

# A Spatial Analysis of Incomes and Institutional Quality: Evidence from US Metropolitan Areas

## Appendix Tables

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**Abstract:** We use the Stansel (2013) metropolitan area economic freedom index and 25 conditioning variables to analyze the spatial relationships between institutional quality and economic outcomes across 381 U.S. metropolitan areas. Specifically, we allow for spatial dependence in both the dependent and independent variables and estimate how economic freedom impacts both per-capita income growth and per-capita income levels. We find that economic freedom and per-capita income growth and income levels are directly and positively related. Furthermore, we find that the total (direct plus indirect) effects on all metropolitan areas are positive and larger in magnitude than the direct effects alone, indicating that freedom-enhancing reforms in one metropolitan area lead to positive-sum games with neighboring metropolitan areas.

**JEL codes:** O43, O12, R11, R12

**Keywords:** regional growth, institutional quality, economic freedom, income levels, income growth, spatial dependence, spillovers

Tables A1 through A9 below report OLS or spatial Durbin model (SDM) estimations where either income levels or average income growth rates are the dependent variable. Table 1 from the actual paper is reproduced below to indicate how all variables are defined.

**Table 1. [From Accepted Manuscript] Variable definitions, sources, and summary statistics.**

Name	Definition	Year	Source	Mean	Std. Dev.
<i>INCOME_05</i>	2005 personal income per-capita (excluding transfer payments; 2005 constant dollars)	2005	BEA	27,313.520	6,757.524
<i>INCOME_11</i>	2011 Personal income per-capita (excluding transfer payments; 2005 constant dollars)	2011	BEA	27,169.880	6,795.154
<i>GROWTH_05</i>	personal income per-capita average growth rate, 2002-2005(excluding transfer payments)	'02-'05	BEA	0.009	0.015
<i>GROWTH_11</i>	personal income per-capita average growth rate, 2002-2011 (excluding transfer payments)	'02-'11	BEA	0.002	0.010
<i>FREEDOM</i>	economic freedom index (Stansel, 2013)	2002	Stansel	6.691	0.855
<i>SIZE_GOV</i>	size of government, area 1 of economic freedom index (Stansel, 2013)	2002	Stansel	7.536	1.137
<i>TAXATION</i>	takings and discriminatory taxation, area 2 economic freedom index (Stansel, 2013)	2002	Stansel	6.059	0.825
<i>LABOR</i>	labor market freedom , area 3 of economic freedom index (Stansel, 2013)	2002	Stansel	6.479	1.195
<i>FEDERAL</i>	% of pop. employed by the federal government	2002	BEA	0.924	0.976
<i>AGRICULTURE</i>	% of pop. 15 years and over employed in agriculture, forestry, fishing, hunting, or mining	2000	Census	1.223	1.227
<i>CONSTRUCTION</i>	% of pop. 15 years and over employed in construction	2000	Census	4.061	0.840
<i>MANUFACTURE</i>	% of pop. 15 years and over employed in manufacturing	2000	Census	8.670	4.500
<i>WHOLESALE</i>	% of pop. 15 years and over employed in wholesale trade	2000	Census	1.998	0.570
<i>RETAIL</i>	% of pop. 15 years and over employed in retail trade	2000	Census	7.207	0.904
<i>TRANSPORT</i>	% of pop. 15 years and over employed in transportation, warehousing, utilities	2000	Census	2.805	0.755
<i>INFORMATION</i>	% of pop. 15 years and over employed in information	2000	Census	1.479	0.634
<i>FIRE</i>	% of pop. 15 years and over employed in finance, insurance, real estate	2000	Census	3.525	1.372
<i>PROFESSIONAL</i>	% of pop. 15 years and over employed in professional and related services	2000	Census	4.612	1.712
<i>EDU_HEALTH</i>	% of pop. 15 years and over employed in education, health and social services	2000	Census	12.418	2.768
<i>RECREATION</i>	% of pop. 15 years and over employed in arts, entertainment, recreation, acc. or food services	2000	Census	4.806	1.602
<i>OTHER_SERV</i>	% of pop. 15 years and over employed in other services (except public admin.)	2000	Census	2.834	0.357
<i>SELF_EMPLOY</i>	Percent of population 15 years and over that are self employed	2000	Census	3.824	0.924
<i>HIGH_SCHOOL</i>	% of pop. 25 years and over with a high school diploma	2000	Census	30.079	5.971
<i>SOME_COLLEGE</i>	% of pop. 25 years and over with some college	2000	Census	28.421	4.459
<i>BACHELORS</i>	% of pop. 25 years and over with a bachelor degree or above	2000	Census	22.817	7.501
<i>TEEN</i>	% of pop. ages 15-19 years old	2000	Census	7.546	1.138
<i>WORKING</i>	% of pop. ages 20-64 years old	2000	Census	58.434	2.636
<i>SENIOR</i>	% of pop. ages 65 plus	2000	Census	12.706	3.494
<i>BLACK</i>	% of pop. that are black	2000	Census	10.396	10.642
<i>HISPANIC</i>	% of pop. that are Hispanic	2000	Census	9.432	14.059
<i>POVERTY</i>	% of pop. that are below poverty level	1999	Census	12.505	4.321
<i>LAND</i>	land area per capita in square meters	2010	Census	21.653	30.978
<i>WATER</i>	water area per capita in square meters	2010	Census	1.240	2.460
<i>INCOME_2002</i>	2002 personal income per-capita (excluding transfer payments; 2005 constant dollars)	2002	BEA	26,558.994	6,271.648

## Appendix

**Table A1:** OLS estimates of economic freedom on metropolitan area per capita income levels and growth rates.

	<i>INCOME_05</i>	<i>INCOME_11</i>	<i>GROWTH_05</i>	<i>GROWTH_11</i>
<i>FREEDOM</i>	0.1076*** (0.0151)	0.1220*** (0.0186)	0.0056*** (0.0021)	0.0032** (0.0014)
<i>INCOME_2002</i>			0.0166* (0.0085)	0.0087 (0.0057)
<i>FEDERAL</i>	0.0103* (0.0061)	0.0137* (0.0076)	-0.0010 (0.0008)	0.0000 (0.0006)
<i>AGRICULTURE</i>	0.0255*** (0.0061)	0.0446*** (0.0074)	0.0011 (0.0008)	0.0024*** (0.0005)
<i>CONSTRUCTION</i>	0.0225** (0.0091)	0.0109 (0.0111)	-0.0010 (0.0012)	-0.0017** (0.0008)
<i>MANUFACTURE</i>	0.0014 (0.0021)	-0.0033 (0.0026)	-0.0012*** (0.0003)	-0.0009*** (0.0002)
<i>WHOLESALE</i>	0.0075 (0.0115)	-0.0005 (0.0141)	-0.0003 (0.0015)	-0.0010 (0.0010)
<i>RETAIL</i>	-0.0051 (0.0078)	-0.0096 (0.0096)	-0.0012 (0.0010)	-0.0009 (0.0007)
<i>TRANSPORT</i>	0.0121* (0.0071)	0.0129 (0.0088)	-0.0015 (0.0009)	-0.0004 (0.0006)
<i>INFORMATION</i>	0.0019 (0.0121)	-0.0027 (0.0149)	-0.0020 (0.0016)	-0.0012 (0.0011)
<i>FIRE</i>	0.0123** (0.0048)	0.0078 (0.0059)	-0.0011* (0.0006)	-0.0009** (0.0004)
<i>PROFESSIONAL</i>	0.0098 (0.0067)	0.0159* (0.0082)	-0.0010 (0.0009)	0.0003 (0.0006)
<i>EDU-HEALTH</i>	-0.0087** (0.0036)	-0.0094** (0.0045)	-0.0020*** (0.0005)	-0.0007** (0.0003)
<i>RECREATION</i>	0.0050 (0.0036)	-0.0027 (0.0045)	-0.0006 (0.0005)	-0.0011*** (0.0003)
<i>OTHERSERVICE</i>	0.0323** (0.0160)	0.0345* (0.0196)	-0.0004 (0.0021)	0.0000 (0.0014)
<i>SELF</i>	-0.0102 (0.0089)	-0.0156 (0.0110)	0.0040*** (0.0012)	0.0008 (0.0008)

**Table A1 (cont.):** OLS estimates of economic freedom on metropolitan area per capita incomes.

	<i>INCOME_05</i>	<i>INCOME_11</i>	<i>GROWTH_05</i>	<i>GROWTH_11</i>
<i>HSDIPLOMA</i>	-0.0057* (0.0031)	-0.0007 (0.0038)	0.0006 (0.0004)	0.0008*** (0.0003)
<i>COLLEGE</i>	-0.0019 (0.0026)	0.0041 (0.0031)	0.0006* (0.0003)	0.0009*** (0.0002)
<i>BACHELORS</i>	0.0138*** (0.0027)	0.0153*** (0.0033)	0.0008** (0.0004)	0.0004 (0.0002)
<i>TEEN</i>	-0.0205** (0.0090)	-0.0223** (0.0111)	0.0002 (0.0012)	-0.0001 (0.0008)
<i>WORKING</i>	0.0018 (0.0039)	0.0071 (0.0048)	-0.0010** (0.0005)	0.0002 (0.0003)
<i>ELDER</i>	0.0043 (0.0036)	0.0032 (0.0044)	-0.0013*** (0.0005)	-0.0006* (0.0003)
<i>BLACK</i>	0.0043*** (0.0008)	0.0034*** (0.0009)	0.0000 (0.0001)	-0.0001 (0.0001)
<i>HISPANIC</i>	0.0014 (0.0009)	0.0020* (0.0011)	0.0001 (0.0001)	0.0000 (0.0001)
<i>POVERTY</i>	-0.0173*** (0.0029)	-0.0146*** (0.0036)	0.0005 (0.0004)	0.0005* (0.0003)
<i>LAND</i>	0.0001 (0.0002)	0.0002 (0.0003)	0.0000 (0.0000)	0.0000 (0.0000)
<i>WATER</i>	0.0032* (0.0019)	0.0064*** (0.0023)	0.0001 (0.0002)	0.0004** (0.0002)
R <sup>2</sup>	0.9140	0.8739	0.6507	0.6879
Obs.	381	381	381	381

*Notes:* \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constants and state fixed effects included in all regressions.

**Table A2:** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita incomes.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>FREEDOM</i>	0.1092*** (0.0145)	0.0057 (0.0392)	0.1149** (0.0447)	0.1122*** (0.0172)	0.0419 (0.0438)	0.1541*** (0.0485)
<i>FEDERAL</i>	0.0119** (0.0054)	-0.0238 (0.018)	-0.0119 (0.0201)	0.0164** (0.0065)	0.0014 (0.0200)	0.0178 (0.0217)
<i>AGRICULTURAL</i>	0.0278*** (0.0059)	-0.0098 (0.0161)	0.018 (0.0170)	0.0437*** (0.0067)	0.0039 (0.0171)	0.0477*** (0.0179)
<i>CONSTRUCTION</i>	0.0156* (0.0086)	0.0213 (0.0221)	0.0369 (0.0241)	0.0056 (0.0101)	0.0311 (0.0243)	0.0368 (0.0256)
<i>MANUFACTURE</i>	-0.0004 (0.0019)	-0.0102* (0.0058)	-0.0105 (0.0065)	-0.0053** (0.0023)	-0.0101* (0.0061)	-0.0155** (0.0066)
<i>WHOLESALE</i>	0.0080 (0.0105)	-0.0066 (0.0334)	0.0014 (0.0366)	0.0045 (0.0126)	0.0097 (0.0375)	0.0141 (0.0398)
<i>RETAIL</i>	0.0022 (0.007)	0.0225 (0.0198)	0.0247 (0.0222)	-0.0022 (0.0086)	0.0255 (0.0220)	0.0232 (0.0243)
<i>TRANSPORT</i>	0.0221*** (0.0061)	0.0351* (0.018)	0.0572*** (0.0199)	0.0277*** (0.0078)	0.0551*** (0.0204)	0.0828*** (0.0217)
<i>INFORMATION</i>	-0.0004 (0.0116)	0.0035 (0.0345)	0.0031 (0.0396)	-0.0031 (0.0147)	0.0483 (0.0378)	0.0452 (0.0436)
<i>FIRE</i>	0.0087** (0.0042)	-0.0288** (0.0123)	-0.0201 (0.0137)	0.0007 (0.0053)	-0.0332*** (0.0125)	-0.0325** (0.0138)
<i>PROFESSIONAL</i>	0.0111* (0.0065)	-0.024 (0.0203)	-0.0129 (0.0231)	0.0171** (0.0078)	-0.0308 (0.0212)	-0.0136 (0.0238)
<i>EDU-HEALTH</i>	-0.0137*** (0.0035)	-0.04*** (0.0102)	-0.0537*** (0.0116)	-0.0139*** (0.0041)	-0.0312*** (0.0109)	-0.0451*** (0.0121)
<i>RECREATION</i>	0.0009 (0.0036)	-0.0294*** (0.011)	-0.0285** (0.0126)	-0.0064 (0.0042)	-0.0141 (0.0114)	-0.0204 (0.013)
<i>OTHERSERVICE</i>	0.0474*** (0.0153)	0.1319*** (0.0382)	0.1793*** (0.0424)	0.0534*** (0.0177)	0.1612*** (0.043)	0.2146*** (0.0468)
<i>SELF</i>	-0.0145* (0.0081)	-0.0124 (0.0239)	-0.0269 (0.0256)	-0.0263*** (0.0095)	-0.0071 (0.0256)	-0.0334 (0.0272)

**Table A2 (cont.):** SDM direct, indirect, total effect estimates of economic freedom on metropolitan area per capita incomes.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	-0.0077*** (0.0029)	0.0063 (0.0064)	-0.0015 (0.0067)	-0.0034 (0.0036)	0.0107 (0.0073)	0.0073 (0.0075)
<i>COLLEGE</i>	-0.0043* (0.0024)	0.0028 (0.0069)	-0.0014 (0.0078)	0.0009 (0.0029)	-0.0043 (0.0076)	-0.0034 (0.0083)
<i>BACHELORS</i>	0.0126*** (0.0026)	0.0137** (0.0066)	0.0264*** (0.0074)	0.0142*** (0.0032)	0.0153** (0.0073)	0.0295*** (0.008)
<i>TEEN</i>	-0.0137 (0.0086)	0.0279 (0.0231)	0.0142 (0.0264)	-0.0132 (0.0101)	0.0320 (0.0254)	0.0188 (0.0289)
<i>WORKING</i>	0.0042 (0.0038)	0.0227** (0.0106)	0.0269** (0.0114)	0.0095** (0.0046)	0.0174 (0.0116)	0.0269** (0.0122)
<i>ELDER</i>	0.0042 (0.0036)	0.0148 (0.0092)	0.019* (0.0102)	0.0032 (0.0042)	0.0136 (0.0102)	0.0168 (0.0108)
<i>BLACK</i>	0.004*** (0.0008)	0.0009 (0.0019)	0.005*** (0.0019)	0.0028*** (0.0009)	0.0007 (0.0021)	0.0035* (0.0020)
<i>HISPANIC</i>	-0.0014 (0.0011)	0.0057** (0.0023)	0.0043** (0.0022)	-0.0009 (0.0013)	0.0058** (0.0025)	0.0048** (0.0022)
<i>POVERTY</i>	-0.0164*** (0.0028)	0.0024 (0.0072)	-0.0139* (0.0078)	-0.0142*** (0.0033)	0.0019 (0.0076)	-0.0124 (0.0082)
<i>LAND</i>	0.0000 (0.0002)	-0.0005 (0.0008)	-0.0006 (0.0008)	0.0000 (0.0003)	-0.0006 (0.0008)	-0.0006 (0.0009)
<i>WATER</i>	0.0043** (0.0018)	-0.0039 (0.0043)	0.0003 (0.0044)	0.0083*** (0.0022)	-0.0036 (0.0047)	0.0047 (0.0047)
<i>RHO</i>		-0.2470**			-0.3970***	
<i>R<sup>2</sup></i>		0.9354			0.9048	
<i>Obs.</i>		381			381	

*Notes:* \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constants and state fixed effects included in all regressions.

**Table A3:** SDM Direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita income growth rates.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>FREEDOM</i>	0.0041** (0.0019)	0.0060 (0.0049)	0.0101** (0.0051)	0.0014 (0.0012)	0.0055** (0.0028)	0.0069** (0.0030)
<i>INCOME_2002</i>	0.0216*** (0.0077)	-0.0121 (0.0164)	0.0096 (0.0166)	0.0114** (0.0050)	-0.008 (0.0099)	0.0034 (0.0100)
<i>FEDERAL</i>	-0.0011 (0.0007)	-0.0035* (0.0019)	-0.0046** (0.0020)	0.0000 (0.0005)	0.0015 (0.0012)	0.0016 (0.0013)
<i>AGRICULTURE</i>	0.0013* (0.0008)	0.0005 (0.0018)	0.0018 (0.0018)	0.0021*** (0.0005)	0.0015 (0.0011)	0.0036*** (0.0011)
<i>CONSTRUCTION</i>	-0.0012 (0.0011)	0.0012 (0.0025)	0.0001 (0.0027)	-0.0016** (0.0007)	0.0013 (0.0015)	-0.0003 (0.0016)
<i>MANUFACTURE</i>	-0.0010*** (0.0003)	0.0007 (0.0006)	-0.0004 (0.0007)	-0.0009*** (0.0002)	0.0002 (0.0004)	-0.0007* (0.0004)
<i>WHOLESALE</i>	-0.0005 (0.0013)	0.0014 (0.0036)	0.0009 (0.0038)	-0.0006 (0.0008)	0.0020 (0.0022)	0.0014 (0.0023)
<i>RETAIL</i>	-0.0011 (0.0009)	-0.0026 (0.0022)	-0.0037 (0.0024)	-0.0009 (0.0006)	-0.0001 (0.0014)	-0.0011 (0.0015)
<i>TRANSPORT</i>	-0.0018** (0.0008)	-0.0014 (0.0020)	-0.0032 (0.0022)	-0.0001 (0.0005)	0.0017 (0.0012)	0.0016 (0.0013)
<i>INFORMATION</i>	-0.0033** (0.0015)	0.0036 (0.0035)	0.0003 (0.0040)	-0.0014 (0.0010)	0.0061*** (0.0021)	0.0047* (0.0024)
<i>FIRE</i>	-0.0012** (0.0006)	0.0012 (0.0013)	0.0000 (0.0016)	-0.0014*** (0.0004)	-0.0001 (0.0008)	-0.0015* (0.0008)
<i>PROFESSIONAL</i>	-0.0006 (0.0008)	-0.0012 (0.0022)	-0.0018 (0.0024)	0.0004 (0.0005)	-0.0011 (0.0014)	-0.0007 (0.0015)
<i>EDU-HEALTH</i>	-0.0022*** (0.0005)	-0.0012 (0.0011)	-0.0034*** (0.0012)	-0.0008*** (0.0003)	0.0004 (0.0007)	-0.0004 (0.0007)
<i>RECREATION</i>	-0.0013*** (0.0005)	0.0002 (0.0011)	-0.0011 (0.0013)	-0.0013*** (0.0003)	0.0016** (0.0007)	0.0003 (0.0008)
<i>OTHERSERVICE</i>	-0.0010 (0.0019)	0.0040 (0.0042)	0.0030 (0.0044)	0.0001 (0.0012)	0.0051* (0.0027)	0.0052* (0.0029)
<i>SELF</i>	0.0042*** (0.0011)	0.0066** (0.0027)	0.0108*** (0.0028)	0.0004 (0.0007)	0.0025 (0.0017)	0.0029* (0.0017)

**Table A3 (cont.):** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita income growth rates.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	0.0006 (0.0004)	0.0021*** (0.0007)	0.0027*** (0.0008)	0.0007*** (0.0002)	0.0011** (0.0005)	0.0018*** (0.0005)
<i>COLLEGE</i>	0.0005 (0.0003)	0.002*** (0.0007)	0.0025*** (0.0008)	0.0008*** (0.0002)	-0.0001 (0.0004)	0.0007 (0.0005)
<i>BACHELORS</i>	0.0005 (0.0003)	0.0017** (0.0008)	0.0022*** (0.0008)	0.0003 (0.0002)	0.0007 (0.0005)	0.0011** (0.0005)
<i>TEEN</i>	0.0007 (0.0011)	-0.0002 (0.0025)	0.0005 (0.0029)	0.0004 (0.0007)	0.0004 (0.0015)	0.0009 (0.0017)
<i>WORKING</i>	-0.0004 (0.0005)	-0.0012 (0.0012)	-0.0016 (0.0012)	0.0005* (0.0003)	-0.0009 (0.0007)	-0.0004 (0.0007)
<i>ELDER</i>	-0.0014*** (0.0005)	-0.0004 (0.001)	-0.0018 (0.0011)	-0.0006** (0.0003)	-0.0002 (0.0006)	-0.0008 (0.0007)
<i>BLACK</i>	0.0000 (0.0001)	0.0002 (0.0002)	0.0002 (0.0002)	-0.0002** (0.0001)	0.0001 (0.0001)	-0.0001 (0.0001)
<i>HISPANIC</i>	-0.0003* (0.0001)	0.0008*** (0.0003)	0.0005** (0.0002)	0.0000 (0.0001)	0.0002 (0.0002)	0.0002* (0.0001)
<i>POVERTY</i>	0.0006 (0.0004)	0.0005 (0.0008)	0.0011 (0.0009)	0.0005** (0.0002)	0.0000 (0.0005)	0.0005 (0.0005)
<i>LAND</i>	-0.0001** (0.0000)	0.0001 (0.0001)	0.0001 (0.0001)	0.0000 (0.0000)	0.0000 (0.0001)	0.0000 (0.0001)
<i>WATER</i>	0.0000 (0.0002)	0.0006 (0.0005)	0.0006 (0.0005)	0.0005*** (0.0002)	0.0003 (0.0003)	0.0007*** (0.0003)
<i>RHO</i>		-0.5300***			-0.5790***	
<i>R<sup>2</sup></i>		0.7278			0.7789	
<i>Obs.</i>		381			381	

*Notes:* \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constants and state fixed effects included in all regressions.



**Table A4:** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita incomes excluding observations where the economic freedom score a further than two standard deviations from the mean.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>FREEDOM</i>	0.1080*** (0.0152)	0.0115 (0.0459)	0.1196** (0.0504)	0.0995*** (0.0192)	0.0248 (0.0479)	0.1244** (0.0534)
<i>FEDERAL</i>	0.0081 (0.0055)	-0.0354** (0.0176)	-0.0273 (0.0197)	0.0124* (0.0068)	-0.0117 (0.0190)	0.0007 (0.0206)
<i>AGRICULTURAL</i>	0.0216*** (0.0061)	-0.0243 (0.0169)	-0.0027 (0.0185)	0.0368*** (0.0068)	-0.0097 (0.0171)	0.0271 (0.0183)
<i>CONSTRUCTION</i>	0.0097 (0.0088)	0.0079 (0.0243)	0.0176 (0.0266)	-0.0065 (0.0111)	0.0072 (0.0267)	0.0007 (0.0291)
<i>MANUFACTURE</i>	-0.0008 (0.0020)	-0.0110** (0.0053)	-0.0118** (0.0060)	-0.0061** (0.0024)	-0.0129** (0.0058)	-0.0191*** (0.0063)
<i>WHOLESALE</i>	0.0107 (0.0112)	-0.0131 (0.0356)	-0.0025 (0.0394)	0.0074 (0.0134)	-0.0037 (0.0361)	0.0037 (0.0387)
<i>RETAIL</i>	-0.0008 (0.0075)	0.0223 (0.0224)	0.0215 (0.0255)	-0.0058 (0.0092)	0.0203 (0.0247)	0.0145 (0.0272)
<i>TRANSPORT</i>	0.0221*** (0.0067)	0.0296 (0.0182)	0.0517** (0.0206)	0.0254*** (0.0082)	0.0421** (0.0197)	0.0675*** (0.0218)
<i>INFORMATION</i>	-0.0030 (0.0128)	-0.0137 (0.0351)	-0.0167 (0.0410)	-0.0076 (0.0154)	0.0197 (0.0373)	0.0121 (0.0434)
<i>FIRE</i>	0.0069 (0.0043)	-0.0288** (0.0121)	-0.0219 (0.0136)	-0.0011 (0.0053)	-0.0324** (0.0131)	-0.0335** (0.0143)
<i>PROFESSIONAL</i>	0.0176*** (0.0066)	0.0019 (0.0220)	0.0195 (0.0250)	0.0245*** (0.0079)	-0.0035 (0.0240)	0.0210 (0.0268)
<i>EDU-HEALTH</i>	-0.0111*** (0.0034)	-0.0315*** (0.0101)	-0.0426*** (0.0113)	-0.0114*** (0.0042)	-0.0239** (0.0103)	-0.0353*** (0.0114)
<i>RECREATION</i>	0.0015 (0.0035)	-0.0232** (0.0105)	-0.0216* (0.0119)	-0.0070* (0.0042)	-0.0117 (0.0109)	-0.0187 (0.0122)
<i>OTHERSERVICE</i>	0.0394** (0.0158)	0.1127*** (0.0403)	0.1521*** (0.0446)	0.0429** (0.0187)	0.1355*** (0.0412)	0.1784*** (0.0454)
<i>SELF</i>	-0.0023 (0.0085)	0.0138 (0.0285)	0.0116 (0.0306)	-0.0140 (0.0106)	0.0144 (0.0297)	0.0004 (0.0316)

**Table A4 (cont.):** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita incomes excluding observations where the economic freedom score a further than two standard deviations from mean.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	-0.0088*** (0.0030)	0.0083 (0.007)	-0.0005 (0.0075)	-0.0045 (0.0037)	0.0109 (0.0074)	0.0064 (0.0077)
<i>COLLEGE</i>	-0.0042* (0.0024)	0.0030 (0.0067)	-0.0011 (0.0076)	0.0001 (0.0031)	-0.0053 (0.0075)	-0.0053 (0.0084)
<i>BACHELORS</i>	0.0103*** (0.0025)	0.0094 (0.0068)	0.0197*** (0.0075)	0.0118*** (0.0032)	0.0101 (0.0069)	0.0219*** (0.0074)
<i>TEEN</i>	-0.0097 (0.009)	0.0357 (0.0241)	0.0260 (0.0282)	-0.0101 (0.0110)	0.0377 (0.0253)	0.0276 (0.0288)
<i>WORKING</i>	0.0031 (0.0039)	0.0166 (0.0115)	0.0196 (0.0123)	0.0074 (0.0048)	0.0049 (0.0118)	0.0122 (0.0124)
<i>ELDER</i>	0.0029 (0.0035)	0.0139 (0.0094)	0.0168 (0.0104)	0.0011 (0.0045)	0.0086 (0.0101)	0.0097 (0.0108)
<i>BLACK</i>	0.0040*** (0.0008)	0.0014 (0.0018)	0.0053*** (0.0019)	0.0026** (0.0010)	0.0003 (0.0021)	0.0029 (0.002)
<i>HISPANIC</i>	-0.0024** (0.0011)	0.0066*** (0.0025)	0.0041* (0.0023)	-0.0019 (0.0014)	0.0050* (0.0028)	0.0030 (0.0026)
<i>POVERTY</i>	-0.0184*** (0.0028)	0.0010 (0.0077)	-0.0174** (0.0086)	-0.0178*** (0.0036)	-0.0011 (0.0081)	-0.0188** (0.009)
<i>LAND</i>	-0.0001 (0.0002)	-0.0003 (0.0008)	-0.0004 (0.0008)	0.0000 (0.0003)	-0.0005 (0.0008)	-0.0004 (0.0008)
<i>WATER</i>	0.0040** (0.0018)	-0.0022 (0.0043)	0.0019 (0.0044)	0.0081*** (0.0022)	-0.0018 (0.0047)	0.0064 (0.0046)
<i>RHO</i>		-0.2490**			-0.4500***	
R <sup>2</sup>		0.9354			0.9025	
Obs.		368			368	

*Notes:* \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constants and state fixed effects included in all regressions.

**Table A5:** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita income growth rates excluding observations where the economic freedom score a further than two standard deviations from mean.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>FREEDOM</i>	0.0033 (0.0020)	0.0089* (0.0051)	0.0121** (0.0054)	-0.0004 (0.0014)	0.0058* (0.0031)	0.0054 (0.0033)
<i>INCOME_2002</i>	0.0201** (0.0082)	-0.0075 (0.0168)	0.0127 (0.0172)	0.0122** (0.0050)	-0.0164 (0.0100)	-0.0042 (0.0100)
<i>FEDERAL</i>	-0.0009 (0.0007)	-0.0046** (0.0019)	-0.0055*** (0.0020)	0.0000 (0.0005)	0.0009 (0.0012)	0.0009 (0.0012)
<i>AGRICULTURE</i>	0.0012 (0.0008)	-0.0019 (0.0018)	-0.0007 (0.0018)	0.0019*** (0.0005)	0.0011 (0.0011)	0.0030** (0.0012)
<i>CONSTRUCTION</i>	-0.0014 (0.0011)	0.001 (0.0026)	-0.0004 (0.0027)	-0.0023*** (0.0007)	0.0004 (0.0017)	-0.0019 (0.0017)
<i>MANUFACTURE</i>	-0.0011*** (0.0002)	0.0003 (0.0006)	-0.0008 (0.0006)	-0.0010*** (0.0002)	-0.0001 (0.0004)	-0.0011*** (0.0004)
<i>WHOLESALE</i>	0.0008 (0.0014)	0.0029 (0.0038)	0.0036 (0.0040)	-0.0002 (0.0009)	0.0014 (0.0023)	0.0012 (0.0024)
<i>RETAIL</i>	-0.0011 (0.0009)	-0.0017 (0.0023)	-0.0028 (0.0025)	-0.0009 (0.0006)	-0.0003 (0.0014)	-0.0012 (0.0016)
<i>TRANSPORT</i>	-0.0020** (0.0008)	-0.0010 (0.0019)	-0.0030 (0.0021)	-0.0004 (0.0006)	0.0016 (0.0013)	0.0012 (0.0014)
<i>INFORMATION</i>	-0.0037** (0.0016)	0.0005 (0.0036)	-0.0032 (0.0043)	-0.0019* (0.0010)	0.0038* (0.0023)	0.0019 (0.0026)
<i>FIRE</i>	-0.0013** (0.0005)	0.0007 (0.0013)	-0.0006 (0.0014)	-0.0015*** (0.0004)	-0.0002 (0.0008)	-0.0017* (0.0009)
<i>PROFESSIONAL</i>	-0.0004 (0.0008)	-0.0008 (0.0023)	-0.0012 (0.0026)	0.0006 (0.0005)	-0.0005 (0.0015)	0.0001 (0.0016)
<i>EDU-HEALTH</i>	-0.0020*** (0.0004)	-0.0007 (0.0011)	-0.0027** (0.0012)	-0.0007*** (0.0003)	0.0003 (0.0007)	-0.0004 (0.0007)
<i>RECREATION</i>	-0.0014*** (0.0004)	0.0002 (0.0011)	-0.0013 (0.0012)	-0.0015*** (0.0003)	0.0011* (0.0007)	-0.0004 (0.0007)
<i>OTHERSERVICE</i>	-0.0021 (0.0019)	0.0048 (0.0041)	0.0027 (0.0043)	-0.0005 (0.0013)	0.0053** (0.0027)	0.0048* (0.0028)
<i>SELF</i>	0.0043*** (0.0011)	0.007** (0.0031)	0.0113*** (0.0032)	0.0003 (0.0007)	0.0026 (0.0020)	0.0029 (0.0020)

**Table A5 (cont.):** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita income growth rates excluding observations where the economic freedom score a further than two standard deviations from mean.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	0.0004 (0.0004)	0.0019** (0.0007)	0.0023*** (0.0008)	0.0007*** (0.0003)	0.0009* (0.0005)	0.0015*** (0.0005)
<i>COLLEGE</i>	0.0005 (0.0003)	0.002*** (0.0007)	0.0025*** (0.0008)	0.0007*** (0.0002)	-0.0002 (0.0005)	0.0005 (0.0005)
<i>BACHELORS</i>	0.0004 (0.0004)	0.0013* (0.0007)	0.0017** (0.0008)	0.0003 (0.0002)	0.0007 (0.0005)	0.0009** (0.0005)
<i>TEEN</i>	0.0008 (0.0012)	0.0015 (0.0025)	0.0024 (0.0029)	0.0004 (0.0007)	0.0008 (0.0015)	0.0011 (0.0017)
<i>WORKING</i>	-0.0001 (0.0005)	-0.0015 (0.0012)	-0.0016 (0.0012)	0.0005 (0.0003)	-0.0015** (0.0007)	-0.001 (0.0007)
<i>ELDER</i>	-0.0012*** (0.0005)	-0.0003 (0.0010)	-0.0015 (0.0011)	-0.0006** (0.0003)	-0.0005 (0.0006)	-0.0011 (0.0007)
<i>BLACK</i>	0.0000 (0.0001)	0.0002 (0.0002)	0.0002 (0.0002)	-0.0002** (0.0001)	0.0000 (0.0001)	-0.0001 (0.0001)
<i>HISPANIC</i>	-0.0003** (0.0001)	0.0008*** (0.0003)	0.0005** (0.0002)	0.0000 (0.0001)	0.0001 (0.0002)	0.0001 (0.0001)
<i>POVERTY</i>	0.0004 (0.0004)	0.0004 (0.0009)	0.0007 (0.0010)	0.0003 (0.0003)	-0.0003 (0.0006)	0.0000 (0.0006)
<i>LAND</i>	0.0000 (0.0000)	0.0001 (0.0001)	0.0001 (0.0001)	0.0000 (0.0000)	0.0000 (0.0001)	0.0000 (0.0000)
<i>WATER</i>	0.0001 (0.0002)	0.0008 (0.0005)	0.0008* (0.0004)	0.0004*** (0.0002)	0.0003 (0.0003)	0.0008*** (0.0003)
<i>RHO</i>		-0.5539***			-0.6060***	
R <sup>2</sup>		0.7279			0.7750	
Obs.		368			368	

*Notes:* \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constant and state fixed effects included in all regressions.

**Table A6:** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita incomes with a contiguous weight matrix.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>FREEDOM</i>	0.1043*** (0.0135)	0.0379 (0.0325)	0.1422*** (0.0373)	0.1046*** (0.0138)	0.0393 (0.0339)	0.1439*** (0.0381)
<i>FEDERAL</i>	0.009* (0.0054)	-0.0042 (0.014)	0.0048 (0.0165)	0.0090 (0.0055)	-0.0046 (0.0144)	0.0045 (0.0168)
<i>AGRICULTURAL</i>	0.0316*** (0.0053)	0.0248** (0.0124)	0.0564*** (0.012)	0.0313*** (0.0053)	0.025** (0.0123)	0.0564*** (0.0120)
<i>CONSTRUCTION</i>	0.0141* (0.0077)	0.0299* (0.017)	0.044** (0.0175)	0.0139* (0.0083)	0.0298* (0.0171)	0.0437** (0.0177)
<i>MANUFACTURE</i>	0.0042** (0.0018)	-0.0016 (0.0041)	0.0025 (0.0045)	0.0042** (0.002)	-0.0013 (0.0042)	0.0029 (0.0046)
<i>WHOLESALE</i>	0.0061 (0.0102)	-0.0464* (0.0275)	-0.0403 (0.0301)	0.0059 (0.0105)	-0.0483* (0.0278)	-0.0424 (0.0306)
<i>RETAIL</i>	0.0044 (0.0070)	0.056*** (0.0192)	0.0604*** (0.0216)	0.0046 (0.007)	0.0568*** (0.0187)	0.0614*** (0.021)
<i>TRANSPORT</i>	0.0223*** (0.0062)	0.0187 (0.0151)	0.0409** (0.0164)	0.0223*** (0.0063)	0.0189 (0.0157)	0.0412** (0.0168)
<i>INFORMATION</i>	-0.0134 (0.0109)	0.057** (0.0283)	0.0436 (0.0309)	-0.0137 (0.0114)	0.0564** (0.0278)	0.0427 (0.0313)
<i>FIRE</i>	0.0151*** (0.0040)	-0.0073 (0.011)	0.0078 (0.012)	0.0152*** (0.0042)	-0.0068 (0.0109)	0.0084 (0.0118)
<i>PROFESSIONAL</i>	0.0133** (0.0065)	-0.0264 (0.0165)	-0.0131 (0.0184)	0.0135** (0.0063)	-0.0258 (0.0169)	-0.0123 (0.0182)
<i>EDU-HEALTH</i>	-0.0071** (0.0033)	-0.0162* (0.0088)	-0.0234** (0.01)	-0.0073** (0.0033)	-0.0167* (0.009)	-0.0241** (0.01)
<i>RECREATION</i>	0.0033 (0.0031)	-0.0267*** (0.0085)	-0.0233** (0.0094)	0.0032 (0.0032)	-0.0265*** (0.0083)	-0.0233** (0.0093)
<i>OTHERSERVICE</i>	0.0403*** (0.0139)	0.0704* (0.0369)	0.1107*** (0.0403)	0.0403*** (0.0138)	0.0722** (0.0364)	0.1124*** (0.0398)
<i>SELF</i>	-0.0137* (0.0081)	-0.0402** (0.0194)	-0.0539** (0.0209)	-0.0138 (0.0085)	-0.0394** (0.0185)	-0.0533*** (0.0201)

**Table A6 (cont.):** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita incomes with a contiguous weight matrix.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	-0.0058** (0.0029)	0.0006 (0.0056)	-0.0052 (0.0056)	-0.0058** (0.0029)	0.0004 (0.0054)	-0.0053 (0.0056)
<i>COLLEGE</i>	-0.0012 (0.0023)	0.0030 (0.0047)	0.0018 (0.0053)	-0.0011 (0.0023)	0.0029 (0.0050)	0.0017 (0.0057)
<i>BACHELORS</i>	0.0132*** (0.0026)	0.009 (0.0056)	0.0222*** (0.0063)	0.0132*** (0.0025)	0.0088 (0.0059)	0.022*** (0.0064)
<i>TEEN</i>	-0.0235*** (0.0077)	-0.0049 (0.0214)	-0.0284 (0.0237)	-0.0234*** (0.0077)	-0.0029 (0.0214)	-0.0262 (0.0237)
<i>WORKING</i>	0.0041 (0.0035)	0.0118* (0.0062)	0.0159** (0.0065)	0.0044 (0.0033)	0.0119* (0.0062)	0.0162** (0.0068)
<i>ELDER</i>	0.0048 (0.0033)	0.0187*** (0.0058)	0.0235*** (0.0065)	0.0051 (0.0032)	0.0188*** (0.0061)	0.0239*** (0.0068)
<i>BLACK</i>	0.004*** (0.0008)	0.0027* (0.0015)	0.0067*** (0.0015)	0.0040*** (0.0008)	0.0028* (0.0015)	0.0067*** (0.0014)
<i>HISPANIC</i>	-0.0005 (0.0010)	0.0053*** (0.0014)	0.0049*** (0.0013)	-0.0004 (0.0010)	0.0054*** (0.0014)	0.0049*** (0.0014)
<i>POVERTY</i>	-0.0157*** (0.0026)	0.0054 (0.0054)	-0.0103* (0.0055)	-0.0156*** (0.0026)	0.0054 (0.0055)	-0.0101* (0.0056)
<i>LAND</i>	0.0003 (0.0002)	-0.0010* (0.0005)	-0.0008 (0.0005)	0.0003 (0.0002)	-0.0010* (0.0005)	-0.0008 (0.0005)
<i>WATER</i>	0.0009 (0.0018)	0.0070* (0.0039)	0.0079** (0.0035)	0.0008 (0.0018)	0.0069* (0.0038)	0.0078** (0.0035)
<i>RHO</i>		-0.2310***			-0.2310***	
<i>R<sup>2</sup></i>		0.9379			0.9379	
<i>Obs.</i>		368			381	

*Notes:* \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constants and state fixed effects included in all regressions.

**Table A7:** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita incomes growth rates with a contiguous weight matrix.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>FREEDOM</i>	0.0055*** (0.0018)	0.0102** (0.0039)	0.0157*** (0.0043)	0.0022* (0.0012)	0.0076*** (0.0026)	0.0098*** (0.0029)
<i>INCOME_2002</i>	0.0127* (0.0072)	-0.0114 (0.0089)	0.0013 (0.0103)	0.0062 (0.0048)	-0.011* (0.0057)	-0.0049 (0.0068)
<i>FEDERAL</i>	-0.0013* (0.0007)	-0.0017 (0.0017)	-0.0029 (0.0019)	0.0002 (0.0004)	0.0008 (0.0011)	0.0010 (0.0012)
<i>AGRICULTURE</i>	0.0018** (0.0007)	0.0031** (0.0016)	0.0050*** (0.0015)	0.0028*** (0.0005)	0.0022** (0.0010)	0.005*** (0.0010)
<i>CONSTRUCTION</i>	-0.0014 (0.0010)	0.0018 (0.0020)	0.0005 (0.0021)	-0.0016** (0.0007)	0.0025* (0.0014)	0.0009 (0.0014)
<i>MANUFACTURE</i>	-0.0008*** (0.0002)	0.001** (0.0005)	0.0003 (0.0005)	-0.0006*** (0.0002)	0.0003 (0.0003)	-0.0003 (0.0003)
<i>WHOLESALE</i>	0.0000 (0.0013)	-0.0001 (0.0032)	-0.0001 (0.0034)	-0.0007 (0.0008)	-0.0001 (0.0019)	-0.0008 (0.0020)
<i>RETAIL</i>	-0.0009 (0.0009)	0.0025 (0.0021)	0.0016 (0.0024)	-0.0009 (0.0006)	0.0013 (0.0014)	0.0004 (0.0016)
<i>TRANSPORT</i>	-0.0007 (0.0008)	0.0011 (0.0018)	0.0004 (0.0018)	0.0002 (0.0005)	0.0015 (0.0012)	0.0017 (0.0012)
<i>INFORMATION</i>	-0.0039*** (0.0014)	0.0075** (0.0031)	0.0036 (0.0033)	-0.0013 (0.0009)	0.0045** (0.0020)	0.0032 (0.0022)
<i>FIRE</i>	-0.0005 (0.0005)	0.0028** (0.0013)	0.0023* (0.0013)	-0.0009** (0.0004)	0.0001 (0.0008)	-0.0007 (0.0009)
<i>PROFESSIONAL</i>	-0.0014* (0.0008)	-0.0011 (0.0019)	-0.0025 (0.0021)	-0.0002 (0.0005)	0.0016 (0.0012)	0.0014 (0.0013)
<i>EDU-HEALTH</i>	-0.0017*** (0.0004)	-0.0015 (0.0010)	-0.0032*** (0.0011)	-0.0004 (0.0003)	0.0006 (0.0006)	0.0002 (0.0007)
<i>RECREATION</i>	-0.0005 (0.0004)	0.0016 (0.0010)	0.0011 (0.0010)	-0.0008*** (0.0003)	0.0018*** (0.0006)	0.0010 (0.0007)
<i>OTHERSERVICE</i>	0.0004 (0.0018)	0.0045 (0.0042)	0.0049 (0.0046)	0.0017 (0.0011)	0.0042 (0.0027)	0.0059** (0.0029)
<i>SELF</i>	0.0033*** (0.0011)	-0.0007 (0.0022)	0.0026 (0.0024)	0.0000 (0.0007)	0.0017 (0.0015)	0.0016 (0.0016)

**Table A7 (cont.):** SDM direct, indirect, and total effect estimates of economic freedom on metropolitan area per capita incomes growth rates with a contiguous weight matrix.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	0.0005 (0.0004)	0.0014** (0.0006)	0.0019*** (0.0006)	0.0004 (0.0002)	0.0013*** (0.0004)	0.0016*** (0.0004)
<i>COLLEGE</i>	0.0011*** (0.0003)	0.0008 (0.0006)	0.0019*** (0.0006)	0.0008*** (0.0002)	0.0002 (0.0004)	0.0010** (0.0004)
<i>BACHELORS</i>	0.0009*** (0.0003)	0.0017** (0.0007)	0.0026*** (0.0007)	0.0003 (0.0002)	0.0005 (0.0004)	0.0008* (0.0005)
<i>TEEN</i>	-0.0009 (0.0010)	0.0022 (0.0025)	0.0013 (0.0028)	-0.0007 (0.0006)	0.0002 (0.0016)	-0.0005 (0.0017)
<i>WORKING</i>	-0.0003 (0.0004)	-0.0031*** (0.0009)	-0.0034*** (0.0009)	0.0003 (0.0003)	-0.0018*** (0.0006)	-0.0015** (0.0006)
<i>ELDER</i>	-0.0011*** (0.0004)	0.0004 (0.0009)	-0.0008 (0.0009)	-0.0005** (0.0003)	-0.0003 (0.0006)	-0.0008 (0.0006)
<i>BLACK</i>	0.0000 (0.0001)	0.0002 (0.0002)	0.0002 (0.0002)	-0.0001 (0.0001)	0.0001 (0.0001)	0.0000 (0.0001)
<i>HISPANIC</i>	-0.0003** (0.0001)	0.0007*** (0.0002)	0.0004** (0.0002)	-0.0003*** (0.0001)	0.0005*** (0.0001)	0.0002** (0.0001)
<i>POVERTY</i>	0.0009** (0.0003)	0.0009 (0.0006)	0.0018*** (0.0006)	0.0005** (0.0002)	0.0008** (0.0004)	0.0012*** (0.0004)
<i>LAND</i>	-0.0001** (0.0000)	0.0000 (0.0001)	-0.0001 (0.0001)	0.0000 (0.0000)	-0.0001*** (0.0000)	-0.0001*** (0.0000)
<i>WATER</i>	-0.0003 (0.0002)	0.0010** (0.0004)	0.0007* (0.0004)	0.0002 (0.0002)	0.0006** (0.0003)	0.0008*** (0.0003)
<i>RHO</i>		-0.3800***			-0.4129***	
R <sup>2</sup>		0.7630			0.7958	
Obs.		381			381	

Notes: \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constant and state fixed effects included in all regressions.



**Table A8:** SDM direct, indirect, and total effect estimates of each area of economic freedom on metropolitan area per capita incomes.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>SIZE_GOV</i>	-0.0232** (0.0089)	-0.0104 (0.0228)	-0.0335 (0.0239)	-0.0150 (0.0112)	-0.0018 (0.0264)	-0.0168 (0.0272)
<i>TAXATION</i>	-0.0111 (0.0102)	-0.0550** (0.025)	-0.0661** (0.0277)	-0.0293** (0.0123)	-0.0202 (0.0311)	-0.0495 (0.0336)
<i>LABOR</i>	0.1464*** (0.0102)	0.0620*** (0.0236)	0.2085*** (0.0252)	0.1533*** (0.0132)	0.0486 (0.0295)	0.2019*** (0.0317)
<i>FEDERAL</i>	0.0078* (0.0046)	-0.0217 (0.0136)	-0.0138 (0.0146)	0.0116* (0.0059)	-0.0011 (0.0163)	0.0105 (0.0176)
<i>AGRICULTURAL</i>	0.0186*** (0.0051)	-0.0297** (0.0119)	-0.011 (0.0125)	0.0357*** (0.0066)	-0.0205 (0.0149)	0.0151 (0.0151)
<i>CONSTRUCTION</i>	-0.0016 (0.0074)	-0.0206 (0.0183)	-0.0222 (0.0195)	-0.0163* (0.0099)	-0.0057 (0.0222)	-0.022 (0.0241)
<i>MANUFACTURE</i>	-0.0041** (0.0017)	-0.0114*** (0.0042)	-0.0155*** (0.0045)	-0.0096*** (0.0021)	-0.0121** (0.0054)	-0.0217*** (0.0058)
<i>WHOLESALE</i>	0.0014 (0.0090)	-0.0230 (0.0242)	-0.0216 (0.0253)	-0.0018 (0.0117)	-0.0115 (0.0283)	-0.0133 (0.0301)
<i>RETAIL</i>	0.0017 (0.0059)	0.0182 (0.0145)	0.0200 (0.0154)	-0.0033 (0.0076)	0.0219 (0.0182)	0.0186 (0.0193)
<i>TRANSPORT</i>	0.011** (0.0056)	0.0296** (0.0135)	0.0406*** (0.0143)	0.014** (0.0068)	0.0514*** (0.0167)	0.0654*** (0.0181)
<i>INFORMATION</i>	-0.0046 (0.0098)	0.0302 (0.0250)	0.0257 (0.0285)	-0.0061 (0.0127)	0.0786*** (0.0294)	0.0724** (0.0333)
<i>FIRE</i>	-0.0018 (0.0038)	-0.0211** (0.0087)	-0.0229** (0.0097)	-0.0107** (0.0048)	-0.024** (0.0108)	-0.0347*** (0.0115)
<i>PROFESSIONAL</i>	0.0017 (0.0054)	-0.0445*** (0.0147)	-0.0429*** (0.0161)	0.0081 (0.007)	-0.0552*** (0.0186)	-0.0471** (0.0209)
<i>EDU-HEALTH</i>	-0.0114*** (0.0030)	-0.0257*** (0.0071)	-0.0372*** (0.0080)	-0.0112*** (0.0036)	-0.0202** (0.0091)	-0.0314*** (0.0098)
<i>RECREATION</i>	-0.0084*** (0.0032)	-0.0212** (0.0083)	-0.0295*** (0.0092)	-0.0187*** (0.0039)	-0.0047 (0.0102)	-0.0234** (0.0111)
<i>OTHERSERVICE</i>	0.0171 (0.0127)	0.0770*** (0.0292)	0.0941*** (0.0310)	0.0223 (0.0157)	0.1152*** (0.0359)	0.1375*** (0.0378)
<i>SELF</i>	-0.0034 (0.0070)	0.0221 (0.0187)	0.0187 (0.0198)	-0.0129 (0.0093)	0.0232 (0.0217)	0.0103 (0.0229)

**Table A8 (cont.):** SDM direct, indirect, and total effect estimates of each area of economic freedom on metropolitan area per capita incomes.

	<i>INCOME_05</i>			<i>INCOME_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	-0.0060** (0.0026)	0.0025 (0.0048)	-0.0035 (0.0048)	-0.0016 (0.0033)	0.0049 (0.0062)	0.0033 (0.0061)
<i>COLLEGE</i>	-0.0038* (0.0021)	-0.0040 (0.0048)	-0.0078 (0.0053)	0.0014 (0.0027)	-0.0122* (0.0063)	-0.0107 (0.0068)
<i>BACHELORS</i>	0.0087*** (0.0023)	0.0060 (0.0049)	0.0148*** (0.0053)	0.0093*** (0.0029)	0.0089 (0.0061)	0.0182*** (0.0066)
<i>TEEN</i>	-0.0166** (0.0073)	0.0219 (0.0175)	0.0053 (0.0199)	-0.0178* (0.0094)	0.0284 (0.0209)	0.0106 (0.0237)
<i>WORKING</i>	-0.0008 (0.0033)	0.0076 (0.0080)	0.0068 (0.0084)	0.0043 (0.0042)	0.0026 (0.0101)	0.0069 (0.0108)
<i>ELDER</i>	-0.0031 (0.0031)	0.0021 (0.0073)	-0.0010 (0.0077)	-0.0054 (0.0039)	0.0022 (0.0092)	-0.0032 (0.0099)
<i>BLACK</i>	0.0018** (0.0007)	0.0012 (0.0015)	0.0029** (0.0015)	0.0002 (0.0009)	0.0012 (0.0018)	0.0014 (0.0018)
<i>HISPANIC</i>	-0.0014 (0.0009)	0.0049*** (0.0019)	0.0035** (0.0017)	-0.0009 (0.0012)	0.0046** (0.0023)	0.0037* (0.0021)
<i>POVERTY</i>	-0.0148*** (0.0023)	-0.0025 (0.0051)	-0.0173*** (0.0054)	-0.0122*** (0.003)	-0.0055 (0.0061)	-0.0177*** (0.0063)
<i>LAND</i>	-0.0002 (0.0002)	-0.0001 (0.0006)	-0.0003 (0.0006)	-0.0003 (0.0003)	-0.0002 (0.0007)	-0.0004 (0.0007)
<i>WATER</i>	0.0041*** (0.0015)	-0.0025 (0.0033)	0.0016 (0.0032)	0.0078*** (0.0020)	-0.0014 (0.0040)	0.0065* (0.0038)
<i>RHO</i>		-0.5000***			-0.5350***	
<i>R<sup>2</sup></i>		0.9505			0.9227	
<i>Obs.</i>		381			381	

*Notes:* \*\*\* indicates statistically significant at 1% level, \*\* indicates statistically significant at 5% level, \* indicates statistically significant at 10% level. Standard errors are in parentheses. Constants and state fixed effects included in all regressions.

**Table A9:** SDM direct, indirect, and total effect estimates of each area of economic freedom on metropolitan area per capita income growth rates.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>SIZE_GOV</i>	0.0021 (0.0014)	-0.0038 (0.0032)	-0.0018 (0.0033)	0.0018** (0.0008)	-0.0004 (0.0021)	0.0014 (0.0022)
<i>TAXATION</i>	-0.0019 (0.0016)	0.0002 (0.0035)	-0.0017 (0.0039)	-0.0026*** (0.0010)	0.0040* (0.0024)	0.0014 (0.0026)
<i>LABOR</i>	0.0041** (0.0019)	0.0117*** (0.0045)	0.0158*** (0.005)	0.0013 (0.0013)	0.0021 (0.0028)	0.0034 (0.0031)
<i>INCOME_2002</i>	0.0150 (0.0091)	-0.0400** (0.0186)	-0.0250 (0.0196)	0.0103* (0.0059)	-0.0119 (0.0115)	-0.0016 (0.0122)
<i>FEDERAL</i>	-0.0009 (0.0007)	-0.0035* (0.0019)	-0.0044** (0.0020)	0.0001 (0.0004)	0.0012 (0.0012)	0.0013 (0.0013)
<i>AGRICULTURAL</i>	0.0011 (0.0008)	-0.0008 (0.0017)	0.0003 (0.0018)	0.0022*** (0.0005)	0.0009 (0.0011)	0.0031*** (0.0011)
<i>CONSTRUCTION</i>	-0.0020* (0.0011)	-0.0001 (0.0025)	-0.0022 (0.0027)	-0.0022*** (0.0007)	0.0016 (0.0017)	-0.0006 (0.0018)
<i>MANUFACTURE</i>	-0.0012*** (0.0003)	0.0002 (0.0006)	-0.0010 (0.0007)	-0.001*** (0.0002)	0.0001 (0.0004)	-0.0009** (0.0004)
<i>WHOLESALE</i>	-0.0008 (0.0013)	0.0000 (0.0034)	-0.0008 (0.0036)	-0.0005 (0.0008)	0.0015 (0.0022)	0.0010 (0.0023)
<i>RETAIL</i>	-0.0010 (0.0009)	-0.0015 (0.0021)	-0.0025 (0.0023)	-0.0010 (0.0006)	-0.0002 (0.0014)	-0.0012 (0.0015)
<i>TRANSPORT</i>	-0.0019** (0.0008)	-0.0011 (0.0020)	-0.0030 (0.0021)	-0.0004 (0.0005)	0.0019 (0.0013)	0.0014 (0.0014)
<i>INFORMATION</i>	-0.0032** (0.0015)	0.0038 (0.0035)	0.0006 (0.0038)	-0.0013 (0.0009)	0.0069*** (0.0022)	0.0057** (0.0025)
<i>FIRE</i>	-0.0015*** (0.0005)	0.0010 (0.0013)	-0.0005 (0.0013)	-0.0015*** (0.0004)	0.0002 (0.0008)	-0.0013 (0.0009)
<i>PROFESSIONAL</i>	-0.0009 (0.0008)	-0.0021 (0.0021)	-0.0029 (0.0023)	0.0004 (0.0005)	-0.0017 (0.0013)	-0.0014 (0.0014)
<i>EDU-HEALTH</i>	-0.0022*** (0.0004)	-0.0014 (0.0010)	-0.0036*** (0.0012)	-0.0007** (0.0003)	0.0002 (0.0007)	-0.0005 (0.0007)
<i>RECREATION</i>	-0.0017*** (0.0005)	-0.0004 (0.0012)	-0.0022* (0.0013)	-0.0017*** (0.0003)	0.0017** (0.0008)	0.0001 (0.0009)
<i>OTHERSERVICE</i>	-0.0011 (0.0019)	0.0036 (0.0042)	0.0025 (0.0044)	0.0000 (0.0012)	0.0051* (0.0027)	0.0052* (0.0028)
<i>SELF</i>	0.0043*** (0.0010)	0.0074*** (0.0027)	0.0117*** (0.0028)	0.0005 (0.0007)	0.0027 (0.0017)	0.0032* (0.0018)

**Table A9 (cont.)** : SDM direct, indirect, and total effect estimates of each area of economic freedom on metropolitan area per capita income growth rates.

	<i>GROWTH_05</i>			<i>GROWTH_11</i>		
	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>	<i>DIRECT</i>	<i>INDIRECT</i>	<i>TOTAL</i>
<i>HSDIPLOMA</i>	0.0004 (0.0004)	0.0019*** (0.0007)	0.0023*** (0.0007)	0.0007*** (0.0002)	0.0010** (0.0005)	0.0017*** (0.0005)
<i>COLLEGE</i>	0.0003 (0.0003)	0.0016** (0.0007)	0.0019** (0.0008)	0.0007*** (0.0002)	-0.0003 (0.0004)	0.0005 (0.0005)
<i>BACHELORS</i>	0.0003 (0.0004)	0.0016** (0.0007)	0.0019*** (0.0007)	0.0002 (0.0002)	0.0008* (0.0005)	0.0010** (0.0005)
<i>TEEN</i>	0.0005 (0.0011)	0.0004 (0.0024)	0.0009 (0.0027)	0.0002 (0.0007)	0.0008 (0.0016)	0.0010 (0.0018)
<i>WORKING</i>	-0.0006 (0.0005)	-0.0014 (0.0011)	-0.0020 (0.0012)	0.0004 (0.0003)	-0.0011 (0.0008)	-0.0007 (0.0008)
<i>ELDER</i>	-0.0016*** (0.0005)	-0.0006 (0.0010)	-0.0023** (0.0011)	-0.0008*** (0.0003)	-0.0002 (0.0007)	-0.001 (0.0007)
<i>BLACK</i>	0.0000 (0.0001)	0.0002 (0.0002)	0.0002 (0.0002)	-0.0002*** (0.0001)	0.0001 (0.0001)	-0.0001 (0.0001)
<i>HISPANIC</i>	-0.0003** (0.0001)	0.0008*** (0.0003)	0.0005** (0.0002)	-0.0001 (0.0001)	0.0002 (0.0002)	0.0002 (0.0002)
<i>POVERTY</i>	0.0005 (0.0004)	-0.0003 (0.0008)	0.0002 (0.0009)	0.0005** (0.0002)	-0.0003 (0.0005)	0.0002 (0.0006)
<i>LAND</i>	-0.0001** (0.0000)	0.0001* (0.0001)	0.0001 (0.0001)	0.0000 (0.0000)	0.0001 (0.0001)	0.0000 (0.0001)
<i>WATER</i>	0.0001 (0.0002)	0.0007 (0.0005)	0.0008* (0.0004)	0.0004*** (0.0001)	0.0004 (0.0003)	0.0008*** (0.0003)
<i>RHO</i>		-0.5729***			-0.5430***	
R <sup>2</sup>		0.7309			0.7886	
Obs.		381			381	