A Comparison of Two Governmental Spending Scales

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The 1990 General Social Survey (GSS) had two governmental spending scales. The regular, interviewer-administered survey included the standard 15-item governmental spending scale (Figure 1). In the International Social Survey Program (ISSP), role-of-government module an 8-item governmental spending question appeared (Figure 2). The two scales both asked whether there was too much, too little, or about the right amount of governmental spending in a list of areas. The two scales overlapped in inquiring about six similar, but not identical, spending areas (Figure 3). The scales differ in various other aspects. The standard items 1) are orally administered so respondents do not know what groups are included until they are asked about each particular group, 2) have a longer preamble about the difficulty and expense of solving national problems, 3) present three response options (too much, too little, about the right amount) and have an unread Don't Know category, 4) cover 15 spending areas, and 5) come in two experimental versions in which the descriptors for the spending areas, but nothing else, are varied (Figure 1, X and Y). The international items 1) are self-administered so respondents can see all areas being covered from the beginning, 2) have an introduction that reminds people that "if you say 'much more', it might require a tax increase to pay for it," 3) use five, ordered responses (spend much more, spend more, spend the same as now, spend less, and spend much less) and a Can't Choose category, and 4) cover only eight areas. In addition, context differs for the two scales. First, the standard

scale is the initial question in the interview. The ISSP scale occurs about 85 minutes later, about 10-minutes into the role-of-government module. Second, only six of 17 areas covered by the two scales overlap and these appear in different orders.

While the ISSP governmental spending scale was not added or designed with the standard GSS scale in mind, it is possible to compare these two scales and use them to examine issues of attitude consistency, question wording, response scales, and related measurement issues. Although not as powerful as an explicit, methodological experiment, the comparison of the two scales provides useful information on the measurement properties of these governmental spending scales.

Table 1 shows the distribution of each item. In Section A the distributions of the two standard versions are compared. There are no statistically significant differences for the environment, education, defense, and Social Security. Health varies marginally and crime/law enforcement varies appreciably. These results are consistent with earlier comparisons of these experiments (Smith, 1984; Smith, 1987; Rasinski, 1989). For the environment, education, defense, social security, and health we have used the combined standard marginals to compare to the ISSP items. For crime/law enforcement we used the Y or law enforcement version to compare to the ISSP police/law enforcement item. Section B gives the ISSP distributions. There are no appreciable differences in Don't Knows. The standard scale has higher levels on five of six items, but the average levels are 3.3% for the standard questions and 2.8% for the ISSP items.

Table 2 compares the distribution of the matched items (Don't Knows are excluded since they differ little and are omitted from subsequent analyses of associations). The first line of each comparison shows the full, five-category distributions for the ISSP items. The second line recodes the ISSP distributions to match the three categories used on the standard scale. The third line presents the distributions for standard items. The last line compared the recoded ISSP and standard items by subtracting line three (standard) from line two (recoded ISSP).

Despite the differences in response scales and descriptors, there are no meaningful differences in the response distributions for health, law enforcement, education, defense, and Social Security/retirement. For the environment however there is much less support on the ISSP item (spend more = 61.5%) than on the standard item (too little being spent = 75.6%). Even the more similarly worded Y version ("The environment" for both items) differs appreciably from the ISSP item (respectively 74.3% and 61.5%). This probably results from a context effect. On the standard scale the spending item is the initial question in the survey and the environmental item is second on the list after space exploration. On the ISSP the spending question follows 85 minutes of interviewing and the environment is the first item in the battery. Three possible context effects may be operating. First, on implicit, comparison scales the item appearing first often takes on

an extreme value, being either higher or lower than if it appears in any later position. This is apparently because people are not used to using the scale and are unable to judge the item in light of alternative stimuli (Schuman and Presser, 1981). Second, space exploration, which precedes the environment on the standard version, is the second least popular of the 15 spending topics (exceeding only foreign aid). Its unpopularity might have created a contrast effect that made spending on the environment seem especially attractive. Finally, on the ISSP the spending scale follows an 8-item scale about governmental, economic policies with an emphasis on jobs ("Government financing of projects to create new jobs," "Support for industry to develop new products and technology," "Supporting declining industries to protect jobs," and "Reducing the work week to create more jobs"). This may have activated concerns about the economic and employment consequences of environmental regulation and therefore lowered support for governmental spending on the environment.

Second, we examine how the two spending scales inter-correlate. The diagonal in Table 3 shows the correlations between each related pair. These correlations are moderate to substantial, ranging from .564 for Defense down to .343 for Law Enforcement and averaging .434. Between 61% and 74% of respondents gave a comparable response to both matched questions. These correlations are a little above the test/retest correlations for the standard items (Environment=.312, Health=.258, Law Enforcement=.305, Education=.264, Defense=.521 - Smith and Stephenson, 1979). The diagonals are also considerably higher than the off-diagonal correlations.

Third, we consider how the two spending scales inter-correlate amongst themselves. Table 4 shows that the standard scale has consistently lower inter-item correlations than the ISSP scale. The average correlations are respectively .103 and .207 (and .126 and .259 if defense is excluded). This probably indicates that the five-response categories used by the ISSP are better at measuring the spending preferences of respondents. These rates are higher than the across version inter-item correlations (excluding the matched pairs) which average .099 and .094 (respectively below and above the diagonals in Table 3).

Fourth, we examine associations with generic and specific criterion variables. Table 5 first presents five general measures that we hypothesized would relate to the spending scales (political ideology, party identification, education, confidence in the executive branch of the federal government, and government regulation). We thought that social spending would be supported by liberals, Democrats, the better educated, and those with low confidence in the executive (i.e. Bush) and that defense and law enforcement would be backed by conservatives, Republicans, the less educated, and those with high confidence in the executive. We also predicted that those for government regulation would favor spending in all categories. While a number of relationships were not statistically significant, the hypothesized patterns basically

emerged. There were no major differences between the standard and ISSP scales on the general, criterion variables. The ISSP correlations were statistically significant in 20 of 30 cases, while the standard-scale correlations were statistically significant 16 times out of 30. The ISSP correlations were higher than the standard correlations in 18 out of 30 comparisons and the ISSP correlations average .104 vs. .094 for the standard correlations.

Next, Section B of Table 5 presents 18 item-specific comparisons. Each was hypothesized to associate with a particular spending item (e.g. support for governmental health care programs with more spending on health, courts too lenient with more crime spending, disliking Russia and more defense spending, etc.). For the standard items 13 of 18 associations were statistically significant as were 16 of 18 for the ISSP scale. Pearson's r was higher for the standard scale in 5 cases and for the ISSP scale in 13 cases and averaged .121 for the standard scale and .160 for the ISSP scale. This edge to the ISSP items shows up only when Pearson's r is utilized. When gammas are compared, both the ISSP and standard items have stronger associations in 9 instances.

When the six ISSP and six standard items are factor analyzed (with varimax rotation), four factors emerge. The standard and ISSP measures of health, Social Security/retirement, and educational spending load of a social welfare factor, the standard and ISSP defense spending items load on a defense factor, both environmental items on an environmental factor, and both crime items on a crime prevention factor. The loadings are highly similar for both scales, indicating that both are measuring the same factor to a comparable degree.

In sum, the comparison of the two governmental spending scales shows highly similar marginals except for environmental spending where a context effect is probably operating. The matched items also show moderately strong inter-items associations (even somewhat higher than test/retest correlations for the standard items). The ISSP items with their finer grain five-point response scale do produce higher within scale, inter-item correlations and marginally stronger associations with general and specific criterion variables. The gains are modest, however, and the standard and ISSP items show highly similar loadings on spending factors. The edge to the scale with the greater number of response scales is however greater than shown in earlier work with the confidence scales (Peterson, 1985; Smith and Peterson, 1985; Smith, 1994). Overall, the comparison of these scales demonstrates considerable robustness and indicates that spending items are generally answered in a consistent and meaningful manner.

Figure 1

Standard Scale

A. X Version

(mail GSS for Figure)

B. Y Version

Figure 2

ISSP Scale

(mail GSS for Figure)

Figure 3

Descriptors Used for Six Overlapping Institutions

Standard Scale		ISSP Scale
X Version	Y Version	
Improving and protecting the environment	The environment	The environment
Improving and protecting the nation's health	Health	Health
Halting the rising crime rate	Law enforcement	The police and law enforcement
Improving the nation's education system	Education	Education
The military, armaments, and defense	National defense	The military and defense
		Retirement
Social Security benefits	Social Security	

Table 1

Table 1

Distribution of Governmental Spending Items

A. Standard

	Too much	About right	Too little	Don't Know	
Environment					
X	72.6	17.8	4.0	5.6	(610)
Y	71.8	22.0	2.9	3.4	(603)

XY	72.2	19.9	3.5	4.5	(1213)

prob.=.165

Health

X	73.1	22.4	2.2	2.3	(609)
Y	67.8	24.9	4.3	2.9	(603)
XY	70.5	23.7	3.2	2.6	(1213)

prob.=.043

Crime/Law Enforcement

X	69.8	23.2	3.8	3.2	(611)
Y	56.4	35.9	4.8	2.9	(601)
XY	63.2	29.5	4.3	3.1	(1212)

prob.=.000

Education

X	72.7	22.5	2.7	2.2	(611)
Y	73.7	22.1	2.6	1.7	(604)
XY	73.2	22.3	2.6	1.9	(1214)

prob.=.962

Defense

X	11.2	42.9	41.8	4.0	(609)
Y	9.0	42.5	45.4	3.1	(604)
XY	10.1	42.7	43.6	3.5	(1213)

prob.=.299

Social Security

XY	49.4	40.4	5.6	4.6	(1210)

Table 1 (continued)

B. ISSP Scale

	Much More	More	Same	Less	Much Less	Can't Choose	
Environment	15.0	44.5	28.1	7.1	1.9	3.4	(1183)
Health	19.8	51.2	24.0	2.1	0.8	2.2	(1184)

Police/Law Enforcement	11.5	43.3	37.3	4.2	1.2	2.5	(1188)
Education	25.6	47.7	21.9	1.8	0.8	2.1	(1187)
Defense	3.2	10.4	36.6	27.8	19.0	3.0	(1179)
Retirement Benefits	11.7	35.7	38.7	8.0	2.1	3.8	(1188)

Table 2

Comparison of Distribution of Related Governmental Spending Items

A. Environment					
ISSP(5)	15.5	46.0	29.1	7.4	2.0
ISSP(3)	61.5		29.1	9.4	
Standard(XY)	75.6		20.8	3.6	
Standard - ISSP(3)	+14.1		- 8.3	- 5.8	
B. Health					
ISSP(5)	20.2	52.3	24.5	2.2	0.8
ISSP(3)	72.5		24.5	3.0	
Standard(XY)	72.4		24.3	3.3	
Standard - ISSP(3)	- 0.1		- 0.2	+ 0.3	
C. Crime					
ISSP(5)	11.8	44.4	38.2	4.3	1.2
ISSP(3)	56.2		38.2	5.5	
Standard(Y)	58.1		36.9	4.9	
Standard - ISSP(3)	+ 1.9		- 1.3	- 0.6	
D. Education					

ISSP(5)	26.2	48.8	22.3	1.9	0.8
ISSP(3)	75.0		22.3	2.7	
Standard(XY)	74.6		22.7	2.7	
Standard - ISSP(3)	- 0.4		+ 0.4	0.0	

Table 2 (continued)

E. Defense

ISSP(5)	3.3	10.7	37.8	28.6	19.6
ISSP(3)	14.0		37.8	48.2	
Standard(XY)	10.5		44.3	45.2	
Standard - ISSP(3)	- 3.5		+ 6.5	- 3.0	

F. Social Security/Retirement

ISSP(5)	12.1	37.2	40.2	8.3	2.2
ISSP(3)	49.3		40.2	10.5	
Standard(XY)	51.7		42.4	5.8	
Standard - ISSP(3)	+ 2.4		+ 2.2	- 4.7	

Table 3

Inter-item Correlations Across Spending Scales

(Pearson's r)

	ISSP					
	Enviro.	Health	Law	Educ.	Defense	Soc. Sec.
Standard						
Environment	.460	.087	.075	.138	-.120	.005*
Health	.079	.345	.065	.149	-.037*	.188
Law Enforce.	-.026	.093	.343	.069	.046*	.128
Education	.180	.183	.045*	.349	-.068	.081
Defense	-.148	-.062	.089	-.067	.564	.156
Soc. Security	-.010*	.182	.119	.050*	.153	.387

*=Not statistically significant at the .05 level.

Table 4

Inter-item Correlations within Each Spending Scale

(Pearson's r)

A. Standard Scale

	Enviro.	Health	Law	Educ.	Defense	Soc. Sec.
Environment		.135	.066	.168	-.089	.034*
Health			.113	.183	.029*	.174
Law Enforce.				.160	.050*	.169
Education					-.053	.098
Defense						.163

B. ISSP Scale

	Enviro.	Health	Law	Educ.	Defense	Soc. Sec.
Environment		.314	.184	.279	-.123	.046*
Health			.271	.405	-.005*	.325
Law Enforce.				.281	.164*	.263
Education					-.009*	.219
Defense						.211

*=Not statistically significant at the .05 level.

Table 5

Association of Confidence Items with Generalized and Group-Specific Criterion Variables

A. Generalized Variables (Pearson's r)

Confidence in Exec.	Political Ideology		Political Party		Educa-tion		Government Regulation	
	Stnd	ISSP	Stnd	ISSP	Stnd	ISSP	Stnd	ISSP

Environment	.111	.132	.031*	-.016	-.179	-.245	-.052*	.014*	.104*	.052*
Health	.085	.157	.145	.153	.036*	.006*	-.152	-.088*	.133	.190
Law	-.138	-.056	-.024*	.014*	.078*	.022*	-.052	.103	-.036*	.011*
Education	.084*	.133	.034*	.086*	-.103	-.139	-.059*	.000*	.123	.098*
Defense	-.153	-.164	-.108	-.126	.220	.201	.047*	.138	-.003*	.081
Social Security	.023*	.024	.062*	.113	.208	.217	-.100	-.106	.148	.234

B. Group-Specific Variables (Probability/Pearson's r)

	Standard	ISSP
Health X		
Government Care of Sick (HELPSICK)	.011/ .130	.000/ .235
Government Health Care (HLTHCARE)	.000/ .241	.000/ .421
Child Health Care (CHLDHLTH)	.000/-.109	.000/-.040
Law Enforcement X		
Tougher Courts (COURTS)	.002/-.106	.000/-.143
Approve of Police Hitting (POLHITOK)	.630/ .020	.000/ .069
Capital Punishment (CAPPUN)	.163/ .058	.134/ .040
Education X		
Confidence in Education (CONEDUC)	.000/-.078	.268/-.056
Aid for College (AIDCOL)	.000/ .160	.000/ .272
Role of Teachers (ROLETCHR)	.197/-.046	.003/ .079
Quality of Education (CHLDEDUC)	.006/-.107	.001/-.028
Defense X		
Like of Russia (RUSSIA)	.000/-.225	.000/-.203
Communist Governments (COMMUN)	.003/ .107	.000/ .162
Confidence in Military (CONARMY)	.000/ .229	.000/ .345
Social Security X		
Family Income (INCOME86)	.150/ .112	.007/ .182
Retired (WRKSTAT)	.020/ .012	.028/-.050
Government Aid to Elderly (AIDOLD)	.000/ .287	.000/ .377
Confidence in Banks/Insurance (CONFINAN)	.237/-.007	.002/ .027
Political Alienation (ANOMIA7)	.000/ .145	.000/ .149

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