

The Economic Impact of MaineHousing's Investment in Affordable Multifamily Housing:
State and Regional for 2017 - 2018

A regional economic impact analysis of MaineHousing's Low Income Housing Tax Credit program in 2017 and 2018



Communications, Planning and Development

Summary

MaineHousing's investment in the Low Income Housing Tax Credit (LIHTC) program adds to the supply of much needed affordable housing in Maine. In the process additional funding from other sources is leveraged and a substantial and critical economic boost is given to the local, regional and statewide economy.

- Between 2017 and 2018 MaineHousing and its partners spent \$68,124,109 million on new construction, rehabilitation, and reuse projects through the LIHTC program with \$56,152,849 million coming from MaineHousing and another \$11.9 million from other sources.¹ Combined this investment led to the construction of 15 housing projects with 799 affordable housing units for families and seniors.²
- The 15 projects were distributed across nine counties and all seven regions represented in the economic impact model.
- In addition to the direct output generated by the expenditure of \$68 million, the investments led to an additional \$77.4 million in gross domestic product (GDP) as the expenditure made its way throughout the economy.
- An estimated 1,080 total jobs were created and/or preserved with 59% being in construction.
- Between 2017 and 2018 MaineHousing's LIHTC program generated an equivalent of 13% of total average annual residential construction employment in Maine from 2016 to 2017.³ An area of employment that is improving but has yet to return to pre-recession levels.

Background

One of MaineHousing's strategic goals is to expand the supply of affordable housing opportunities for low and moderate income Maine residents and subsequently enhance their quality of life while furthering the development of more vibrant and productive communities. In addition to allocating tax credits through the LIHTC program, MaineHousing utilizes bond sales proceeds, federal grants and other funding to offer a wide range of affordable housing-related assistance including but not limited to:

- Below market interest rate mortgages for first time home buyers
- Energy and Housing services such as heating assistance and weatherization
- Rental assistance
- Affordable housing asset management with direct funding and operating subsidies for owners of affordable housing

March 7, 2019

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¹ MaineHousing investments include Maine State HOME Funds and Federal Home Funds in addition to Housing Trust Funds, Mortgage Purchase Program funding and tax credit equity. Other sources of funding include developer fees, loans and grants from sources other than MaineHousing.

² Projects were selected for inclusion in this analysis based on the dates of their certificate of occupancy; projects that received a final certificate of occupancy in 2017 were included in the 2017 analysis and those that received it in 2018 were included in the 2018 analysis.

³ As of the time of this report, March 2019, the Center for Workforce Research and Information had not released industry employment data for 2018.

• Helping people who are homeless achieve permanent stable housing

All these programs improve the economic well-being of low to moderate income Maine residents by reducing housing costs and freeing that money to be used for healthcare, transportation, food and education. They also provide stability to families and individuals as well as the community in which they live. All of these programs along with the construction, rehabilitation and reuse of multi-family housing stimulate economic activity.

MaineHousing Economic Impacts

To examine the economic impact of investments in affordable multi-family housing, data on expenditures for new, rehabilitated, and reuse construction was provided to the Maine Center for Business and Economic Research (MCBER) located on the University of Southern Maine campus in Portland, Maine. MCBER used this data to produce an estimate of the number of jobs and economic activity that were supported in Maine by expenditures on multifamily housing.

The economic impacts were estimated using a set of economic models developed by Regional Economic Models Inc. (REMI) and maintained by MCBER that cover the entire state of Maine. The REMI models are considered among the best available for estimating the effects of economic events over time. Simulations of an economic event or activity, in this case MaineHousing's project related expenditures and investments, are compared against a baseline control forecast of the economy. The differences between the forecast control and simulation are interpreted as the economic impacts.

The REMI model maintained by MCBER is comprised of seven regions covering the entire state of Maine. These regions are based on aggregates of the state's 16 counties and are defined as follows:

- 1. Androscoggin-Franklin-Oxford
- 2. Aroostook
- 3. Cumberland
- 4. Hancock-Washington/Penobscot-Piscataquis
- 5. Kennebec-Somerset
- 6. Waldo-Knox/Lincoln-Sagadahoc
- 7. York

For the purposes of this analysis expenditure data only included spending directly related to the construction and development (professional and technical services) category of the projects and did not include real estate acquisition (land and property) costs or residual costs that do not have a defined spending category but are assumed to be associated with the acquisition and financing of the project. Project expenditure data was allocated by year based on proportioned shares of project expenditures and by REMI region.⁴

⁴ Appendix 1: Model Inputs by region for Construction and Professional Technical Services (PTS)

Expenditures data was provided for three types of MaineHousing multi-family projects for each region⁵:

- Multifamily New Construction Projects conceptualized, planned and constructed as multifamily housing.
- Multifamily Rehabilitation Projects that take existing multifamily housing and rehabilitate it to meet recent codes, accessibility requirements, and overall standards of current multifamily housing living.
- Multifamily Reuse These projects take an existing structure previously used for another purpose such as manufacturing or warehousing and convert it into multifamily housing.

The economic impact measures reported from these projects include employment, wages and salaries, total output, and gross domestic product. Employment outputs are reported as inclusive of the direct, indirect, and induced economic activity supported by project expenditures. ⁶ Direct impacts refer to jobs supported by the initial rounds of project expenditures on construction and professional and technical services. These firms in turn make purchases of materials and other services to support operations which in turn support jobs at supplier firms. These are referred to as indirect impacts. Lastly, induced impacts refer to local economic demand supported by direct and indirect rounds of spending. Specifically, this refers to jobs supported by spending in the local economy on food, transportation, entertainment, and other more general purchases made with job earnings from the direct and indirect impacts.⁷

Property tax revenues are based on the current mil rates (2017-2018) and specific project valuation. Impacts are reported in aggregate by REMI region and reported for a single year only.

Analysis Results

As shown in Table 1, MaineHousing and leveraged source spending of \$68.1 million from 2017 – 2018 for the three project types resulting in 1,080 total jobs that paid \$42 million in wages and salaries. Total output, the sum of private non-farm private industries, state and local government, federal civilian and military, and farm sectors economic output from the projects was \$132 million. Total GDP, the market value of goods and services produced by labor and property involved in the project was \$77 million.

The impact for each REMI region is detailed in Tables 1 - 8.

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⁵ See Appendix 2, Types of Construction by Region, Expenditure and Unit Counts.

⁶ See Appendix 4, Definitions

⁷ See Appendix 3, Businesses and Employees Involved in Residential Construction

Table 1: New Construction, Rehabilitation and Reuse Projects Funded by MaineHousing and Other Sources, 2017-18

Maine (15 Projects, 799 Affordable Housing Units)

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	MaineHousing and Other Sources of Funding					
Expenditures	\$68.1 million					
	Wages and					
	Salaries Total Output					
Impact	Employment	(millions)	(millions)	GDP millions		
Direct	468					
Indirect and		\$42.3	Ć122 4 mailliam	¢77.4		
Induced	612	million	\$132.4 million	\$77.4		
Total	1,080					

Table 2: New Construction, Rehabilitation and Reuse Projects Funded by MaineHousing, 2017 - 18

Androscoggin-Franklin-Oxford Region (1 Projects, 62 Units)

			<u> </u>			
	MaineHousing and Other Sources of Funding					
Expenditures	\$4.0 million					
		Wages and Salaries	Total Output			
Impact	Employment	(millions)	(millions)	GDP (millions)		
Direct Indirect and	25	\$3.0	\$8.1	\$5.0		
Induced	49	33. 0	γο.1	33.0		
Total	74					

Table 3: New Construction, Rehabilitation and Reuse Projects Funded by MaineHousing, 2017 - 18

Cumberland Region (9 Projects, 216 Units)

	MaineHousing and Other Sources of Funding					
Expenditures	\$42.4 million					
	Wages and Salaries Total Output					
Impact	Employment	(millions)	(millions)	GDP (millions)		
Direct Indirect and	265	\$27.0	\$80.3	\$47.338		
Induced Total	341 606					

Table 4: New Construction, Rehabilitation and Reuse Projects Funded by MaineHousing, 2017 - 18

Kennebec-Somerset Region (1 Project, 21 Units)

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MaineHousing and Other Sources of Funding					
Expenditures	\$5.1 million				
	Wages and				
	Salaries Total Output				
Impact	Employment	(millions)	(millions)	GDP (millions)	
Direct	32				
Indirect and		62.0	ćr a		
Induced	42	\$3.0	\$9.0	\$5.3	
Total	74				

Table 5: New Construction, Rehabilitation and Reuse Projects Funded by MaineHousing, 2017 - 18

Waldo-Knox/Lincoln-Sagadahoc (1 Project, 59 Units)

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	MaineHousing and Other Sources of Funding					
Expenditures	\$6.4 million					
	Wages and					
	Salaries Total Output					
Impact	Employment	(millions)	(millions)	GDP (millions)		
Direct	59					
Indirect and		3.2	7.0			
Induced	59	5.2	12.0	7.0		
Total	118					

Table 6: New Construction, Rehabilitation and Reuse Projects Funded by MaineHousing, 2017 - 18

York Region (3 Projects, 210 units)

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	MaineHousing and Other Sources of Funding					
Expenditures	\$10.3 million					
		Wages and Salaries	Total Output			
Impact	Employment	(millions)	(millions)	GDP (millions)		
Direct Indirect and Induced	87 111	\$6.1	\$22.0	\$13.0		
Total	198					

Growing Residential Building Construction Jobs

The residential building construction industry in Maine is beginning to improve. Since the economic recovery began in 2009, employment in the industry has grown 15%. During the recession the industry was hit particularly hard because it was so closely tied to the causes of the recession itself. Only the information sector lost a greater percentage of jobs. As Table 7 shows, between 2006 and 2011 when average annual employment of residential building construction workers hit bottom, the average number of construction employees dropped 34% or 1,919 workers from peak pre-recession level to the bottom of the recession. During the recovery, post 2009, some of these jobs have come back

In construction alone, MaineHousing expenditures resulted in an annual average of 539 residential construction jobs from 2017 to 2018. Comparatively speaking, those jobs would comprise an equivalent of 13% of total average annual residential construction employment in Maine between 2016 and 2017. In those two years, overall residential building construction employment has increased 3% and MaineHousing has helped. MaineHousing expenditures also generated jobs in other industry sectors and in particular professional and technical fields. Investing in housing helped put residential construction workers and others back to work.

Table 7: Average Annual Employment for All Industries 2006-2010 & 2012-2017

Industry				% Change			% Change
Code	Industry Description	2006	2011	2006-2011	2016	2017	2016 - 2017
10	Total, All Industries	499,137	482,296	-3.4%	486,511	513,304	1.0%
1011	Natural Resources and Mining	5,860	6,087	3.9%	6,310	6,815	1.4%
1012	Construction	31,375	25,193	-19.7%	25,608	28,230	3.1%
23	Construction	31,375	25,193	-19.7%	25,608	28,230	3.1%
2361	Residential building construction	5,655	3,736	-33.9%	3,760	4,469	2.5%
1013	Manufacturing	60,100	50,749	-15.6%	50,742	50,900	0.4%
1021	Trade, Transportation, and Utilities	125,148	116,841	-6.6%	117,312	119,370	-0.3%
1022	Information	11,235	8,261	-26.5%	7,869	7,338	-4.8%
1023	Financial Activities	32,370	30,219	-6.6%	30,045	29,385	0.4%
1024	Professional and Business Services	51,885	57,541	10.9%	58,258	66,643	0.9%
1025	Education and Health Services	105,142	110,903	5.5%	112,279	118,368	1.7%
1026	Leisure and Hospitality	59,758	60,081	0.5%	61,530	67,291	2.5%
1027	Other Services	16,199	16,419	1.4%	16,555	17,756	-3.5%

Source: Maine Bureau of Labor, Center for Workforce Research and Information

Tax Base

In addition to employment, income and value added output, these projects contribute to the municipal tax base raising total municipal property valuation. Depending upon the decision of the respective municipality, this *may* result in additional tax revenue. Some municipalities may decide to adjust the municipal mil rate based on the added valuation, while others may choose to collect the

⁸ As of the time of this report, March 2019, the Center for Workforce Research and Information had not released industry employment data for 2018.

⁹ See Appendix 6 for a breakdown of jobs by industry 2015 – 2016.

additional tax revenue. Table 8 below provides a breakdown by REMI region of cumulative valuations and potential additional tax revenues based on calculations at current mil rates.¹⁰

Table 8: Valuation and Estimated Total Municipal Tax Revenue by REMI Region

REMI Region	Total Valuations	Total Tax Rev
Androscoggin-Franklin-Oxford	\$295,780	\$8,480
Cumberland	\$28,443,680	\$580,224
Waldo-Knox/Lincoln-Sagadahoc	\$489,100	\$10,662
York	\$4,793,910	\$94,709

¹⁰ See Appendix 5 for a breakdown by project and town of tax revenue

Appendix 1: Model Inputs for Construction and Professional Technical Services (PTS) by region

Model Inputs (In millions of dollars)						
Remi Region	Expenditure Category	2017	2018			
Androscoggin-Franklin-Oxford	Construction	\$2.1	\$0.0			
Androscoggin-Franklin-Oxford	PTS	\$0.4	\$0.0			
Cumberland	Construction	\$18.6	\$12.1			
Cumberland	PTS	\$4.1	\$2.5			
Kennebec-Somerset	Construction	\$2.2	\$1.6			
Kennebec-Somerset	PTS	\$0.5	\$0.3			
Waldo-Knox/Lincoln-Sagadahoc	Construction	\$4.9	\$0.0			
Waldo-Knox/Lincoln-Sagadahoc	PTS	\$0.9	\$0.0			
York	Construction	\$7.7	\$0.0			
York	PTS	\$1.4	\$0.0			

Appendix 2: Types of Construction by Region, Expenditure and Count (2017 – 2018)

Region	penditure/Un	New Construction	Acquisition/Rehab	Adaptive Reuse
State	Expenditure (millions) Units	\$53.9 299	\$41.2 287	\$39.5 213
Androscoggin-Franklin- Oxford	Expenditure (millions) Units	\$11.0 62	\$0.0 0	\$0.0 0
Aroostook	Expenditure (millions) Units	\$0.0 0	\$0.0 0	\$0.0 0
Cumberland	Expenditure (millions)	\$31.5 216	\$22.6 143	\$18.0 88
Hancock- Washingto/Penobscot-	Expenditure Units	\$0.0 0	\$0.0	\$0.0
Kennebec-Somerset	Expenditure Units	\$5.1 21	\$0.0 0	\$0.0 0
Waldo-Knox/Lincoln- Sagadahoc	Expenditure (millions) Units	\$0.0 0	\$0.0 0	\$10.5 59
York	Expenditure (millions) Units	\$0.0 0	\$18.7 144	\$10.9 66

Appendix 3: Businesses and Employees Involved in Residential Construction (2012 Census)

Maine Business Employees Involved in Residential Construction

NAICS	Industry name	,				
Code		2012	2017	Payroll (2017)	Sales (2017)	Employment
		Establishments	Establishments	, ()		2017
236116	New Multifamily Housing Construction (except For-Sale B	9	8	\$674,735	\$1,665,658	18
236117	New Housing For-Sale Builders	15	11	\$11,708,181	\$29,030,640	421
236118	Residential Remodelers	559	724	\$164,457,153	\$405,210,339	5,360
238110	Poured Concrete Foundation and Structure Contractors	176	156	\$47,194,612	\$116,527,001	1,378
238120	Structural Steel and Precast Concrete Contractors	24	25	\$6,155,802	\$15,190,045	140
238130	Framing Contractors	53	55	\$16,168,838	\$39,910,202	491
238140	Masonry Contractors	163	161	\$55,191,751	\$136,226,366	1,468
238150	Glass and Glazing Contractors	19	20	\$7,625,151	\$18,830,137	181
238160	Roofing Contractors	86	107	\$55,300,873	\$136,772,684	1,266
238170	Siding Contractors	34	38	\$8,054,922	\$19,900,963	245
238210	Electrical Contractors and Other Wiring Installation Contra	611	624	\$216,359,406	\$533,875,071	4,425
238220	Plumbing, Heating, and Air-Conditioning Contractors	681	687	\$295,246,024	\$728,601,835	5,741
238310	Drywall and Insulation Contractors	139	129	\$70,771,434	\$174,566,373	1,958
238320	Painting and Wall Covering Contractors	266	280	\$98,003,013	\$242,073,953	3,492
238330	Flooring Contractors	91	72	\$35,840,904	\$88,566,084	1,154
238350	Finish Carpentry Contractors	253	217	\$86,555,072	\$213,779,283	3,150
238910	Site Preparation Contractors	596	575	\$321,928,860	\$795,751,380	7,633
3211	Sawmills and Wood Preservation	81	75	\$122,828,728	\$628,709,908	2,298
32199	All Other Wood Product Manufacturing	70	64	\$57,178,832	\$219,300,938	1,456
321911	Wood Window and Door Manufacturing	7	5	\$13,639,813	\$58,787,878	266
3273	Cement and Concrete Product Manufacturing	38	44	\$47,807,615	\$194,950,438	830
33711	Wood Kitchen Cabinet and Countertop Manufacturing	47	37	\$14,380,201	\$31,847,452	381
4421	Furniture Stores	100	94	\$33,691,926	\$78,205,111	754
4441	Building Material and Supplies Dealers	422	393	\$272,754,464	\$767,610,554	6,842
4442	Lawn and Garden Equipment and Supplies Stores	126	130	\$49,550,943	\$140,044,053	1,456
45393	Manufactured (Mobile) Home Dealers	34	35	\$10,312,690	\$24,138,093	210
522292	Real Estate Credit	54	67	\$52,665,279	\$153,056,869	872
524126	Direct Property and Casualty Insurance Carriers	68	57	\$110,702,139	\$555,206,487	1,325
531110	Lessors of Residential Buildings and Dwellings	222	236	\$209,256,242	\$901,579,322	7,157
531210	Offices of Real Estate Agents and Brokers	492	586	\$159,003,551	\$687,681,840	7,264
53132	Offices of Real Estate Appraisers	105	95	\$22,557,590	\$97,861,689	655
531311	Residential Property Managers	166	200	\$76,261,686	\$329,535,836	2,997
541191	Title Abstract and Settlement Offices	42	45	\$17,677,593	\$41,239,044	327
54131	Architectural Services	138	141	\$63,678,151	\$128,586,441	1,003
54132	Landscape Architectural Services	25	26	\$10,734,349	\$21,708,511	373
541613	Marketing Consulting Services	196	249	\$85,164,810	\$150,496,785	1,514
	TOTAL	6,208	6,468	2,927,083,333	8,907,025,261	76,504

Source: EMSI dataseries 2019.1 - includes all four Classes of Workers QCEW, Non-QCEW, Self-Employed, and Extended Proprietors.

	Establishments	Payroll (2017)	Sales (2017)	Employment (2017
238 Specialty Trade Contractors	3,510	1523307567	3761773275	37421

238110 Poured Concrete Foundation and Structure Contractors

238120 Structural Steel and Precast Concrete Contractors

238130 Framing Contractors

238140 Masonry Contractors

238150 Glass and Glazing Contractors

238160 Roofing Contractors

238170 Siding Contractors

238210 Electrical Contractors and Other Wiring Installation Contractors

238220 Plumbing, Heating, and Air-Conditioning Contractors

238310 Drywall and Insulation Contractors

238320 Painting and Wall Covering Contractors

238330 Flooring Contractors

238350 Finish Carpentry Contractors

238910 Site Preparation Contractors

Appendix 4:

Definitions

Output category	Definition	Measurement Units
Total Employment	Total employment impacts generated by project spending on construction and professional and technical services, including direct, indirect, and induced rounds of spending.	Individuals (Jobs)
Direct Employment	Employment supported by the direct expenditures on construction and professional and technical services.	Individuals (Jobs)
Indirect and Induced Employment (Intermediate and local)	Employment supported by recurrent rounds of spending that stem from the initial project expenditures in construction and professional and technical services. These include the indirect or supply chain impacts (i.e. Jobs supported from purchases of materials and supplies to do the construction and provide professional services) and the induced impacts from workers supported through direct and indirect expenditures through spending in the local economy (i.e. food, entertainment, personal and household expenses, etc.)	Individuals (Jobs)
Wages and Salaries	The sum of Wages and Salaries for private non-farm industries, state and local government, federal civilian, federal military, and farm sectors.	Millions of Current Dollars
Total Output	The sum of economic output for private non-farm industries, state and local government, federal civilian, federal military, and farm sectors.	Millions of Fixed (2019) Dollars
Gross Domestic Product (GDP)	The market value of goods and services produced by labor and property in the United States, regardless of nationality.	Millions of Fixed (2019) Dollars

Note on tax revenues	Municipal tax revenue is based on	* Based on MH
	current mil rates and reported project	data and municipal
	valuation. An important caveat here is	tax assessor data
	that ultimately the municipality decides	* If added at
	how the Tax Increment Financing	current mil rates
	(TIF) revenue is spent, which may be	
	given back to the developer. However,	
	it is still municipal tax revenue	
	generated and we include it here in the	
	total. Second, while we show the	
	potential additional valuation at existing	
	mil rates, it is ultimately up to the	
	municipality to decide whether to keep	
	the mil rate the same or whether they	
	make adjustments to the mil rate based	
	on the new valuation. However, it is	
	also assumed much of the new project	
	valuation is included in the	
	municipality's calculations of reported	
	mil rates.	

Appendix 5: Breakdown by Project, Municipality and Tax Revenue

Project Name	Municipality	Tax Revenue
Bayside Anchor	Portland	\$62,793
Loring House	Portland	\$137,189
The Ledges	Saco	\$36,669
Huston Commons (Bishop Street)	Portland	\$43,960
The Malcolm A. Noyes Apts. (Mill Brook Estates II)	Westbrook	\$46,106
Pierce Place	Lewiston	\$8,480
The Pines at Ocean Park	Old Orchard Beach	\$4,256
Huse School	Bath	\$10,662
Bartlett Woods	Yarmouth	\$42,926
Carleton Street	Portland	\$30,312
St. Ignatius	Sanford	\$53,784
Blackstone	Falmouth	\$53,289
Cabin in the Woods*	Chelsea	\$0
Motherhouse	Portland	\$19,078
Dr. Arthur O. Berry Apartments (Larrabee Commons)	Westbrook	\$144,570

Appendix 6: Estimated Job Counts by Industry 2015 – 2016 and REMI Region as a Result of MaineHousing Investments

Category	Androsæggin-Franklin- Oxford	Aroostook	Cumberland	Hancock-Washington/Penobscot- Piscataquis	Kennebee-Somerset	Waldo- Knox/Lincoln- Sagadahoc	York
Forestry, Fishing, and Related							
Activities	0.10	0.00	1.16	0.03	0.10	0.00	0.29
Mining	0.26	0.00	1.02	0.02	0.06	0.32	0.81
Utilities	0.07	0.00	0.46	0.02	0.10	0.06	0.10
Construction	38.11	-0.16	328.96	1.45	38.62	74.42	116.04
Manufacturing	2.31	0.08	10.23	0.42	1.23	1.76	3.47
Wholesale Trade	0.72	0.02	8.76	0.29	0.91	0.48	1.20
Retail Trade	6.73	0.01	49.57	1.14	6.39	8.96	16.78
Transportation and Warehousing	0.88	0.06	5.18	0.36	0.54	0.79	0.86
Information	0.17	0.01	2.49	0.11	0.23	0.07	0.19
Finance and Insurance	1.17	0.01	5.00	0.23	0.76	1.19	2.23
Real Estate and Rental and							
Leasing	1.16	0.03	11.12	0.47	0.91	1.11	2.41
Professional, Scientific, and Technical Services	5.92	-0.02	67.26	0.38	8.50	12.73	20.72
Management of Companies and Enterprises	0.38	0.01	3.03	0.07	0.33	0.06	0.27
Administrative and Waste Management Services	2.18	0.02	14.26	0.62	1.60	1.58	2.48
Educational services; private	0.33	0.01	2.43	0.11	0.27	0.13	0.38
Health Care and Social Assistance	2.99	0.03	24.99	0.96	3.07	2.81	6.20
Arts, Entertainment, and							
Recreation	0.73	0.01	6.31	0.18	0.23	0.74	1.40
Accommodation and Food							
Services	2.27	0.02	20.43	0.73	2.08	2.82	5.47
Other Services, except Public Administration	2.30	0.04	15.29	0.71	2.47	2.98	4.81