# Data Codebook, STATA Code, and Supplemental Material for Quantitative Analysis of Contemporary Era in Chapters 7, 8, and 12 of:

Cathie Jo Martin and Duane Swank, *The Political Construction of Business Interests: Coordination, Growth, and Equity.*(Cambridge University Press, 2012)

**Data Set**: MartinSwank contemporary data.xls

Section 1: Analysis associated with Table 8.1:

Data Set: MartinSwank contemporary data.xls

The first set of variables pertain to the data for the analysis of active labor policy spending and income support for current workers in Table 8.1 in Martin and Swank (2012). The STATA code for the core estimating equations is:

xtpcse almpsp lg1deind lg1rgdpch lg1unemp lg1open lg1caplib lg1employerorg lg1medvoter avleftc avtcdemc coid1 coid2 coid3 coid4 coid5 coid6 coid7 coid8 coid9 coid10 coid11 coid12 coid13 coid14 coid15 coid16 coid17, correlation(ar1) pairwise;

xtpcse wasocwelf lg1deind lg1rgdpch lg1unemp lg1open lg1caplib lg1macrocorp lg1medvoter avleftc avtcdemc coid1 coid2 coid3 coid4 coid5 coid6 coid7 coid8 coid9 coid10 coid11 coid12 coid13 coid14 coid15 coid16 coid17, correlation(ar1) pairwise;

Note: Precise definitions of variable and/or components of complex variables as well as data sources are given in subsequent sections below and in text of book.

year 1955 to 2005 (Note: several series do not begin until the 1960s or 1970s; many

data series end before 2005.)

coid Country identifier: 1 for Australia, 2 for Austria, 3 for Belgium, 4 for Canada, 5

for Denmark, 6 for Finland, 7 for France, 8 for West Germany, 9 for Ireland, 10 for Italy, 11 for Japan, 12 for Netherlands, 13 for New Zealand, 14 for Norway, 15 for Sweden, 16 for Switzerland, 17 for the United Kingdom, 18 for the United

States, 19 for Greece, 20 for Portugal, and 21 for Spain.

almpsp Active labor market spending as a percent of GDP.

wasocwelf Additive index of Scruggs' score of unemployment insurance generosity (benefit

levels, entitlement rights, and coverage) and sickness insurance generosity. (See

below and book text)

avleftc Mean of percentage of cabinet portfolios held by left parties at t-1, t-2, t-3.

avtcdemc Mean of percentage of cabinet portfolios held by all Christian Democratic parties

at t-1, t-2, t-3.

lgldeind One year lag of index of deindustrialization,

lglrgdpch One year lag of real GDP per capita in international prices.

lglopen One year lag of trade openness.

lg1caplib One year lag of Quinn's index of liberalization of capital controls.

1glunemp One year lag of unemployment.

lg1employerorgn One year lag of index of employers' organization.

lg1medvoter One year lag of ideological position of median voter.

coid1 ... 17 Country dummy variables where numeric designation corresponds to coid code above (Australia through United Kingdom).

### Section 2. Analysis associated with Table 7.2.

**Data Set**: MartinSwank contemporary data.xls

Variables required for this analysis (in addition to those above) are supplied next in the data set. The STATA code required for estimation of the core models in Table 7.2 is:

All countries as described in text:

xtpcse employerorg lg1aunmem lg1deind lg1medvoter lg1rgdpch lg1unemp lg1open lg1caplib lg1prorep lg1feder lg1statecapacity lg1neffpar avleftc avtcdemc if year > 1973 & year < 2003, correlation(ar1) pairwise;

xtpcse macrocorp lg1deind lg1medvoter lg1rgdpch lg1unemp lg1open lg1caplib lg1prorep lg1feder lg1statecapacity lg1neffpar avleftc avtcdemc if coid < 19 & year > 1973 & year < 2003, correlation(ar1) pairwise;

xtpcse macrocorp lg1macrocorp lg1deind lg1medvoter lg1rgdpch lg1unemp lg1open lg1caplib lg1prorep lg1feder lg1statecapacity lg1neffpar avleftc avtcdemc if coid < 19 & year > 1973 & year < 2003, pairwise;

CMEs only as listed in the text:

xtpcse employerorg lg1aunmem lg1deind lg1medvoter lg1rgdpch lg1unemp lg1open lg1caplib lg1prorep lg1feder lg1statecapacity lg1neffpar avleftc avtcdemc if cme==1 & year > 1973 & year < 2003, correlation(ar1) pairwise;

xtpcse macrocorp lg1deind lg1medvoter lg1rgdpch lg1unemp lg1open lg1caplib lg1prorep lg1feder lg1statecapacity lg1neffpar avleftc avtcdemc if cme==1 & year > 1973 & year < 2003, correlation(ar1) pairwise;

xtpcse macrocorp lg1macrocorp lg1deind lg1medvoter lg1rgdpch lg1unemp lg1open lg1caplib lg1prorep lg1feder lg1statecapacity lg1neffpar avleftc avtcdemc if cme==1 & year > 1973 & year < 2003, pairwise;

employerorg Index of employer organization.

macrocorp Index of macrocorporatism as described in book.

seccoord Index of sector coordination as defined in book.

lg1prorep One year lag of measure of proportional representation.

lg1feder One year lag of measure of federalism.

lg1neffpar One year lag of number of effective parliamentary parties.

lg1statecapacity One year lag of index of state capacity.

lg1unmem One year lag of union density.

### Section 3. Analysis in Table 12.4.

Data Set: MartinSwank contemporary data.xls

Additional variables required for Table estimation of models of 12.4 are given below. The STATA code for the four models is:

xtpcse earn 5010 lg1deind lg1pcrgdpch lg1open lg1caplib lg1macrocorp lg1cumleft lg1cumtcdem if coid<19 & year<2004, correlation(ar1) pairwise;

xtpcse involpt lg1deind lg1pcrgdpch lg1open lg1caplib lg1macrocorp lg1cumleft lg1cumtcdem coid2 coid3 coid5 coid6 coid7 coid8 coid10 coid11 coid12 coid14 if cme==1 & year <2004, correlation(ar1) pairwise;

xtpcse ltunem12 lg1deind lg1pcrgdpch lg1open lg1caplib lg1macrocorp lg1cumleft lg1cumtcdem coid2 coid3 coid5 coid6 coid7 coid8 coid10 coid11 coid12 coid14 if cme==1 & year <2004, correlation(ar1) pairwise;

xtpcse tmpempl lg1deind lg1pcrgdpch lg1open lg1caplib lg1macrocorp lg1cumleft lg1cumtcdem coid2 coid3 coid5 coid6 coid7 coid8 coid10 coid11 coid12 coid14 if cme==1 & year <2004, correlation(ar1) pairwise;

tmpempl Temporary contract employment.

earn5010 Ratio of earnings of worker at 50<sup>th</sup> to worker at 10<sup>th</sup> percentile.

involpt Involuntary part-time employment.

ltunem12 Long-term unemployment (percent of unemployed out of work for 12 months or

more.

involpt Involuntary part-time unemployment.

lg1cumleft One year lag of cumulative years of left government.

lg1cumtcdem One year lag of cumulative years of Christian Democratic government.

### Section 4. Analysis in Table 12.5.

Data Set: MartinSwank contemporary data.xls

Additional required variables for analyses in Table 12.5 are given below. The STATA Code for estimating core Table 12.5 models is (where year74 ... year 01 are 1974 to 2001year dummies and ):

xtpcse pcrgdpch lg1rgdpch lg1inflate lg1employerorg worldgrowop year74 year75 year76 year77 year78 year79 year80 year81 year82 year83 year84 year85 year86 year87 year88 year89 year90 year91 year92 year93 year94 year95 year96 year97 year98 year99 year00 year01 if coid < 19 & year > 1973 & year < 2004, correlation(ar1) pairwise;

xtpcse pcrgdpch lg1rgdpch lg1inflate lg1employerorg lg1employerorgsq worldgrowop year74 year75 year76 year77 year78 year79 year80 year81 year82 year83 year84 year85 year86 year87 year88 year89 year90 year91 year92 year93 year94 year95 year96 year97 year98 year99 year00 year01 if coid < 19 & year > 1973 & year < 2004, correlation(ar1) pairwise;

xtpcse pcrgdpch lg1rgdpch lg1inflate lg1macrocorp worldgrowop year74 year75 year76 year77 year78 year80 year81 year82 year83 year84 year85 year86 year87 year88 year89 year90 year91 year92 year93 year94 year95 year96 year97 year98 year99 year00 year01 if coid < 19 & year > 1973 & year < 2004, correlation(ar1) pairwise;

xtpcse pcrgdpch lg1rgdpch lg1inflate lg1macrocorp lg1macrocorpsq worldgrowop year74 year75 year76 year77 year78 year79 year80 year81 year82 year83 year84 year85 year86 year87 year88 year89 year90 year91 year92 year93 year94 year95 year96 year97 year98 year99 year00 year01 if coid < 19 & year > 1973 & year < 2004, correlation(ar1) pairwise;

lglinflate One year lag of inflation rate.

worldgrowop World demand (one year lag of mean of growth rates in all other advanced

democracies weighted by the level of trade openness)

pergdpch Percentage change in real per capita GDP (international prices).

### Section 5. Supplemental Variables for Preceding Analyses in Sections 1 to 4.

Data Set: MartinSwank contemporary data.xls

Variables listed below are components of composite variables/indices listed above (e.g., components of macrocorporatism, state capacity and so forth). See supplemental material below for further descriptions and data sources.

unionorg Index of union organization (standard score index of union density powers of

largest central peak association; and labor integration in national policy making)

cenbar Level of collective bargaining.

aunmem Union density.

conp1...4 Union peak association powers (see below).

labpolm Labor integration in the policy process.

empfed Presence of national peak association of employers.

emppow Powers of peak employers' federation (see below).

emppolm Extent of employer integration in the national policy process.

pursup Degree of long-term linkage between purchasers and suppliers.

comfrm Degree of cooperation between competitive firms for collective business goods.

invfrm Degree of long-term linkages between finance-producers.

labmanc Extent of labor-management cooperation on employment and other issues.

trecgdp Total government revenues as a percent of GDP.

government employment as a percent of total employment.

pop1564 Working age population (1000s).

cvempa Civilian employment in primary sector (1000s).

cvempi Civilian employment in industrial sector (1000s).

leftc Left party cabinet share of total cabinet portfolios.

tcdemc Total Christian Democratic parties (center and right CD parties) cabinet share.

flfp Female labor force participation rate.

### Section 6. Analysis associated with Table 12. 3

**Data Set**: MartinSwank redistribution data.xls

This data set consists of variables that have been defined above (and are lagged as defined in the text of the book); the only additional variables are the redistribution variable and its components - pre- and post-fisc GINIs for working-age household income – and the one-year lag of sector coordination. Only country years that have Luxembourg Income Study data on income redistribution are used as discussed in the text.

The STATA code for the core analyses associated with Table 12.3 is:

xtpcse waredistriba lg1earn9050 lg1deind lg1flfp lg1rgdpch lg1unemp lg1open lg1caplib lg1employerorg avleftc avtcdemc, correlation(ar1) pairwise;

xtpcse waredistriba lg1earn9050 lg1deind lg1flfp lg1rgdpch lg1unemp lg1open lg1caplib lg1macrocorp avleftc avtcdemc, correlation(ar1) pairwise;

xtpcse waredistriba lg1earn9050 lg1deind lg1flfp lg1rgdpch lg1unemp lg1open lg1caplib lg1employerorg lg1unionorg avleftc avtcdemc, correlation(ar1) pairwise;

xtpcse waredistriba lg1earn9050 lg1deind lg1flfp lg1rgdpch lg1unemp lg1open lg1caplib lg1macrocorp lg1seccoord avleftc avtcdemc, correlation(ar1) pairwise;

where waredistriba =  $((disinc25p - privinc25p)/privinc25p) \times 100$ 

disinc25p Gini index for distribution of disposable income across working-age households (age 25-59 head).

privinc25p Gini index for distribution of private income across working-age households.

lg1seccoord One-year lag of index of sector coordination (standard score index of pursup, comfrm, invfrm, and labmanc as defined above).

### CONTEMPORARY ANCILLARY MATERIAL: DATA AND SUPPLEMENTAL ANALYSIS FOR CHAPTERS 7 THROUGH 12

### **CONTEMPORARY ANCILLARY MATERIAL**

#### **CONTENTS**

**Overview** 

Variable Characteristics, Descriptions, and Data Sources

**Supplemental Analysis for Chapters 7, 8, and 12** 

### **OVERVIEW**

In the following sections, we provide details on variable measurement and data sources as we as extensive supplemental analysis for quantitative work presented in Chapters 7, 8, and 12. Supplemental analysis includes tests of robustness of findings presented in the book and tests of additional hypotheses introduced in the text. We also discuss a variety a methodological issues in our quantitative analysis not fully covered in the book's chapters. (References used in this appendix are listed here unless used elsewhere in the book; for material also cited in the text, full references are provided in the book's bibliography.)

As to measurement issues for variables listed below, we discuss many well-known problems in the text or make reference to core work in the literature. For some measurement issues, however, we rely on reader familiarity (and the willingness of the reader to consult the general literature). For instance, we do not discuss at any length here

1

or in the text controversies about the best data sources and operationalizations for income inequality. For inequality and many other variables, we use "best practices" (e.g., GINI indices of Luxembourg Income Study data). For other variables, some limitations exist on cross-national comparability of standard measures (e.g., the OECD and International Labor Organization data on public employment). When non-trivial measurement error is likely, we use multiple indicators of core causal factors and present multiple tests.

### VARIABLE CHARACTERISTICS, DESCRIPTIONS, AND DATA SOURCES

### Part I: Public Sector, Redistribution, Social Policy and Inequality/Labor Market Dualism: Details and Data Sources

Active Labor Market Policy: Total ALMP spending as a percent of GDP. Source: OECD (2006) Social Expenditures Data Base, CD Rom. Paris: OECD.

Social Protection of Workers: Index of unemployment and sickness insurance income replacement rates, benefit entitlements (e.g., qualification period, waiting days, duration), and population coverage rates. Source: Lyle Scruggs and James Allen, "The Comparative Welfare State Entitlements Data Set."

State Capacity. Standard score index of public sector employment as a percent of total employment and general government revenues as a percent of GDP. Sources: Total and government employment. Sources: OECD Economic Outlook Database (No.82); For Australia, Austria, Switzerland, and New Zealand, all or part of series from OECD Historical Statistics and ILO, Public employment data series. Total tax revenues: OECD, Revenue Statistics of Member Countries. Paris: OECD, various years. Country GDP. Source: OECD, National Accounts. Paris OECD, various years.

GINI Indices for Market and Post-Tax/Transfer Income Distribution of Working-Age Households. Absolute and percentage changes from pre- to post-fisc GINI. Source: GINI's computed by Vincent Mahler, Department of Political Science, Loyola University from Luxembourg Income Study data; see Mahler and Jesuit (2006).

Part-Time and Fixed Term Employment: Percentage of total employees in part-time or fixed-term contract work; percentage of total employees in involuntary part-time work. Source: OECD, Employment Outlook (selected numbers); OECD Employment Data Base.

50/10~Wage~Ratio: Ratio of  $50^{th}$  percentile to  $10^{th}$  percentile (full-time equivalent) earner. Source: OECD Earnings Data Base.

*Low Wage Employment*: percentage of workers below one-half median income. OECD Earnings Data Base.

### Part II: Political Data: Details and Data Sources.

Party Government. We measure Left and Christian Democratic government control in three ways: for some parts of the analysis, we use average shares of cabinet portfolios held by these party groups in the three preceding years; for other stages of analyses, we use either cumulative shares from 1950, or for a time-invariant version, 1950-1975 cumulative years of government control by Left and Christian Democratic parties. Sources: Left and

Christian democratic party cabinet portfolios as a percent of all portfolios: (for portfolios): Eric Browne and John Dreijmanis, *Government Coalitions in Western Democracies*, (Longman, 1982); *Keesings Contemporary Archives* (selected years). Sources for Classification: (1) Francis Castles and Peter Mair, "Left\_Right Political Scales: Some 'Expert' Judgments," *European Journal of Political Research* 12 (1984): 73\_88. (2) *Political Handbook of the World* (New York: Simon and Schuster, selected years.) (3) Country-specific sources as well as Mackie and Rose's *International Almanac of Electoral History*, 2<sup>nd</sup> Edition, and "Political Data" updates in annual issues of *European Journal of Political Research*.

Median Voter/Ideological Position: Kim-Fording estimate of the left-right voter ideology of median voter based on party manifesto data and electoral choice. Source: 1945-2003 data supplied by HeeMin Kim, Department of Political Science, Florida State University. See Kim and Fording (1998; 2003).

*Median Voter/Economic Position*: 90/50 and 50/10 Ratios, or ratios of 90 (50<sup>th</sup>) percentile to 50<sup>th</sup> (10<sup>th</sup>) percentiles (full-time equivalent) earner. Source: OECD Earnings Data Base.

Employers' Organization: standard score index of presence of national employers' federation, the peak federation's powers over members (i.e., appointment power, veto power over collective bargains and lockouts, own conflict funds), and policy-process integration of employers in (e.g., boards, commissions). Sources: for presence and powers of national peak assications, Miriam Golden, Michael Wallerstein, and Peter Lange, "Union Centralization Among Advanced Industrial Societies" (electronic data base at www.shelly.polisci.ucla.edu/data); for incorporation of employers and unions into corporatist policy making forums, 1970 to 1997 data are from Traxler, Blaschke, and Kittle 2001, with updates by the authors.

Macro-corporatism: standard-score index of employer organization, union organization (index of union density, union peak association power, as for employers, and policy-process integration of labor), and the level of collective bargaining. Sources: for union and employer peak association presence and powers, and for bargaining centralization, Miriam Golden, Michael Wallerstein, and Peter Lange, "Union Centralization Among Advanced Industrial Societies" (electronic data base at www.shelly.polisci.ucla.edu/data). For incorporation of unions (and employers) into corporatist policy making forums, 1970 to 1997 data are from Traxler, Blaschke, and Kittle 2001, with updates by the authors. For Union Density: For union membership, Jelle Visser, "Trade Union Membership Database," Typescript, Sociology of Organizations Research Unit, Department of Sociology, University of Amsterdam, March, 1992; "Unionization Trends Revisited," Centre for Research of European Societies and Industrial Relations (CESAR), Research Paper 1996/2, February 1996 (and updates provide to the authors by Bernhard Ebbinghaus).

*Sector coordination*: standard-score index of long-term finance-producer relations, long-term purchaser-supplier relations, labor-management cooperation at firm level,

enterprise cooperation for collective business goos. Source: Hicks-Kenworthy data base as described in Alex Hicks and Lane Kenworthy, "Cooperation and Political Economic Performance in Affluent Democratic Capitalism," *American Journal of Sociology* 6 (May 1998): 1631-72, and updated by authors for 1994 to 2002.

*Proportionality*: measured as an ordinal scale of the degree of proportionality of the electoral system (0.0 = disportional, 1.0 = semi-proportional, and 2.0 = proportional). Lijphart (1999) and country specific sources for updates to 2000s.

The number of effective legislative parties:  $1/\sum p_i^2$ , where p is the proportion of seats for the i-th party. Source for seats: Mackie and Rose's *International Almanac of Electoral History*,  $2^{nd}$  Edition, and "updates" as noted above for party data..

Federalism: measured as an 1.0 to 5.0 ordinal scale (1.0 = unity and centralized, 2.0 = unity and decentralized, 3.0 = semi-federal, 4 federal and centralized, 5.0 = federal and decentralized. Lijphart (1999) and country specific sources for updates to 2000s.

Institutional Veto Points. Standard Score index of federalism, bicameralism, presidentialism, strength of judicial review and use of referendums. Sources: Lijphart (1999) and country specific sources for updates to 2000s.

### **Part III: International Variables:**

Index of restrictions on capital flows: 0 to 100 index of the degree of liberalization of controls on transnational flows capital movements. Source: Dennis Quinn, School of Business, Georgetown University. See Dennis Quinn and Carla Inclan, "The Origins of Financial Openness." American Journal of Political Science 41 (July, 1997): 777-813.

Foreign Direct Investment. Total inflows and outflows (unless analysis stipulates inflows or outflows only) of FDI as a percent of GDP. Source: OECD, Foreign Direct Investment in OECD Countries; IMF, Balance of Payments Statistics; GDP in US dollars from OECD, National Accounts.

*Trade Openness*: Exports and imports of goods and services in millions (billions for Italy and Japan) of national currency units: Source: OECD, *National Accounts of OECD Member Countries*. Paris: OECD, various years.

### Part IV: Socioeconomic Data:

*De-industrialization* as 100 minus industrial and agricultural employment as a percentage of the working age population (and lag this one year). Source: component parts from OECD, *Labor Force Statistics*. (Paris: OECD, various years).

*Dependent Population*: Total population minus population 16 to 64 as a percent of

total population. Source: OECD, Labor Force Statistics. (Paris: OECD, various years).

Unemployment/Long-term Unemployment Rates. percent of the civilian labor force unemployed and percent of all unemployed out of work for 12 or more months. Source: OECD, Labor Force Statistics. (Paris: OECD, various years).

*Female Labor Force Participation Rates*. Percent of working-age (16-64) females in formal labor market. Source: OECD, *Labor Force Statistics*. (Paris: OECD, various years).

Real per capita GDP in constant international prices: Source: Alan Heston, Robert Summers and Bettina Aten, Penn World Table Version 6.3, Center for International Comparisons of Production, Income and Prices at the University of Pennsylvania, August 2009.

### **SUPPLEMENTAL ANALYSIS: CHAPTER 7**

In Ancillary Table 7.1, we provide jackknifed tests of the robustness of our findings on the causes of 1974-2002 variations in employers' organization and macro-corporatism across 18 nations. To compute "jackknifed" estimates, we delete one nation (*i*) at a time and estimate 18 17-country equations. The mean of these 18 new coefficient estimates becomes the jackknifed coefficient for each variable and the standard deviation of these 18 17-country estimates becomes the standard error. We also substitute cumulative years in government of social and Christian democratic parties for the short-term measures used in the text (average percentage of cabinet portfolios for the last three years). This latter set of tests is particularly important as it allows us to assess (1) long-term impacts of collectivist and communitarian parties on cooperative institutions suggest by Walter Korpi, Alexander Hicks, Harold Wilensky and others, and (2) the persistence or absence of impacts of political institutions on cooperation in the presence of long-term patterns of partisan government.

As the table reveals, our final models of employers' organization and macrocorporatism are highly robust to deletions of individual countries (e.g, potential outliers that
unduly influence estimated coefficients and significance levels). This holds systematically
for theoretically central variables (proportionality, number of effective parties, federalism,
state capacity, and party variables) as well as control variables. As to long-term partisan
effects, the third column in each set of columns provides clear evidence
that long-term patterns of partisan government are important: both social and Christian

<sup>&</sup>lt;sup>1</sup> Korpi 2006; Hicks no date; Wilensky 2002.

democratic governance bolsters coordination in the post-industrial era, with the substantive impact of social democracy being two to three times the magnitude of the effect of Christian democracy. Moreover, with the exception of state capacity in employers' organization model, the political institutional variables all remain significant in the presence of long-term party measures. The anomaly of state capacity suggests that while state capacity has important direct effects on macro-corporatist cooperation between labor, employers, and the state, it does not, by itself, buoy employers' organization. This is generally consistent with our theoretical arguments that link state capacity to coordination.

In Ancillary Table 7.2, we display the full model of determinants of state capacity and offer tests of robustness and, again, long-term partisan impacts. As in the case of coordination, our findings seem to be highly robust to deletions of individual countries. In addition, the model of long-term partisan impacts behaves as expected. That is, our theory argues that proportionality and federalism have long-term, indirect effects coordination (in addition to their direct effects) because they influence state capacity, itself a positive influence on the maintenance of cooperation institutions. For proportionality, the core mechanism linking electoral systems and state capacity is the strong, positive impact of PR on social democratic governance and, in turn, social democratic government's effect on state capacity. In fact, that is actually what our findings – a large positive impact on state capacity of Left Government and, in the presence of social democracy, an insignificant coefficient for proportionality – indicate. (Federalism continues to exert a negative influence on state capacity in the long-term partisan model.)

Finally, for both coordination and state capacity models, we assessed our models

with a Fixed Effects Vector Decomposition (FEVD) estimator (not reported). We did so primarily because we desired to assess our core findings in the presence of controls of unmodeled unit (country) effects. As the same time, as we note in the text, it is difficult if not impossible to obtain good estimates of the effects of largely time-invariant factors (e.g., PR and federalism) in the presence of country "fixed effects." FEVD, developed by Thomas Plümper and Vera Troeger, offers one possible solution to this problem.<sup>2</sup> In short, as Nathaniel Beck has recently pointed out, FEVD is equivalent to estimating parameters with OLS for effects of time variant variables on some dependent variable in the presence of full fixed effects. Coefficients for unit effects are then regressed on time-invariant variables and the resulting coefficients for time-invariant variables become the estimates for the time-invariant factors on the focal dependent variable.<sup>3</sup>

Findings from FEVD estimation of our basic models for employers' organization, macro-corporatism, and state capacity (available from the authors) reaffirmed significant effects for core political institutional variables and, for nearly all cases, time variant factors. (Estimation of these models also produced equation R-squares of .90-plus along with substantively very similar individual coefficients.) We do not, however, wish to rely on this technique beyond perusal as another secondary check on the robustness of our findings. First, it constrains variables to either solely time variant or invariant categories (where, for instance, cross-national variation in predominately time varying factors is not utilized). Second, and most important, econometricians question a variety of properties of the FEVD

<sup>&</sup>lt;sup>2</sup> Plümper and Troeger 2007.

<sup>&</sup>lt;sup>3</sup> Nathaniel Beck. 2011. "Of Fixed Effects and Time In-Variant Variables." *Political Analysis* 19 (No. 2): 119-122



<sup>&</sup>lt;sup>4</sup> For instance, see William Greene's and Breusch, Ward, Nguyen, and Kompas's multiple contributions to the symposium on FEVD in *Political Analysis* 19 (No. 2).

Ancillary Table 7.1. The Underpinnings of Employers' Organization and Macro-Corporatism in Post-industrial Capitalism, 1974-2002. Robustness and Alternative Specifications.

	Emp	loyers' Organ	ization	Macro-corporatism			
Variables	Basic	Jackknife	Cumulative Party Govt	Basic	Jackknife	Cumulative Party Govt	
Politics & Institutions							
Proportionality t-1	.0703*** (.0234)	.0770*** (.0298)	.0335* (.0.222)	.2515*** (.0458)	.2530*** (.0433)	.1787*** (.0449)	
Number of Effective Parties <sub>t-1</sub>	.0259*** (.0078)	.0259*** (.0064)	.0203*** (.0069)	.0504*** (.0171)	.0505*** (.0062)	.0516*** (.0175)	
Federalism <sub>t-1</sub>	1323*** (.0199)	1351*** (.0281)	1287*** (.0171)	0523*** (.0211)	0511** (.0218)	0423** (.0199)	
State Capacity <sub>t-1</sub>	.0961*** (.0374)	.0990*** (.0200)	0094 (.0380)	.3133*** (.0362)	.3143*** (.0235)	.1273** (.0636)	
Left Government mean, t-1 to t-3	.0009*** (.0003)	.0010*** (.0002)		.0022*** (.0007)	.0022*** (.0002)		
Christian Democratic Government mean, t-1 to t-3	.0017*** (.0005)	.0017*** (.0006)		.0039*** (.0011)	.0038*** (.0005)		
Left Government <sub>cum from</sub>			.0302*** (.0056)			.0301*** (.0062)	
Christian Democratic Government <sub>cum to t-1</sub>			.0169*** (.0024)			.0120*** (.0034)	
Median Voter <sub>t-1</sub>	.0007 (.0008)	.0008** (.0004)	.0008 (8000.)	0001 (.0018)	.0000 (.0009)	.0005 (.0017)	
Post-industrialization							
Union Density t-1	.0104*** (.0018)	.0102*** (.0013)	.0075*** (.0019)				
De-industrialization $_{\rm t-1}$	0046 (.0041)	0047** (.0025)	0052* (.0034)	0177*** (.0057)	0181*** (.0050)	0148*** (.0055)	
Trade Openness t-1	.0007 (.0006)	.0011 (.0020)	.0001 (.0005)	.0022** (.0011)	.0022*** (.0006)	.0019** (.0011	
Capital Market Liberalization <sub>t-1</sub>	0015*** (.0007)	0015*** (.0003)	0017*** (.0007)	0086*** (.0022)	0084*** (.0009)	0080*** (.0022	
Business Cycle							
Unemployment t-1	0085** (.0041)	0082*** (.0023)	0103*** (.0038)	0069 (.0085)	0068** (.0037)	0052 (.0087)	

Per Capita Real GDP <sub>t-1</sub>	.0037 (.0036)	.0044 (.0035)	0125*** (.0039)	.0048 (.0079)	.0050* (.0031)	0119 (.0079)
Constant	.0278	.0953	.2802	1.4527	1.4618	1.2871
$R^2$	.3292		.3933	.4261		.4221
N	494		494	493		493

Models of columns I and III, and IV and VI, are estimated with Ordinary Least Squares with panel correct standard errors; models of columns II and V are based on jackknifed coefficients which are described in the text above.

<sup>\*</sup> probability < .10
\*\* probability < .05
\*\*\* probability < .01

## Ancillary Table 7.2. The Impact of Political Institutions on the Development of State Capacity 1974-2002:

Variables	Basic Model	Jackknifed Model	Cum Party Govt.
Politics & Institutions			
Proportionality t-1	.0401**	.0426**	0228
	(.0023)	(.0179)	(.0240)
Federalism <sub>t-1</sub>	1250***	1261***	0474**
	(.0196)	(.0251)	(.0215)
Left Government $_{\text{t-3 to t-1}}$	.0010** (.0004)	.0010*** (.0003)	
Christian Democratic	.0002	.0007	
Government <sub>t-3 to t-1</sub>	(.0008)	(.0025)	
Left Government $_{cum\ from\ 1950\ to\ t-1}$			.0620*** (.0042
Christian Democratic Government <sub>cum from 1950 to t-1</sub>			0071* (.0037)
Median Voter <sub>t-1</sub>	.0023*	.0023***	.0017*
	(.0016)	(.0003)	(.0011)
Economic Structure - Change			
Dependent Population $_{t-1}$	.0001	.0016	.0003
	(.0004)	(.0064)	(.0003)
Unemployment t-1	.0237***	.0239***	.0152***
	(.0060)	(.0021)	(.0054)
Trade Openness <sub>t-1</sub>	.0002	.0002	0008
	(.0009)	(.0010)	(.0010)
Capital Market	.0005	.0005*	.0005
Liberalization <sub>t-1</sub>	(.0015)	(.0003)	(.0012)
Per Capita Real GDP <sub>t-1</sub>	.0201***	.0203***	0110*
	(.0069)	(.0039)	(.0069)
Economic Growth Rate $_{t-1}$	0065***	0065***	0034**
	(.0022)	(.0005)	(.0018)
Constant	8449	6952	7189
$R^2$	.1734		.4183
N	502		502

Models of columns I and III are estimated with Ordinary Least Squares with panel correct standard errors. \* probability < .10 \*\* probability < .05 \*\*\* probability < .01

#### SUPPLEMENTAL ANALYSIS FOR CHAPTER 8

We display 1980s and 2000s levels and changes in ALMP and social protection for workers in Ancillary Table 8.1. In Ancillary Table 8.2 we offer tests of the simultaneous effects of employers' organization and union organization on ALMP and social protection as well as the impacts of macro-corporatist institutions (substituted here for employers' organization that anchors the main models of the text). Ancillary Tables 8.3 and 8.4 report jackknife tests for robustness and tests of additional hypotheses for direct effects of PR, federalism, veto points, and voter turnout on ALMP and on social protection.

With regard to the findings of Table 8.2, two results depart somewhat from expectations. For social protection, employers' organization becomes insignificant in the presence of (the highly significant) union organization factor. While this is not completely inconsistent with our theory, which emphasizes the important of employers to ALMP, it does raise questions about the role of employers' organization on levels of social supports for working-age families. One possibility to keep in mind is that the employer and union variables in these equations have high R-square deletes (R-squares of regressions of employer and union organization on other variables in the models) in excess of .80. That is, high multicollinearity raises the question of whether it is possible to get reasonable estimates of employer and union organization's simultaneous impacts on policies.

The second result in Table 8.2 of note is that the interaction of macro-corporatism and deindustrialization is marginally significant in the ALMP equation (prob = .11). The mediation of deindustrialization's impacts on social protection by macro-corporatism is, however, very clear with a highly significant coefficient for the macro-corporatism and

deindustrialization interaction.

With respect to Tables 8.3 and 8.4, our findings for determinants of ALMP and social protection are highly robust to deletions of individual countries and the addition of supplemental variables. Tests of supplemental hypotheses indicate that federalism and veto points may constrain the development of ALMP and that voter turnout may positively bolster levels of social protection for current workers. Given that these additional factors do not have consistent and clearly significant effects across both policy areas, we consider the findings as suggestive and do not draw firm conclusions on their relevance.

Ancillary Table 8.1. Change and Continuity in ALMP Spending and Social Protection, 1980-2002

	AL	MP	Social Protection		
Country	Early 1980s	Early 2000s	Early 1980s	Early 2000s	
Relatively High Macro- corporatism					
Norway	.6	.8	25.6	26.3	
Denmark	.8	1.7	22.2	21.0	
Sweden	1.6	1.6	23.1	22.7	
Belgium	1.3	1.2	20.3	20.3	
Finland	1.0	1.1	16.1	17.9	
Austria	.3	.6	17.0	16.6	
Moderate Macro- corporatism					
Italy	.2	.5	10.4	12.6	
Germany	.7	1.2	20.1	18.8	
Ireland	1.4	.9	15.2	14.2	
Netherlands	.7	1.1	23.6	21.4	
Australia	.4	.4	7.2	7.7	
Relatively Low Macro- corporatism					
Switzerland	.1	.6	20.8	12.8	
Japan	.2	.3	10.6	11.3	
France	.6	1.3	16.6	16.3	
New Zealand	.8	.5	9.6	8.2	
United Kingdom	.7	.4	9.7	11.5	
Canada	.4	.4	13.1	9.0	
United States	.1	.2	8.9	9.0	

The table displays 1981-1985 and 1998-2002 means for the policy dimensions. See above for details on variable measurement and sources.

### Ancillary Table 8.2. The Determinants of ALMP and Social Protection in the Postindustrial Era: Supplemental Tests of Union Power and Macro-corporatism

	ALMP			Social Protection		
	I	II	III	IV	V	VI
Employers' Organization	.4761** (.1983)			.0855 (.3279)		
Labor Organization	1050 (.0904			1.2981** (.3903)		
Macro-corporatism		.0778* (.0520)	7200 (.6778)		.2469* (.1825)	-5.6851** (1.942)
Macro-corporatism × Deindustrialization			.0102 <sup>a</sup> (.0085			.0777** (.0261
Median Voter (Ideological Position)	0048** (.0019)	0041** (.0020)	0040** (.0020)	.0139** (.0067)	.0140** (.0069)	.0144** (.0067)
Left Party Government	.0005 (.0006)	.0003 (.0006)	.0003 (.0006)	.0019 (.0021)	.0027 (.0022)	.0027 (.0021)
Christian Democratic Party Government	.0000 (.0013)	0001 (.0014)	0002 (.0014)	0002 (.0049)	0018 (.0050)	0019 (.0051)
Deindustrialization	.0088 (.0139)	.0038 (.0137)	.0033 (.0135)	.0756** (.0283)	.0662** (.02800	.1354** (.0440)
Trade Openness	0028* (.0019)	0028* (.0019)	0029* (.0019)	0021 (.0076)	0015 (.0078)	0019 (.0078)
Capital Mobility	.0047** (.0017)	.0051** (.0018)	.0047** (.0019)	0020 (.0071)	0034 (.0072)	0079 (.0071)
Unemployment	.0268** (.0120)	.0250** (.0118)	.2423** (.0118)	0114 (.0306)	0067 (.0315)	0637** (.0373)
Per capita Real GDP	.0036 (.0076)	.0037 (.0077)	.0044 (.0077)	.0687** (.0290)	.0629** (.0302)	.0330 (.0322)
ntercept	2210	5707	4631	2.11393	1.6640	-1.8121
$\mathcal{E}^2$	.6275	.5740	.5710	.8825	.8780	.8647
Number Observations	391	391	391	501	501	501

The models are estimated with 1973 (1980/1985) to 2003 annual data from 18 nations by Prais-Winston (AR1) regression with panel correct standard errors; nation fixed effects are included (not reported). The table reports OLS regression coefficients with panel correct standard errors.

<sup>\*</sup>indicates significance at the .10 level \*\* indicates significance at the .05 level or below.

Ancillary Table 8.3. The Determinants of ALMP Spending in the Postindustrial Era: Tests of Supplemental Hypotheses and Robustness.

	Basic	Jackknife	PR	Federalism	Veto Points	Voter Turnout
Employers' Organization	.4144**	.4153**	.4172**	.4174**	.4188**	.3831**
	(.1670)	(.0363)	(.1614)	(.1644)	(.1647)	(.1686)
Proportional Representation			0316 (.0309)			
Federalism				0477* (.0370)		
Veto Points					1980* (.1526)	
Voter Turnout						0029 (.0040)
Median Voter	0047**	0047**	0049**	0047**	0047**	0038**
(Ideological Position)	(.0019)	(.0007)	(.0019)	(.0019)	(.0019)	(.0020)
Left Party Government	.0004	.0004**	.0003	.0004	.0004	.0006
	(.0006)	(.0001)	(.0006)	(.0006)	(.0006)	(.0006)
Christian Democratic	.0001	.0001	0001	0001	0001	0001
Party Government	(.0013)	(.0013)	(.0013)	(.0013)	(.0013)	(.0015)
Deindustrialization	.0120	.0117**	.0129	.0125	.0127	.0115
	(.0133)	(.0060)	(.0131)	(.0132)	(.0133)	(.0138)
Trade Openness	0029*	0029**	0034**	0031**	0030*	0049**
	(.0019)	(.0004)	(.0019)	(.0019)	(.0019)	(.0027)
Capital Mobility	.0046**	.0047**	.0019**	.0047**	.0048**	.0051**
	(.0018)	(.0006)	(.0017)	(.0018)	(.0018)	(.0018)
Unemployment	.0247**	.0246**	.0242**	.0248**	.0248**	.0277**
	(.0117)	(.0034)	(.0116)	(.0116)	(.0116)	(.0118)
Per capita Real GDP	.0034	.0024	.0036	.0041	.0039	.0063
	(.0075)	(.0033)	(.0074)	(.0074)	(.0074)	(.0082)
Intercept	4566	4736	5244	2684	1688	4469
$R^2$	.6210		.6541	.6333	.6307	.6801
Number Observations	392		393	393	392	342

The models of column I is estimated with 1971-2002 annual data from 18 nations by Prais-Winston (AR1) regression with panel correct standard errors; nation fixed effects are included (not reported).

<sup>\*</sup>indicates significance at the .10 level  $\,$  \*\* .05 level or below.

Ancillary Table 8.4. The Determinants of Social Protection in the Postindustrial Era: Tests of Supplemental Hypotheses and Robustness.

	Basic	Jackknife	PR	Federalism	Veto Points	Voter Turnout
Employers' Organization	.5041*	.5124**	.5034*	.5004*	.5037*	.5327**
	(.3189)	(.1001)	(.3201)	(.3198)	(.3191)	(.2911)
Proportional Representation			0294 (.1443)			
Federalism				1822 (.1800)		
Veto Points					.0168 (.6060)	
Voter Turnout						.0268** (.0163)
Median Voter	.0133**	.0133**	.0133**	.0133**	.0133**	.0124**
(Ideological Position)	(.0068)	(.0020)	(.0068)	(.0068)	(.0068)	(.0068)
Left Party Government	.0029*	.0028**	.0029*	.0030*	.0029*	.0035*
	(.0022)	(.0007)	(.0020)	(.0021)	(.0022)	(.0022)
Christian Democratic	0010	0009	0010	0010	0010	0005
Party Government	(.0050)	(.0020)	(.0051)	(.0051)	(.0051)	(.0051)
Deindustrialization	.0643**	.0643**	.0645**	.0642**	.0643**	.0662**
	(.0271)	(.0250)	(.0272)	(.0271)	(.02710	(.0267)
Trade Openness	0012	0011	0013	0014	0012	0011
	(.0071)	(.0037)	(.0077)	(.0077)	(.0078)	(.0081)
Capital Mobility	0043	0044**	0042	0042	0043	0045
	(.0070)	(.0023)	(.0071)	(.0071)	(.0071)	(.0072)
Unemployment	.5041*	0081	0056	0043	0056	.0007
	(.3190)	(.0214)	(.0312)	(.0312)	(.0315)	(.309)
Per capita Real GDP	.0628**	.0572**	.0627**	.0642**	.0628**	.0656**
	(.0299)	(.0212)	(.0298)	(.0299)	(.0801)	(.0328)
Intercept	2.5606	2.9234	2.5461	3.412	2.5332	1.0261
$R^2$	.8723		.8728	.8726	.8723	.8706
Number Observations	501		501	501	501	486

The models are estimated with 1971-2002 annual data from 18 nations by Prais-Winston (AR1) regression with panel correct standard errors; nation fixed effects are included (not reported).

<sup>\*</sup>indicates significance at the .10 level  $\,$  \*\* .05 level or below.

### **Supplemental Analysis for Chapter 12.**

In Ancillary Table 12.1, we report tests of supplementary hypotheses that suggest direct redistributive impacts of PR, federalism, veto points, and voter turnout as well as a test of Lupa and Pontusson's hypothesis about the redistributive role of the closeness of the median and low income voter. Federalism and veto points have marginally significant, negative effects on state redistribution. The closeness of median and low income voters is negatively related to redistribution: as the distance of median and low income voters declines, state redistribution increases.

Ancillary Table 12.2 presents a number of tests of the robustness of our findings on the determinants of redistribution. Tests for alternative measures of the median voter as well as tests for robustness in lagged dependent variable models, in models that use alternative estimates of standard errors, and in jackknife models all confirm the positive impact of macro-corporatism on redistribution (and other key findings from Chapter 12).

We also wish to highlight the results in column I where the dependent variable is operationalized as the *percentage change between pre- and post-fisc GINI indices* of workingage family income inequality (rather than absolute change). Results in column I (and reestimations for all models from Chapter 12 with the percentage change measure) are virtually identical to our results with absolute change between pre- and post-fisc GINI indices.<sup>6</sup>

<sup>&</sup>lt;sup>5</sup> Lupa and Pontusson 2011.

<sup>&</sup>lt;sup>6</sup> Kenworthy and Pontusson argue that absolute change between pre- and post-fisc GINIs is a more interpretable measure of redistribution and less susceptible to distortions. Kenworthy and Pontusson 2001. For instance, they argue that in tests for partisan impacts on percentage change measures of redistribution, left governments may be associated with lower pre-fisc

Finally, Table 12.3 completes our assessment of the impact of coordination on labor market inequalities and dualism. As the table illustrates, macro-corporatism suppresses two additional features of dualism and inequality in private markets. It is negatively associated with both the percentage of earners working below one-half the median wage and the magnitude of inequality of (working-age) family market income.

inequality and, hence, artifactualy with large percentage changes in pre- and post-fisc GINIs that come from low pre-fisc inequality. Iversen argues, however, that absolute change measures will automatically produce more redistribution when pre-fisc inequality increases without any changes in policy. Iversen 2009. We present our results in the text with the absolute measure but estimate all models with both absolute and percentage change. The choice of measure makes no difference to our results.

Ancillary Table 12.1. The Determinants of Government Income Redistribution: Supplemental Tests

	I	II	III	IV	V	VI
Macro-corporatism	2.8416**	2.6740**	2.5312**	2.6021**	2.6876**	2.0114**
	(.4149)	(.6485)	(.4670)	(.4245)	(.4252)	(.8372)
Proportional Representation		.2057 (.4925)				
Federalism			2509* (.1638)			
Veto Points				6308* (.3839)		
Voter Turnout					.0025 (.0041)	
Median-Low Income Voter (50-10 Ratio)						-3.1235* (1.9336)
Median Voter (90-50	6.5622**	6.2760**	5.6059**	6.9148**	6.8260**	5.3857**
Wage Ratio)	(2.2021)	(1.8807)	(1.9449)	(1.9047)	(2.1770)	(2.0095)
Left Party Government	.0007	.0008	.0018	.0024	.0038	0016
	(.0069)	(.0076)	(.0075)	(.0076)	(.0080)	(.0068)
Christian Democratic	.0069	.0044	.0094	.0079	.0093	.0013
Party Government	(.0131)	(.0132)	(.0116	(.0113)	(.0136)	(.0103)
Deindustrialization	.5304**	.5372**	.4925**	.4844**	.4781**	.5314**
	(.0880)	(.0699)	(.0747)	(.0777)	(.0862)	(.0804)
Trade Openness	.0040	.0009	.0003	0015	.0087	0034
	(.0147)	(.0135)	(.0139)	(.0145)	(.0126)	(.0133)
Capital Mobility	.0198	.0176	.0213	.0183	.0230	.0308*
	(.0232)	(.0260)	(.0224)	(.0224)	(.0223)	(.0230)
Unemployment	.2095**	.2139**	.2176**	.2337**	.2355**	.1963**
	(.1074)	(.1012)	(.1008)	(.1017)	(.1111)	(.1022)
Female Labor Force	.1688**	.1629**	.1459**	.1361**	.1742**	.1461**
Participation	(.0289)	(.0332)	(.0345)	(.0382)	(.0341)	(.0315)
Per capita Real GDP	3812**	3811**	3398**	3273**	3762**	3842**
	(.0605)	(.0447)	(.0522)	(.0579)	(.0954)	(.0453)
Intercept	-47.6825	-47.1772	-41.8245	-43.7283	-45.7523	-39.3072
$R^2$	.8185	.8038	.8107	.8092	.8091	.8136
Number Observations	57	57	57	57	55	57

The models are estimated with 1971-2002 annual data from 18 nations by Prais-Winston (AR1) regression with panel correct standard errors; \* indicates significance at the .10 level \*\* significant at the .05 level or below.

Ancillary Table 12.2. The Determinants of Government Income Redistribution: Robustness Tests.

	I	II	III	IV	V
Macro-corporatism	9.1863**	2.5790**	1.9473**	2.8354**	2.8046**
	(1.1926)	(.3693)	(.3252)	(.3252)	(.1714)
Median Voter (90-50	16.5262**		.2817	6.4132**	6.3415**
Wage Ratio)	(4.9657)		(1.5677)	(2.3353)	(1.0700)
Median Voter (GINI Pre- fisc Family Income)		31.6559** (5.9681)			
Left Party Government	0029	0006	0109	.0009	.0008
	(.0184)	(.0059)	(.0069)	(.0067)	(.0023)
Christian Democratic	0049	0015	.0149**	.0056	.0064*
Party Government	(.0304)	(.0094)	(.0089)	(.0087)	(.0042)
Deindustrialization	1.0900**	.3091**	.4262**	.5169**	.5190**
	(.2063)	(.0677)	(.1960)	(.0790)	(.0464)
Trade Openness	.0413	.0076	0287**	.0035	.0041
	(.0379)	(.0108)	(.0143)	(.0198)	(.0086)
Capital Mobility	.0594	.0245	0001	.0234	.0221**
	(.0638)	(.0215)	(.0296)	(.0267)	(.0094)
Unemployment	.3757	.1843**	.1834**	.2136**	.2142**
	(.3118)	(.1012)	(.1022)	(.0700)	(.0386)
Female Labor Force	.4489**	.1356	.1540**	.1627**	.1635**
Participation	(.0813)	(.0271)	(.0328)	(.0262)	(.0137)
Per capita Real GDP	9869**	3106**	2347**	3788	3787**
	(.1358)	(.0401)	(.0521)	(.0553)	(.0320)
Redistribution t-1			.3326** (.0554)		
ntercept	-100.2948	-30.3859	-29.4412	-46.3468	-46.2062
2	.8163	.8449	.8874	.8016	
lumber Observations	57	58	46	57	

Column I reports results for the basic model for the percentage change in the Pre- to post-fisc GINI; II reports the basic model with the GINI for median family private income; III reports the results with a lagged endogenous variable specification. IV displays the results with the Huber-White robust standard errors estimation. V reports the jackknife estimates of parameter effects (see text). \*indicates significance at the .10 level

<sup>\*\*</sup> indicates significance at the .05 level or below.

### Ancillary Table 12.3. The Determinants of Market Income Inequality in the Post-Industrial Era: Low Income Earners and Family Income Market Income Distribution

	% Low Earners	Family Market Income
Macro-corporatism	-1.4891** (.3628)	-1.3888** (.4592)
Left Party Government	2791** (.0377)	.0004 (.0091)
Christian Democratic Government	1805** (.0409)	.0108 (.0138)
Deindustrialization	0470 (.0369)	.6340** (.0954)
Trade Openness	0031 (.0074)	0669** (.0140)
Capital Mobility	.0429** (.0157)	.0206 (.0281)
Growth Rate in Per Capita Real GDP	.0494* (.0280)	.0152 (.0213)
Intercept	18.3140	-11.3860
$R^2$	.6505	.6684
Number Obs.	244	59

Models are estimated with 1980s to 2000s annual data from 17 nations (low income earners) and 13 nations (family market income) by Prais-Winsten (AR1) regression with panel correct standard errors.

<sup>\*</sup>indicates significance at the .10 level

<sup>\*\*</sup> indicates significance at the .05 level or below.