ECONOMIC IMPACT OF THE 2023 KENTUCKY MAIN STREET PROGRAM

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Kentucky League of Cities

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2023 Economic Impact of the Main Street Program in Kentucky

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Introduction

The economic decline experienced by many of Kentucky's downtown areas in the late 20th century posed a significant threat to their architecturally and historically valuable buildings. [1] Recognizing the need to preserve not only these structures but also the economic vibrancy of the surrounding communities, the Kentucky Heritage Council, an agency of the Kentucky Tourism, Arts and Heritage Cabinet, established the Kentucky Main Street Program to support local revitalization efforts.

Using data provided by the Kentucky League of Cities through the Kentucky Main Street Program, this report assesses the economic impact of investments made possible by the Main Street Program in 2023. It evaluates the effects of construction projects involved in downtown revitalization efforts and the impact of new businesses established in these areas.

The results were obtained using IMPLAN,[2] an Input-Output modeling software widely used by economic development practitioners. This type of model begins by capturing the initial increase in expenditures generated by the economic event under study, known as "direct effects." In this case, the direct effects stem from the construction expenditures and the operations of the newly established businesses.

However, meeting these additional expenses requires increased production, triggering a chain reaction of business-to-business purchases within the supply chain. Input suppliers must ramp up their production to meet the new demands, which, in turn, increases their own input requirements and expenses. These successive rounds of increased spending are referred to as "indirect effects."

Finally, this process leads to increased household income as wages and profits rise with the additional production in the economy. Households then spend their increased pay across various industries, such as food, clothing, restaurants, and health services. These industries, in turn, must increase production to meet the new demand, creating what are known as "induced effects." The direct, indirect, and induced effects are the outputs generated by IMPLAN.

Data was available for each of Kentucky's six congressional districts, enabling us to estimate the economic impact at both the state and district levels. The analysis utilized a Multi-Regional Input-Output (MRIO) model, which allowed us to capture not only the effects of a district's investments on its economy but also the interdependencies—how investments in one district impact the economies of others.

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[1] This paragraph source is https://heritage.ky.gov/community/main-street/Pages/overview.aspx. The Main Street Program was developed by Main Street America's National Main Street Center, a National Trust for Historic Preservation division.
[2] https://implan.com/

There are two primary channels through which investments in one region can influence another: inter-regional trade and commuting. For example, if an industry expands in Region A, it may source inputs from Region B, leading to increased production in Region B to meet the new demand. As a result, the direct effects in Region A create indirect effects in Region B. Also, suppliers in Region B may have their suppliers in Region A, thereby enhancing inter-regional trade and generating cascading impacts along the supply chain.

Additionally, workers in Region A may reside in Region B and, thus, spend most of their income there. Their expenses on restaurants, retail stores, and so on contribute to both induced and indirect effects in both regions. In summary, while the direct effects are always tied to the district where the investment is made, indirect and induced effects arise as dollars circulate among neighboring regions.

Following this introduction and the accompanying glossary, the report details the modeling parameters and decisions made during the analysis. It then presents the predicted economic impacts, including tax estimates, for Kentucky and its congressional districts. The report concludes with recommendations for future data collection.

Glossary

Direct effects
It is one or more production changes or expenditures made by producers/consumers/institutions as a result of an activity or policy being studied.

Employment
Employment in IMPLAN is an Industry-specific mix of full-time, part-time, and seasonal employment. It is an annual average that accounts for seasonality and follows the same definition used by the BLS and BEA.

Indirect effects
Changes in backward-linked industry purchases as they respond to the new demands of the directly affected industries.

Induced effects
Changes in spending from households as labor income is converted into household spending on local goods and services.

Labor Income
All forms of Employment income, including Employee Compensation (wages, salaries, and benefits) and Proprietor Income.

Output
The value of production by industry in a calendar year. It can also be described as annual revenues plus net inventory change.

Proprietor Income
The current-production income of sole proprietorships, partnerships, and tax-exempt cooperatives. Excludes dividends, monetary interest received by nonfinancial business, and rental income received by persons not primarily engaged in the real estate business.

Sub-County
Geographic locations contained in a county such as cities, townships, and villages.

Sub-County Special Districts
Special districts contained in a county such as public-school districts and fire districts.

Value Added
Value Added represents the difference between Output and the cost of Intermediate Inputs throughout a defined economy during a specified period of time. It is equivalent to the Industry's contribution to GDP.

Modeling Parameters

All data and results presented in this report pertain to the year 2023. Data on both construction and business operations were aggregated at the congressional district level, which serves as the geographic unit for this report. Although several construction-related expenses were provided, not all could be used. For instance, substantial resources were invested in the "Public Improvements" category. However, without further clarification on the nature of these expenditures, they were excluded from the analysis as it was unclear which economic multipliers would be appropriate to apply.

In addition, there is the potential issue of double-counting. For example, the dataset includes expenses categorized as both "Façade and Exterior Renovations" and "Building Rehabilitations," which are likely to overlap. Including both of these categories without distinguishing between them could lead to overestimating the total impact.

Therefore, the following types of expenditures were included: "New Construction" and the maximum value between "Façade and Exterior Renovations" and "Building Rehabilitations." By including the maximum between the latter two, we include as much information as possible without risking double counting.

Data on new businesses provided the number of jobs created aggregated by 4 groups: "Retail," "Restaurant," "Service," and "Other (please specify business industry)." A total of 447 businesses were established as a result of the program. However, due to insufficient information on the sectors for the "Other" category, only 5 out of 25 businesses in this group could be used. As a result, the final sample size for the analysis was 427 businesses."

One significant issue was the aggregation of industries. While only a few sectors fall under retail (NAICS codes 44 and 45) and restaurants (NAICS code 72251), any sector classified between NAICS 51 (Information) and NAICS 81 (Other Services, except Public Administration) could be considered as part of the service sector. Grouping all these sectors together introduces considerable aggregation bias. However, due to the lack of more detailed information, using a different classification scheme would be arbitrary. Therefore, the analysis was conducted using this broad aggregation structure.

This report does not address the possibility of job displacement. There is no information regarding jobs lost due to business closures potentially caused by the program. However, we have the overall information that, across all sectors, while new businesses created 447 new jobs, 529 *net* new jobs were created by new and existing businesses. Thus, we do not believe the results are significantly overestimated.

A final note concerns the data availability for District 3. Since no data were available for this district, only indirect and induced effects—resulting from inter-regional trade and migration—were captured in this region, while direct effects were not estimated.

Results

There are two sets of results in this analysis. The first set corresponds to construction expenses, which, by nature, are non-recurring. The second set pertains to new businesses and their operations, which are recurring on an annual basis since these businesses are expected to remain in operation for an extended period.

An important word of caution regards the tax results. In principle, IMPLAN reports the impact on all tax revenue in the study area across all levels of government. However, IMPLAN does not have systematic state government tax revenue reports for each county. IMPLAN has same-year state government tax revenue by state and must allocate that to counties based on proxy information (they do have county-level data for some states and use this to build a model for the allocation process). Thus, tax estimates for government levels smaller than states must be considered carefully: regional officials and local economic developers are often more knowledgeable about the regional tax system.[3]

[3] https://support.implan.com/hc/en-us/articles/115009674528-Generation-and-Interpretation-of-IMPLAN-s-Tax-Impact-Report

All estimated values in this study are in 2024 dollars. Note that labor income consists of employee compensation and proprietor income. Value-added includes labor income plus certain taxes and other property income. Finally, output adds to value-added the amount spent on intermediate inputs (business-to-business purchases) and corresponds to production value. (See also the glossary for more definitions.)

Construction Projects: One-Time Results

Kentucky: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	169.53	$10,243,355.98	$12,701,953.50	$35,463,654.95
2 - Indirect	72.19	$4,206,853.55	$7,912,237.40	$15,610,118.97
3 - Induced	41.91	$2,178,128.91	$4,035,229.51	$7,035,041.89
Total	283.62	$16,628,338.44	$24,649,420.41	$58,108,815.81

Kentucky: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$47,744.45	$52,500.83	$36,214.64	$429,970.67	$1,918,066.14	$2,484,496.73
2 - Indirect	$82,645.65	$238,650.00	$54,679.98	$830,468.57	$929,485.85	$2,135,930.05
3 - Induced	$31,707.72	$83,594.41	$20,235.30	$306,606.53	$480,871.39	$923,015.35
Total	$162,097.82	$374,745.23	$111,129.92	$1,567,045.78	$3,328,423.39	$5,543,442.13

Kentucky's 1st Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	14.68	$750,947.03	$968,359.07	$3,128,113.72
2 - Indirect	6.95	$387,724.97	$754,002.12	$1,543,982.46
3 - Induced	3.3	$150,890.58	$293,185.38	$525,215.69
Total	24.94	$1,289,562.58	$2,015,546.57	$5,197,311.87

Kentucky's 1st Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$4,025.70	$3,690.92	$2,171.30	$33,982.24	$140,742.86	$184,613.01
2 - Indirect	$7,958.60	$20,371.41	$5,944.86	$85,330.82	$84,002.46	$203,608.16
3 - Induced	$2,387.29	$5,639.87	$1,700.73	$25,096.62	$32,822.93	$67,647.43
Total	$14,371.59	$29,702.21	$9,816.89	$144,409.67	$257,568.24	$455,868.60

Kentucky's 2nd Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	5.78	$326,175.71	$371,873.34	$903,300.00
2 - Indirect	4.34	$250,634.62	$483,474.47	$1,037,884.52
3 - Induced	1.92	$91,428.43	$180,685.95	$318,654.57
Total	12.05	$668,238.76	$1,036,033.76	$2,259,839.09

Kentucky's 2nd Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$1,912.18	$1,590.15	$494.79	$11,994.39	$59,593.64	$75,585.16
2 - Indirect	$5,557.01	$15,807.43	$3,318.07	$53,114.28	$56,159.89	$133,956.68
3 - Induced	$1,595.79	$4,035.79	$860.05	$14,528.01	$20,578.28	$41,597.91
Total	$9,064.98	$21,433.37	$4,672.91	$79,636.68	$136,331.82	$251,139.75

Kentucky's 3rd Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
2 - Indirect	5.16	$365,171.83	$636,325.84	$1,186,759.08
3 - Induced	2.36	$150,312.96	$252,867.35	$428,203.27
Total	7.52	$515,484.79	$889,193.18	$1,614,962.35

Kentucky's 3rd Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
2 - Indirect	$9,113.30	$13,434.82	$68.98	$43,830.79	$70,595.78	$137,043.67
3 - Induced	$3,257.86	$4,577.36	$23.14	$15,344.23	$28,739.66	$51,942.24
Total	$12,371.15	$18,012.18	$92.12	$59,175.02	$99,335.44	$188,985.91

Kentucky's 4th Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	87.9	$6,648,875.43	$8,271,596.24	$20,930,925.00
2 - Indirect	30.81	$1,911,889.09	$3,522,328.06	$6,479,153.95
3 - Induced	20.15	$1,109,847.78	$2,049,713.45	$3,499,743.13
Total	138.86	$9,670,612.29	$13,843,637.75	$30,909,822.08

Kentucky's 4th Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$31,535.97	$34,701.13	$22,774.65	$252,639.69	$1,183,758.56	$1,525,410.01
2 - Indirect	$34,291.53	$118,491.79	$27,590.21	$335,297.25	$408,780.52	$924,451.30
3 - Induced	$14,865.16	$46,523.69	$11,519.64	$143,191.82	$237,589.91	$453,690.21
Total	$80,692.66	$199,716.61	$61,884.51	$731,128.75	$1,830,128.99	$2,903,551.52

Kentucky's 5th Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	59.67	$2,426,766.07	$2,969,675.48	$10,161,316.23
2 - Indirect	18.37	$899,710.03	$1,825,085.69	$3,946,662.43
3 - Induced	10.62	$491,442.61	$921,800.31	$1,673,326.61
Total	88.66	$3,817,918.72	$5,716,561.48	$15,781,305.27

Kentucky's 5th Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$9,269.14	$11,946.32	$10,581.55	$127,405.34	$516,272.68	$675,475.03
2 - Indirect	$16,034.52	$53,588.99	$15,669.64	$253,650.26	$225,591.16	$564,534.57
3 - Induced	$5,357.32	$15,942.87	$5,246.88	$83,418.84	$120,874.03	$230,839.94
Total	$30,660.98	$81,478.18	$31,498.07	$464,474.44	$862,737.86	$1,470,849.53

Kentucky's 6th Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	1.49	$90,591.74	$120,449.36	$340,000.00
2 - Indirect	6.55	$391,723.01	$691,021.22	$1,415,676.53
3 - Induced	3.55	$184,206.56	$336,977.08	$589,898.63
Total	11.59	$666,521.31	$1,148,447.67	$2,345,575.16

Kentucky's 6th Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$1,001.45	$572.29	$192.36	$3,949.02	$17,698.40	$23,413.52
2 - Indirect	$9,690.69	$16,955.56	$2,088.21	$59,245.18	$84,356.04	$172,335.68
3 - Induced	$4,244.31	$6,874.83	$884.87	$25,027.02	$40,266.60	$77,297.62
Total	$14,936.45	$24,402.68	$3,165.43	$88,221.21	$142,321.04	$273,046.82

New Businesses: Yearly Results

Kentucky: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	427	$14,581,002.82	$24,718,416.82	$47,386,308.79
2 - Indirect	83.07	$4,617,283.55	$7,772,829.27	$14,755,648.03
3 - Induced	54.98	$2,707,725.70	$4,696,354.52	$8,748,523.67
Total	565.04	$21,906,012.07	$37,187,600.61	$70,890,480.48

Kentucky: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$226,344.93	$663,565.61	$175,012.70	$2,566,107.56	$3,203,164.32	$6,834,195.13
2 - Indirect	$48,888.01	$117,153.12	$33,423.34	$514,753.53	$1,003,888.47	$1,718,106.47
3 - Induced	$37,313.19	$92,281.73	$23,447.24	$374,335.89	$591,677.05	$1,119,055.09
Total	$312,546.13	$873,000.46	$231,883.27	$3,455,196.99	$4,798,729.84	$9,671,356.68

Kentucky's 1st Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	74	$2,700,221.78	$4,767,018.76	$8,871,039.18
2 - Indirect	13.46	$699,727.37	$1,166,498.83	$2,300,343.68
3 - Induced	8.1	$360,640.53	$637,783.57	$1,228,141.22
Total	95.57	$3,760,589.68	$6,571,301.17	$12,399,524.09

Kentucky's 1st Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$47,082.08	$117,804.28	$34,912.84	$501,039.19	$566,688.24	$1,267,526.63
2 - Indirect	$7,295.48	$15,001.73	$4,902.28	$73,848.77	$143,233.58	$244,281.84
3 - Induced	$5,269.27	$12,392.73	$3,775.74	$55,177.61	$75,520.67	$152,136.01
Total	$59,646.83	$145,198.74	$43,590.86	$630,065.57	$785,442.48	$1,663,944.48

Kentucky's 2nd Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	60	$2,052,797.73	$3,484,630.67	$6,794,372.01
2 - Indirect	10.19	$557,917.77	$966,919.35	$1,883,544.57
3 - Induced	5.81	$274,086.37	$498,920.17	$941,929.15
Total	76	$2,884,801.87	$4,950,470.19	$9,619,845.73

Kentucky's 2nd Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$34,313.43	$90,176.08	$19,225.57	$316,428.35	$438,817.11	$898,960.54
2 - Indirect	$7,092.92	$15,761.64	$3,450.50	$61,234.92	$118,671.90	$206,211.88
3 - Induced	$4,401.95	$11,027.33	$2,361.47	$39,851.03	$59,582.99	$117,224.76
Total	$45,808.30	$116,965.05	$25,037.54	$417,514.30	$617,071.99	$1,222,397.19

Kentucky's 3rd Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
2 - Indirect	1.76	$134,155.72	$216,551.54	$393,553.88
3 - Induced	2.27	$147,666.98	$244,804.52	$434,863.71
Total	4.03	$281,822.69	$461,356.07	$828,417.59

Kentucky's 3rd Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
2 - Indirect	$2,437.71	$3,243.94	$16.10	$11,241.64	$25,395.59	$42,334.98
3 - Induced	$3,168.30	$4,464.41	$22.55	$14,929.06	$28,004.45	$50,588.78
Total	$5,606.01	$7,708.35	$38.65	$26,170.70	$53,400.04	$92,923.76

Kentucky's 4th Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	109	$4,066,958.89	$6,655,720.85	$12,112,618.66
2 - Indirect	20.6	$1,299,395.66	$2,161,072.41	$3,871,184.59
3 - Induced	13.26	$737,506.32	$1,257,489.25	$2,234,772.27
Total	142.86	$6,103,860.87	$10,074,282.51	$18,218,575.52

Kentucky's 4th Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$64,763.39	$220,234.07	$52,505.96	$628,446.89	$830,506.18	$1,796,456.49
2 - Indirect	$12,999.60	$36,950.47	$9,915.54	$122,932.16	$266,899.83	$449,697.60
3 - Induced	$8,783.92	$26,827.47	$6,829.99	$83,994.32	$152,686.13	$279,121.84
Total	$86,546.91	$284,012.01	$69,251.49	$835,373.37	$1,250,092.15	$2,525,275.93

Kentucky's 5th Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	172	$5,254,958.96	$8,930,773.45	$18,097,260.67
2 - Indirect	32.5	$1,664,413.70	$2,824,065.27	$5,469,271.29
3 - Induced	19.61	$879,507.59	$1,531,531.16	$2,948,413.16
Total	224.11	$7,798,880.26	$13,286,369.88	$26,514,945.12

Kentucky's 5th Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$65,535.37	$207,068.53	$65,095.77	$1,026,151.30	$1,259,380.01	$2,623,230.97
2 - Indirect	$14,217.78	$39,344.25	$14,147.08	$218,706.37	$394,187.99	$680,603.47
3 - Induced	$9,175.57	$27,309.44	$9,089.31	$142,561.00	$210,338.98	$398,474.30
Total	$88,928.72	$273,722.22	$88,332.16	$1,387,418.67	$1,863,906.97	$3,702,308.74

Kentucky's 6th Congressional District: Economic Indicators by Impact

Impact	Employment	Labor Income	Value Added	Output
1 - Direct	12	$506,065.45	$880,273.09	$1,511,018.26
2 - Indirect	4.55	$261,673.32	$437,721.86	$837,750.03
3 - Induced	5.92	$308,317.92	$525,825.84	$960,404.15
Total	22.47	$1,076,056.69	$1,843,820.79	$3,309,172.44

Kentucky's 6th Congressional District: Tax Results

Impact	Sub County General	Sub County Special Districts	County	State	Federal	Total
1 - Direct	$14,650.66	$28,282.66	$3,272.56	$94,041.83	$107,772.78	$248,020.49
2 - Indirect	$4,844.53	$6,851.08	$991.83	$26,789.67	$55,499.59	$94,976.70
3 - Induced	$6,514.17	$10,260.35	$1,368.18	$37,822.87	$65,543.83	$121,509.40
Total	$26,009.36	$45,394.09	$5,632.58	$158,654.37	$228,816.21	$464,506.60

Recommendations for Future Data Collection

There are two primary recommendations for future studies. The first is to ensure that each business's NAICS code is included in the data collection. Economic impact studies require at least one of two types of information: employment figures by industrial sector or output data by industrial sector. In instances where NAICS codes are unavailable, as seen in this study, industry aggregation becomes necessary. This introduces aggregation bias, as it assumes that the aggregated multiplier reflects an overall average across sectors, which can be inaccurate. If a business is unwilling to provide its NAICS, it can be acquired through purchase. It is important to note that confidentiality concerns can be addressed, as no identifying information about the businesses is required for data analysis—only the total employment or output figures categorized by NAICS.

The second recommendation is to take job displacement into account. Business closures are just as critical to economic impact analyses as new business openings. Additionally, the creation of new jobs by existing firms due to the policy being examined should also be incorporated. However, similar to case of new businesses, this information is unusable without sufficient details regarding the industrial sector (ideally the NAICS) for each job figure.

Disclaimer

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