Empirical Evidence of Systems Change in Supported Employment

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ABSTRACT

Supported employment emerged rapidly with the onset of federal incentives for state systems change. This expansion was influenced by policy initiatives and legislation, as well as fiscal incentives. Nonetheless, states have implemented supported employment with variable success. This paper analyzes state outcomes in implementing supported employment with three goals: (1) to identify states who have excelled in implementing supported employment; (2) to examine the relationship of economic, socio-political and cultural factors to exemplary supported employment outcomes; and, (3) to compare these relationships with findings of other studies on state implementation of progressive public policy. This analysis suggets that the federal systems change strategies influenced the pace of implementation across the states. States are more likely to adopt a new policy if it has been or is being adopted by another state and when motivated by federal incentives.

Supported employment emerged quietly in the late 1970's and early 1980's with scattered demonstration projects showing the capabilities of people with severe disabilities to work in community jobs. This, coupled with growing dissatisfaction of segregated day programs and sheltered workshops resulted in a nationwide initiative. Now, practitioners and researchers have been demonstrating the benefits of supported employment for people with severe disabilities for over two decades. Clear and documented advantages include higher wages and benefits, increased opportunities to interact with individuals without disabilities, improvement in participants adaptive behavior skills, and greater employee satisfaction (e.g., Wehman and Kregel, 1995; Mank, 1994).

In supported employment, individuals with disabilities typically receive job-related supports in order to obtain or maintain employment. Some of these supports may be provided by coworkers, family members or friends, and some are provided by professional staff. Although the technical knowledge was available as early as the late 1970's and early 1980's to provide and/or stimulate effective, work-related supports for individuals with disabilities, the necessary funding structures, administrative supports, trained personnel, and interagency linkages to establish local, state, and national networks of supported employment were not in place until later in the 1980's.

A number of events occurred during the early 1980's that encouraged development of these linkages. The 1984 Developmental Disabilities Act and the Education for all Handicapped Children Act of 1983 stressed the importance of employment in integrated work settings for individuals with severe disabilities and established demonstration grant funding for transition from school to work. At the time of these new employment initiatives, special education legislation had been in force for ten years. Students with disabilities and their families came to believe that their personal dreams of life in typical community environments might be able to come true upon leaving school. Those dreams were likely to include a valued, community-based job, an apartment or house, the right to choose with

whom and how many people to live, hobbies, and activities with friends and family members.

Supported employment was first defined as a legitimate VR service option in Title VI Part C of the Rehabilitation Act Amendments of 1986 (PL 99-596). Supported employment has most recently been defined in the 1998 Rehabilitation Act Amendments (PL 105-220) as:

> . . . competitive work in integrated work settings, or employment in integrated work settings in which individuals are working toward competitive work, consistent with the strengths, resources, priorities, concerns, abilities, capabilities, interests, and informed choice of the individuals . . . for individuals with the most significant disabilities; (a) for whom competitive employment has not traditionally occurred; or (b) for whom competitive employment has been interrupted or intermittent as a result of a significant disability; and who, because of the nature and severity of their disability, need intensive supported employment services.

State Vocational Rehabilitation agencies have the latitude to tap Title I monies (primary federal funding stream for state rehabilitation services) for supported employment services. As early as 1984, Virginia was funding supported employment services through the "other services as needed" provision of Title I of the Rehabilitation Act (Hill & Revell, 1987). However, introduction of supported employment into the state VR service system seemed to call for a separate funding source in order to demonstrate that individuals with severe disabilities were, indeed, employable. As such, a separate title, VIC, was established in vocational rehabilitation specifically for supported employment services. Up to this point, most state VR systems were still heavily invested in facility-based or segregated services (Whitehead, 1989).

Title III of the Rehabilitation Act allocates funding for state and agency-level systems change activities. In 1985, the Rehabilitation Services Administration (RSA) provided competitive grant funding for 10 states, with an additional 17 states in 1986, to develop and/or provide training, technical assistance, innovative funding strategies and demonstration projects related to supported employment for persons with severe disabilities. These grants continued through 1998, with all but two states participating. In addition, national scale technical assistance was established at Virginia Commonwealth University and the University of Oregon to provide and coordinate national training and technical activities related to supported employment.

Inclusion of supported employment as a separate, rehabilitation option in the Rehabilitation Act and funding provided through Titles III and VI established the initial legitimacy of this model within the state VR system and generated potentially important resources for developing supported employment service capacity and administrative networks within and across states. The Rehabilitation Act specified that RSA would provide funding for time-limited supported employment services. Follow-up or extended employment supports were to be obtained from extended service funding agencies (e.g., state Departments of Mental Retardation/Developmental Disabilities, Departments of Mental Health, etc). Thus, the funding strategy demanded coordination of service eligibility and service delivery procedures across state and local organizations, both government and private.

Prior to this time, federal funds had been used for new policy adoption and systemic change in other human service areas (e.g., implementation of Title XIX Medicaid Act, federal welfare and Social Security legislation, special education services mandated through Public Law 94-142). (See McGaughey and Mank, 1999.) However, this is the first time that such a large-scale federal policy initiative had been financed toward employment for individuals with severe disabilities. Logically, systems change in employment services

follows deinstitutionalization, as supports for individuals with disabilities develop into more person-centered, more focused on inclusion, and increasingly shaped by individual preferences.

Broad-based systemic change is a challenging goal to pursue. Since the beginning of RSA's systems change initiative, research studies have documented consistent annual increases in the number of persons with disabilities working in supported employment across the United States. This number has grown from a total of a few thousand in 1986 to more than 140,000 in 1995 (Wehman, Revell, and Kregel, 1998). Other studies of employment outcomes for extended service funding agencies confirm these trends (McGaughey, Kiernan, Lynch, Schalock and Morganstern, 1991; McGaughey, Kiernan, McNally, and Gilmore, 1995) and for special populations served by state VR agencies (Kiernan, McGaughey, & Cooperman, 1991).

In spite of impressive gains in the number of individuals with disabilities working in supported employment, several authors pointed to shortfalls in the systems-change initiative. These include: low percentages of persons with severe disabilities, funding disincentives, rate inequities, entrenchment of some facility-based services, waiting lists of students leaving school, etc. (Mank, 1994; McGaughey, Kiernan, McNally, Gilmore, & Keith, 1995; Wehman & Kregel, 1994; Wehman & Kregel, 1995). Disincentives remain that hinder full systems change. Supported employment remains as an additional service option rather than the prevailing service option for people with severe disabilities. Fiscal incentives continue to support the maintenance of a parallel system of segregated employment and day services rather than conversion of resources to integrated supported employment. True systems change to supported employment will occurr when segregated services are an exception rather than the prevailing service for most people with severe disabilities.

States have had variable success in expanding supported employment. It is important to gain an understanding of why certain states have been more successful than others in undertaking systemic change. How have some states been able to achieve higher supported employment rates or serve a larger percentage of individuals with severe disabilities? A necessary first step to addressing these questions is to identify the factors or conditions related to positive supported employment outcomes. The study presented relies on the theory developed to explain the process of policy innovation, adoption, and diffusion among the states (McGaughey and Mank, 1999).

In many cases, state policy investigators focused on the effects of federal mandates directed toward states, such as: legislative acts, federal grants-in-aid, and other intergovernmental transfer payments (e.g., Dye, 1969). Researchers began to study this process systematically during the Johnson administration, when the federal governments expanded its involvement in state policy innovation and adoption. According to Walker (1969), the main trend in intergovernmental relations from 1964 to 1978 was an aggressive national assertion of policy leadership by the political and judicial branches of the Federal government, even as the localities and, the states were also experiencing the most dramatic reformation in their two century history. Total government expenditures for domestic purposes (excluding national defense and interest on the federal debt) rose from $119 billion in 1964 to $545 billion in 1978. Eyestone (1977) described the process of diffusion as a pattern of adopting policy innovations. He noted that a state's tendency towards new policy adoption most likely depends upon a variety of factors, including its intrinsic properties, state politics, emulation of other states, and interaction effects.

Braddock and his associates (Braddock, Hemp, Bachelder, & Fujiura, 1995; Braddock, Hemp, Fujiura, Bachelder, & Mitchell, 1990; Braddock, Hemp, Parish, & Westrich, 1998) have studied the relationship between economic and socio-political factors and state MR/DD agency spending. They have consistently reported that political indicators (special interest group involvement, specifically state ARC membership, and protections offered through state civil rights legislation) are stronger predictors of state MR/DD spending than measures of state wealth or population size. This finding is contrary to results reported in many studies of state expenditure patterns, where more populous and wealthy states score higher on measures of policy innovation (Klingman and Lammers, 1984; Walker, 1969; Dye, 1990, etc.). According to Braddock and his colleagues, MR/DD funding may be somewhat distinct from other categories of state expenditure. It is likely that the presence and relative strength of disability-related advocacy groups may counteract competing pressures on state coffers from other special interest groups.

Previous research has documented a relationship between measures of state wealth (or personal income), taxation levels, urbanization measures, unemployment rates, state fiscal commitment, antidiscrimination employment legislation, and supported employment or competitive employment outcomes for persons with disabilities. Other studies of supported employment outcomes have documented a great deal of variability across states (West, Revell, and Wehman, 1992; Wehman, Revell, and Kregel, 1998).

Research and analysis is needed to examine systems change activities and policies designed to understand systems change and enhance supported employment or convert facility-based resources. The goals of this study are threefold :

1. to identify states that have excelled at establishing supported employment services and the necessary related administrative structures and linkages,
2. to examine the relationship between economic, socio-political, and cultural factors and stronger supported employment outcomes, and
3. to compare these relationships with findings from other studies of state innovation and diffusion.

Research to date suggests that systems change is a complex process influenced by a wide range of factors. Conventional wisdom might suggest the funding of five-year systems change grants may account for systems change. Clearly, this strategy delivered results as documented elsewhere (e.g., Wehman et al., 1998). Nonetheless, this factor is but one in a complex set of factors that must be considered in evaluating systems change in supported employment in states. They include political factors, economic factors, and demographic factors. Figure 1 below provides a vision of a conceptual framework for understanding a state's environment.

FIGURE 1 -- STATE ENVIRONMENT

POLITICAL FACTORS:

- Political culture
- Liberalism
- Political Competition
- Grassroots Advocacy

ECONOMIC FACTORS:

- Employment Rate
- SE Spending Ratio/Per Capita Income
- Federal Spending Ratio
- Tax Ratio

DEMOGRAPHIC FACTORS:

- State Population
- Degree of Urbanization
- Degree of Industrialization

MEASURES

The data source used for this study was the National Longitudinal Study of Supported Employment conducted by researchers at Virginia Commonwealth University (VCU) from 1986 through 1997, with additional surveys planned (Wehman, Revell and Kregel, 1998). Data were collected from state Vocational Rehabilitation agencies and, in some instances, from extended-service funding agencies. The state VR director was asked to appoint a respondent. When necessary, responses were clarified over the telephone by VCU staff. Each state's data profile was returned to the responding state office for final validation. For more information on the survey questions or methodology for this study, refer to Wehman, et al., (1998).

Outcome data used for this study include supported employment rates for 1988, 1990, 1993, and 1995 (measured as the number of supported employees per 100,000 of the state's population) as well as a summative measure of the total number of supported employees reported for those four years. Several other variables were examined for 1995 only: the percentage receiving extended employment services, percentage with severe mental retardation (of those with mental retardation), percentage with long-term mental illness, and wage and hour data. Two states were not included in the analyses due to missing data on the outcome measures.

Based on the review of factors reported to influence state patterns of adoption, economic indicators were analyzed to understand how they were related to supported employment outcomes. For this study, the proportion of state wealth devoted to supported employment or "state effort" was measured as spending on supported employment per 100,000/per capita income. It is likely that supported employment outcomes also are related to states' overall employment environment, which was measured as the percentage of the population employed. States chosen to receive the earlier federal systems change grants may be those "pioneer" states that are consistently more receptive to new policy adoption, or they may display stronger supported employment outcomes as a result of early participation in the systems change initiative (see McGaughey and Mank, 1999). The time period during which states received their systems change grant funding was coded as: 4 = states that received funding during more than one grant cycle, 3 = the first group of 10 states, 2 = second group of 17 states, 1 = remaining states to be funded, 0 = did not receive a systems change grant.

Several socio-political and demographic characteristics also were examined for their relationship to supported employment outcomes: state political preferences, the degree of special interest group involvement, population size and density, and the degree of urbanization. The policy "liberalism" factor developed by Klingman and Lammers was chosen to measure state political preferences, because it is based on a variety of regulatory and expenditure-based policies across several points in time. The final factor accounted for 61.5 percent of the variance in the following variables: 1) Walker index of policy innovativeness up to 1965 (Walker, 1969); 2) McCrone-Cnudde scale of anti-discrimination provisions as of 1961 (McCrone and Cnudde, 1968); average monthly payment per recipient of Aid to Families with Dependent Children (AFDC) for 1965 (Social Security Administration, 1966); number of years since ratification of the Equal Rights amendment for women as of 1978 (Boles, 1979); number of consumer-oriented provisions as of 1974 (Sigelman and Smith, 1980); and percentage of federal allotment to the state for Title XX social services programs spent by the state in fiscal year 1976 (Whitney, 1975). Special interest group involvement was measured as

state membership in the ARC (previously called the Association for Retarded Citizens) during FY 1997. Population size was measured as total state population reported in 1990, and population density was based on total state population in 1990/total square miles (U.S. Bureau of the Census, 1990). Finally, the percentage of the state population living in metropolitan areas in 1990 was used to assess the degree of urbanization (U.S. Bureau of the Census, 1990).

PROCEDURES

A sub-sample of states (n=16, 32%) reporting the highest number of persons in supported employment during 1988, 1990, 1993, 1995 was selected in order to examine characteristics of the most effective states. Statistical comparisons were conducted between the subsample and the remainder sample. Most analyses are based on 48 states (excluding two states due to missing data, except for the multivariate analyses for which one additional state was also excluded due to missing data for one of the four years used to calculate the total served in supported employment.)

RESULTS

Table 1 on the following page shows state supported employment rates per 100,000 of the state population for FY 1990 and FY 1995, and the change from 1990 to 1995. Clearly there is substantial variability across states, with the 1995 supported employment rate ranging from 13 to 165 per 100,000 persons. The number of persons in extended employment was significantly correlated with the supported employment rate for 1995 and the rate of change from 1990 to 1995. Hence, states that reported high supported employment rates for FY 1995 also reported a high percentage of change in enrollments from 1990 to 1995. It will be interesting to see whether state supported employment rolls increase as rapidly during the period from 1995 - 2000. Such increases may reflect the extent to which systems change has permeated other state agencies, because state VR agencies must coordinate with other state agencies to develop funding for extended services.

Table 2 shows the state-by-state distribution for the percentage of employees with mental illness and the percentage with severe mental retardation (of the total number with mental retardation) for FY 1995. Again, there are fairly substantial differences across states, although the overall percentages served are quite small. Except for Oklahoma, Oregon, and Missouri, no states reported more than 10% of their employees with mental retardation as having severe or profound retardation. There also was substantial variation across states in the percentage of employees with serious and persistent mental illness, ranging from 2.6% in Utah to 58% in Idaho.

The 16 states with the highest supported employment rates for 1988, 1990, 1993, and 1995 are ranked in Table 3. In general, the same states appear across the years. However, differences that do exist may be related to the rate of change from 1988 to 1995 (shown in Table 4), as a few states finally appeared on the 1995 list due to a high rate of change (e.g., Wyoming, Idaho, and Pennsylvania). As with the overall sample, the percentage change from 1988 and 1995 was correlated with higher supported employment rates in 1995. Thus, states demonstrating the greatest change in supported employment services also reported the strongest results, either a high percentage of employees with disabilities overall or a high percentage with severe mental retardation or serious and persistent mental illness.

The sub-sample state scores for the total served in supported employment during 1988,

TABLE 1 -- PERCENTAGE IN SE PER 100,000 -- STATE POPULATION FOR FY 1990 & FY 1995 & CHANGE IN ENROLLMENT FROM FY 90 TO FY 95 (N = 48)

State	# in SE per 100,000 FY 1990	# in SE per 100,000 FY 1995	Change from 1990-1995
AK	106	111	5
AL	18	34	16
AR	15	20	5
AZ	24	34	7
CA	26	33	7
CO	57	106	49
CT	129	165	36
DE	128	17	-11
FL	33	34	1
GA	26	61	35
HI	25	14	-11
IA	7	15	8
ID	49	98	49
IL	18	24	6
IN	18	60	42
KS	25	55	30
KY	22	42	20
LA	13	32	19
MA	62	35	-27
MD	30	71	41
ME	24	92	67
MI	27	75	47
MN	123	232	109
MO	20	60	40
MS	29	13	-16
MT	42	100	58
NC	20	66	46
NE	12	49	37
NJ	15	23	8
NM	3	22	18
NV	6	31	24
NY	44	59	15
OH	9	66	57
OK	15	54	39
OR	65	80	15
PA	11	76	65
SC	37	38	1
SD	57	148	91
TN	8	39	31
TX	10	46	36
UT	24	49	25
VA	52	65	13
VT	100	129	29
WA	32	123	87
WI	60	103	43
WV	20	15	-5
WY	33	160	127
Mean	36	66	30
Sd[a]	30	46	32

[a]Standard Deviation

TABLE 2 -- SELECTED OUTCOMES BY STATE -- FY 1995

State (N=48)	% MR with Severe MR (N=30)	% Long-Term MI (N=40)	State (N=48)	% MR with Severe MR (N=30)	% Long-Term MI (N=40)
AK	1.4	36.6	MS	NA	NA
AL	NA	NA	MT	NA	NA
AR	.2	NA	NC	2.1	36.4
AZ	2.0	8.1	NE	5.5	18.2
CA	NA	16.5	NJ	3.8	NA
CO	.8	28.2	NM	NA	NA
CT	8.5	41.2	NV	NA	NA
DE	NA	20.8	NY	NA	34.6
FL	.4	9.1	OH	3.5	12.5
GA	.8	14.5	OK	20.6	15.7
HI	.0	33.8	OR	20.4	15.0
IA	2.6	23.1	PA	NA	30.7
ID	.5	58.4	RI	NA	NA
IL	6.5	24.4	SC	NA	50.0
IN	NA	23.1	SD	1.6	34.0
KS	3.2	36.4	TN	2.4	29.4
KY	2.0	24.4	TX	1.5	57.0
LA	5.7	24.4	UT	24.6	2.6
MA	NA	32.4	VA	5.1	21.3
MD	4.0	27.1	VT	NA	NA
ME	NA	39.5	WA	.2	31.4
MI	6.8	34.4	WI	NA	25.8
MN	NA	17.3	WV	2.4	13.3
MO	17.3	14.1	WY	1.5	20.4
Mean	1.5	28.4	**SD**	6.6	17.0

1990, 1993, and 1995 per 100,000 state population and their associated ranks are displayed in Table 5. Minnesota obtained a much higher score and, consequently, served the largest relative number of persons in supported employment compared with the other high-performing states. In fact, the cumulative supported employment rate reported in Minnesota was 33% greater than that of Connecticut, the state with the second highest rate. States with the strongest supported employment outcomes were located in the northeast, northwest, and southeast coasts or in the upper Midwest sections of the country. No states were represented from the south or southwest, an interesting finding considering the policy innovation and diffusion theories previously discussed (McGaughey and Mank, 1999).

Table 6 presents economic information related to the sub-sample states for 1995, including income, taxation, spending, and employment variables. Five states had average per-capita income levels below the mean for 1995. State fiscal effort for supported employment was based on the ratio of per-capita supported employment spending to per-capita income. State wealth was included in the denominator,

TABLE 3 -- STATES WITH HIGHEST SE RATES[a] FOR 1988, 1990, 1993, & 1995

1988 RANK			1990 STATE			1993 RANK			1995 STATE		
1	MN	105	1	CT	129	1	MN	171	1	MN	232
2	VT	89	2	MN	123	2	VT	146	2	CT	165
3	CT	81	3	AK	106	3	AK	115	3	WY	161
4	RI	54	4	VT	101	4	WY	110	4	SD	148
5	WI	41	5	RI	75	5	CT	109	5	VT	129
6	MA	34	6	OR	66	6	ID	107	6	WA	124
7	CO	33	7	MA	36	7	WI	93	7	AK	111
8	WA	26[b]	8	WI	61	8	CO	91	8	CO	106
9	AK	26	9	SD	58	9	OR	88	9	WI	104
10	DE	26	10	CO	57	10	WA	77	10	MT	100
11	OR	23	11	VA	52	11	VA	70	11	ID	98
12	MD	22	12	ID	49	12	MI	55	12	ME	92
13	MT	20	13	NY	44	13	SD	53	13	RI	86
14	GA	17	14	MT	42	14	OH	52	14	OR	80
15	IA	16	15	SC	37	15	IN	52	15	PA	77
16	ID	15	16	WA	36	16	NC	50	16	MI	75

[a]SE Rates = Number in supported employment per 100,000 state population
[b]Ranks for ties based on value before rounding number

TABLE 4 -- STATES WITH GREATEST CHANGE IN SE RATES: 1988 - 1995

RANK	STATE	# CHANGE	RANK	STATE	# CHANGE
1	WY	146	9	ME	81
2	SD	141	10	PA	75
3	MN	127	11	CO	74
4	WA	98	12	MI	68
5	AK	85	13	OH	65
6	CT	85	14	NC	64
7	ID	83	15	WI	63
8	MT	81	16	OR	57

TABLE 5 -- SIXTEEN STATES WITH THE HIGHEST CUMULATIVE SE RATES OVER FOUR YEARS -- 1988, 1990, 1993, & 1995-

Rank	State	Score[a]
1	MN	632
2	CT	485
3	VT	465
4	AK	358
5	WY	318
6	WI	297
7	CO	287
8	ID	270
9	SD	266
10	WA	264
11	OR	257
12	RI	256
13	MT	209
14	VA	201
15	MI	163
16	NY	157
	Mean:	97
	Standard Deviation:	40

because we were interested in measuring supported employment funding as a proportion of state resources. Most states obtained a ratio close to or above the mean, but not all. Michigan, South Dakota, and Montana all achieved notable employment outcomes with low spending to income ratios. State per-capita tax rates are shown in the next column. South Dakota, Colorado, and Virginia had substantially lower tax burdens than other states. The sub-sample states' employment rates are displayed in the last column. Except for New York and Rhode Island, all states reported employment rates above the national average. A variety of socio-political characteristics of the sub-sample are revealed in Table 7 on the following page. State population varied, from approximately 450 thousand to 18 million. State scores varied on the policy "liberalism" but all states except Wyoming, South Dakota, Vermont, and Virginia exceeded the

TABLE 6 -- SUB-SAMPLE RELATIONSHIP TO INCOME, TAXATION, SPENDING AND EMPLOYMENT VARIABLES

State	PCINC[a]	Effort[b]	State Tax Rate[c]	% Employed[d]
AK	22.5	35	22.5	68.5
CO	21.8	20	12.6	69.4
CT	28.2	48	20.6	68.5
ID	17.9	14	16.1	67.2
MI	22.0	02	16.6	62.7
MN	21.6	16	19.8	72.6
MT	17.2	03	14.5	64.8
NY	24.9	12	18.2	57.0
OR	20.2	21	14.2	65.1
RI	21.7	16	14.3	61.2
SD	18.1	04	9.4	69.4
VA	21.9	11	13.0	66.0
VT	19.5	31	14.8	67.7
WA	22.0	24	19.9	63.0
WI	20.3	18	17.2	69.7
WY	19.8	35	16.3	67.5

[a]Average income for 1995 per 1,000 in population; [b]Per capita SE spending/per capita income * 100; [c]State tax rate per 10 in population; [d]Percentof noninstitutional civilian labor force employed

national average, indicating a potential relationship between a state's political preferences and supported employment outcomes. The last column shows membership in the state ARC association per 100,000 state population. For the sub-sample, membership in the ARC fell both below and above the national mean.

Three additional outcomes were examined for the sub-sample: extended employment rates and the extent to which persons with long-term mental illness or severe/profound mental retardation received supported employment services. The results are shown in Table 8. T-tests show that the sub-sample of 16 states differed significantly from the remaining states as follows: they displayed significantly higher proportion of supported employment funding to per-capita income compared with other states ($df=46$, $t=3.6$, $p<.01$), significantly higher numbers of persons in extended employment per 100,000 state population ($df=46$, $t=7$, $p<.001$), significantly higher scores on the policy liberalism index ($df=44$, $t=3.6$, $p=.001$), significantly higher overall state employment rates ($df=46$, $t=2.13$, $p<.05$); and a significantly larger percentage of persons with serious and persistent mental illness in supported employment ($df=38$, $t=2.27$, $p<.05$).

Table 7 -- Sub-sample Characteristics Across Selected Socio-Political Variables

State	Population	System Change Grant[a]	Political Index[b]	Employment Legislation[c]	ARC Membership[d]
AK	550,043	3.0	Missing	4.0	45
CO	3,294,394	2.0	1.12	3.0	43
CT	3,287,116	2.0	1.45	4.0	19
ID	1,006,749	.00	.14	1.0	14
MI	9,295,297	3.0	1.10	4.0	52
MN	4,375,099	3.0	1.23	5.0	110
MT	799,065	1.0	.11	5.0	2
NY	17,990,455	4.0	1.86	5.0	19
OR	2,842,321	4.0	1.44	4.0	71
RI	1,003,464	.0	.87	4.0	162
SD	696,004	.0	-.58	4.0	75
VA	6,187,358	3.0	-.74	4.0	42
VT	562,758	2.0	-.35	5.0	00
WA	4,866,692	3.0	.58	5.0	24
WI	4,891,769	4.0	1.38	4.0	04
WY	453,588	1.0	-.08	4.0	127
Mean & Standard Deviation for all States (N = 48)					
	5,132,394	1.7	-.0006	3.8	54
	5,507,672	1.3	1.02	1.7	49

[a] Higher score = Receipt of the earlier grants; [b] General Liberalism Index developed by Klingman and Lammers (1984); [c] Extent of coverage of state employment legislation affecting PWD, including states with criminal remedies; [d] ARC membership per 100,000.

TABLE 8 -- SUB-SAMPLE ACROSS SELECTED OUTCOMES

State	# w/Long-Term Mental Illness	Of # w/MR % Severe	Average Hourly Wage	Average Hours Per Week	Average Weekly Wage
AK	37	1.4	NA	23	$115.00
CO	28	.8	$4.64	23	$104.40
CT	41	8.5	$4.29	23	$103.06
ID	58	.5	$4.50	20	$89.00
MI	34	6.8	$4.62	22	$102.37
MN	17	NA	$4.05	NA	NA
MT	NA	NA	NA	NA	NA
NY	35	NA	$5.10	25	$126.00
OR	15	20.4	$3.29	22	$61.74
RI	10	NA	NA	NA	$123.00
SD	34	1.6	$4.24	24	$102.00
VA	21	5.1	NA	NA	$139.70
VT	NA	NA	$5.43	NA	$103.17
WA	31	.2	$5.58	19	$133.65
WI	26	NA	$4.61	16	$73.53
WY	20	1.5	$4.55	24	$110.16

[A] Number in extended employment per 100,000 state population; [b] Number per 100,000 w/Long-Term Mental Illness; [c] % of MR population in SE with Severe or Profound MR

DISCUSSION

Studies of statewide policy innovation and diffusion have reported a number of trends associated with state-level systems change (Dye, 1969; Hanson, 1990; Klingman & Lammers, 1984; McGaughey & Mank, 1999). First, states are more likely to adopt a new policy if implemented by another state, especially one which has similar economic, socio-political, and demographic characteristics (Walker, 1969). Second, states are more likely to engage in policy innovation when motivated by federal incentives, particularly those with a fiscal impact (Gray, 1973). Third, most policy innovation originates within the state before it is adopted at the federal level (Elazar, 1984). Elazar argued that the federal government is naturally the inventor of an innovative policy and suggests the implementation process involves a shared commitment and redefinition of policy at state and national levels.

PREDICTORS OF HIGHER RATES OF IMPLEMENTATION

A variety of factors were significant predictors of supported employment systems change outcomes in this study, including: economic indicators (employment rates, personal income, supported employment funding, and tax levels);

socio-political measures (political preferences, anti-discrimination employment legislation, and the degree of liberalism); and demographic factors (state population and population density).

The relationship of economic factors to supported employment outcomes are discussed first. State fiscal commitment to supported employment was the most significant predictor of supported employment rates, even greater than state wealth or the level of taxation. It is not surprising that fiscal commitment was a significant predictor, but it is surprising that it had the greatest impact among the economic indicators.

It is also possible that the influx of federal grants-in-aid into the state policy system could have detrimental effects, such as influencing states to substitute federal funds for state money or to demand a higher level of public services than they can afford (Dye, 1990). Formula grants that allocate resources based on specific indicators tied to categorical programs (e.g., poverty rates used to distribute federal welfare monies) can reduce these effects somewhat. The federal-state Vocational Rehabilitation system is based on a similar formula to ensure that states with fewer resource needs will receive less funding. Moreover, states are required to provide matching monies to receive federal allotments. Supported employment is somewhat unique in this context, because states are expected to leverage long term supports from state funds to sustain supported employment outcomes. Research related to the policy "liberalism" factor demonstrated that, although the type of policy being adopted mattered little, "progressive" is a legitimate label for some state policy trends (Klingman and Lammers, 1984). State political preferences (as conceptualized by Elazar, 1984) also are strong determinants of state policy innovation and systems change. Both Elazar's typology and Klingman and Lammer's (1984) policy "liberalism" factor appeared to predict which states would appear in the group with the strongest supported employment outcomes. These 16 states also were more likely to adopt anti-discrimination employment legislation that contained broader coverage and more complete remedies.

Sustaining Trends

States that reported high supported employment rates for FY 1995 also reported a high percentage of change in rates from 1990 to 1995. This may reflect the extent to which systems change has permeated other state agencies, since state VR agencies must coordinate with other state agencies to develop funding for extended services.

States in the northeast, northwest, southeast coast, and upper midwest showed the strongest supported employment outcomes. Southern states are more likely to have a "traditionalistic" political culture, one that is typically less receptive to government programs. Further research is needed to gain insight into how southern states may have differed in their development of supported employment or in the reduction of sheltered services. One thing we do know is that states in the southern region had a lower fiscal commitment to supported employment (as a percentage of personal income). It would be particularly interesting to examine any exceptions to these trends in the south. It may well be that without the stimulation of federal dollars (Titles III and VI), these states may have been less successful than they were in the change process.

As indicated earlier, five states with higher outcomes had average per-capita income levels below the mean for 1995. Thus, even with fewer resources, some states were achieved impressive supported employment outcomes. A few states achieved notable outcomes with low spending to income ratios.

State employment rates may be an important predictor of supported employment outcomes, particularly for states with lower per-capita income levels and/or lower supported employment funding to income ratios. In fact, South Dakota data may offer an intriguing example of this phenomenon, because a high cumulative supported employment rate was achieved in spite of the fact that South Dakota's fiscal commitment to supported employment was lower than other states in the sub-sample. The percentage employed also may help to explain high supported employment outcomes in Minnesota (employment rate=72.6%) and Colorado and South Dakota (employment rates=69.4%).

State population varied widely among this sub-sample of states, from very rural to highly urbanized. As such, population is not a clear predictor of supported employment outcomes. The period during which systems-change grant monies were received also varied across the sub-sample, indicating that other factors may be more influential. Most of the states in the subsample exceeded the national average on the policy "liberalism" factor. Higher scores on state anti-discrimination employment legislation reflect broader coverage (mental and/or physical disability, pubic and/or private entities specified by size) that is likely to have a greater impact, even for supported employment. Income differentials appear to affect supported employment rates less than political inclinations (e.g., liberalism scores), inclination toward use of federal funds, and employment and economic growth levels.

Stimulating Systems Change in all States

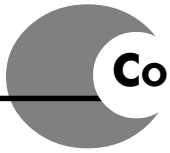
Analysis of upper-Midwest states may provide insight into the process of systems change as an overall phenomenon (defined in this study as the "consistent adoption and diffusion of new policies") that may be helpful. The high levels of employment indicate greater economic growth, even though state wealth was lower in certain cases. Other potentially influential factors include state size and the extent of urbanization. Average wage levels may be lower in some states due to the more rural nature of available employment opportunities (farm labor, small retail and service establishments, etc.). The types of employment opportunities and their accompanying wage levels should be analyzed for this region as well as for some of the other subsample states in order to make effective comparisons regarding economic growth and employment opportunities.

Additional analyses is needed that includes testing various multivariate models which may offer clarification regarding both the independent and the relative effects of economic, sociopolitical, and demographic variables as predictors of states' cumulative supported employment rates. Research is needed to examine the rates of sheltered employment services in states with strong supported employment outcomes and to compare significant determinants for both supported employment and sheltered employment rates, especially in light of the focus on conversion of sheltered workshops in some states (e.g., Texas).

Except for Oklahoma, Oregon, and Missouri, no states reported more than 10% of their employees with mental retardation as having severe or profound retardation. There also was substantial variation across states in the percentage of employees with serious and persistent mental illness. What did states serving a large percentage of persons with severe mental retardation or long-term mental illness in supported employment do to achieve these outcomes? Did court-ordered deinstitutionalization influence the populations served by these states? Were any trade-offs made to achieve these outcomes (such as fewer total persons in supported employment, lower average wages, etc.)?

The next stage of this research project will include a survey of every state VR agency regarding systems change activities and the political context in states. Site visits will be made to selected states that may offer especially relevant information related to the systems change process and new policy adoption. It will be particularly interesting to consider how policies related to supported employment or to sheltered employment may vary across states and whether these differences help to explain variation in state outcomes that has not been clarified through bivariate and multivariate analyses.

Training and technical assistance dollars, as well as investment in creating high quality demonstration projects, may be particularly important when attempting to implement systemic change because of the importance of addressing human resource issues during a period of such extensive change. The new supported employment eligibility and program requirements called for coordination and interagency collaboration across various levels of services (provider to government, provider to families, government agency to government agency, etc.). Furthermore, supported employment required all stakeholders to develop the flexibility to adjust to a more decentralized service model after having been more familiar with the security of a building as a "place to go during the day." Operating effective supported employment services requires employment staff to develop new skills and a greater understanding of employer needs, management staff to provide supports and leadership, board members to offer direction and vision, and family members and supported employees to develop openness to new possibilities.



Conclusion

Systems change is complex, and the implementation of supported employment across states varies. The federal government has invested in systems change to supported employment, and there is clearly evidence of progress across the USA. Initially our main question was: "Did systems change strategies work for supported employment?" This paper presents evidence that change has and continues to occur. However, this leads to questions that may be more important, to what extent has change occurred, and what predicts greatest change? Some of the predictions of greater change (employment rate, tax limits, political context, etc.) are not in the control of implementors. Other factors associated with greater change (state examples that can be emulated, funding schemes, etc.) can be adjusted by state and federal collaboration. While there is evidence of change and factors contributing to this change are emerging, it will be important to conduct a more indepth analysis via surveys and case studies.

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