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Shift-Share Analysis: Virginia, 2005 - 2018

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Regional Research Institute West Virginia University

Research Paper Series



Shift-Share Analysis: Virginia, 2005-2018

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Shift-Share Analysis: Virginia, 2005-2018

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June 11, 2020

Abstract

In County-level CIE Supply Chain Analysis, the second of five parts of An Economic Analysis of the Appalachian Coal Industry Ecosystem posted to the Commission's website in January of 2018, we developed a set of metrics that were used to provide insights on the past and future supply chain implications of long-term coal industry decline in Appalachia.[1] These metrics were used to identify counties that have been heavily impacted by the decline of the coal industry, those that remain dependent on the coal industry ecosystem (CIE), and among the dependent counties, those that are at greatest risk of further impact. This document reports the results of further descriptive analysis aimed at more detailed descriptions of employment trends and conditions in the 420 counties that form the Appalachian Region (the Region). Shift-share analyses for all counties, micropolitan regions, and metropolitan regions are reported in supplemental documents accompanying a project overview document.

The original version of this report will soon be available on the [Appalachian Regional Commission](#) website under the "Research and Data" tab.

Recommended Citation

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Supplementary Document 12

Shift-Share Analysis: Virginia, 2005 - 2018

**Prepared for the Appalachian Regional Commission by the
West Virginia University Regional Research Institute**

Randall Jackson and Peter Jarosi

11-Jun-2020

Table of Contents

Chapter 1. Alleghany County, Virginia	1
Chapter 2. Bath County, Virginia	10
Chapter 3. Bland County, Virginia.....	19
Chapter 4. Botetourt County, Virginia	28
Chapter 5. Buchanan County, Virginia.....	37
Chapter 6. Carroll County, Virginia	46
Chapter 7. Craig County, Virginia.....	55
Chapter 8. Dickenson County, Virginia	64
Chapter 9. Floyd County, Virginia	73
Chapter 10. Giles County, Virginia.....	82
Chapter 11. Grayson County, Virginia	91
Chapter 12. Henry County, Virginia	100
Chapter 13. Highland County, Virginia	109
Chapter 14. Lee County, Virginia	118
Chapter 15. Montgomery County, Virginia	127
Chapter 16. Patrick County, Virginia.....	136
Chapter 17. Pulaski County, Virginia	145
Chapter 18. Rockbridge County, Virginia.....	154
Chapter 19. Russell County, Virginia.....	163
Chapter 20. Scott County, Virginia	172
Chapter 21. Smyth County, Virginia.....	181
Chapter 22. Tazewell County, Virginia.....	190
Chapter 23. Washington County, Virginia	199
Chapter 24. Wise County, Virginia.....	208
Chapter 25. Wythe County, Virginia	217

Chapter 1. Alleghany County, Virginia

Employment in Alleghany County, Virginia, declined from 9,905 in 2005 to 7,760 in 2018, for a change of -2,145, or -21.66%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Alleghany County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,114	-3,262	-703	-2,559
vs. Appalachia	28	-2,173	-238	-1,935
vs. Neighbors	-1,198	-953	-387	-566

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Alleghany County, Virginia, in comparison to at least one of the three referent regions.

Chapter 1. Alleghany County, Virginia

Industry Group Membership for Alleghany County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
07	Utilities	F III c i	no	yes	yes	yes
12	Fabricated metal products	F III c i	no	yes	yes	yes
53	Miscellaneous profession ...	B V e ii	yes	no	no	yes
61	Social assistance	B II b ii	yes	yes	yes	yes
64	Accommodation	A I a i	yes	yes	yes	yes
65	Food services and drinking ...	B I a i	yes	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Alleghany County, Virginia vs. the United States

Groups a, b, and c are from Alleghany County, Virginia vs. Appalachia

Groups i, ii, and iii are from Alleghany County, Virginia vs. its neighbors

Chapter 1. Alleghany County, Virginia

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Alleghany County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Alleghany County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Alleghany County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Alleghany County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

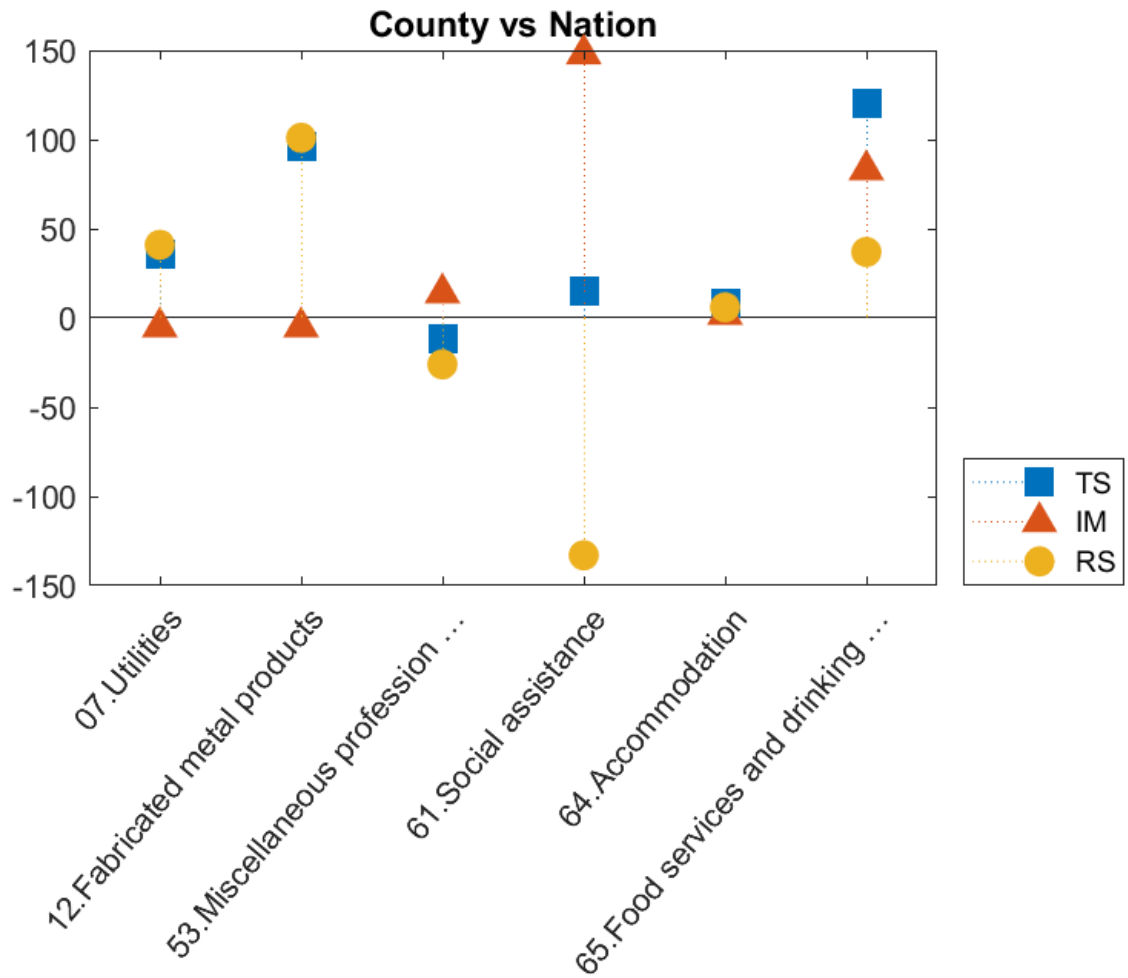
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Alleghany County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Allegheny County, Virginia vs the U.S.

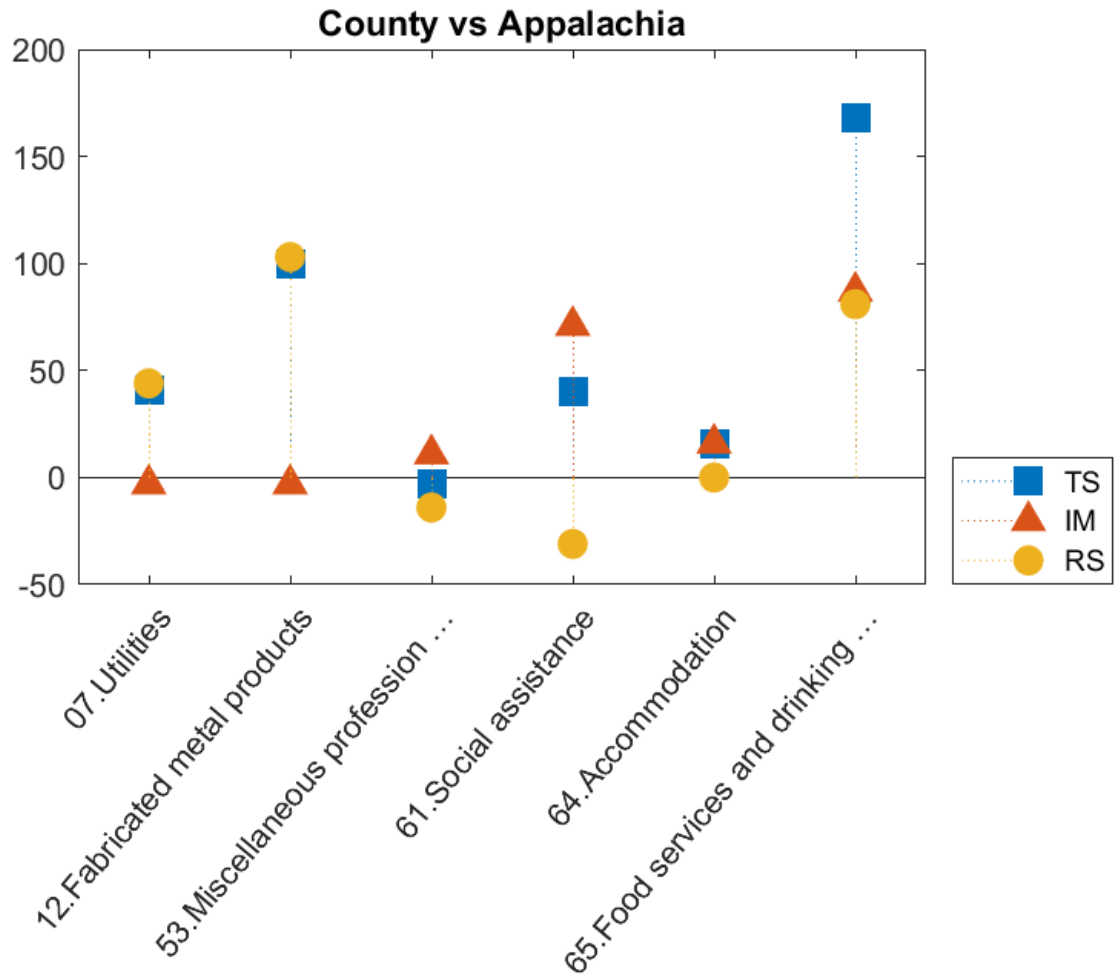


Chapter 1. Alleghany County, Virginia

Alleghany County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
07	Utilities	5	36	-5	41	86
12	Fabricated metal products	4	96	-5	101	137
53	Miscellaneous profession ...	9	-12	14	-26	81
61	Social assistance	25	15	148	-133	266
64	Accommodation	9	8	2	6	97
65	Food services and drinking ...	49	120	83	37	604

Selected SSA Components for Alleghany County, Virginia vs the Appalachian Region

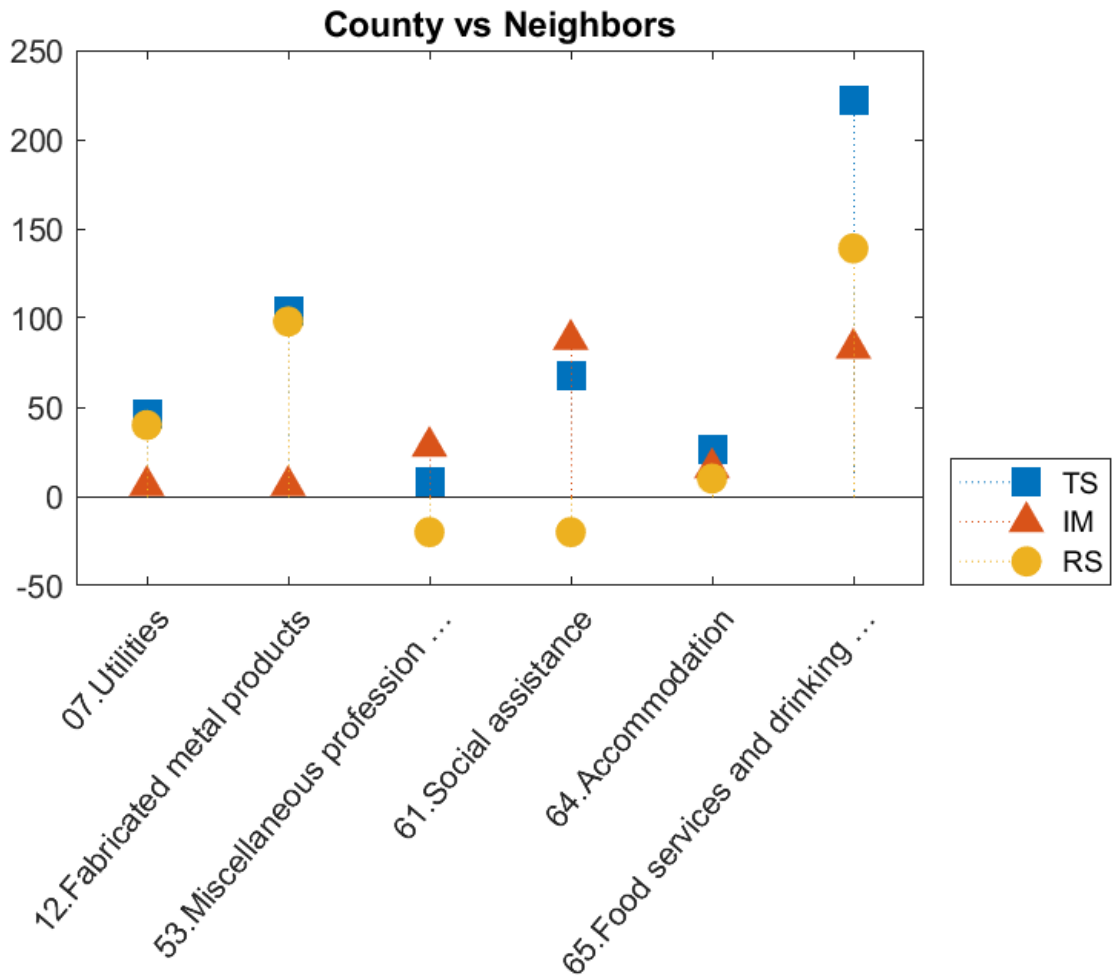


Chapter 1. Alleghany County, Virginia

Selected SSA Components for Alleghany County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
07	Utilities	0	41	-3	44	86
12	Fabricated metal products	0	100	-3	103	137
53	Miscellaneous profession ...	0	-3	11	-14	81
61	Social assistance	1	40	71	-31	266
64	Accommodation	0	16	16	0	97
65	Food services and drinking ...	1	168	87	81	604

Selected SSA Components for Allegheny County, Virginia vs Neighbors



Chapter 1. Alleghany County, Virginia

Selected SSA Components for Alleghany County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
07	Utilities	-5	46	6	40	86
12	Fabricated metal products	-4	104	6	98	137
53	Miscellaneous profession ...	-10	8	28	-20	81
61	Social assistance	-27	68	88	-20	266
64	Accommodation	-10	26	16	10	97
65	Food services and drinking ...	-53	222	83	139	604

Chapter 2. Bath County, Virginia

Employment in Bath County, Virginia, declined from 2,516 in 2005 to 2,232 in 2018, for a change of -284, or -11.29%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Bath County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	282	-568	-9	-559
vs. Appalachia	6	-289	184	-473
vs. Neighbors	-219	-64	54	-118

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Bath County, Virginia, in comparison to at least one of the three referent regions.

Chapter 2. Bath County, Virginia

Industry Group Membership for Bath County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
27	Plastics and rubber prod...	D I a i	no	yes	yes	yes
30	Food and beverage stores	F I a i	no	yes	yes	yes
43	Broadcasting and telecom ...	F III c iii	no	yes	yes	yes
52	Computer systems design ...	B I a i	yes	yes	yes	yes
53	Miscellaneous profession ...	B I a i	yes	yes	yes	yes
54	Management of companies ...	A II b iii	yes	yes	yes	yes
64	Accommodation	A V b i	yes	no	yes	yes
65	Food services and drinking ...	B II a i	yes	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Bath County, Virginia vs. the United States

Groups a, b, and c are from Bath County, Virginia vs. Appalachia

Groups i, ii, and iii are from Bath County, Virginia vs. its neighbors

Chapter 2. Bath County, Virginia

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Bath County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Bath County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Bath County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Bath County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

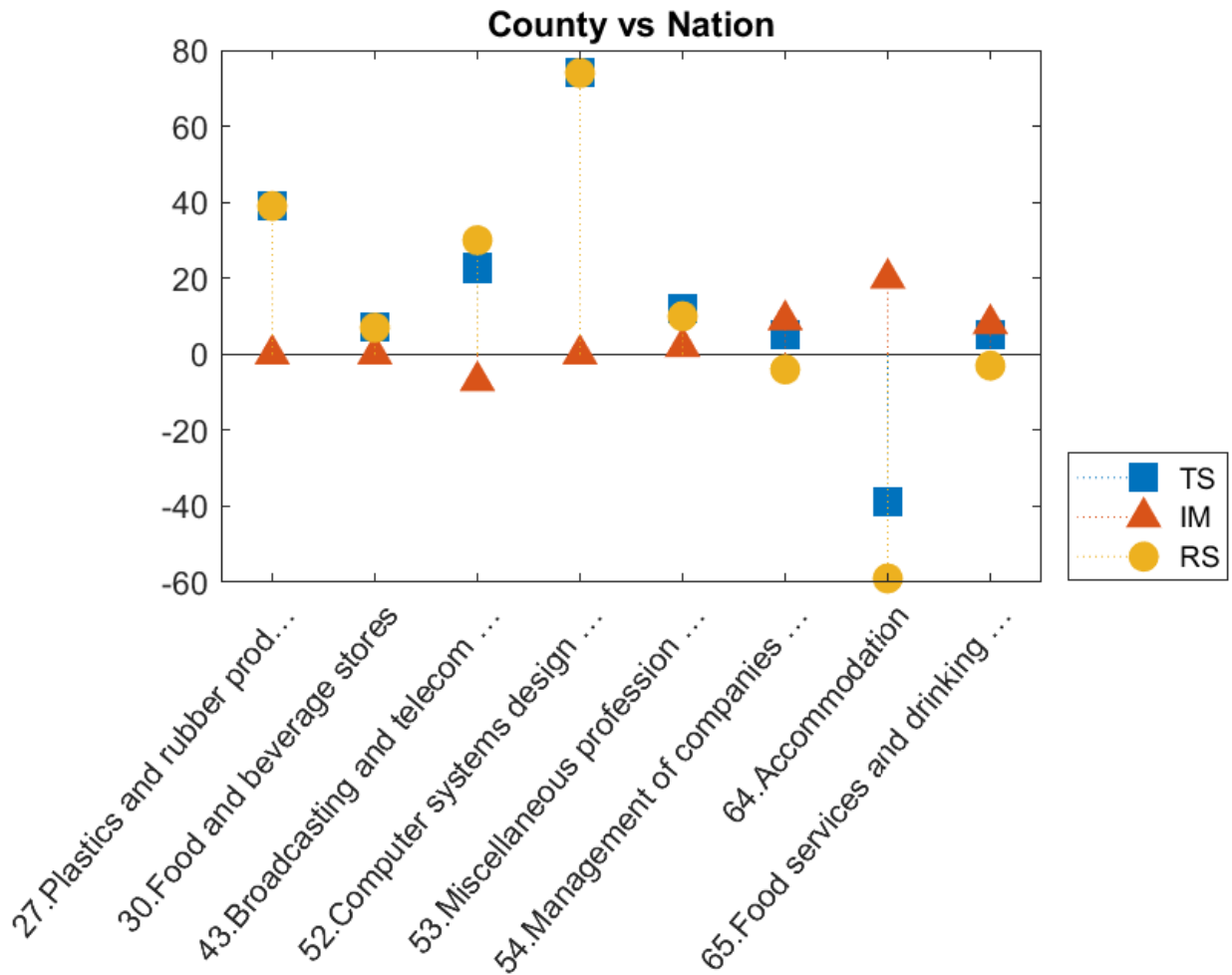
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Bath County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Bath County, Virginia vs the U.S.

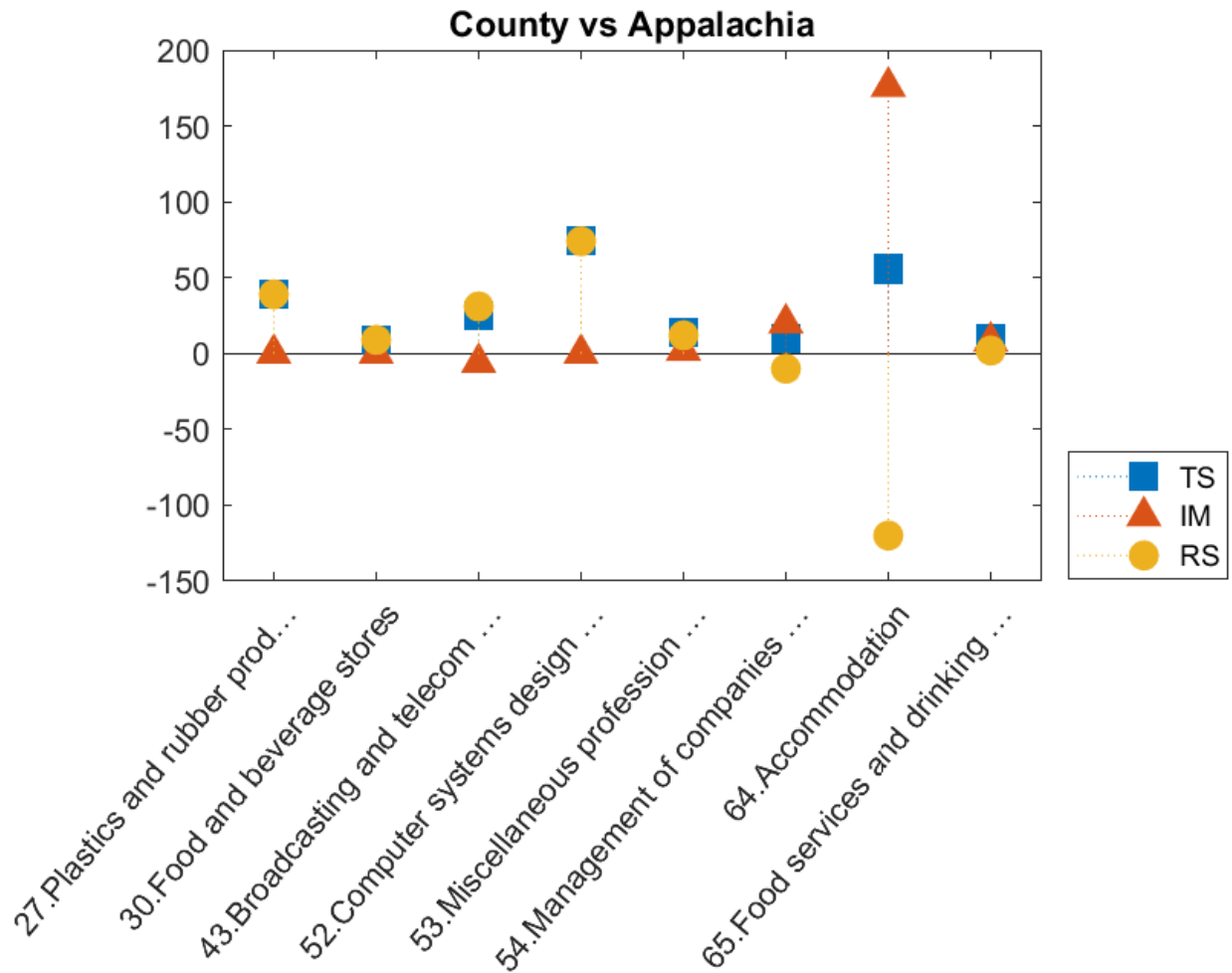


Chapter 2. Bath County, Virginia

Bath County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
27	Plastics and rubber prod...	0	39	0	39	39
30	Food and beverage stores	2	7	-0	7	30
43	Broadcasting and telecom ...	2	23	-7	30	43
52	Computer systems design ...	0	74	0	74	74
53	Miscellaneous profession ...	1	12	2	10	24
54	Management of companies ...	4	5	9	-4	48
64	Accommodation	98	-39	20	-59	928
65	Food services and drinking ...	5	5	8	-3	52

Selected SSA Components for Bath County, Virginia vs the Appalachian Region

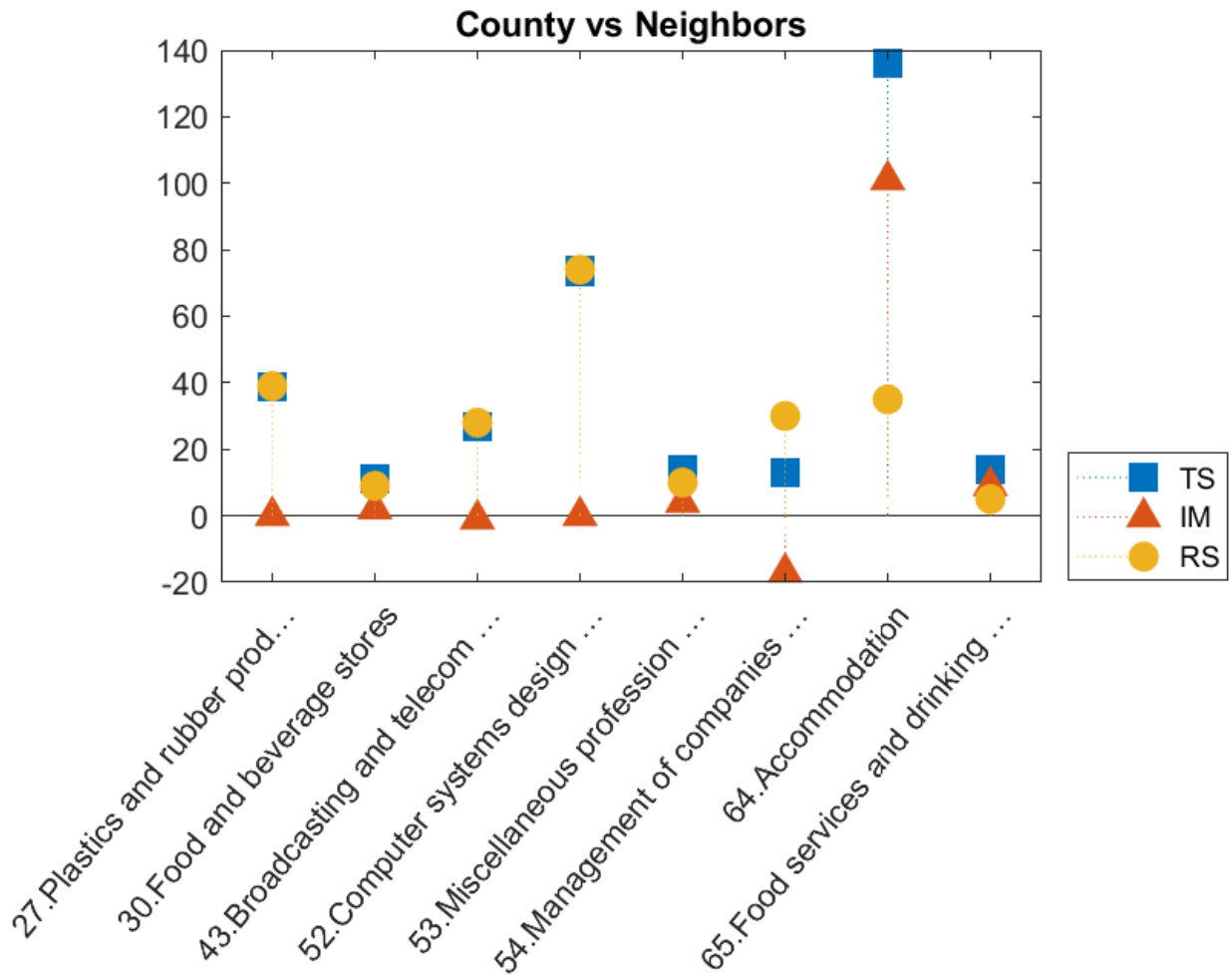


Chapter 2. Bath County, Virginia

Selected SSA Components for Bath County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
27	Plastics and rubber prod...	0	39	0	39	39
30	Food and beverage stores	0	9	-0	9	30
43	Broadcasting and telecom ...	0	25	-6	31	43
52	Computer systems design ...	0	74	0	74	74
53	Miscellaneous profession ...	0	14	2	12	24
54	Management of companies ...	0	10	20	-10	48
64	Accommodation	3	56	176	-120	928
65	Food services and drinking ...	0	10	8	2	52

Selected SSA Components for Bath County, Virginia vs Neighbors



Chapter 2. Bath County, Virginia

Selected SSA Components for Bath County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
27	Plastics and rubber prod...	-0	39	0	39	39
30	Food and beverage stores	-2	11	2	9	30
43	Broadcasting and telecom ...	-2	27	-1	28	43
52	Computer systems design ...	-0	74	0	74	74
53	Miscellaneous profession ...	-1	14	4	10	24
54	Management of companies ...	-3	13	-17	30	48
64	Accommodation	-77	136	101	35	928
65	Food services and drinking ...	-4	14	9	5	52

Chapter 3. Bland County, Virginia

Employment in Bland County, Virginia, declined from 2,973 in 2005 to 1,961 in 2018, for a change of -1,012, or -34.04%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Bland County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	338	-1,345	-113	-1,232
vs. Appalachia	8	-1,020	-34	-986
vs. Neighbors	-374	-638	179	-817

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Bland County, Virginia, in comparison to at least one of the three referent regions.

Chapter 3. Bland County, Virginia

Industry Group Membership for Bland County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
08	Construction	F III c iii	no	yes	yes	yes
11	Primary metals	F I a i	no	yes	yes	yes
12	Fabricated metal products	F III c iii	no	yes	yes	yes
13	Machinery	F I a i	no	yes	yes	yes
15	Electrical equipment, ...	D III c i	no	yes	yes	yes
27	Plastics and rubber prod...	D I a i	no	yes	yes	yes
28	Wholesale trade	F III c iii	no	yes	yes	yes
47	Insurance carriers and ...	F I c iii	no	yes	yes	yes
54	Management of companies ...	A I a i	yes	yes	yes	yes
55	Administrative and ...	A V e ii	yes	no	no	yes
58	Ambulatory health care ...	B I a i	yes	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Bland County, Virginia vs. the United States

Groups a, b, and c are from Bland County, Virginia vs. Appalachia

Groups i, ii, and iii are from Bland County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Bland County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Bland County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Bland County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Bland County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

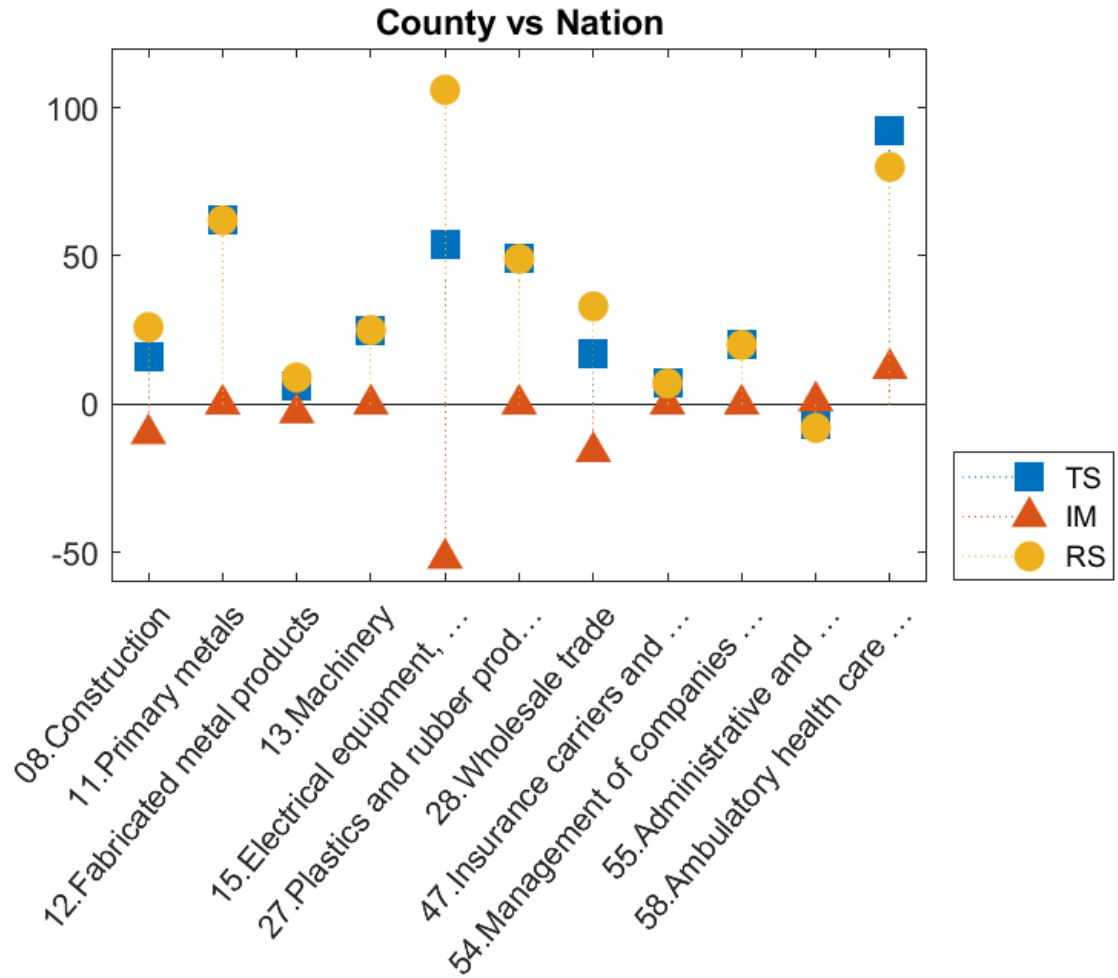
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Bland County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Bland County, Virginia vs the U.S.

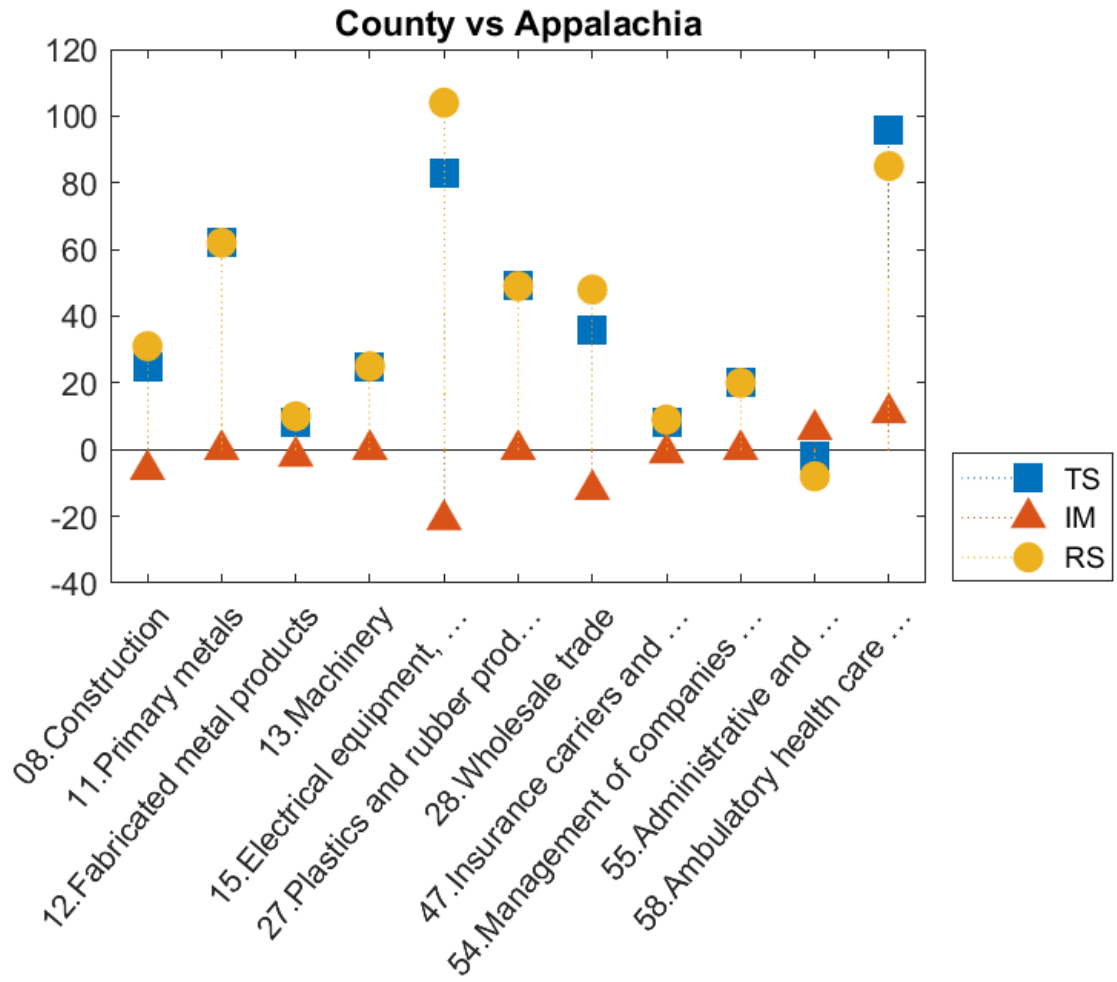


Chapter 3. Bland County, Virginia

Bland County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
08	Construction	9	16	-10	26	104
11	Primary metals	0	62	0	62	62
12	Fabricated metal products	3	6	-3	9	31
13	Machinery	0	25	0	25	25
15	Electrical equipment, ...	30	54	-52	106	350
27	Plastics and rubber prod...	0	49	0	49	49
28	Wholesale trade	19	17	-16	33	206
47	Insurance carriers and ...	2	7	-0	7	23
54	Management of companies ...	0	20	0	20	20
55	Administrative and ...	5	-7	1	-8	44
58	Ambulatory health care ...	4	92	12	80	130

Selected SSA Components for Bland County, Virginia vs the Appalachian Region

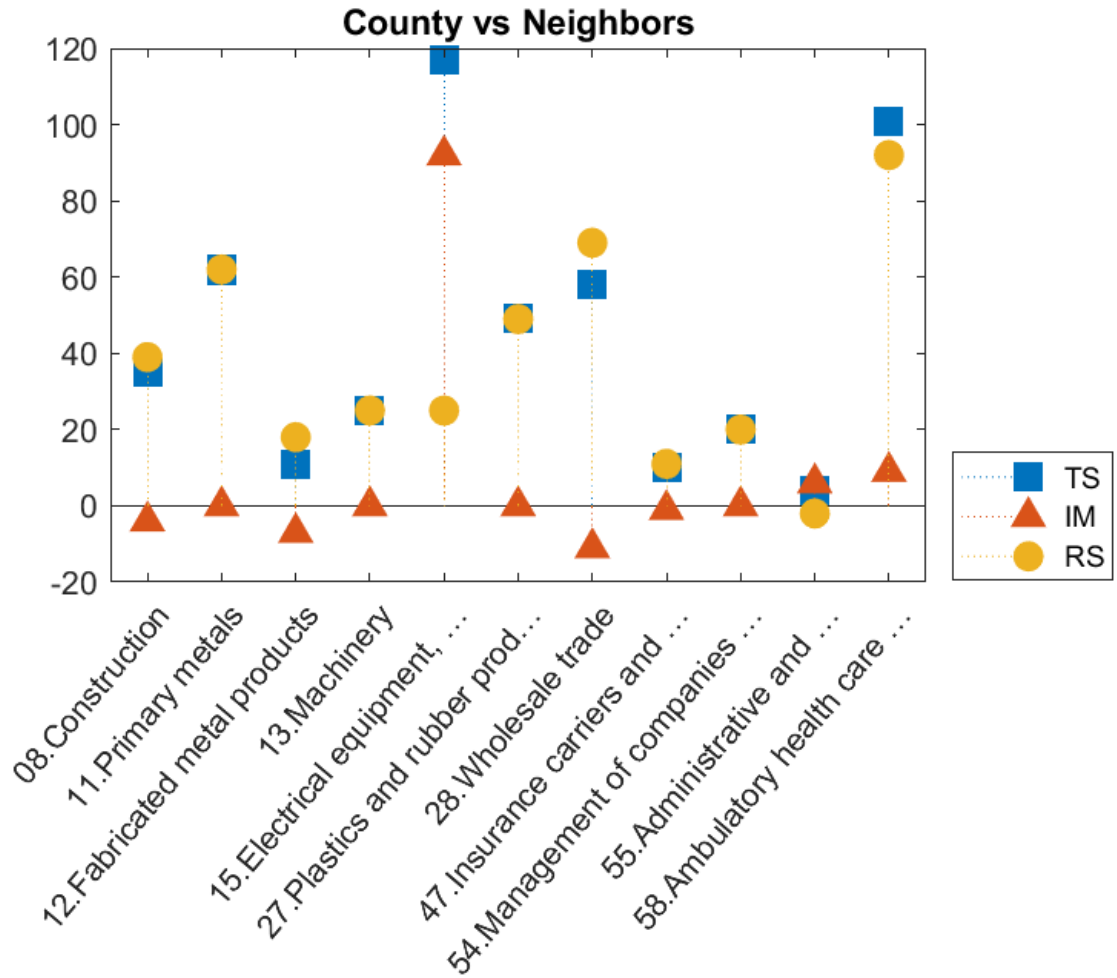


Chapter 3. Bland County, Virginia

Selected SSA Components for Bland County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
08	Construction	0	25	-6	31	104
11	Primary metals	0	62	0	62	62
12	Fabricated metal products	0	8	-2	10	31
13	Machinery	0	25	0	25	25
15	Electrical equipment, ...	1	83	-21	104	350
27	Plastics and rubber prod...	0	49	0	49	49
28	Wholesale trade	1	36	-12	48	206
47	Insurance carriers and ...	0	8	-1	9	23
54	Management of companies ...	0	20	0	20	20
55	Administrative and ...	0	-2	6	-8	44
58	Ambulatory health care ...	0	96	11	85	130

Selected SSA Components for Bland County, Virginia vs Neighbors



Chapter 3. Bland County, Virginia

Selected SSA Components for Bland County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
08	Construction	-10	35	-4	39	104
11	Primary metals	-0	62	0	62	62
12	Fabricated metal products	-3	11	-7	18	31
13	Machinery	-0	25	0	25	25
15	Electrical equipment, ...	-33	117	92	25	350
27	Plastics and rubber prod...	-0	49	0	49	49
28	Wholesale trade	-21	58	-11	69	206
47	Insurance carriers and ...	-2	10	-1	11	23
54	Management of companies ...	-0	20	0	20	20
55	Administrative and ...	-6	4	6	-2	44
58	Ambulatory health care ...	-4	101	9	92	130

Chapter 4. Botetourt County, Virginia

Employment in Botetourt County, Virginia, grew from 9,562 in 2005 to 10,764 in 2018, for a change of 1,202, or 12.57%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Botetourt County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,077	123	115	8
vs. Appalachia	28	1,166	162	1,004
vs. Neighbors	404	796	-448	1,244

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Botetourt County, Virginia, in comparison to at least one of the three referent regions.

Chapter 4. Botetourt County, Virginia

Industry Group Membership for Botetourt County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
13	Machinery	F III c i	no	yes	yes	yes
16	Motor vehicles, bodies ...	C III b iii	yes	yes	yes	yes
28	Wholesale trade	F III c i	no	yes	yes	yes
30	Food and beverage stores	F III c ii	no	yes	yes	yes
54	Management of companies ...	A I a ii	yes	yes	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
60	Nursing and residential ...	E I a i	no	yes	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
64	Accommodation	A I a i	yes	yes	yes	yes
65	Food services and drinking ...	B I a ii	yes	yes	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes
68	Government	F III a ii	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Botetourt County, Virginia vs. the United States

Groups a, b, and c are from Botetourt County, Virginia vs. Appalachia

Groups i, ii, and iii are from Botetourt County, Virginia vs. its neighbors

Chapter 4. Botetourt County, Virginia

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Botetourt County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Botetourt County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Botetourt County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Botetourt County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

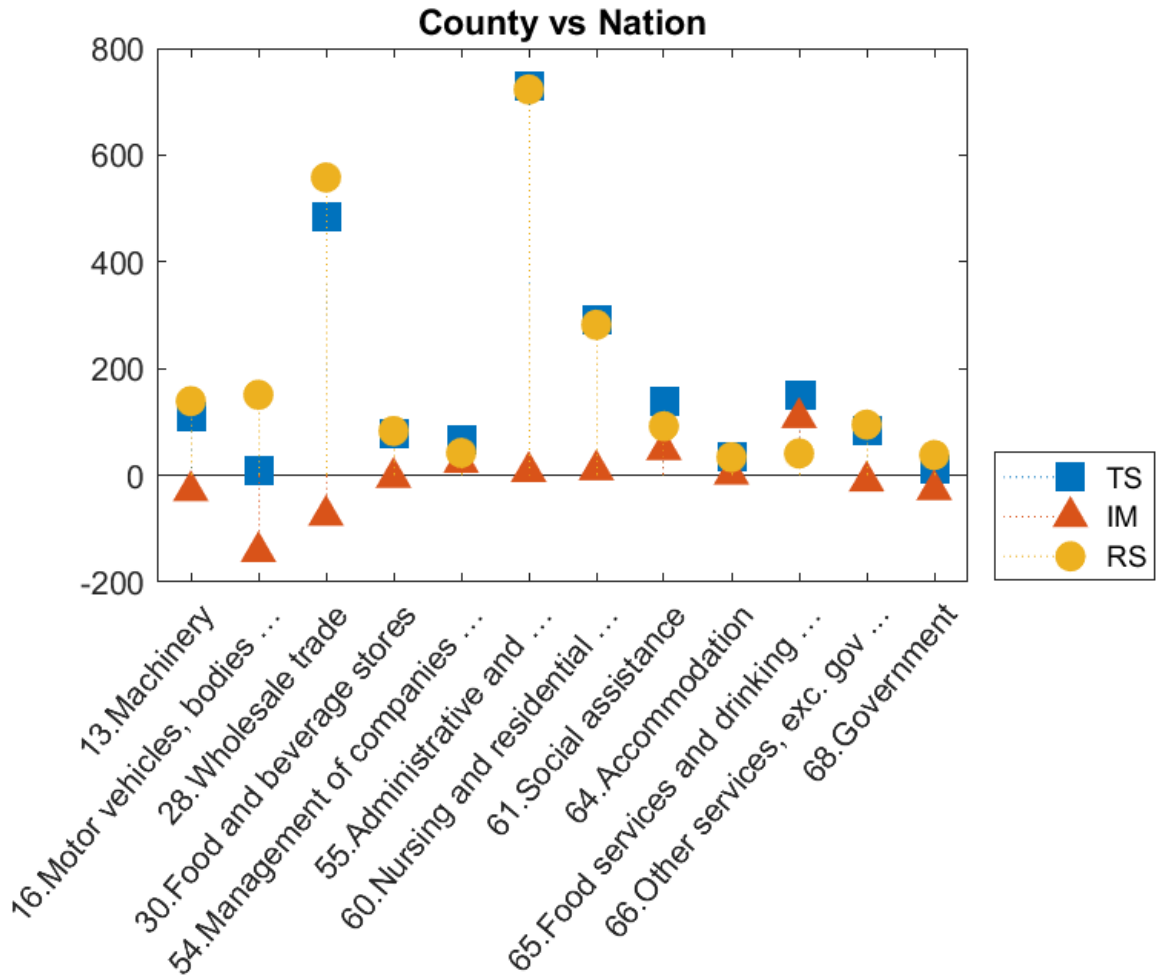
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Botetourt County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Botetourt County, Virginia vs the U.S.

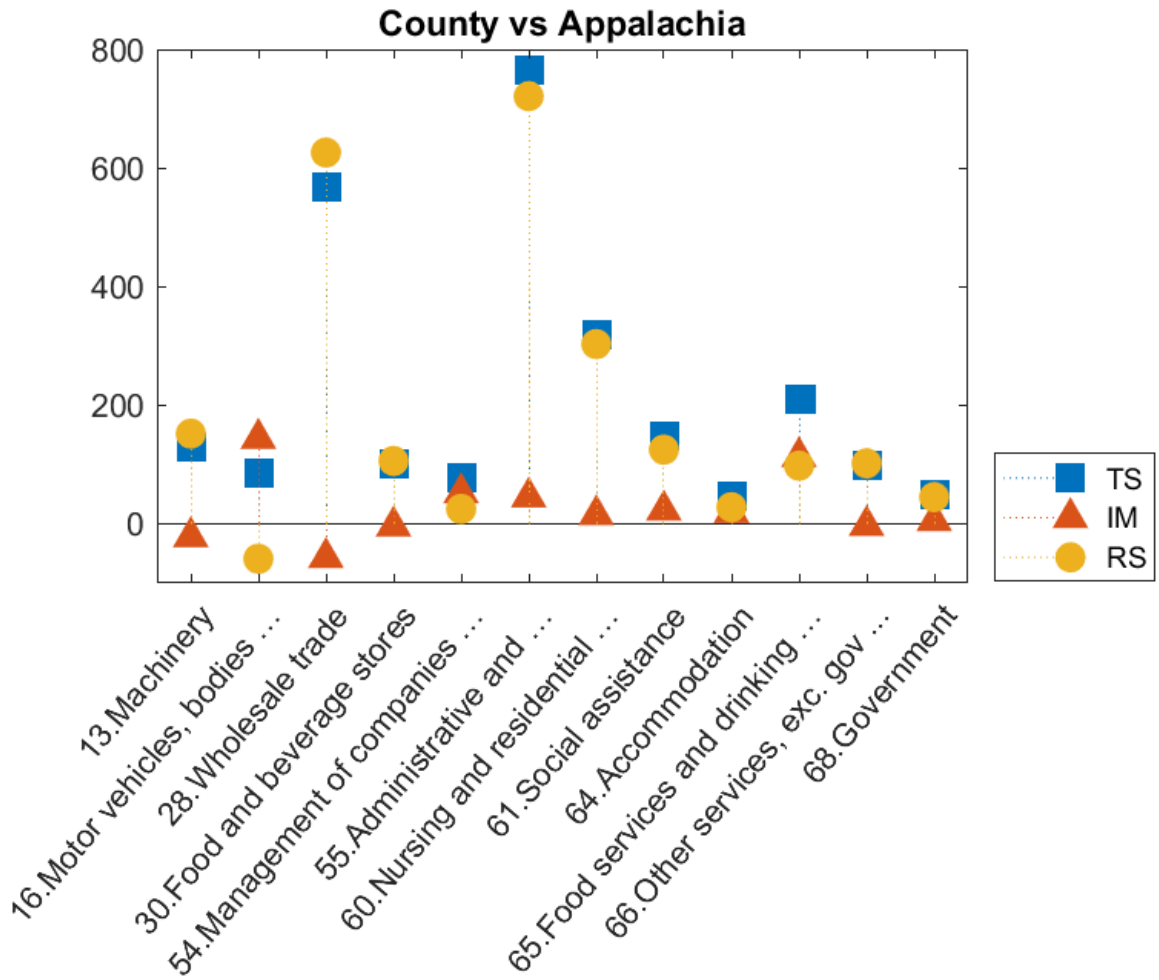


Chapter 4. Botetourt County, Virginia

Botetourt County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
13	Machinery	20	110	-29	139	303
16	Motor vehicles, bodies ...	80	8	-143	151	797
28	Wholesale trade	89	483	-75	558	1,357
30	Food and beverage stores	23	79	-4	83	305
54	Management of companies ...	11	66	24	42	178
55	Administrative and ...	37	730	7	723	1,096
60	Nursing and residential ...	27	292	10	282	554
61	Social assistance	8	140	48	92	221
64	Accommodation	10	36	2	34	140
65	Food services and drinking ...	64	149	108	41	780
66	Other services, exc. gov ...	16	84	-11	95	244
68	Government	40	11	-27	38	403

Selected SSA Components for Botetourt County, Virginia vs the Appalachian Region

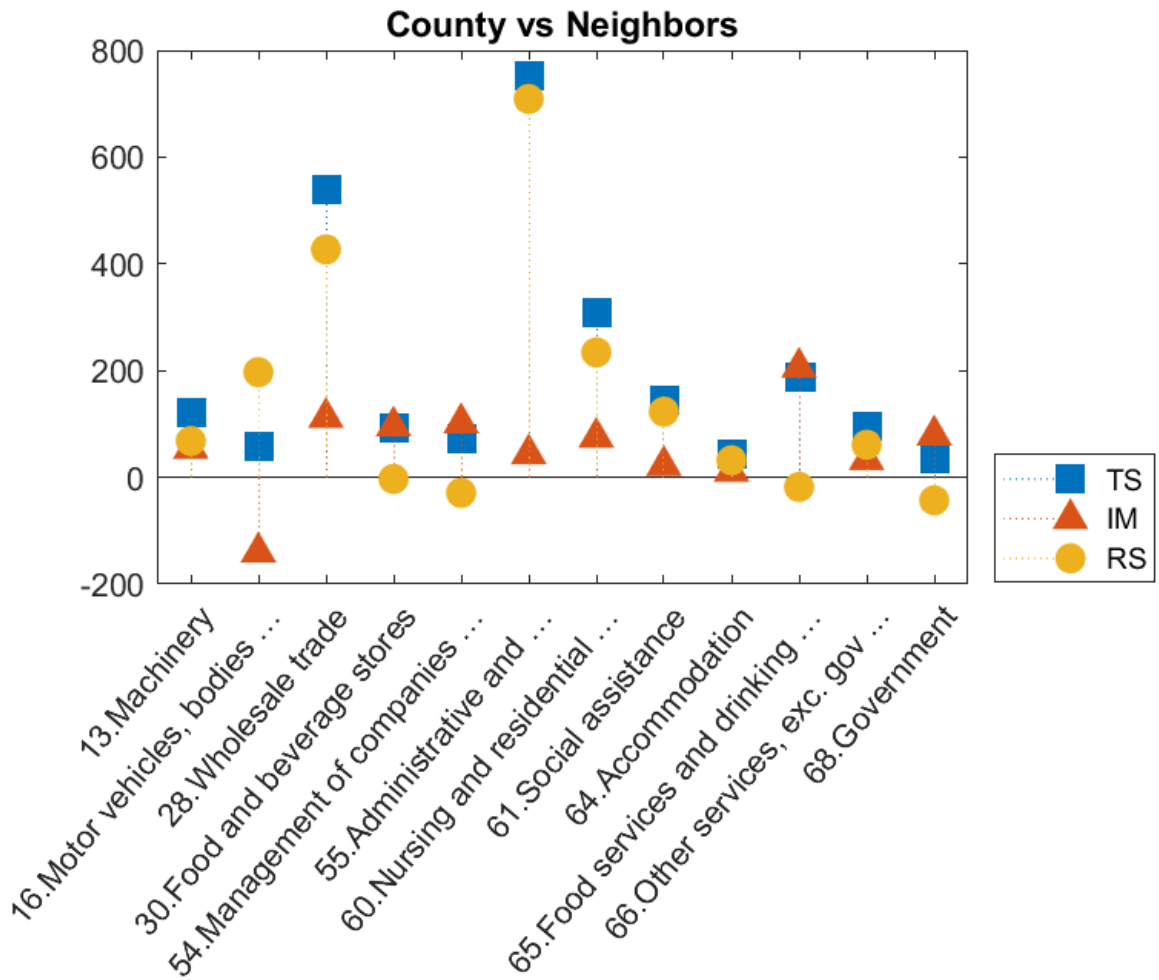


Chapter 4. Botetourt County, Virginia

Selected SSA Components for Botetourt County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
13	Machinery	1	130	-22	152	303
16	Motor vehicles, bodies ...	2	85	144	-59	797
28	Wholesale trade	3	569	-57	626	1,357
30	Food and beverage stores	1	102	-4	106	305
54	Management of companies ...	0	77	52	25	178
55	Administrative and ...	1	766	45	721	1,096
60	Nursing and residential ...	1	318	15	303	554
61	Social assistance	0	148	23	125	221
64	Accommodation	0	47	19	28	140
65	Food services and drinking ...	2	211	113	98	780
66	Other services, exc. gov ...	0	99	-3	102	244
68	Government	1	50	5	45	403

Selected SSA Components for Botetourt County, Virginia vs Neighbors



Chapter 4. Botetourt County, Virginia

Selected SSA Components for Botetourt County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
13	Machinery	7	122	54	68	303
16	Motor vehicles, bodies ...	30	57	-140	197	797
28	Wholesale trade	34	539	112	427	1,357
30	Food and beverage stores	9	93	96	-3	305
54	Management of companies ...	4	73	102	-29	178
55	Administrative and ...	14	753	44	709	1,096
60	Nursing and residential ...	10	309	75	234	554
61	Social assistance	3	145	22	123	221
64	Accommodation	4	43	11	32	140
65	Food services and drinking ...	24	188	206	-18	780
66	Other services, exc. gov ...	6	94	33	61	244
68	Government	15	36	79	-43	403

Chapter 5. Buchanan County, Virginia

Employment in Buchanan County, Virginia, declined from 7,926 in 2005 to 6,626 in 2018, for a change of -1,300, or -16.4%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Buchanan County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	898	-2,200	-188	-2,012
vs. Appalachia	21	-1,328	-173	-1,155
vs. Neighbors	-1,386	85	-97	182

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Buchanan County, Virginia, in comparison to at least one of the three referent regions.

Chapter 5. Buchanan County, Virginia

Industry Group Membership for Buchanan County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
31	General merchandise ...	F III c iii	no	yes	yes	yes
53	Miscellaneous profession ...	B I a i	yes	yes	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
58	Ambulatory health care ...	B V e ii	yes	no	no	yes
60	Nursing and residential ...	E I a i	no	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Buchanan County, Virginia vs. the United States

Groups a, b, and c are from Buchanan County, Virginia vs. Appalachia

Groups i, ii, and iii are from Buchanan County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Buchanan County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Buchanan County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Buchanan County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Buchanan County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

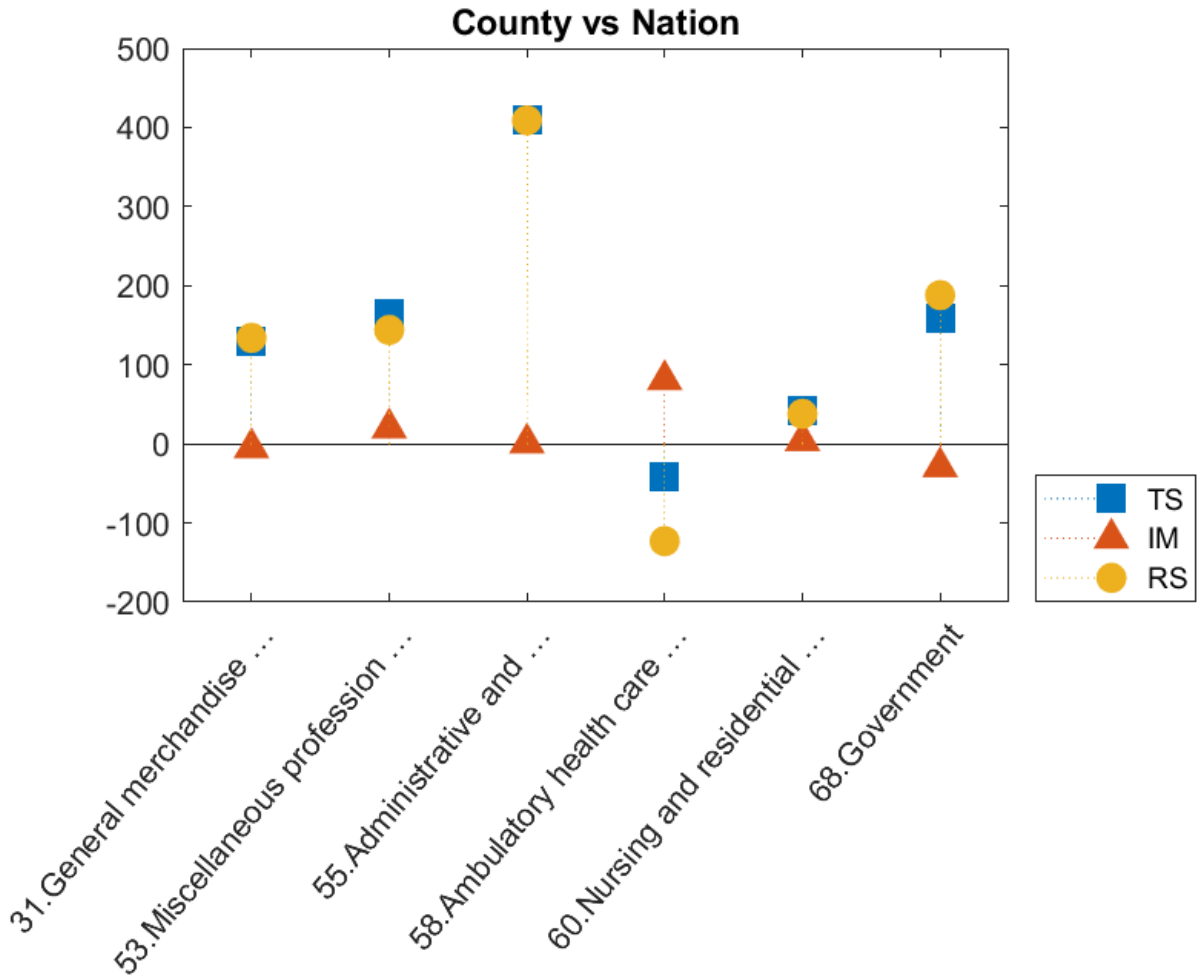
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Buchanan County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Buchanan County, Virginia vs the U.S.

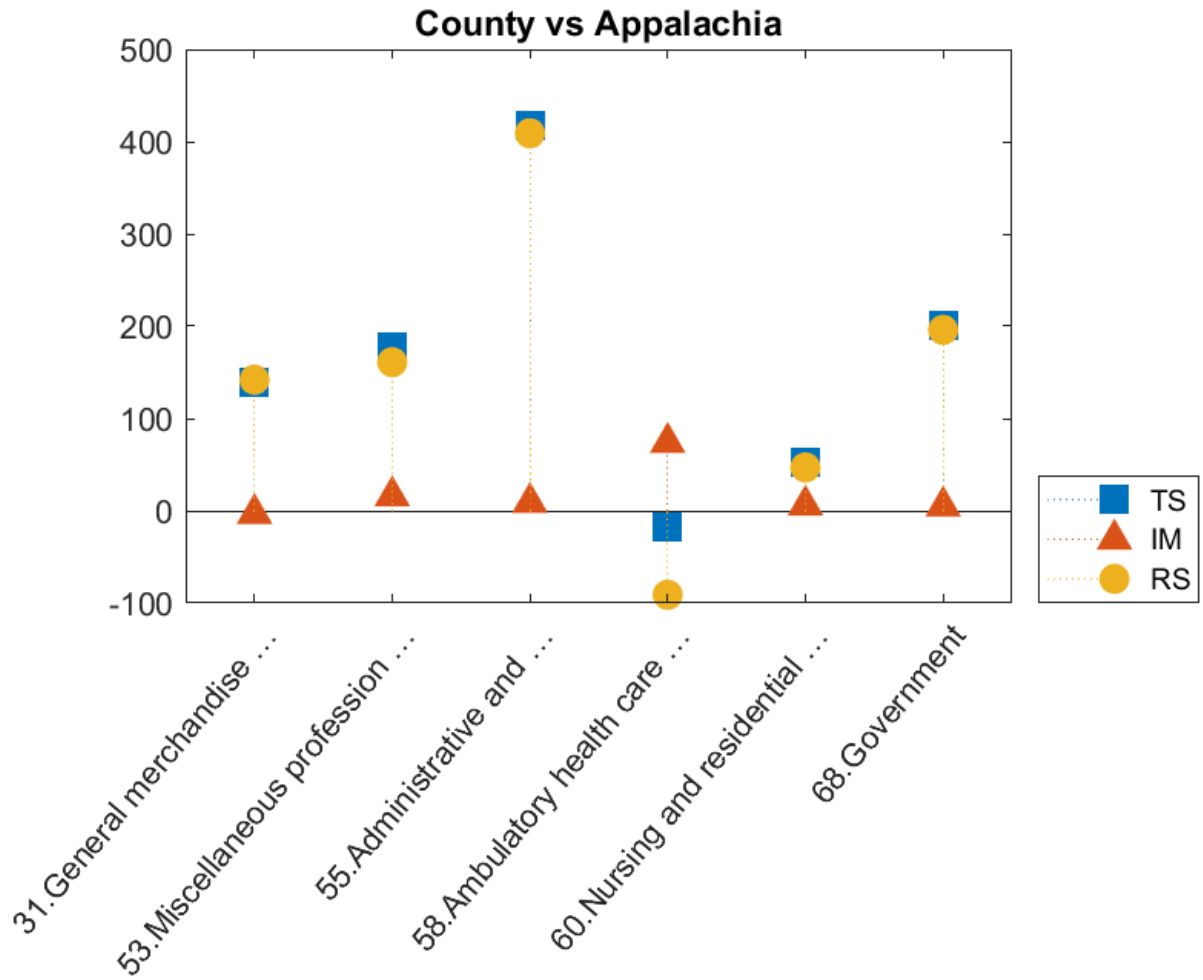


Chapter 5. Buchanan County, Virginia

Buchanan County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
31	General merchandise ...	10	129	-5	134	224
53	Miscellaneous profession ...	14	164	20	144	298
55	Administrative and ...	7	410	1	409	483
58	Ambulatory health care ...	26	-42	81	-123	214
60	Nursing and residential ...	11	42	4	38	154
68	Government	43	159	-29	188	584

Selected SSA Components for Buchanan County, Virginia vs the Appalachian Region

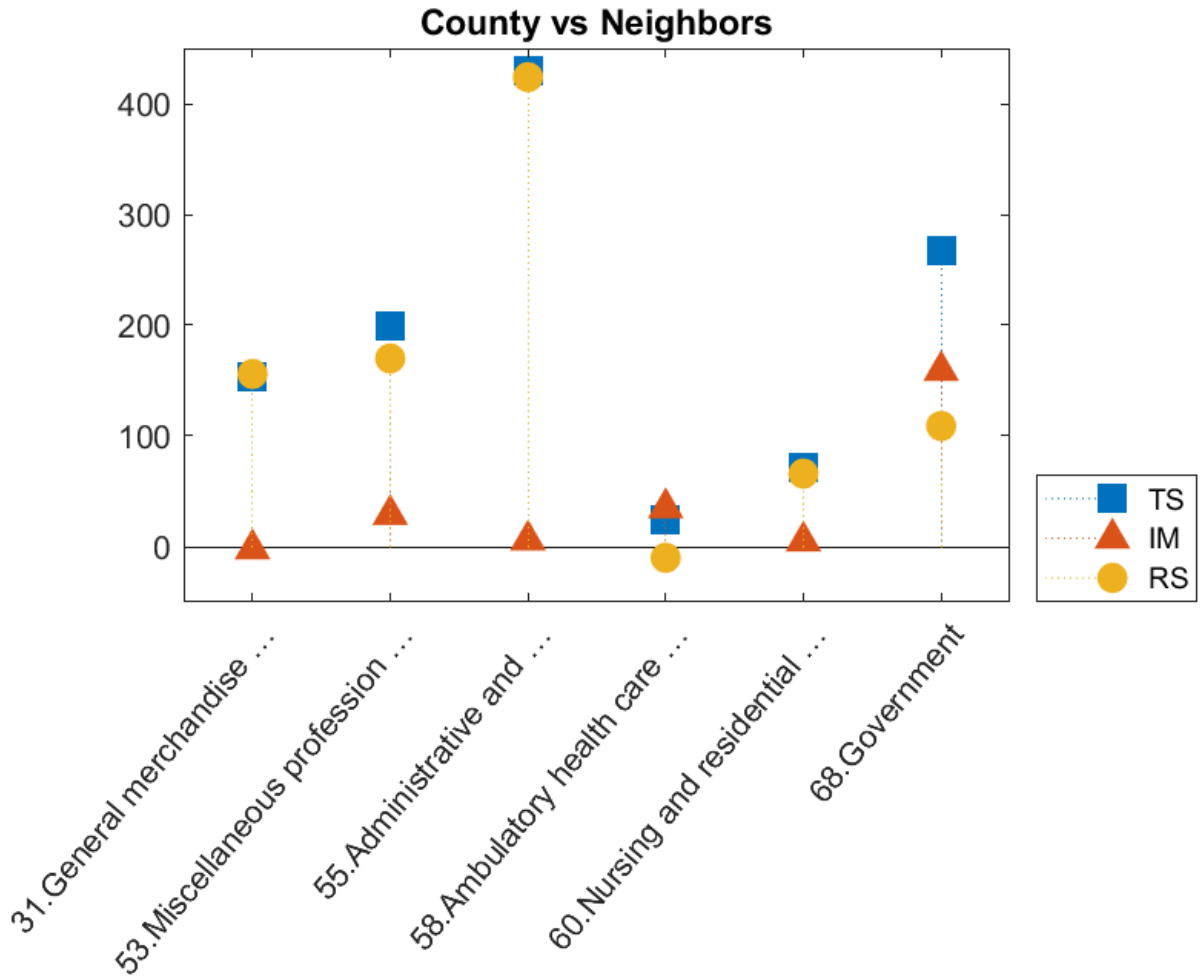


Chapter 5. Buchanan County, Virginia

Selected SSA Components for Buchanan County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
31	General merchandise ...	0	139	-3	142	224
53	Miscellaneous profession ...	0	177	16	161	298
55	Administrative and ...	0	418	9	409	483
58	Ambulatory health care ...	1	-17	74	-91	214
60	Nursing and residential ...	0	53	6	47	154
68	Government	1	201	5	196	584

Selected SSA Components for Buchanan County, Virginia vs Neighbors



Chapter 5. Buchanan County, Virginia

Selected SSA Components for Buchanan County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
31	General merchandise ...	-15	154	-2	156	224
53	Miscellaneous profession ...	-21	199	29	170	298
55	Administrative and ...	-11	430	6	424	483
58	Ambulatory health care ...	-40	25	35	-10	214
60	Nursing and residential ...	-17	71	5	66	154
68	Government	-67	268	159	109	584

Chapter 6. Carroll County, Virginia

Employment in Carroll County, Virginia, declined from 14,956 in 2005 to 12,258 in 2018, for a change of -2,698, or -18.04%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Carroll County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,689	-4,384	-1,308	-3,076
vs. Appalachia	47	-2,750	-1,215	-1,535
vs. Neighbors	-1,700	-999	-626	-373

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Carroll County, Virginia, in comparison to at least one of the three referent regions.

Chapter 6. Carroll County, Virginia

Industry Group Membership for Carroll County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
09	Wood products	F III c i	no	yes	yes	yes
13	Machinery	F III c iii	no	yes	yes	yes
28	Wholesale trade	F III c iii	no	yes	yes	yes
53	Miscellaneous profession ...	B V b ii	yes	no	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
57	Educational services	F III a i	no	yes	yes	yes
58	Ambulatory health care ...	B I a i	yes	yes	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
64	Accommodation	A V e ii	yes	no	no	yes
65	Food services and drinking ...	B V b ii	yes	no	yes	yes
66	Other services, exc. gov ...	F III c ii	no	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Carroll County, Virginia vs. the United States

Groups a, b, and c are from Carroll County, Virginia vs. Appalachia

Groups i, ii, and iii are from Carroll County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Carroll County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Carroll County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Carroll County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Carroll County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

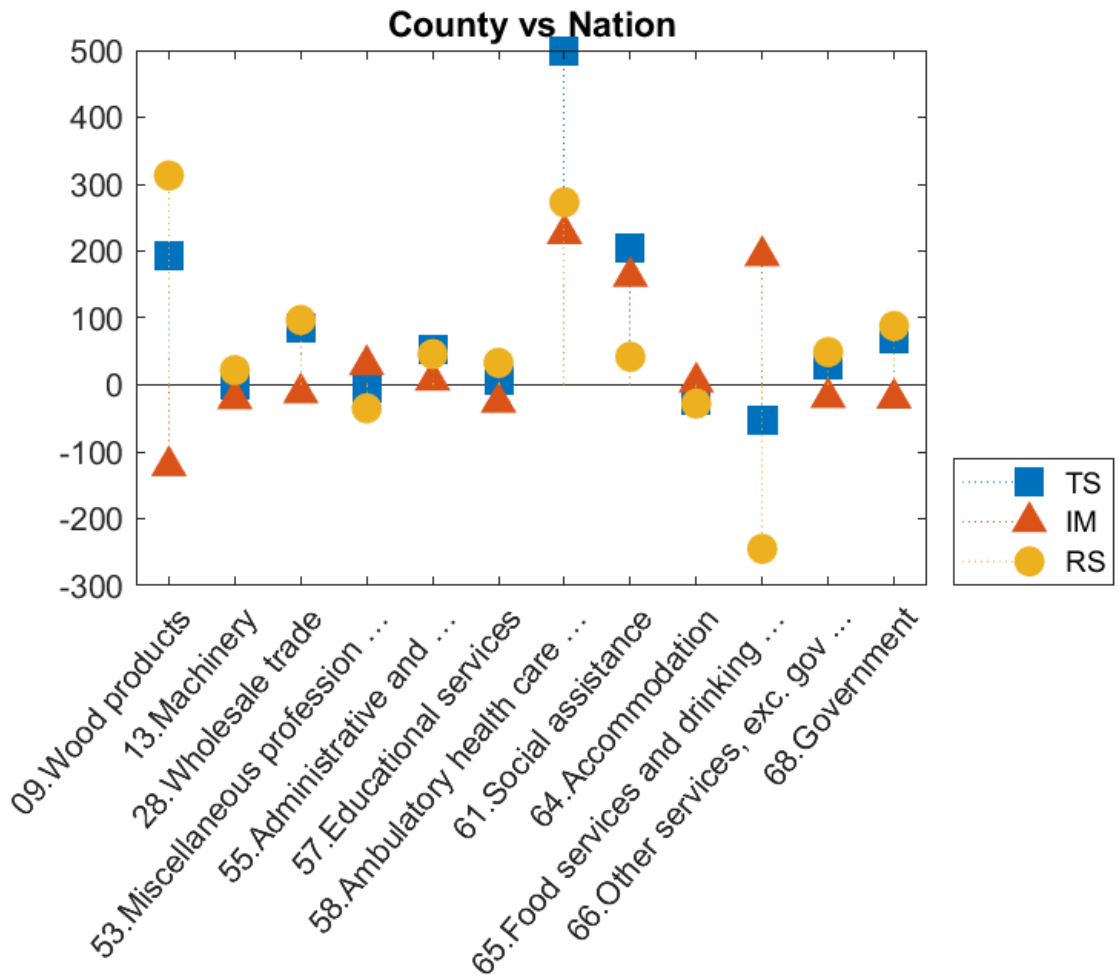
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Carroll County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Carroll County, Virginia vs the U.S.

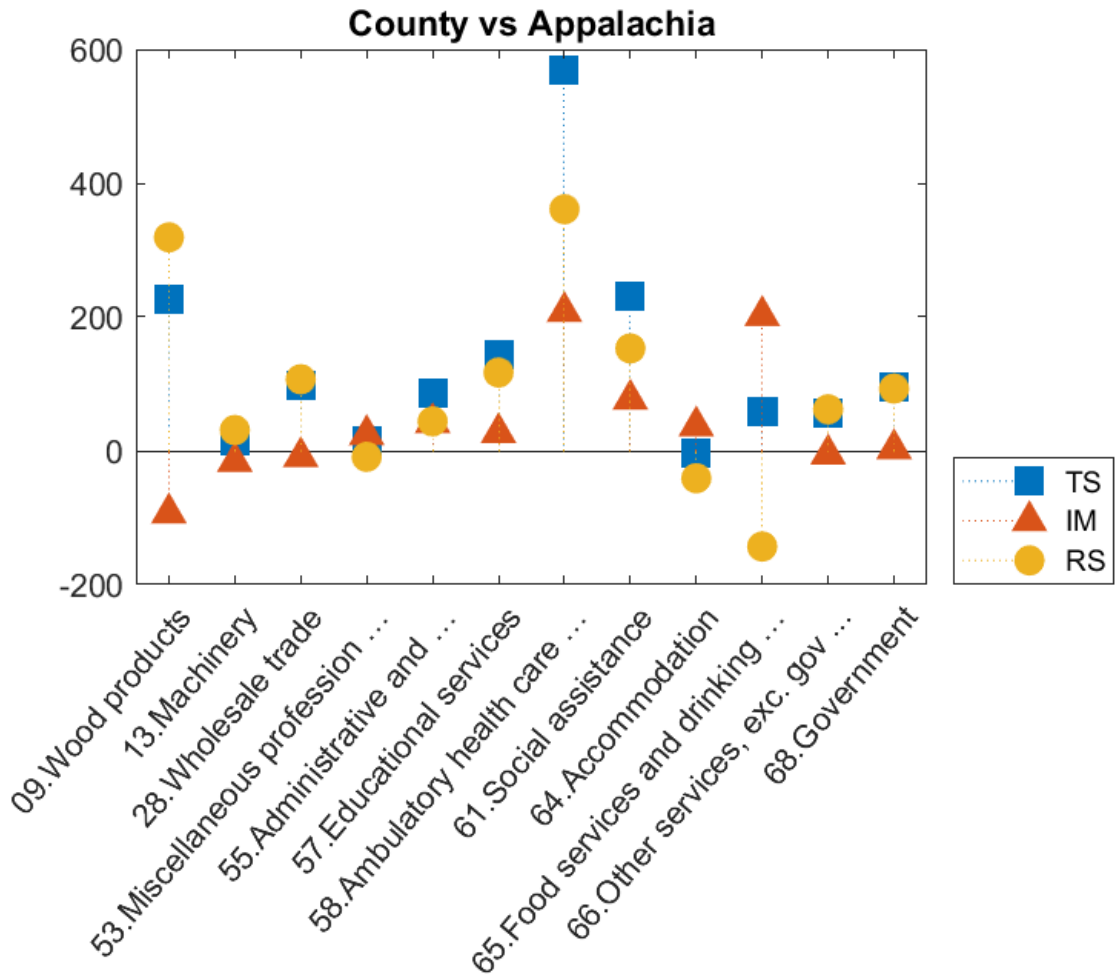


Chapter 6. Carroll County, Virginia

Carroll County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
09	Wood products	35	192	-121	313	537
13	Machinery	14	1	-21	22	141
28	Wholesale trade	14	85	-12	97	224
53	Miscellaneous profession ...	20	-5	30	-35	193
55	Administrative and ...	34	53	7	46	392
57	Educational services	141	7	-26	33	1,400
58	Ambulatory health care ...	73	499	226	273	1,214
61	Social assistance	28	204	162	42	478
64	Accommodation	20	-24	4	-28	176
65	Food services and drinking ...	114	-52	193	-245	1,072
66	Other services, exc. gov ...	28	30	-19	49	306
68	Government	30	68	-20	88	361

Selected SSA Components for Carroll County, Virginia vs the Appalachian Region

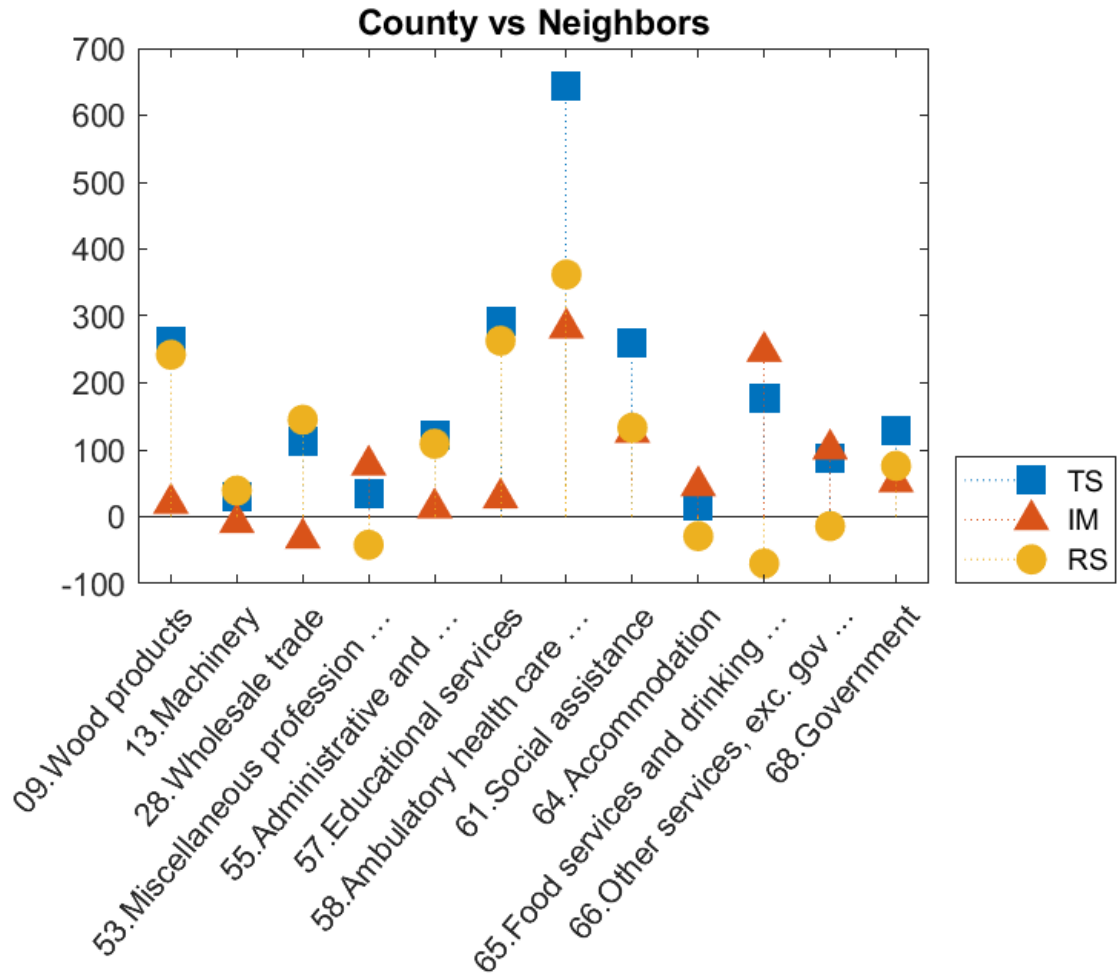


Chapter 6. Carroll County, Virginia

Selected SSA Components for Carroll County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
09	Wood products	1	226	-93	319	537
13	Machinery	0	15	-16	31	141
28	Wholesale trade	0	98	-9	107	224
53	Miscellaneous profession ...	1	15	24	-9	193
55	Administrative and ...	1	86	42	44	392
57	Educational services	4	144	27	117	1,400
58	Ambulatory health care ...	2	569	208	361	1,214
61	Social assistance	1	230	77	153	478
64	Accommodation	1	-4	37	-41	176
65	Food services and drinking ...	3	59	202	-143	1,072
66	Other services, exc. gov ...	1	57	-5	62	306
68	Government	1	96	3	93	361

Selected SSA Components for Carroll County, Virginia vs Neighbors



Chapter 6. Carroll County, Virginia

Selected SSA Components for Carroll County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
09	Wood products	-35	262	20	242	537
13	Machinery	-14	30	-9	39	141
28	Wholesale trade	-14	113	-32	145	224
53	Miscellaneous profession ...	-20	35	77	-42	193
55	Administrative and ...	-35	122	13	109	392
57	Educational services	-142	291	28	263	1,400
58	Ambulatory health care ...	-73	644	282	362	1,214
61	Social assistance	-28	259	126	133	478
64	Accommodation	-20	17	46	-29	176
65	Food services and drinking ...	-115	177	247	-70	1,072
66	Other services, exc. gov ...	-28	87	101	-14	306
68	Government	-30	128	52	76	361

Chapter 7. Craig County, Virginia

Employment in Craig County, Virginia, declined from 1,807 in 2005 to 733 in 2018, for a change of -1,074, or -59.44%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Craig County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	203	-1,281	-48	-1,233
vs. Appalachia	4	-1,078	26	-1,104
vs. Neighbors	-46	-1,026	-361	-665

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Craig County, Virginia, in comparison to at least one of the three referent regions.

Chapter 7. Craig County, Virginia

Industry Group Membership for Craig County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
01	Farms	F I a i	no	yes	yes	yes
08	Construction	F III c iii	no	yes	yes	yes
19	Miscellaneous manufac ...	F I a i	no	yes	yes	yes
28	Wholesale trade	F III c i	no	yes	yes	yes
30	Food and beverage stores	F I a i	no	yes	yes	yes
31	General merchandise ...	F III c iii	no	yes	yes	yes
41	Publishing industries, ...	F I a i	no	yes	yes	yes
47	Insurance carriers and ...	F I a iii	no	yes	yes	yes
49	Real estate	F I a i	no	yes	yes	yes
58	Ambulatory health care ...	B I a i	yes	yes	yes	yes
60	Nursing and residential ...	E I a i	no	yes	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
66	Other services, exc. gov ...	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Craig County, Virginia vs. the United States

Groups a, b, and c are from Craig County, Virginia vs. Appalachia

Groups i, ii, and iii are from Craig County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Craig County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Craig County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Craig County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Craig County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

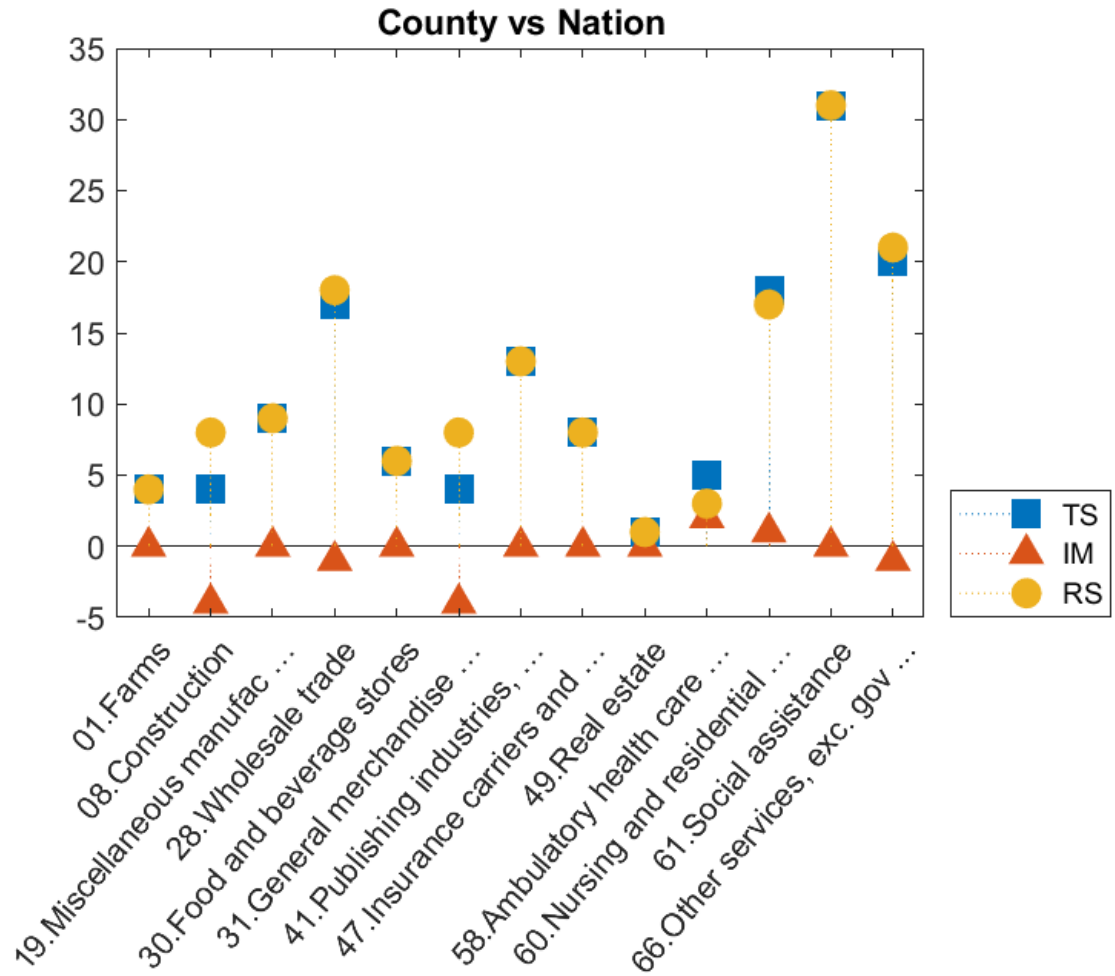
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Craig County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Craig County, Virginia vs the U.S.

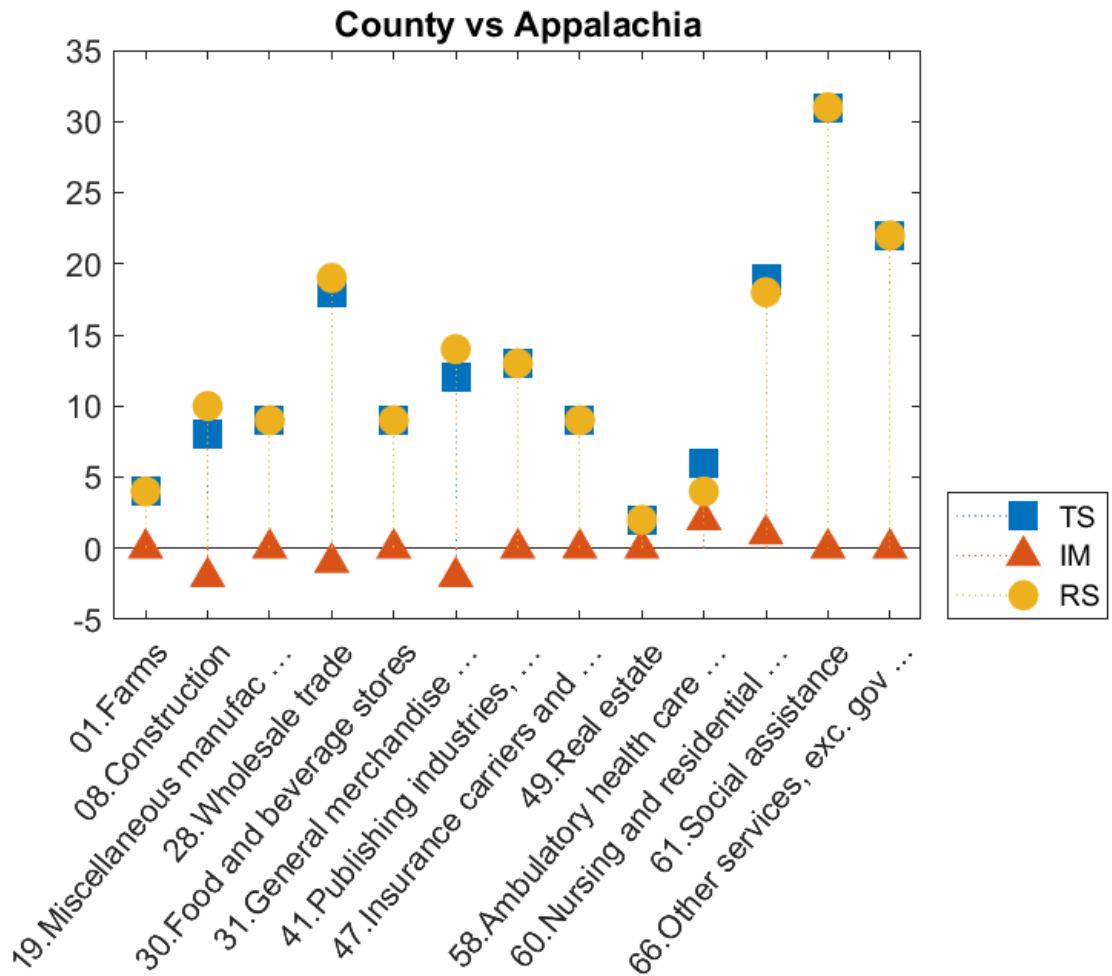


Chapter 7. Craig County, Virginia

Craig County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
01	Farms	1	4	-0	4	11
08	Construction	3	4	-4	8	38
19	Miscellaneous manufac ...	0	9	0	9	9
28	Wholesale trade	1	17	-1	18	26
30	Food and beverage stores	2	6	-0	6	30
31	General merchandise ...	7	4	-4	8	75
41	Publishing industries, ...	0	13	0	13	13
47	Insurance carriers and ...	1	8	-0	8	17
49	Real estate	1	1	-0	1	10
58	Ambulatory health care ...	1	5	2	3	12
60	Nursing and residential ...	2	18	1	17	33
61	Social assistance	0	31	0	31	31
66	Other services, exc. gov ...	1	20	-1	21	32

Selected SSA Components for Craig County, Virginia vs the Appalachian Region

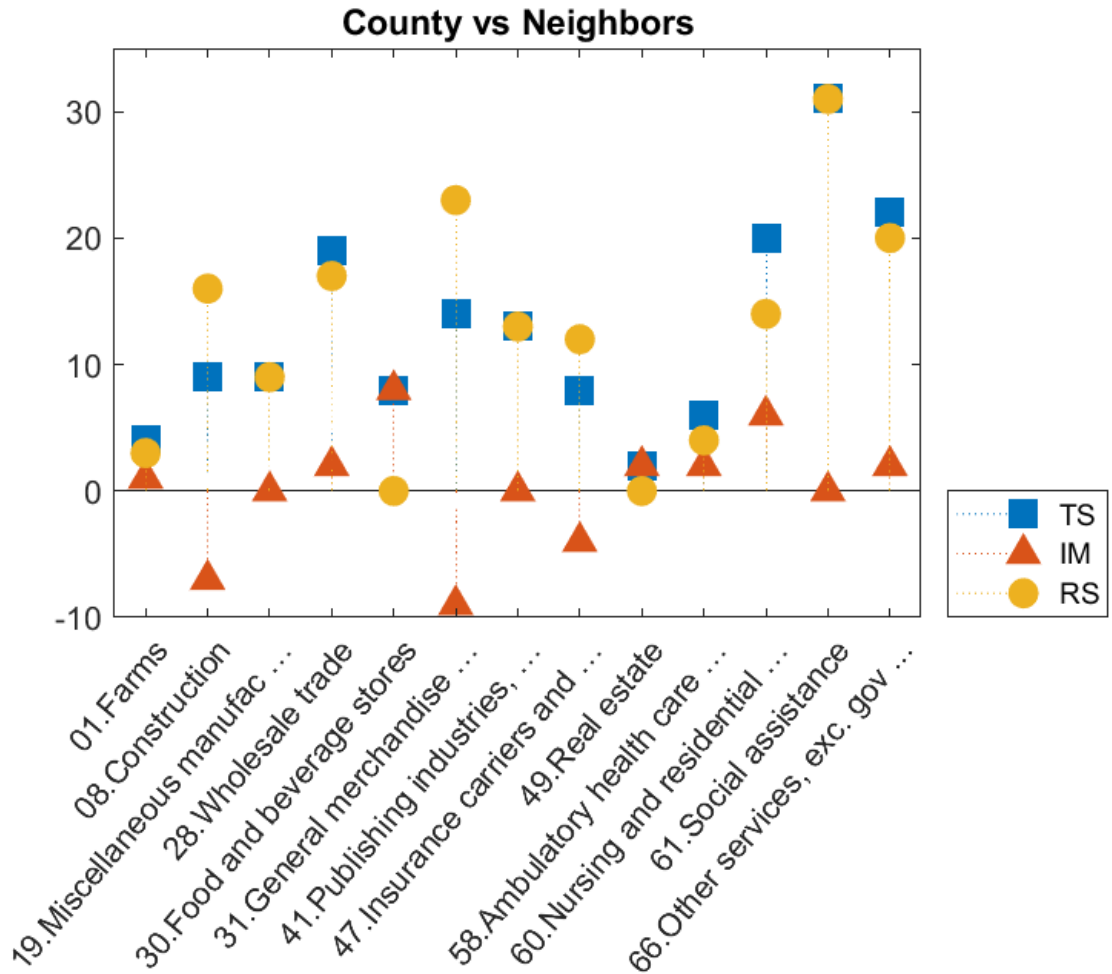


Chapter 7. Craig County, Virginia

Selected SSA Components for Craig County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
01	Farms	0	4	0	4	11
08	Construction	0	8	-2	10	38
19	Miscellaneous manufac ...	0	9	0	9	9
28	Wholesale trade	0	18	-1	19	26
30	Food and beverage stores	0	9	-0	9	30
31	General merchandise ...	0	12	-2	14	75
41	Publishing industries, ...	0	13	0	13	13
47	Insurance carriers and ...	0	9	-0	9	17
49	Real estate	0	2	0	2	10
58	Ambulatory health care ...	0	6	2	4	12
60	Nursing and residential ...	0	19	1	18	33
61	Social assistance	0	31	0	31	31
66	Other services, exc. gov ...	0	22	-0	22	32

Selected SSA Components for Craig County, Virginia vs Neighbors



Chapter 7. Craig County, Virginia

Selected SSA Components for Craig County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
01	Farms	-0	4	1	3	11
08	Construction	-1	9	-7	16	38
19	Miscellaneous manufac ...	-0	9	0	9	9
28	Wholesale trade	-0	19	2	17	26
30	Food and beverage stores	-1	8	8	0	30
31	General merchandise ...	-2	14	-9	23	75
41	Publishing industries, ...	-0	13	0	13	13
47	Insurance carriers and ...	-0	8	-4	12	17
49	Real estate	-0	2	2	-0	10
58	Ambulatory health care ...	-0	6	2	4	12
60	Nursing and residential ...	-0	20	6	14	33
61	Social assistance	-0	31	0	31	31
66	Other services, exc. gov ...	-0	22	2	20	32

Chapter 8. Dickenson County, Virginia

Employment in Dickenson County, Virginia, declined from 3,368 in 2005 to 3,259 in 2018, for a change of -109, or -3.24%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Dickenson County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	379	-491	-170	-321
vs. Appalachia	10	-119	-145	26
vs. Neighbors	-595	491	-21	512

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Dickenson County, Virginia, in comparison to at least one of the three referent regions.

Chapter 8. Dickenson County, Virginia

Industry Group Membership for Dickenson County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
03	Oil and gas extraction	A I a i	yes	yes	yes	yes
53	Miscellaneous profession ...	B I a i	yes	yes	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
58	Ambulatory health care ...	B V b ii	yes	no	yes	yes
61	Social assistance	B II b i	yes	yes	yes	yes
65	Food services and drinking ...	B V b ii	yes	no	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Dickenson County, Virginia vs. the United States

Groups a, b, and c are from Dickenson County, Virginia vs. Appalachia

Groups i, ii, and iii are from Dickenson County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Dickenson County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Dickenson County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Dickenson County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Dickenson County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

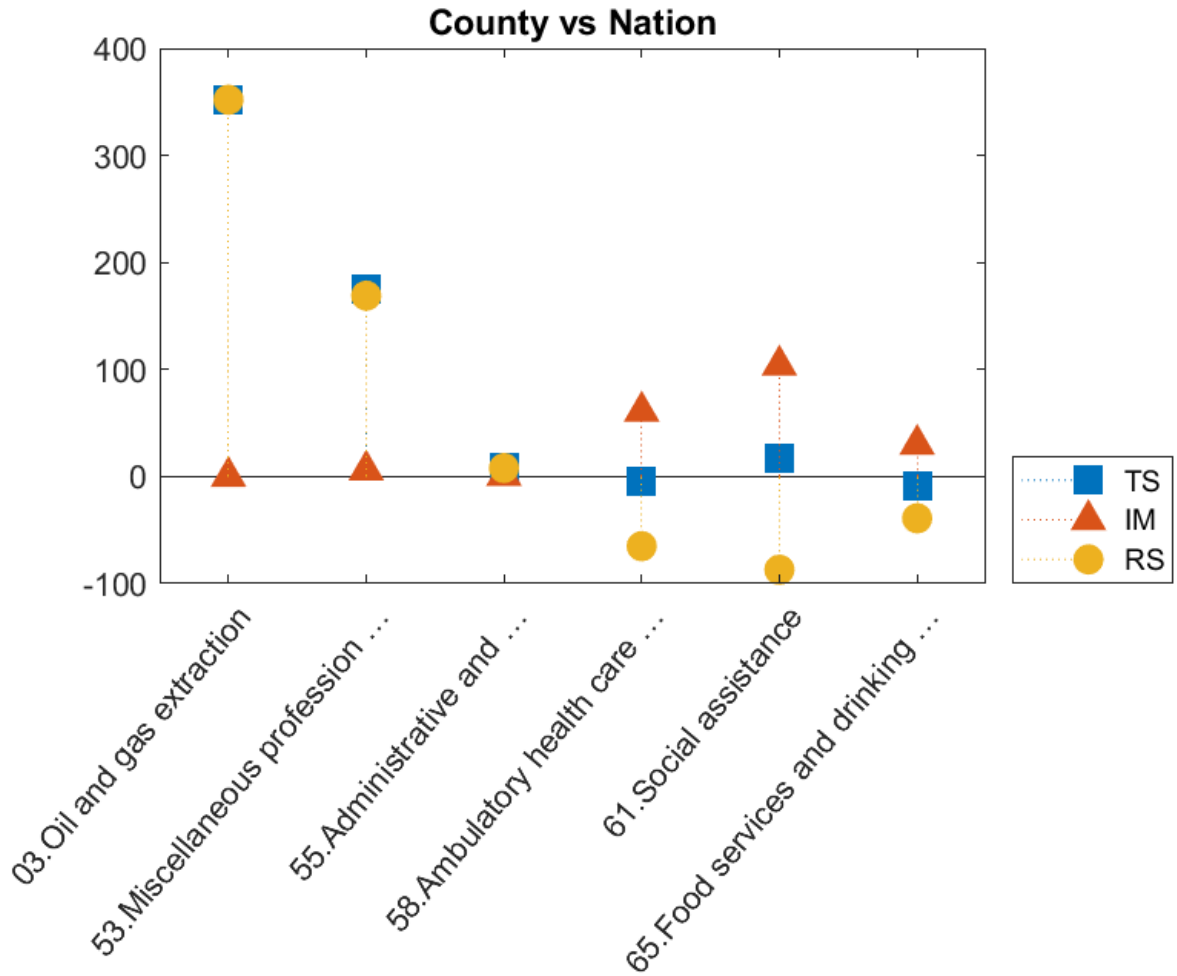
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Dickenson County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Dickenson County, Virginia vs the U.S.

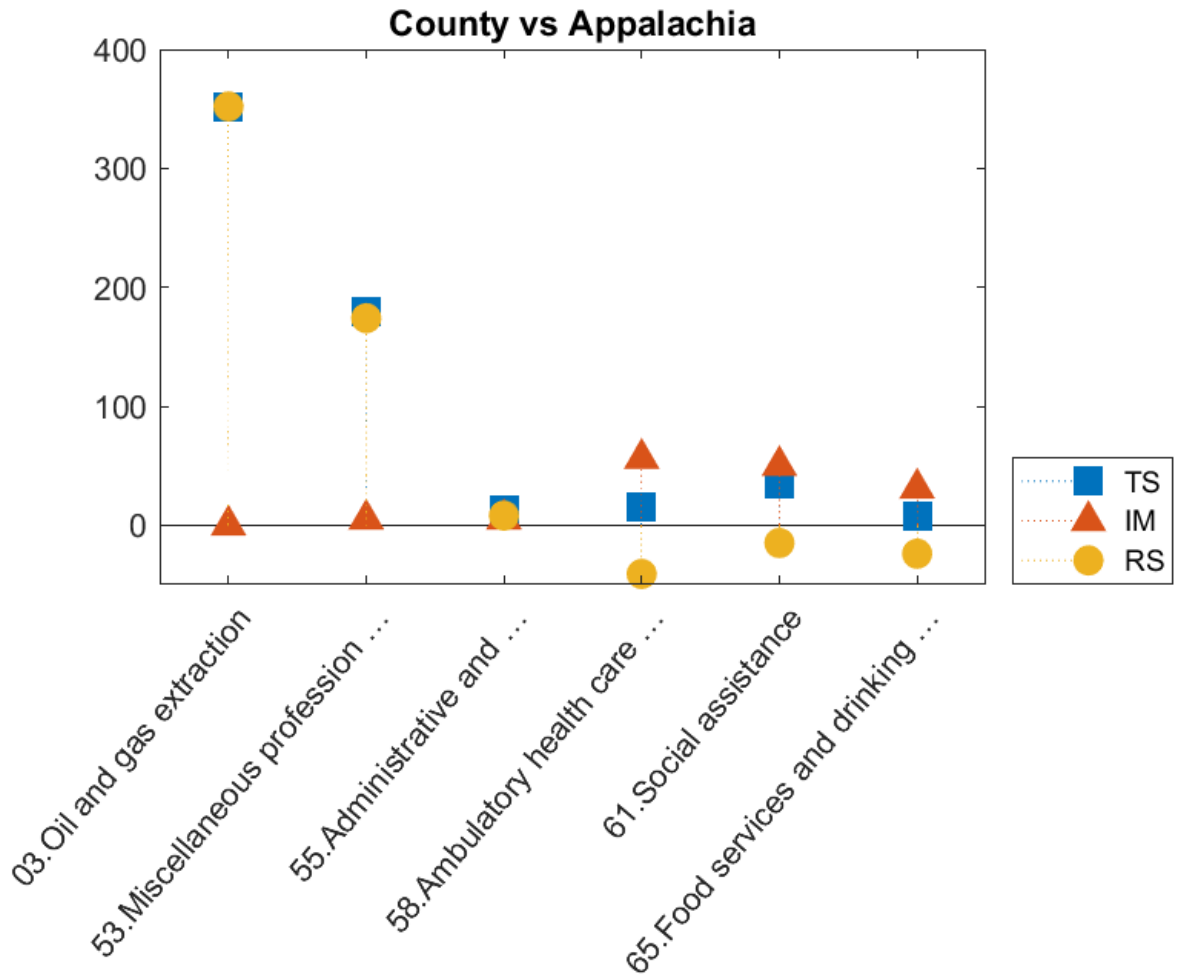


Chapter 8. Dickenson County, Virginia

Dickenson County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
03	Oil and gas extraction	0	352	0	352	353
53	Miscellaneous profession ...	4	175	6	169	214
55	Administrative and ...	4	9	1	8	46
58	Ambulatory health care ...	20	-4	61	-65	189
61	Social assistance	18	17	104	-87	194
65	Food services and drinking ...	18	-9	30	-39	164

Selected SSA Components for Dickenson County, Virginia vs the Appalachian Region

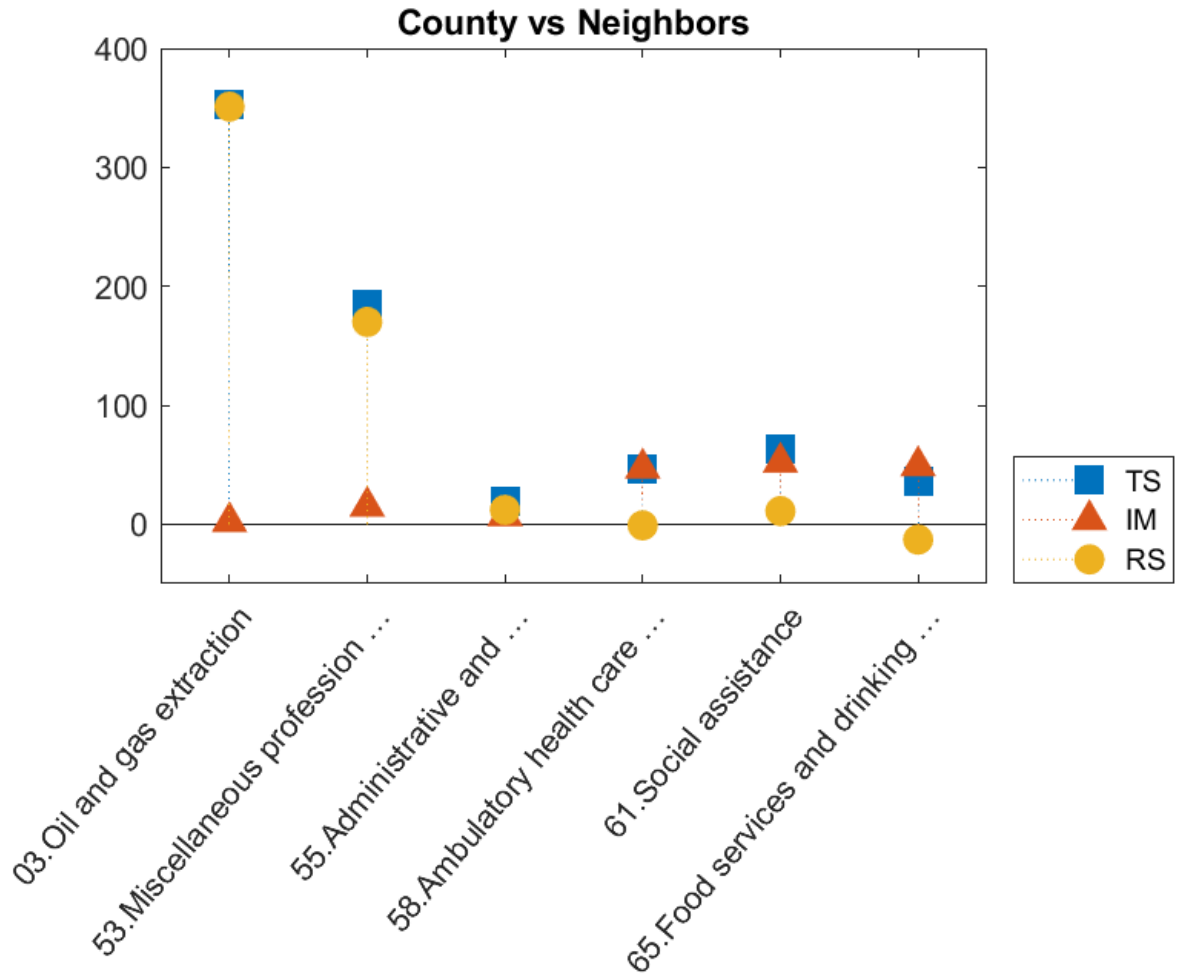


Chapter 8. Dickenson County, Virginia

Selected SSA Components for Dickenson County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
03	Oil and gas extraction	0	352	0	352	353
53	Miscellaneous profession ...	0	179	5	174	214
55	Administrative and ...	0	13	5	8	46
58	Ambulatory health care ...	1	15	56	-41	189
61	Social assistance	1	35	50	-15	194
65	Food services and drinking ...	1	7	31	-24	164

Selected SSA Components for Dickenson County, Virginia vs Neighbors



Chapter 8. Dickenson County, Virginia

Selected SSA Components for Dickenson County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
03	Oil and gas extraction	-0	353	2	351	353
53	Miscellaneous profession ...	-6	185	15	170	214
55	Administrative and ...	-6	19	7	12	46
58	Ambulatory health care ...	-31	46	47	-1	189
61	Social assistance	-28	63	52	11	194
65	Food services and drinking ...	-28	36	49	-13	164

Chapter 9. Floyd County, Virginia

Employment in Floyd County, Virginia, declined from 3,964 in 2005 to 3,462 in 2018, for a change of -502, or -12.66%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Floyd County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	446	-947	-166	-781
vs. Appalachia	11	-513	-41	-472
vs. Neighbors	-165	-332	-234	-98

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Floyd County, Virginia, in comparison to at least one of the three referent regions.

Chapter 9. Floyd County, Virginia

Industry Group Membership for Floyd County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
15	Electrical equipment, ...	D III c i	no	yes	yes	yes
20	Food and beverage ...	E I c i	no	yes	yes	yes
30	Food and beverage stores	F III c i	no	yes	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
60	Nursing and residential ...	E I a i	no	yes	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
62	Performing arts, spectator ...	B II b i	yes	yes	yes	yes
65	Food services and drinking ...	B II b ii	yes	yes	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Floyd County, Virginia vs. the United States

Groups a, b, and c are from Floyd County, Virginia vs. Appalachia

Groups i, ii, and iii are from Floyd County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Floyd County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Floyd County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Floyd County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Floyd County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

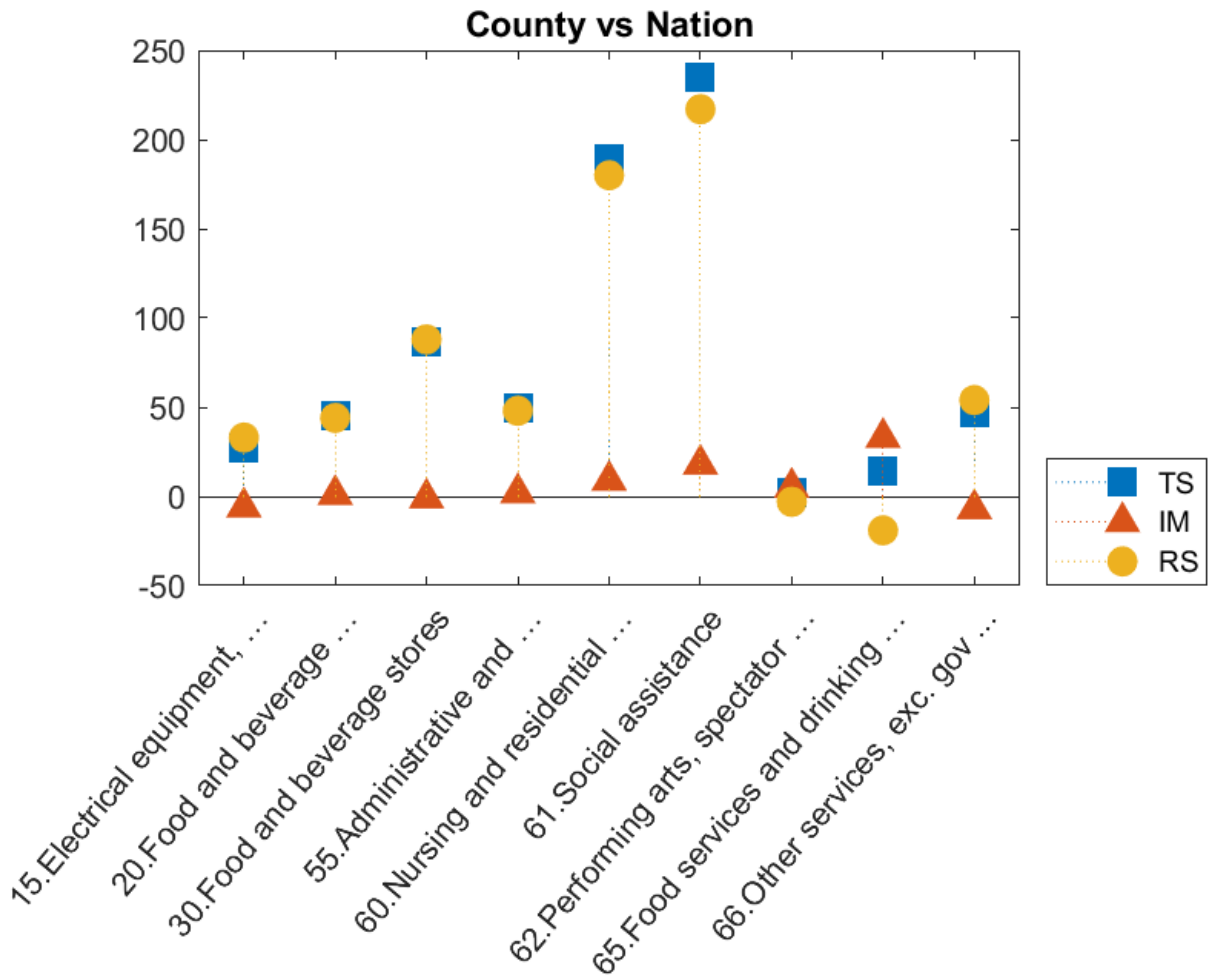
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Floyd County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Floyd County, Virginia vs the U.S.

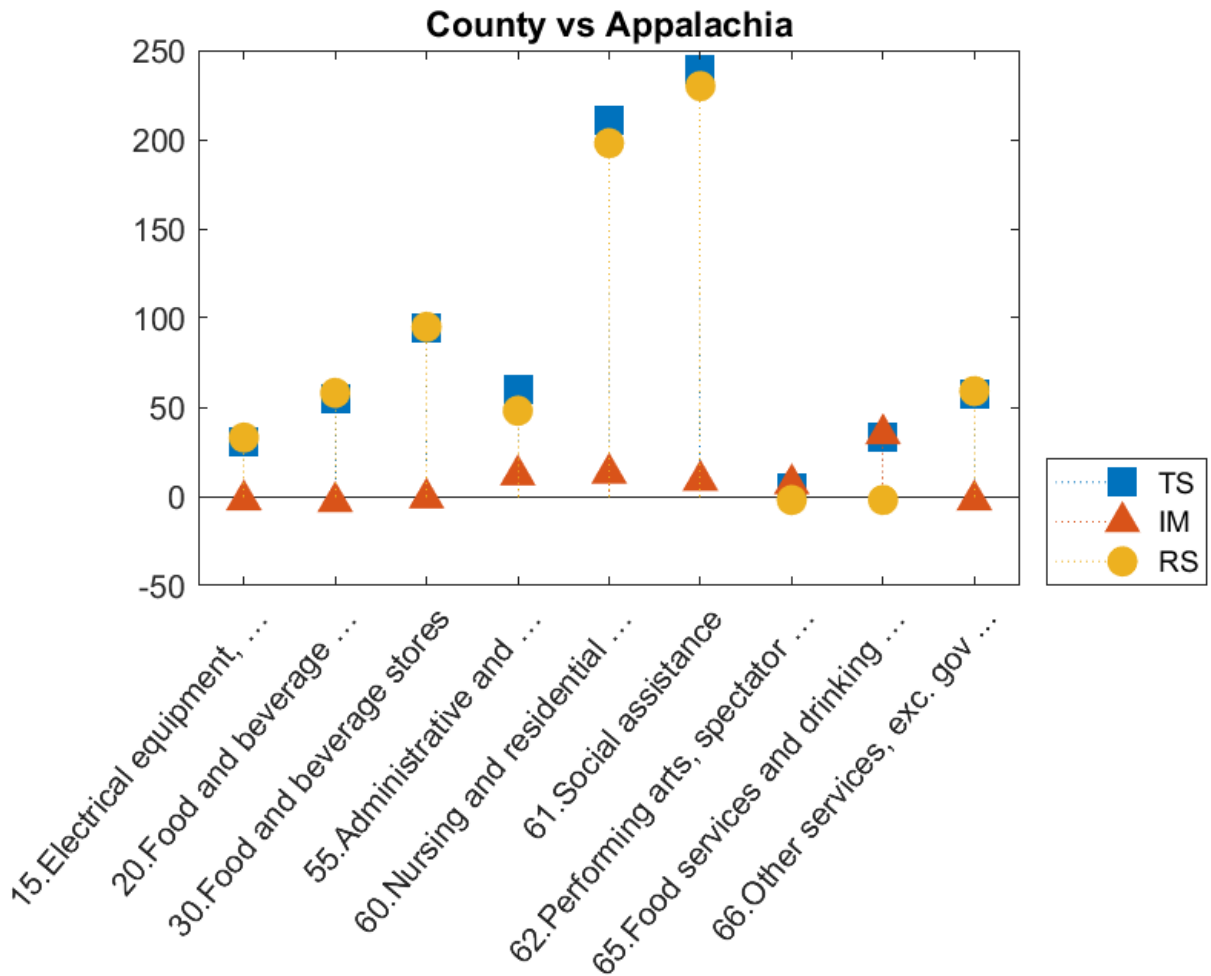


Chapter 9. Floyd County, Virginia

Floyd County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
15	Electrical equipment, ...	3	27	-6	33	61
20	Food and beverage ...	9	45	1	44	138
30	Food and beverage stores	7	87	-1	88	157
55	Administrative and ...	10	50	2	48	146
60	Nursing and residential ...	22	189	9	180	409
61	Social assistance	3	235	18	217	267
62	Performing arts, spectator ...	4	2	5	-3	38
65	Food services and drinking ...	20	14	33	-19	209
66	Other services, exc. gov ...	10	47	-7	54	149

Selected SSA Components for Floyd County, Virginia vs the Appalachian Region

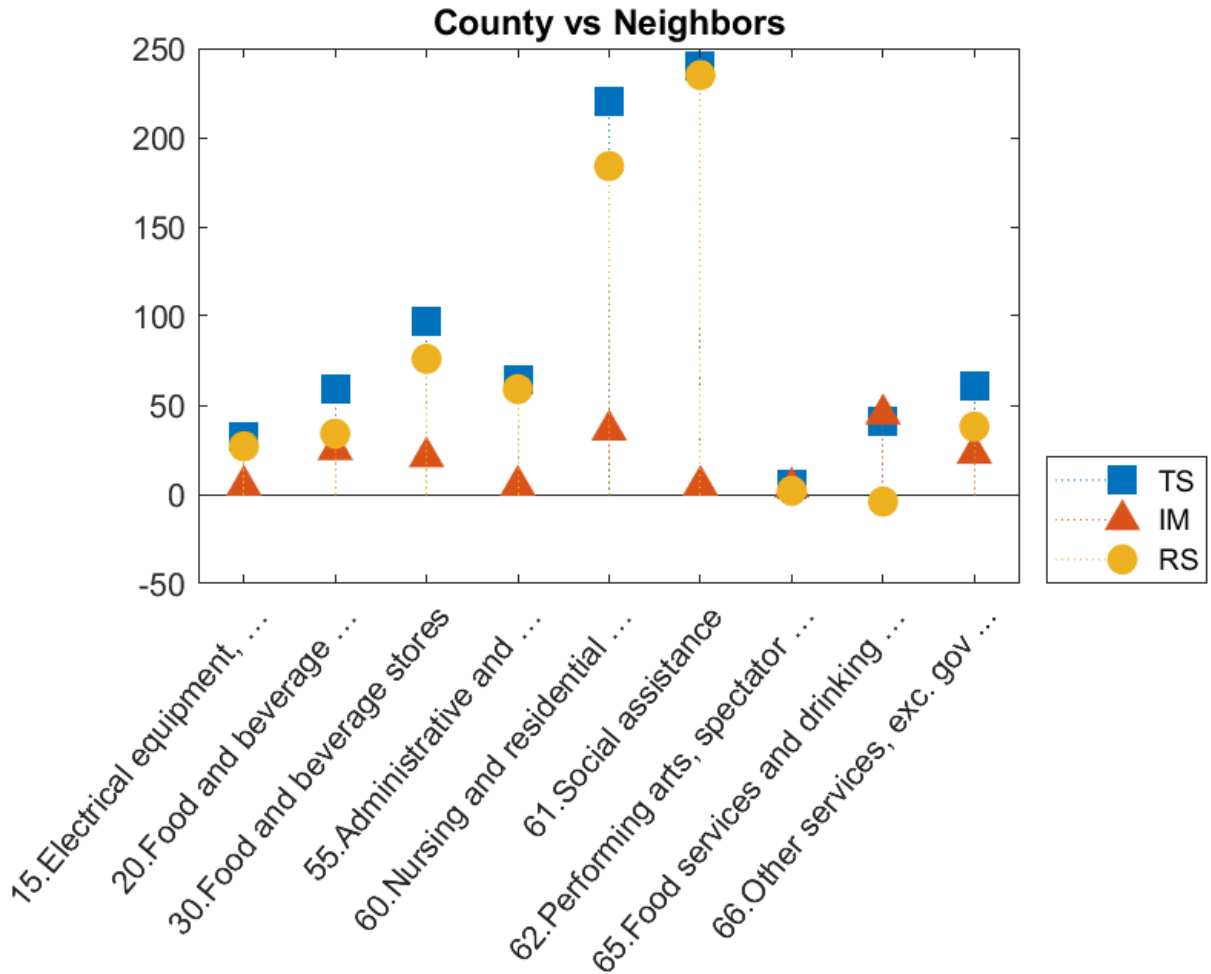


Chapter 9. Floyd County, Virginia

Selected SSA Components for Floyd County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
15	Electrical equipment, ...	0	31	-2	33	61
20	Food and beverage ...	0	55	-3	58	138
30	Food and beverage stores	0	94	-1	95	157
55	Administrative and ...	0	60	12	48	146
60	Nursing and residential ...	1	211	13	198	409
61	Social assistance	0	239	9	230	267
62	Performing arts, spectator ...	0	5	7	-2	38
65	Food services and drinking ...	1	33	35	-2	209
66	Other services, exc. gov ...	0	57	-2	59	149

Selected SSA Components for Floyd County, Virginia vs Neighbors



Chapter 9. Floyd County, Virginia

Selected SSA Components for Floyd County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
15	Electrical equipment, ...	-1	32	5	27	61
20	Food and beverage ...	-4	59	25	34	138
30	Food and beverage stores	-3	97	21	76	157
55	Administrative and ...	-4	64	5	59	146
60	Nursing and residential ...	-8	220	36	184	409
61	Social assistance	-1	240	5	235	267
62	Performing arts, spectator ...	-1	6	4	2	38
65	Food services and drinking ...	-7	41	45	-4	209
66	Other services, exc. gov ...	-4	61	23	38	149

Chapter 10. Giles County, Virginia

Employment in Giles County, Virginia, declined from 5,295 in 2005 to 4,607 in 2018, for a change of -688, or -12.99%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Giles County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	602	-1,284	-199	-1,085
vs. Appalachia	15	-708	-93	-615
vs. Neighbors	-701	15	77	-62

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Giles County, Virginia, in comparison to at least one of the three referent regions.

Chapter 10. Giles County, Virginia

Industry Group Membership for Giles County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
12	Fabricated metal products	F III c iii	no	yes	yes	yes
28	Wholesale trade	F III c i	no	yes	yes	yes
29	Motor vehicle and parts ...	F III a i	no	yes	yes	yes
53	Miscellaneous profession ...	B I a i	yes	yes	yes	yes
54	Management of companies ...	A I a i	yes	yes	yes	yes
58	Ambulatory health care ...	B II b i	yes	yes	yes	yes
61	Social assistance	B II a i	yes	yes	yes	yes
64	Accommodation	A I a i	yes	yes	yes	yes
65	Food services and drinking ...	B I a i	yes	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Giles County, Virginia vs. the United States

Groups a, b, and c are from Giles County, Virginia vs. Appalachia

Groups i, ii, and iii are from Giles County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Giles County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Giles County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Giles County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Giles County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

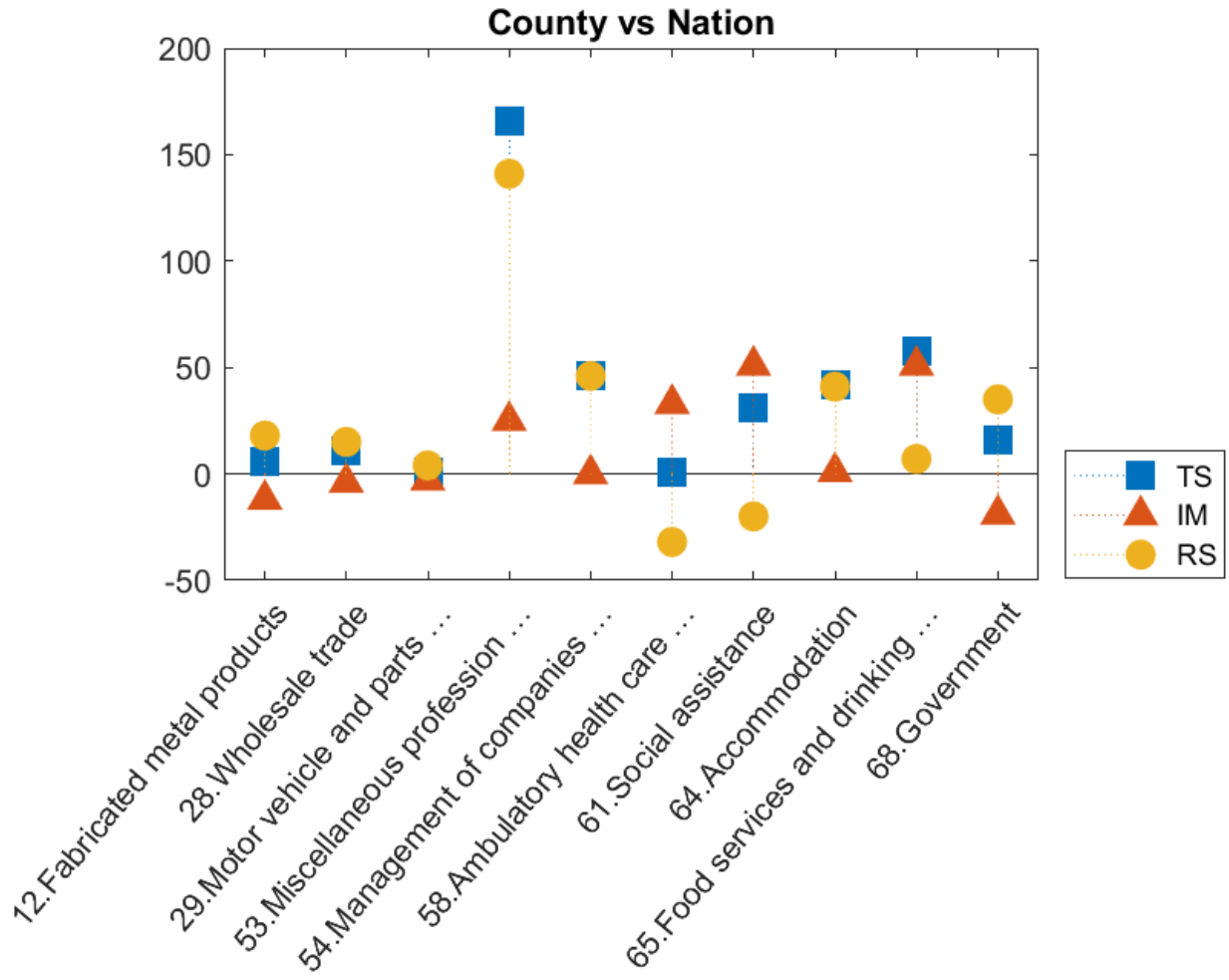
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Giles County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Giles County, Virginia vs the U.S.

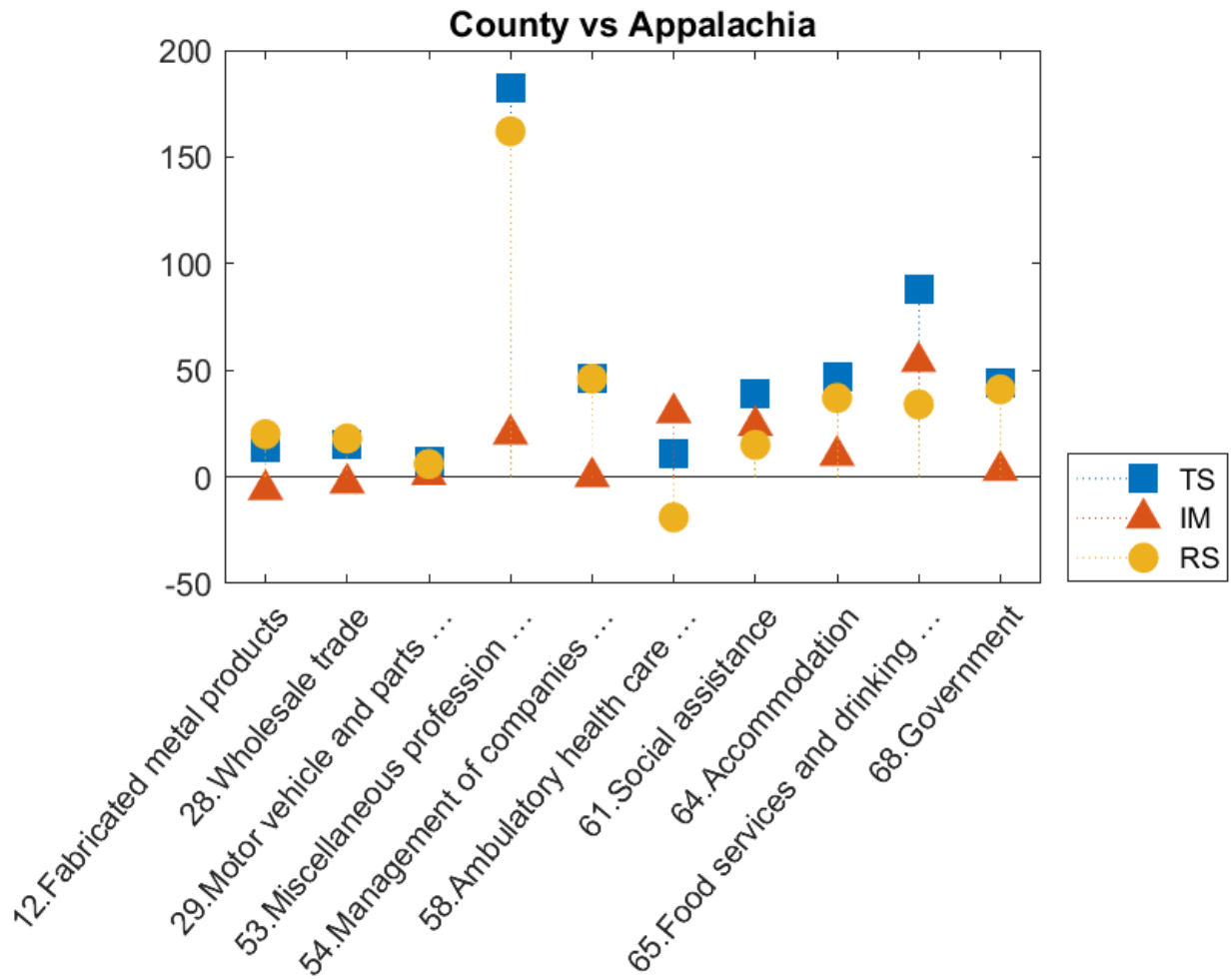


Chapter 10. Giles County, Virginia

Giles County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
12	Fabricated metal products	9	6	-12	18	95
28	Wholesale trade	5	11	-4	15	56
29	Motor vehicle and parts ...	6	1	-3	4	58
53	Miscellaneous profession ...	17	166	25	141	329
54	Management of companies ...	0	46	0	46	46
58	Ambulatory health care ...	11	1	33	-32	106
61	Social assistance	9	31	51	-20	116
64	Accommodation	6	42	1	41	97
65	Food services and drinking ...	30	58	51	7	358
68	Government	29	16	-19	35	300

Selected SSA Components for Giles County, Virginia vs the Appalachian Region

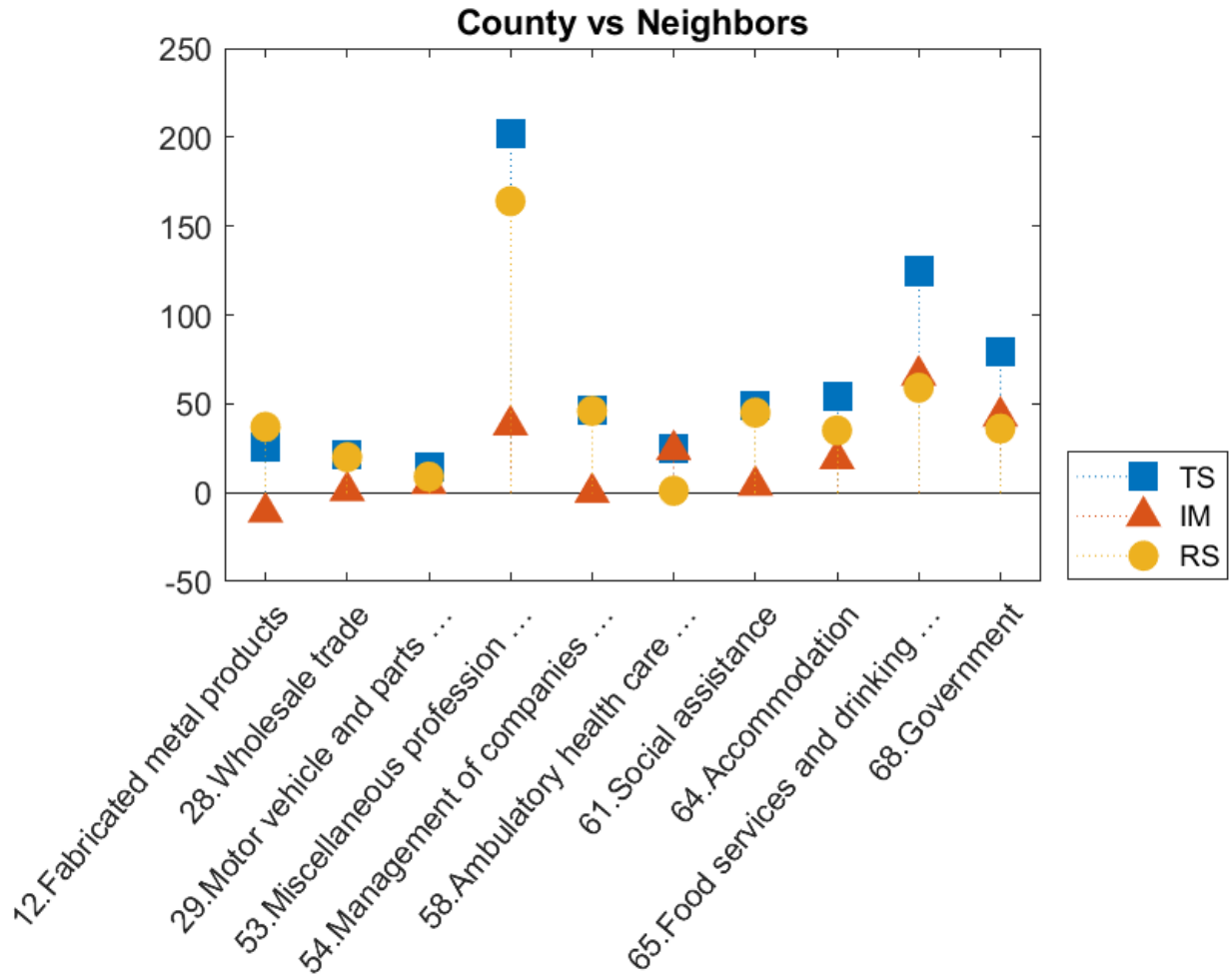


Chapter 10. Giles County, Virginia

Selected SSA Components for Giles County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
12	Fabricated metal products	0	14	-6	20	95
28	Wholesale trade	0	15	-3	18	56
29	Motor vehicle and parts ...	0	7	1	6	58
53	Miscellaneous profession ...	0	182	20	162	329
54	Management of companies ...	0	46	0	46	46
58	Ambulatory health care ...	0	11	30	-19	106
61	Social assistance	0	39	24	15	116
64	Accommodation	0	47	10	37	97
65	Food services and drinking ...	1	88	54	34	358
68	Government	1	44	3	41	300

Selected SSA Components for Giles County, Virginia vs Neighbors



Chapter 10. Giles County, Virginia

Selected SSA Components for Giles County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
12	Fabricated metal products	-11	26	-11	37	95
28	Wholesale trade	-5	21	1	20	56
29	Motor vehicle and parts ...	-7	14	5	9	58
53	Miscellaneous profession ...	-19	202	38	164	329
54	Management of companies ...	-0	46	0	46	46
58	Ambulatory health care ...	-12	25	24	1	106
61	Social assistance	-10	49	4	45	116
64	Accommodation	-7	54	19	35	97
65	Food services and drinking ...	-36	125	66	59	358
68	Government	-34	79	43	36	300

Chapter 11. Grayson County, Virginia

Employment in Grayson County, Virginia, grew from 2,615 in 2005 to 2,980 in 2018, for a change of 365, or 13.96%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Grayson County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	296	72	-271	343
vs. Appalachia	4	354	-160	514
vs. Neighbors	-346	707	-58	765

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Grayson County, Virginia, in comparison to at least one of the three referent regions.

Chapter 11. Grayson County, Virginia

Industry Group Membership for Grayson County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
01	Farms	F III a i	no	yes	yes	yes
18	Furniture and related ...	F III c iii	no	yes	yes	yes
43	Broadcasting and telecom ...	F I a i	no	yes	yes	yes
54	Management of companies ...	A I a i	yes	yes	yes	yes
57	Educational services	F III a i	no	yes	yes	yes
60	Nursing and residential ...	E I a iii	no	yes	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
62	Performing arts, spectator ...	B I a i	yes	yes	yes	yes
65	Food services and drinking ...	B II b i	yes	yes	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Grayson County, Virginia vs. the United States

Groups a, b, and c are from Grayson County, Virginia vs. Appalachia

Groups i, ii, and iii are from Grayson County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Grayson County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Grayson County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Grayson County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Grayson County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

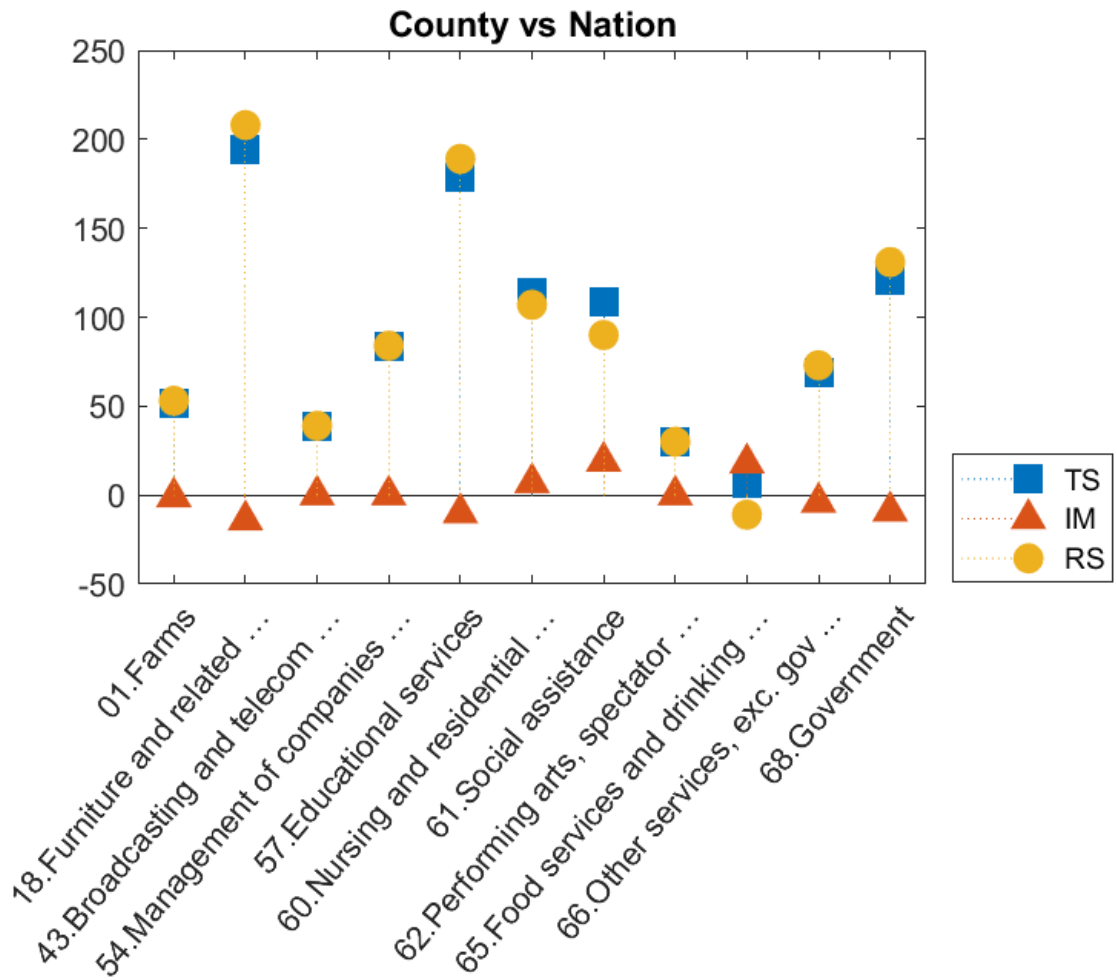
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Grayson County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Grayson County, Virginia vs the U.S.

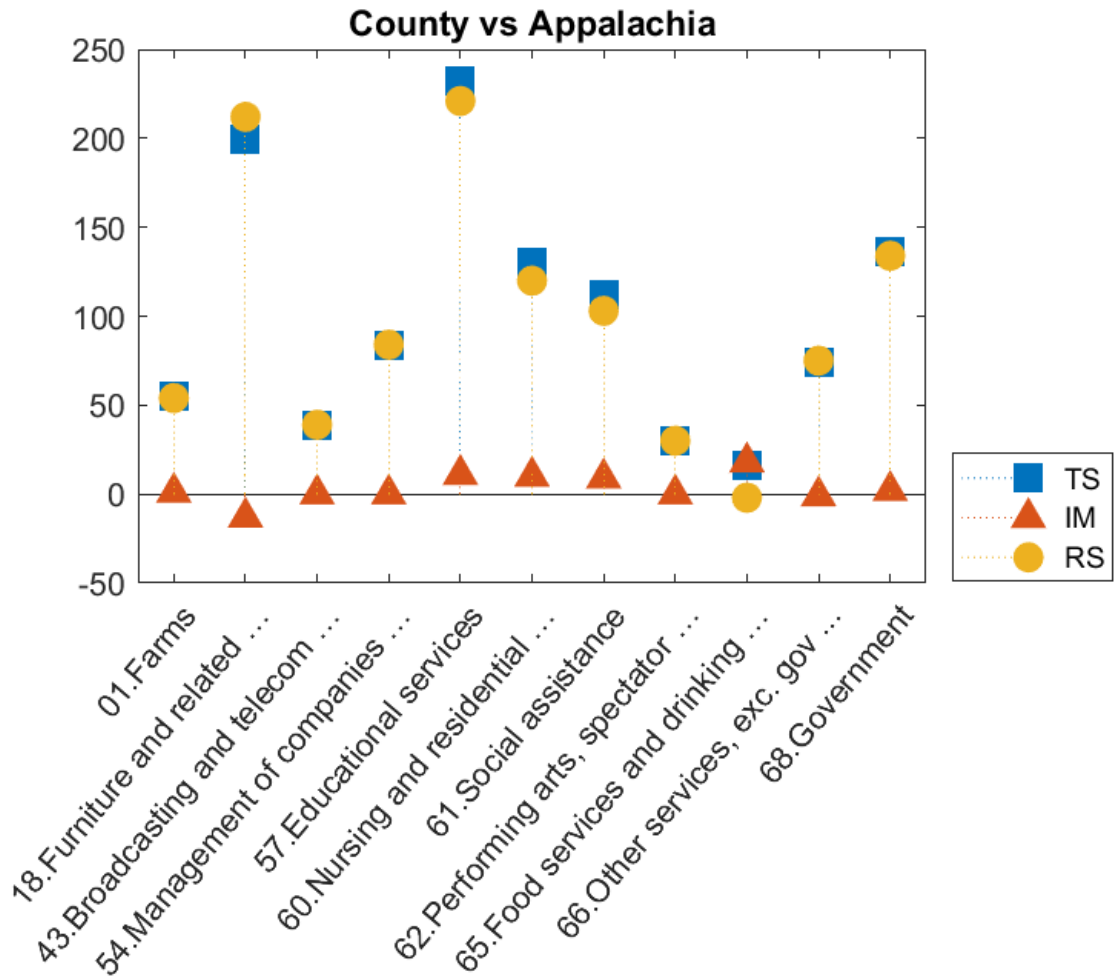


Chapter 11. Grayson County, Virginia

Grayson County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
01	Farms	3	52	-1	53	84
18	Furniture and related ...	4	194	-14	208	231
43	Broadcasting and telecom ...	0	39	0	39	39
54	Management of companies ...	0	84	0	84	84
57	Educational services	55	179	-10	189	718
60	Nursing and residential ...	17	114	7	107	281
61	Social assistance	3	109	19	90	140
62	Performing arts, spectator ...	0	30	0	30	32
65	Food services and drinking ...	10	7	18	-11	109
66	Other services, exc. gov ...	6	69	-4	73	127
68	Government	14	122	-9	131	258

Selected SSA Components for Grayson County, Virginia vs the Appalachian Region

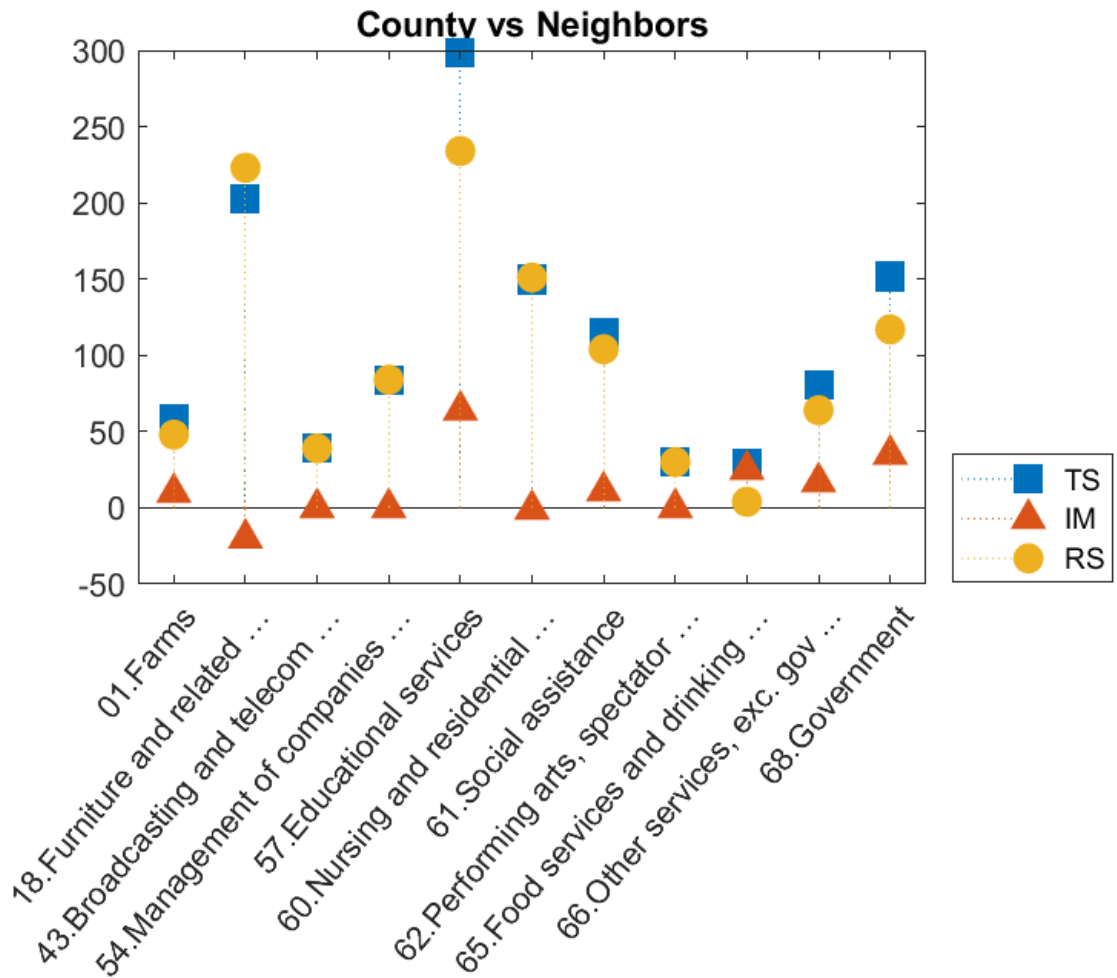


Chapter 11. Grayson County, Virginia

Selected SSA Components for Grayson County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
01	Farms	0	55	1	54	84
18	Furniture and related ...	0	199	-13	212	231
43	Broadcasting and telecom ...	0	39	0	39	39
54	Management of companies ...	0	84	0	84	84
57	Educational services	2	232	11	221	718
60	Nursing and residential ...	1	130	10	120	281
61	Social assistance	0	112	9	103	140
62	Performing arts, spectator ...	0	30	0	30	32
65	Food services and drinking ...	0	16	18	-2	109
66	Other services, exc. gov ...	0	74	-1	75	127
68	Government	0	136	2	134	258

Selected SSA Components for Grayson County, Virginia vs Neighbors



Chapter 11. Grayson County, Virginia

Selected SSA Components for Grayson County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
01	Farms	-4	58	10	48	84
18	Furniture and related ...	-4	203	-20	223	231
43	Broadcasting and telecom ...	-0	39	0	39	39
54	Management of companies ...	-0	84	0	84	84
57	Educational services	-64	298	64	234	718
60	Nursing and residential ...	-20	150	-1	151	281
61	Social assistance	-4	115	11	104	140
62	Performing arts, spectator ...	-0	30	0	30	32
65	Food services and drinking ...	-12	29	25	4	109
66	Other services, exc. gov ...	-7	81	17	64	127
68	Government	-16	152	35	117	258

Chapter 12. Henry County, Virginia

Employment in Henry County, Virginia, declined from 30,574 in 2005 to 25,360 in 2018, for a change of -5,214, or -17.05%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Henry County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	3,447	-8,660	-2,660	-6,000
vs. Appalachia	101	-5,318	-2,240	-3,078
vs. Neighbors	-4,156	-1,057	-916	-141

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Henry County, Virginia, in comparison to at least one of the three referent regions.

Chapter 12. Henry County, Virginia

Industry Group Membership for Henry County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
26	Chemical products	F III c i	no	yes	yes	yes
27	Plastics and rubber prod...	D III a ii	no	yes	yes	yes
28	Wholesale trade	F III c i	no	yes	yes	yes
40	Warehousing and storage	E II a iii	no	yes	yes	yes
53	Miscellaneous profession ...	B V b ii	yes	no	yes	yes
55	Administrative and ...	A V e i	yes	no	no	yes
58	Ambulatory health care ...	B I a i	yes	yes	yes	yes
59	Hospitals	E I a i	no	yes	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
65	Food services and drinking ...	B V b ii	yes	no	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes
68	Government	F III a ii	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Henry County, Virginia vs. the United States

Groups a, b, and c are from Henry County, Virginia vs. Appalachia

Groups i, ii, and iii are from Henry County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Henry County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Henry County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Henry County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Henry County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

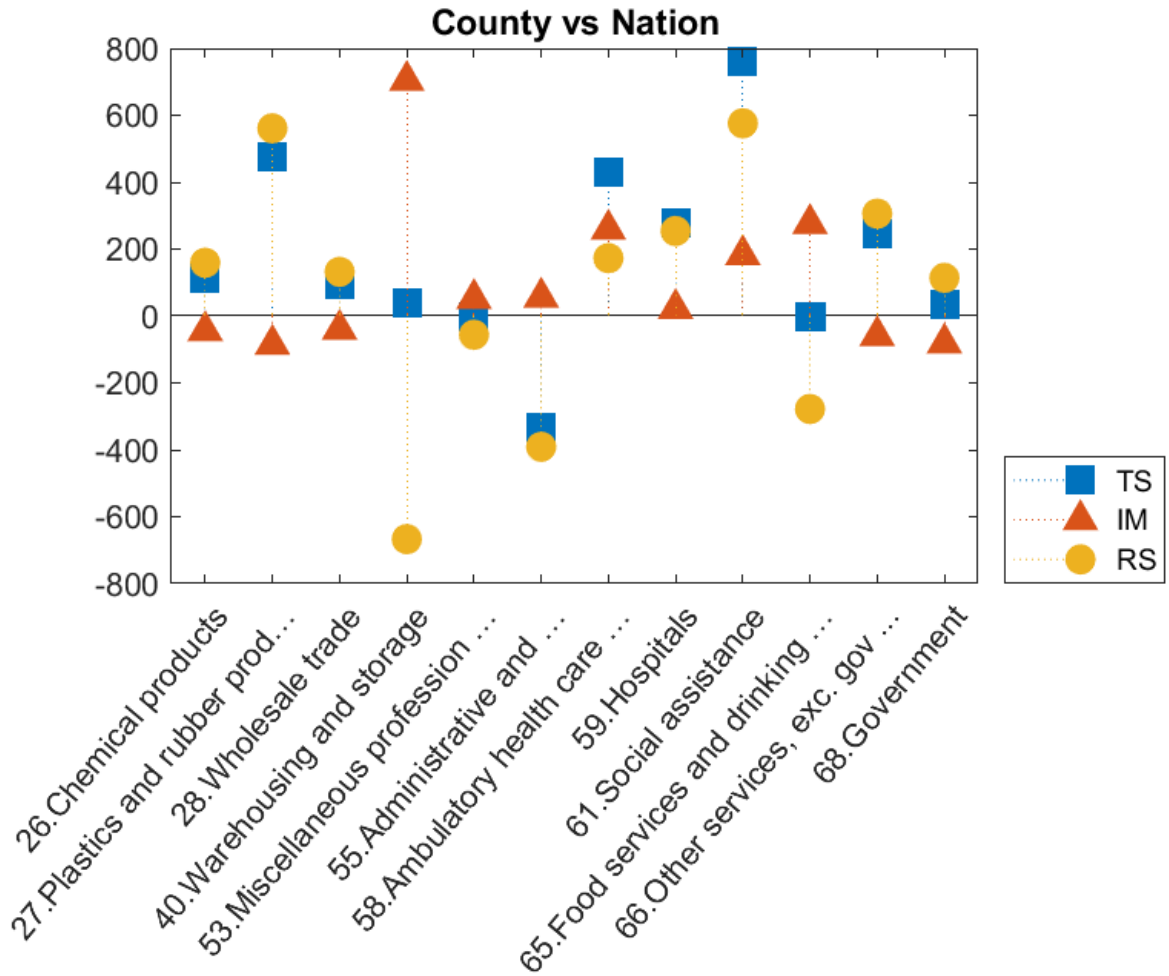
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Henry County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Henry County, Virginia vs the U.S.

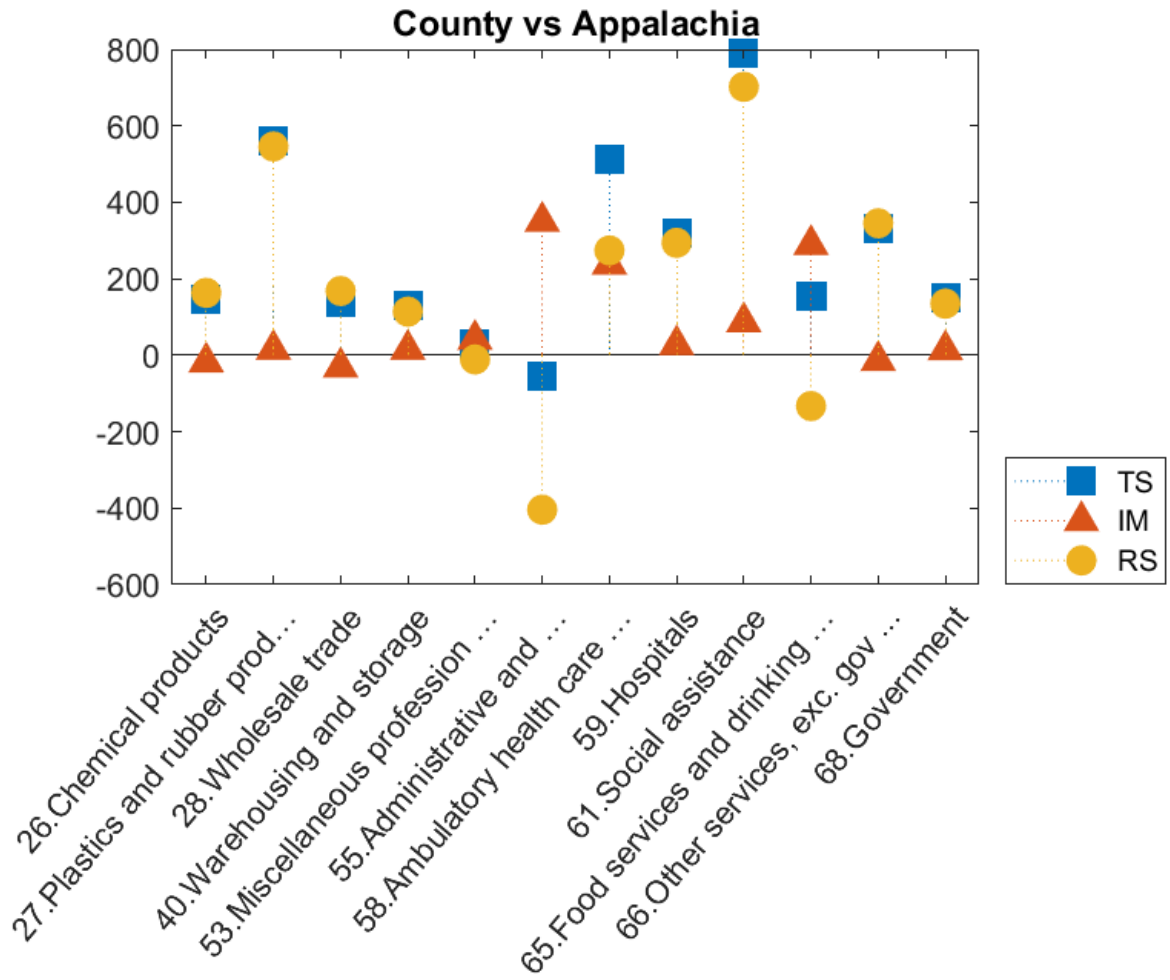


Chapter 12. Henry County, Virginia

Henry County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
26	Chemical products	31	115	-44	159	422
27	Plastics and rubber prod...	87	476	-85	561	1,336
28	Wholesale trade	48	92	-40	132	563
40	Warehousing and storage	95	37	704	-667	974
53	Miscellaneous profession ...	34	-4	52	-56	336
55	Administrative and ...	290	-335	56	-391	2,524
58	Ambulatory health care ...	83	432	259	173	1,253
59	Hospitals	46	276	22	254	727
61	Social assistance	31	759	183	576	1,069
65	Food services and drinking ...	163	-2	276	-278	1,609
66	Other services, exc. gov ...	86	247	-59	306	1,094
68	Government	120	33	-81	114	1,221

Selected SSA Components for Henry County, Virginia vs the Appalachian Region

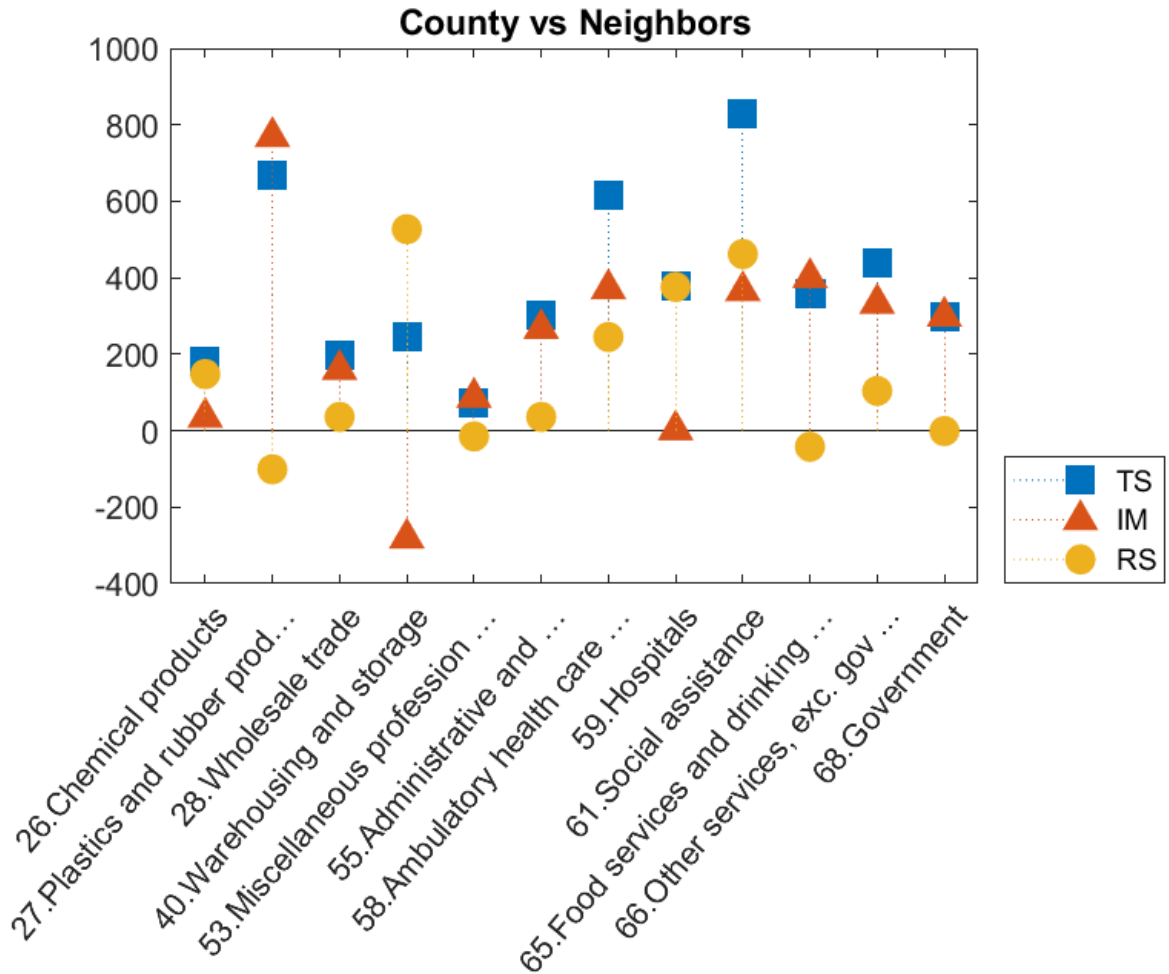


Chapter 12. Henry County, Virginia

Selected SSA Components for Henry County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
26	Chemical products	1	145	-18	163	422
27	Plastics and rubber prod...	3	561	15	546	1,336
28	Wholesale trade	1	137	-31	168	563
40	Warehousing and storage	3	129	15	114	974
53	Miscellaneous profession ...	1	30	41	-11	336
55	Administrative and ...	9	-54	350	-404	2,524
58	Ambulatory health care ...	3	512	238	274	1,253
59	Hospitals	1	321	27	294	727
61	Social assistance	1	789	87	702	1,069
65	Food services and drinking ...	5	156	289	-133	1,609
66	Other services, exc. gov ...	3	331	-14	345	1,094
68	Government	4	149	14	135	1,221

Selected SSA Components for Henry County, Virginia vs Neighbors



Chapter 12. Henry County, Virginia

Selected SSA Components for Henry County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
26	Chemical products	-38	183	35	148	422
27	Plastics and rubber prod...	-105	668	769	-101	1,336
28	Wholesale trade	-58	196	160	36	563
40	Warehousing and storage	-114	246	-281	527	974
53	Miscellaneous profession ...	-42	72	87	-15	336
55	Administrative and ...	-349	303	267	36	2,524
58	Ambulatory health care ...	-100	616	371	245	1,253
59	Hospitals	-55	378	2	376	727
61	Social assistance	-38	828	366	462	1,069
65	Food services and drinking ...	-197	358	400	-42	1,609
66	Other services, exc. gov ...	-103	437	333	104	1,094
68	Government	-145	298	299	-1	1,221

Chapter 13. Highland County, Virginia

Employment in Highland County, Virginia, declined from 674 in 2005 to 472 in 2018, for a change of -202, or -29.97%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Highland County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	76	-279	-6	-273
vs. Appalachia	0	-207	-11	-196
vs. Neighbors	-6	-195	83	-278

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Highland County, Virginia, in comparison to at least one of the three referent regions.

Chapter 13. Highland County, Virginia

Industry Group Membership for Highland County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
14	Computer and electronic ...	F III c iii	no	yes	yes	yes
28	Wholesale trade	F III c i	no	yes	yes	yes
30	Food and beverage stores	F I a i	no	yes	yes	yes
42	Motion picture and sound ...	E I a i	no	yes	yes	yes
52	Computer systems design ...	B I a ii	yes	yes	yes	yes
53	Miscellaneous profession ...	B I a i	yes	yes	yes	yes
55	Administrative and ...	A I a ii	yes	yes	yes	yes
58	Ambulatory health care ...	B I a i	yes	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Highland County, Virginia vs. the United States

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Groups i, ii, and iii are from Highland County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Highland County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Highland County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Highland County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Highland County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

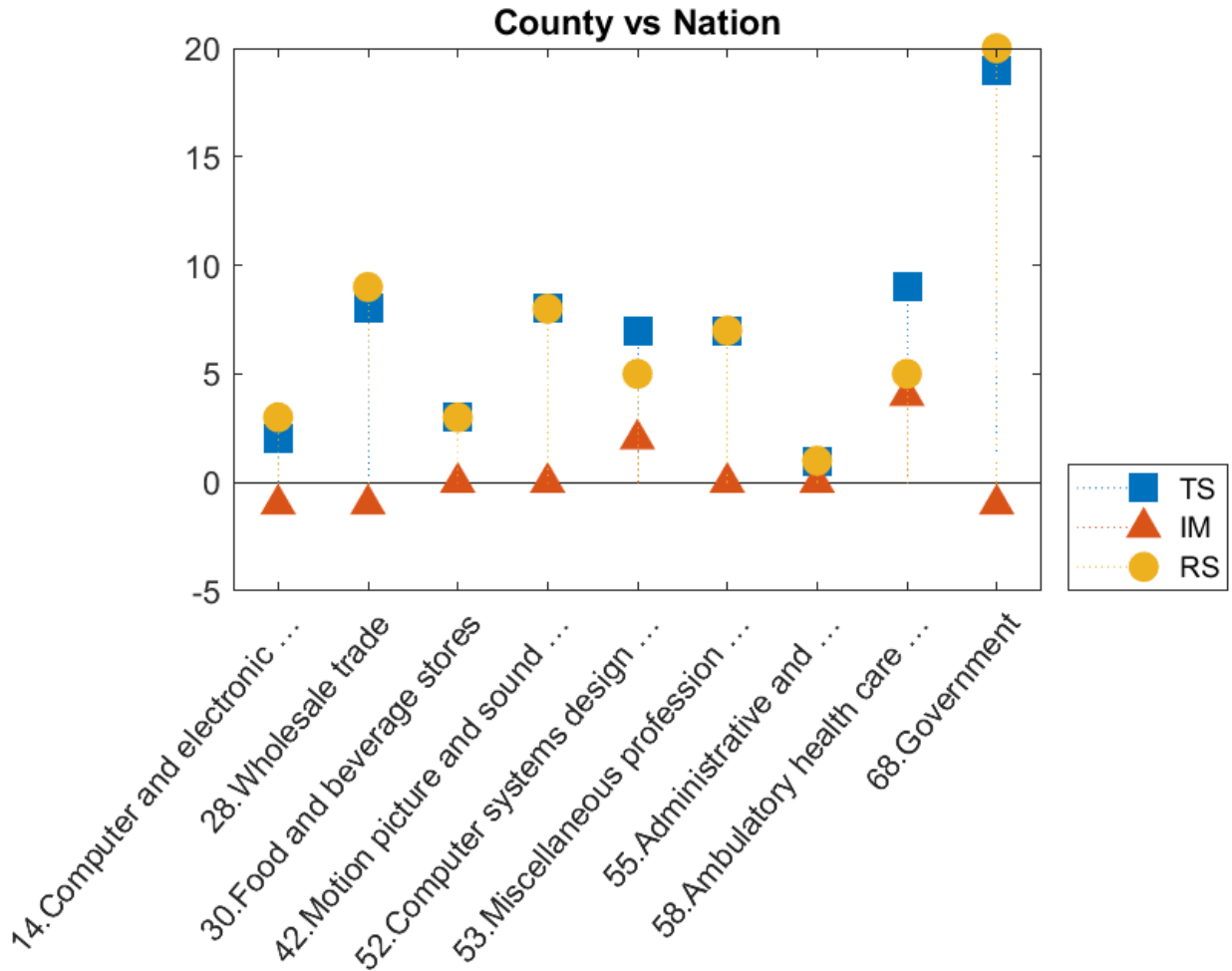
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Highland County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

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Selected SSA Components for Highland County, Virginia vs the U.S.

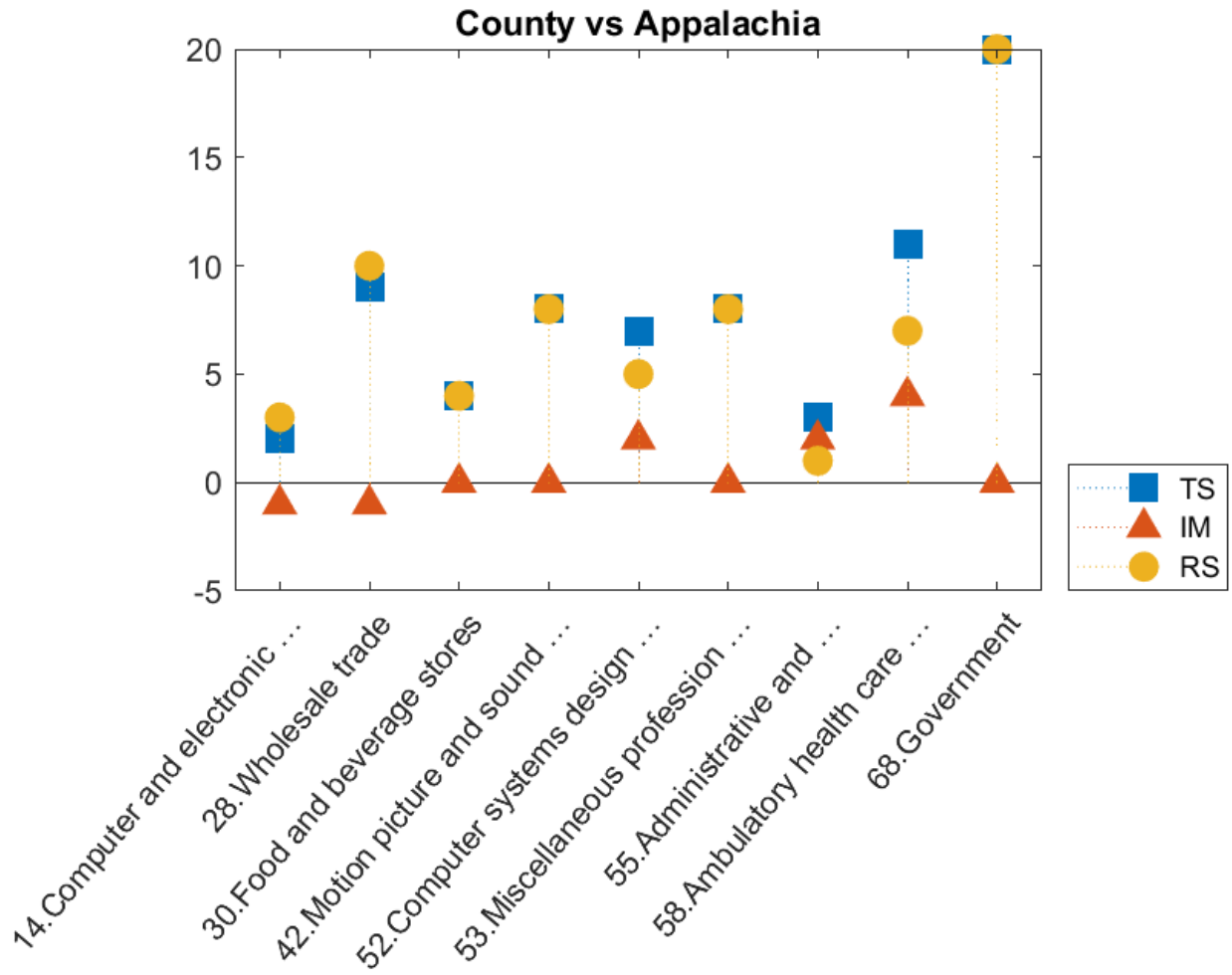


Chapter 13. Highland County, Virginia

Highland County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
14	Computer and electronic ...	1	2	-1	3	7
28	Wholesale trade	1	8	-1	9	19
30	Food and beverage stores	2	3	-0	3	18
42	Motion picture and sound ...	0	8	0	8	8
52	Computer systems design ...	0	7	2	5	10
53	Miscellaneous profession ...	0	7	0	7	10
55	Administrative and ...	1	1	0	1	16
58	Ambulatory health care ...	1	9	4	5	24
68	Government	2	19	-1	20	37

Selected SSA Components for Highland County, Virginia vs the Appalachian Region

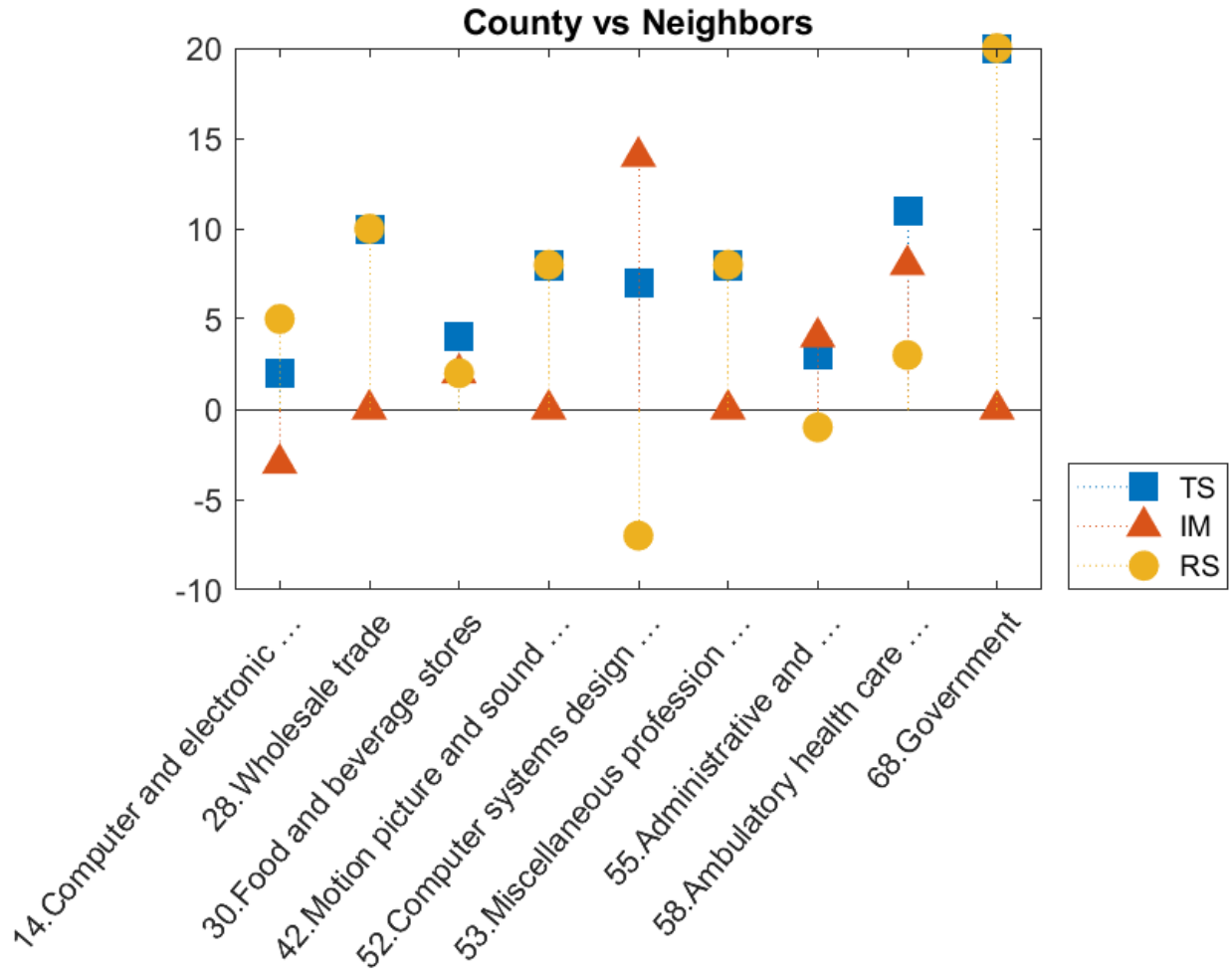


Chapter 13. Highland County, Virginia

Selected SSA Components for Highland County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
14	Computer and electronic ...	0	2	-1	3	7
28	Wholesale trade	0	9	-1	10	19
30	Food and beverage stores	0	4	-0	4	18
42	Motion picture and sound ...	0	8	0	8	8
52	Computer systems design ...	0	7	2	5	10
53	Miscellaneous profession ...	0	8	0	8	10
55	Administrative and ...	0	3	2	1	16
58	Ambulatory health care ...	0	11	4	7	24
68	Government	0	20	0	20	37

Selected SSA Components for Highland County, Virginia vs Neighbors



Chapter 13. Highland County, Virginia

Selected SSA Components for Highland County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
14	Computer and electronic ...	-0	2	-3	5	7
28	Wholesale trade	-0	10	0	10	19
30	Food and beverage stores	-0	4	2	2	18
42	Motion picture and sound ...	-0	8	0	8	8
52	Computer systems design ...	-0	7	14	-7	10
53	Miscellaneous profession ...	-0	8	0	8	10
55	Administrative and ...	-0	3	4	-1	16
58	Ambulatory health care ...	-0	11	8	3	24
68	Government	-0	20	0	20	37

Chapter 14. Lee County, Virginia

Employment in Lee County, Virginia, declined from 5,483 in 2005 to 4,274 in 2018, for a change of -1,209, or -22.05%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Lee County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	619	-1,826	-78	-1,748
vs. Appalachia	13	-1,229	-5	-1,224
vs. Neighbors	-994	-211	-16	-195

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Lee County, Virginia, in comparison to at least one of the three referent regions.

Chapter 14. Lee County, Virginia

Industry Group Membership for Lee County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
07	Utilities	F III c i	no	yes	yes	yes
31	General merchandise ...	F III c i	no	yes	yes	yes
55	Administrative and ...	A V e ii	yes	no	no	yes
58	Ambulatory health care ...	B V e ii	yes	no	no	yes
61	Social assistance	B I a i	yes	yes	yes	yes
65	Food services and drinking ...	B V b i	yes	no	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Lee County, Virginia vs. the United States

Groups a, b, and c are from Lee County, Virginia vs. Appalachia

Groups i, ii, and iii are from Lee County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Lee County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Lee County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Lee County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Lee County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

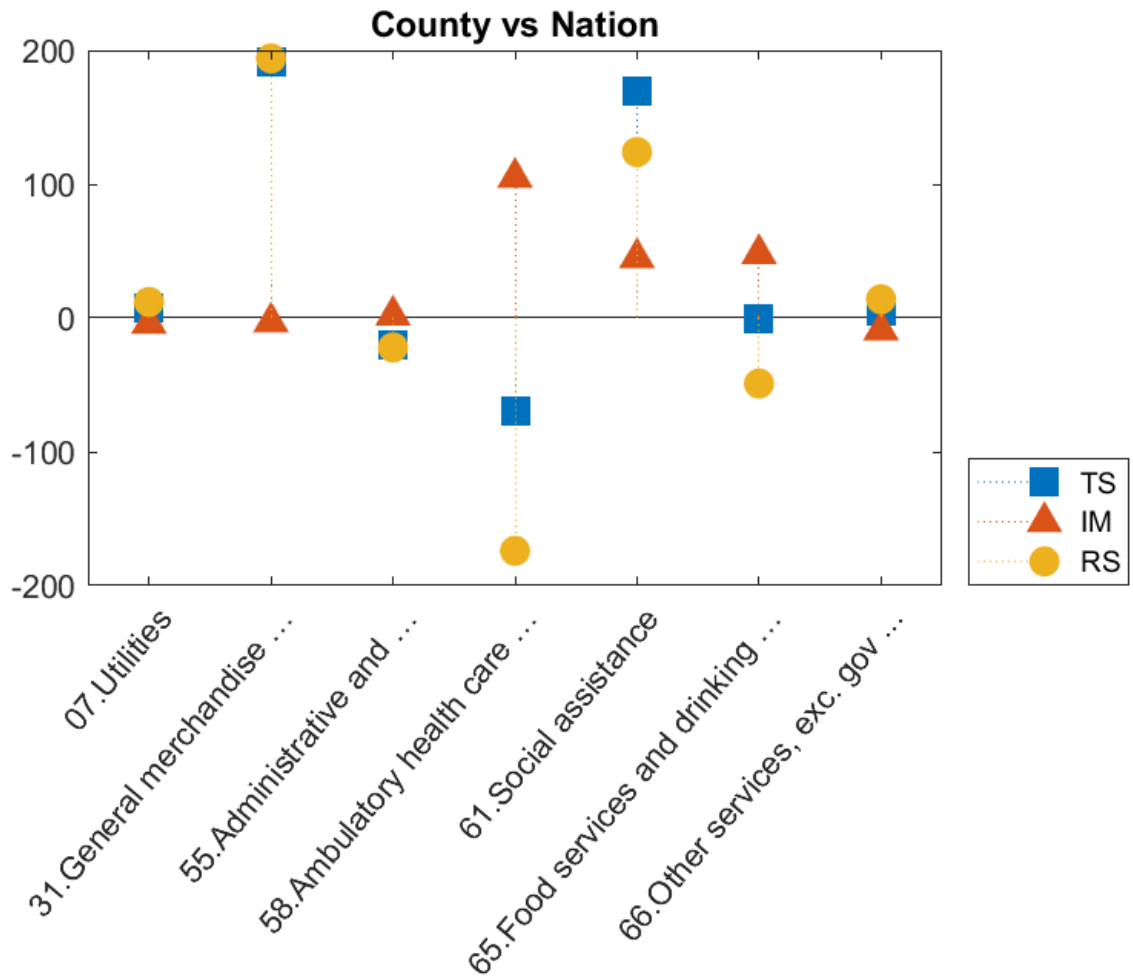
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Lee County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Lee County, Virginia vs the U.S.

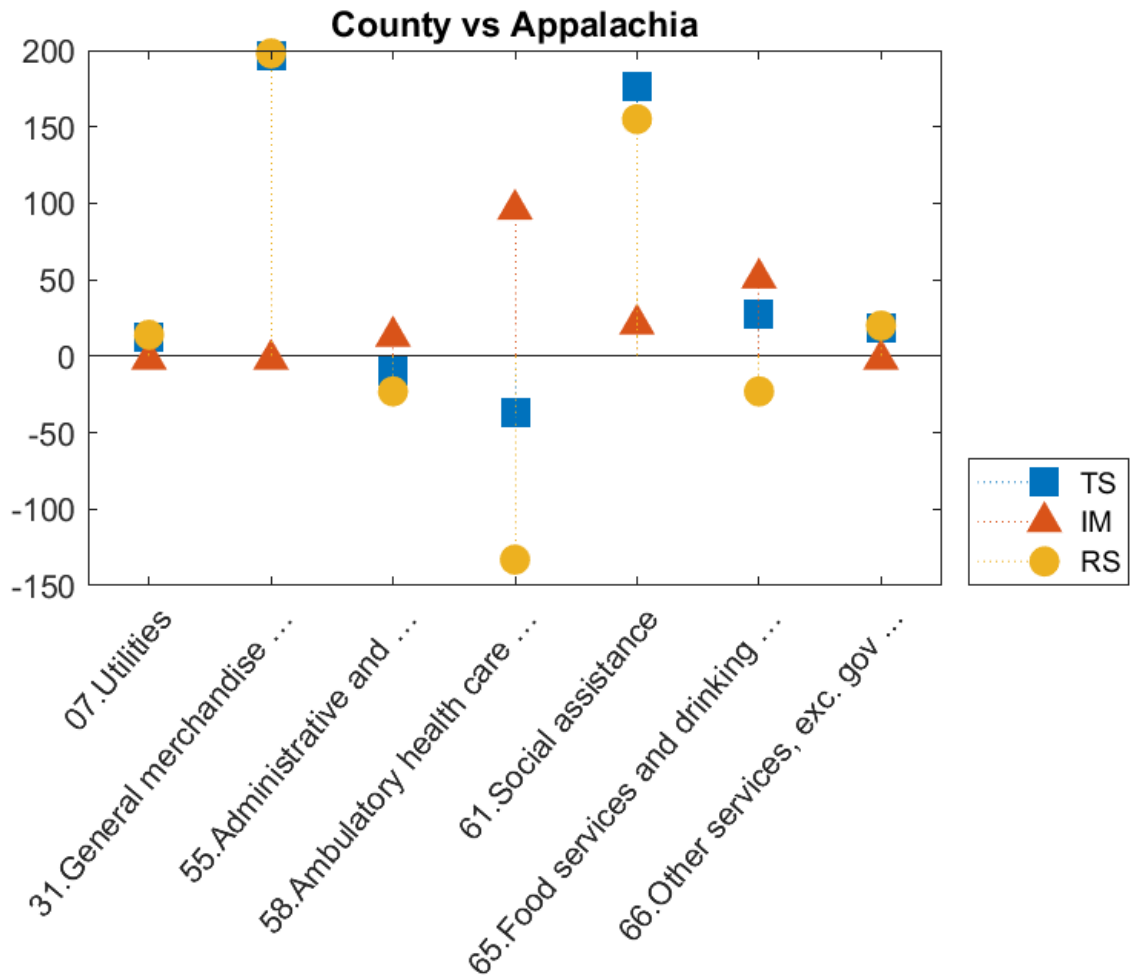


Chapter 14. Lee County, Virginia

Lee County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
07	Utilities	5	8	-4	12	52
31	General merchandise ...	5	191	-3	194	240
55	Administrative and ...	11	-20	2	-22	85
58	Ambulatory health care ...	34	-69	105	-174	263
61	Social assistance	8	169	45	124	244
65	Food services and drinking ...	29	-1	48	-49	281
66	Other services, exc. gov ...	14	5	-9	14	139

Selected SSA Components for Lee County, Virginia vs the Appalachian Region

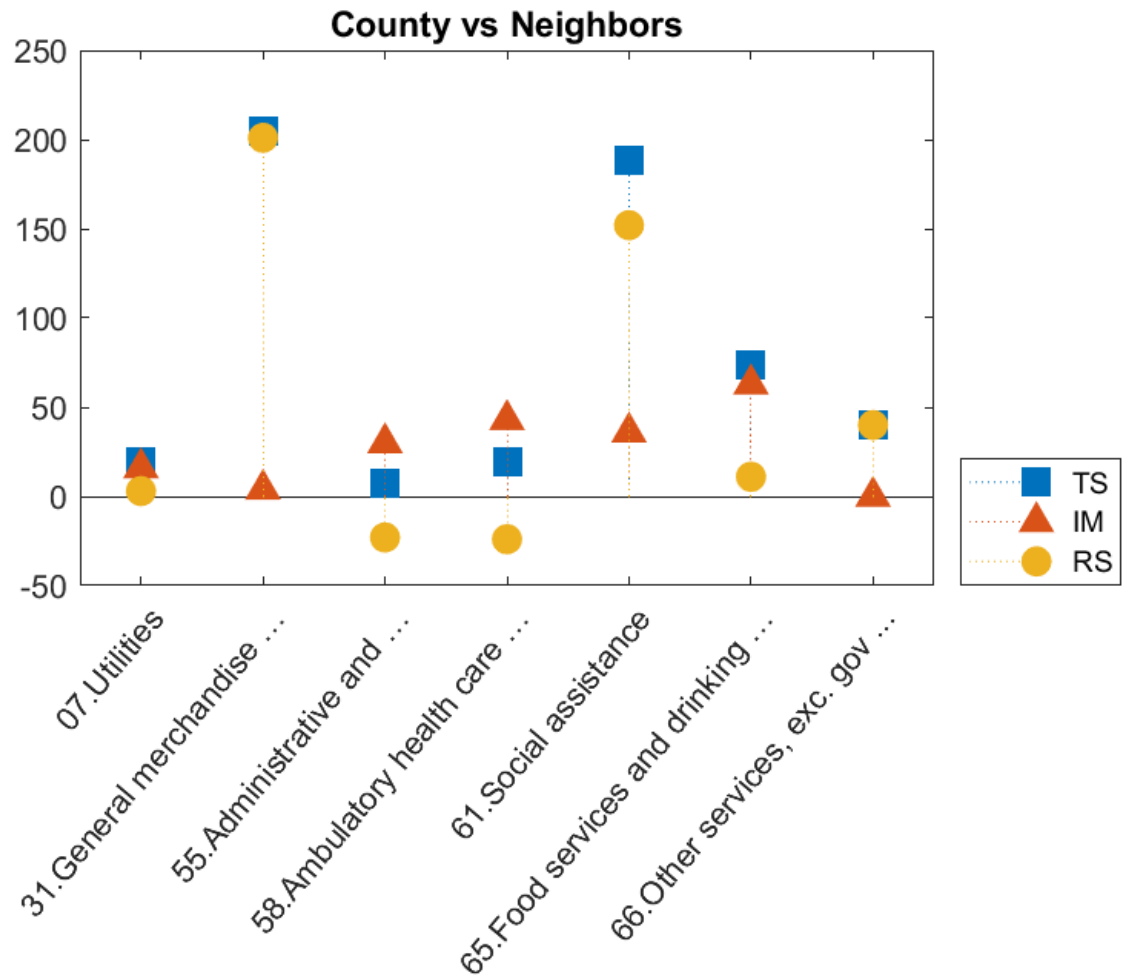


Chapter 14. Lee County, Virginia

Selected SSA Components for Lee County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
07	Utilities	0	12	-2	14	52
31	General merchandise ...	0	196	-2	198	240
55	Administrative and ...	0	-10	13	-23	85
58	Ambulatory health care ...	1	-37	96	-133	263
61	Social assistance	0	176	21	155	244
65	Food services and drinking ...	1	28	51	-23	281
66	Other services, exc. gov ...	0	18	-2	20	139

Selected SSA Components for Lee County, Virginia vs Neighbors



Chapter 14. Lee County, Virginia

Selected SSA Components for Lee County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
07	Utilities	-7	19	16	3	52
31	General merchandise ...	-8	205	4	201	240
55	Administrative and ...	-17	7	30	-23	85
58	Ambulatory health care ...	-54	19	43	-24	263
61	Social assistance	-12	188	36	152	244
65	Food services and drinking ...	-46	74	63	11	281
66	Other services, exc. gov ...	-22	40	0	40	139

Chapter 15. Montgomery County, Virginia

Employment in Montgomery County, Virginia, declined from 42,855 in 2005 to 37,926 in 2018, for a change of -4,929, or -11.5%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Montgomery County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	4,831	-9,759	304	-10,063
vs. Appalachia	144	-5,080	1,185	-6,265
vs. Neighbors	-1,560	-3,372	365	-3,737

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Montgomery County, Virginia, in comparison to at least one of the three referent regions.

Chapter 15. Montgomery County, Virginia

Industry Group Membership for Montgomery County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
16	Motor vehicles, bodies ...	C III a iii	yes	yes	yes	yes
30	Food and beverage stores	F III c ii	no	yes	yes	yes
49	Real estate	F III a i	no	yes	yes	yes
52	Computer systems design ...	B I a i	yes	yes	yes	yes
53	Miscellaneous profession ...	B II a i	yes	yes	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
58	Ambulatory health care ...	B V b ii	yes	no	yes	yes
59	Hospitals	E I a ii	no	yes	yes	yes
60	Nursing and residential ...	E I a i	no	yes	yes	yes
63	Amusements, gambling, ...	B V b ii	yes	no	yes	yes
64	Accommodation	A I a i	yes	yes	yes	yes
65	Food services and drinking ...	B II b ii	yes	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Montgomery County, Virginia vs. the United States

Groups a, b, and c are from Montgomery County, Virginia vs. Appalachia

Groups i, ii, and iii are from Montgomery County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Montgomery County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Montgomery County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Montgomery County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Montgomery County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

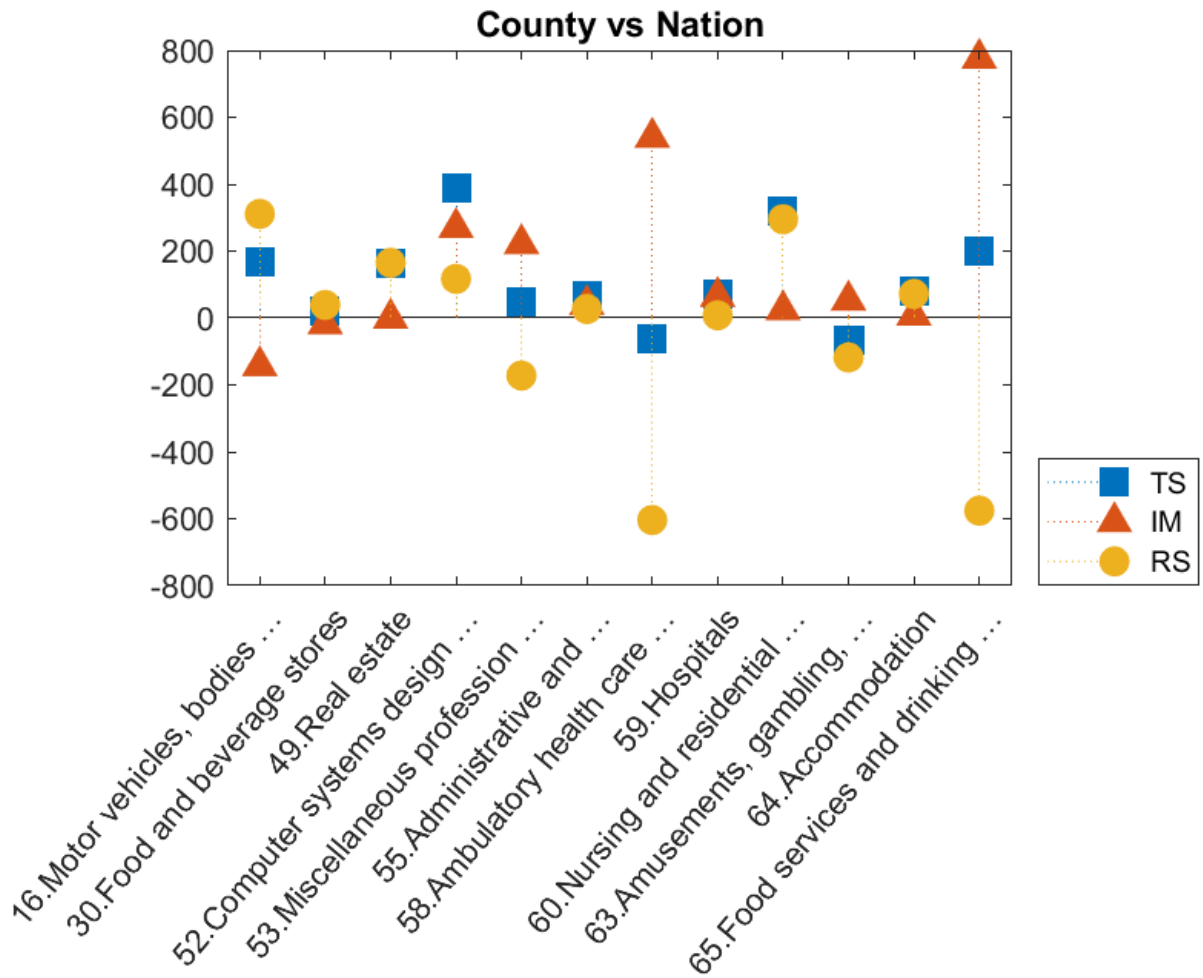
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Montgomery County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Montgomery County, Virginia vs the U.S.

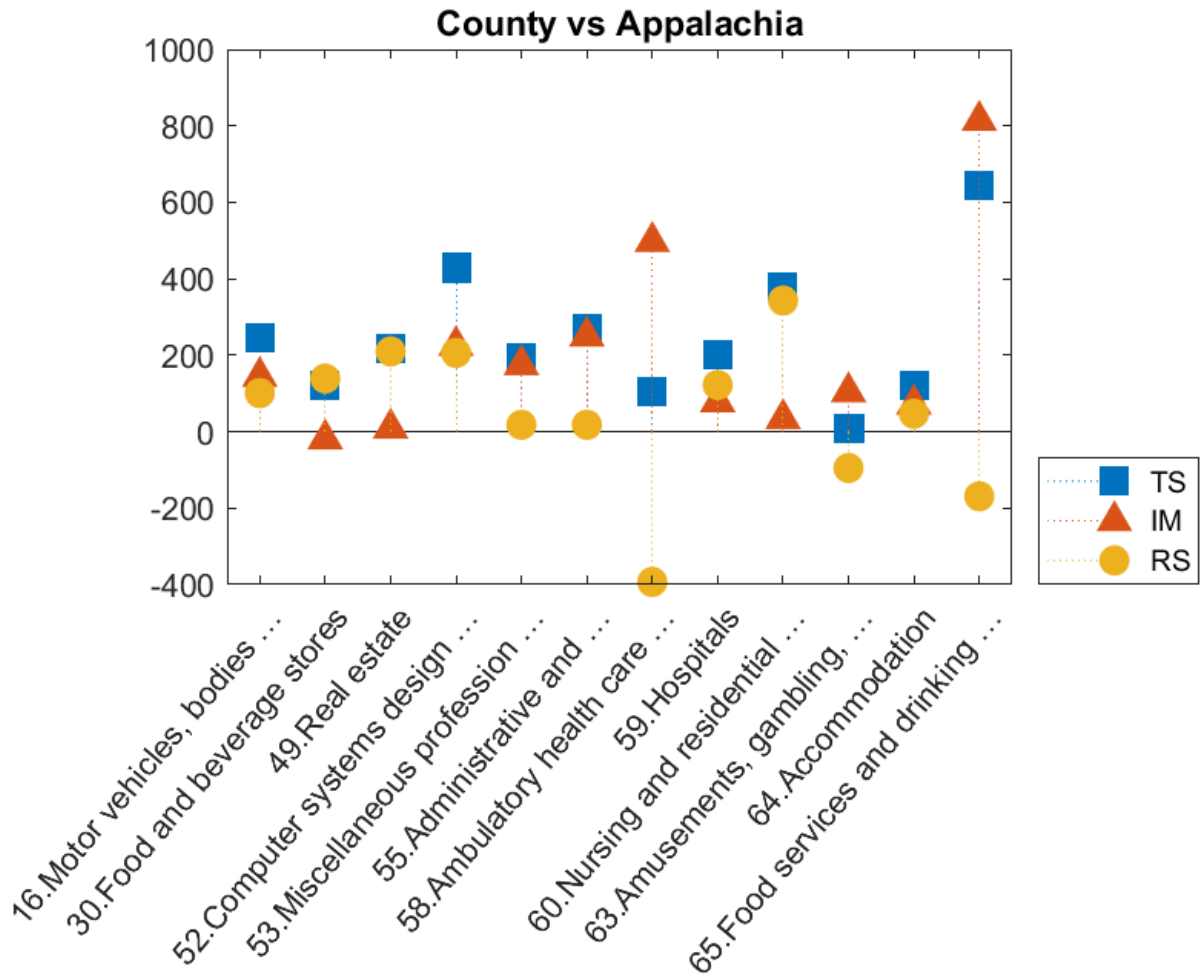


Chapter 15. Montgomery County, Virginia

Montgomery County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	80	168	-143	311	958
30	Food and beverage stores	103	21	-18	39	1,035
49	Real estate	58	164	-1	165	733
52	Computer systems design ...	46	387	270	117	842
53	Miscellaneous profession ...	148	50	222	-172	1,513
55	Administrative and ...	207	67	40	27	2,113
58	Ambulatory health care ...	173	-64	540	-604	1,647
59	Hospitals	131	72	64	8	1,362
60	Nursing and residential ...	60	319	24	295	915
63	Amusements, gambling, ...	76	-65	53	-118	687
64	Accommodation	40	80	8	72	475
65	Food services and drinking ...	459	200	776	-576	4,731

Selected SSA Components for Montgomery County, Virginia vs the Appalachian Region

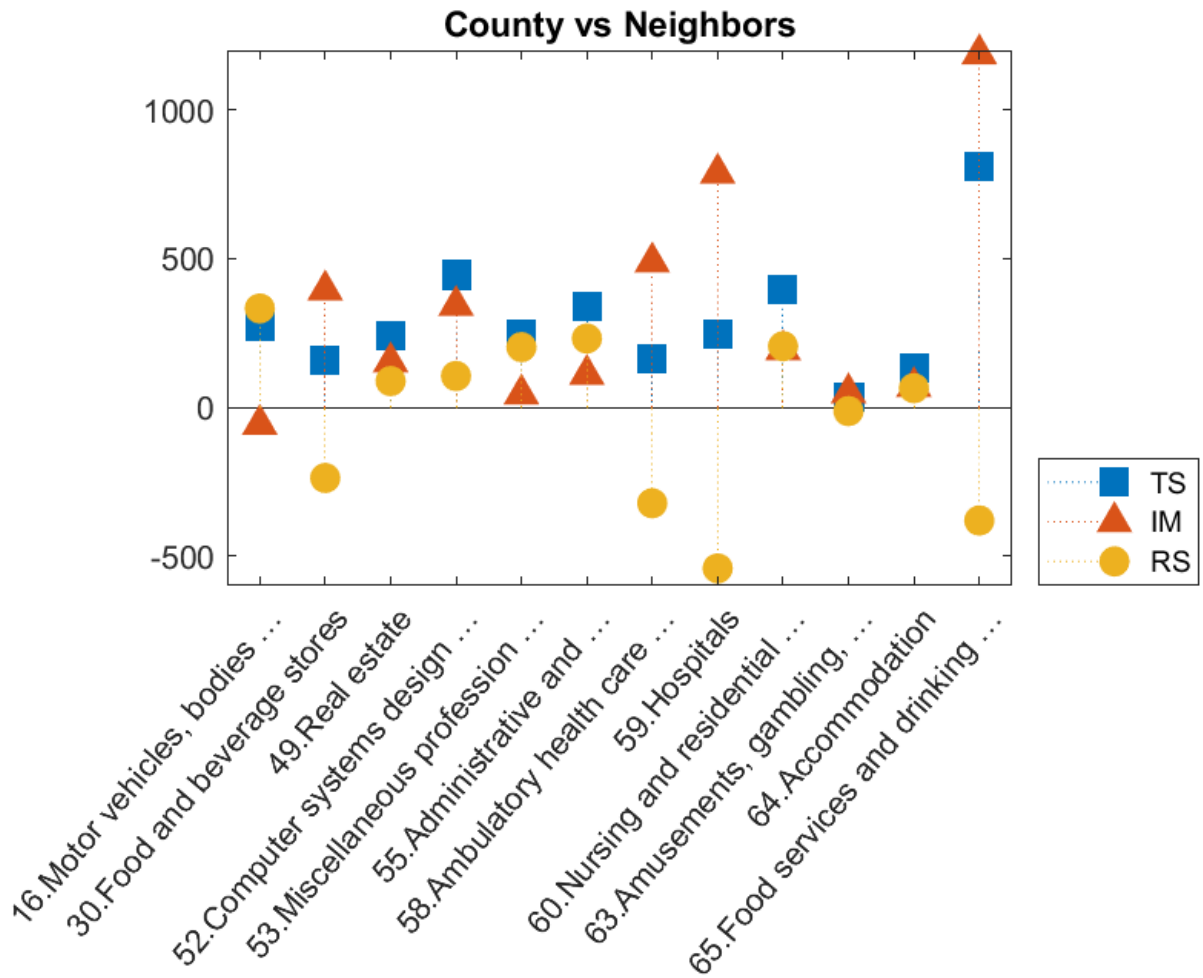


Chapter 15. Montgomery County, Virginia

Selected SSA Components for Montgomery County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	2	245	144	101	958
30	Food and beverage stores	3	120	-19	139	1,035
49	Real estate	2	219	9	210	733
52	Computer systems design ...	1	431	225	206	842
53	Miscellaneous profession ...	4	193	175	18	1,513
55	Administrative and ...	6	268	250	18	2,113
58	Ambulatory health care ...	5	104	497	-393	1,647
59	Hospitals	4	200	78	122	1,362
60	Nursing and residential ...	2	377	34	343	915
63	Amusements, gambling, ...	2	9	104	-95	687
64	Accommodation	1	119	72	47	475
65	Food services and drinking ...	14	645	814	-169	4,731

Selected SSA Components for Montgomery County, Virginia vs Neighbors



Chapter 15. Montgomery County, Virginia

Selected SSA Components for Montgomery County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	-26	274	-58	332	958
30	Food and beverage stores	-33	156	394	-238	1,035
49	Real estate	-19	240	152	88	733
52	Computer systems design ...	-15	447	342	105	842
53	Miscellaneous profession ...	-48	246	44	202	1,513
55	Administrative and ...	-67	341	110	231	2,113
58	Ambulatory health care ...	-56	165	488	-323	1,647
59	Hospitals	-42	245	787	-542	1,362
60	Nursing and residential ...	-19	398	193	205	915
63	Amusements, gambling, ...	-25	35	48	-13	687
64	Accommodation	-13	133	69	64	475
65	Food services and drinking ...	-148	807	1,188	-381	4,731

Chapter 16. Patrick County, Virginia

Employment in Patrick County, Virginia, declined from 5,103 in 2005 to 4,431 in 2018, for a change of -672, or -13.17%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Patrick County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	573	-1,250	-629	-621
vs. Appalachia	13	-688	-499	-189
vs. Neighbors	-623	-47	19	-66

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Patrick County, Virginia, in comparison to at least one of the three referent regions.

Chapter 16. Patrick County, Virginia

Industry Group Membership for Patrick County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
02	Forestry, fishing, and ...	E I c i	no	yes	yes	yes
20	Food and beverage ...	E I c i	no	yes	yes	yes
31	General merchandise ...	F III c i	no	yes	yes	yes
53	Miscellaneous profession ...	B I a i	yes	yes	yes	yes
56	Waste management and ...	A I a i	yes	yes	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
65	Food services and drinking ...	B V n ii	yes	no	no	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Patrick County, Virginia vs. the United States

Groups a, b, and c are from Patrick County, Virginia vs. Appalachia

Groups i, ii, and iii are from Patrick County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Patrick County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Patrick County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Patrick County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Patrick County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

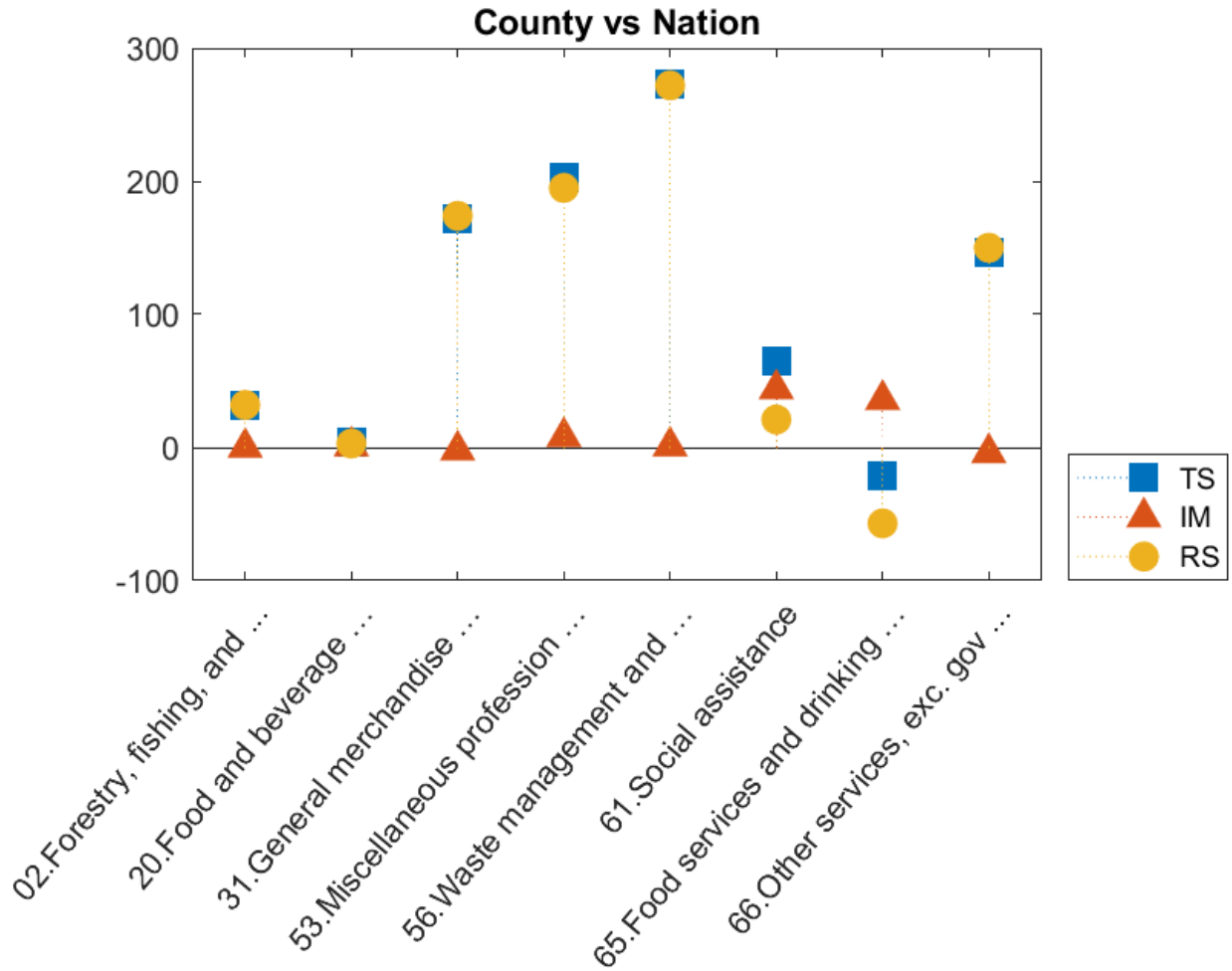
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Patrick County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Patrick County, Virginia vs the U.S.

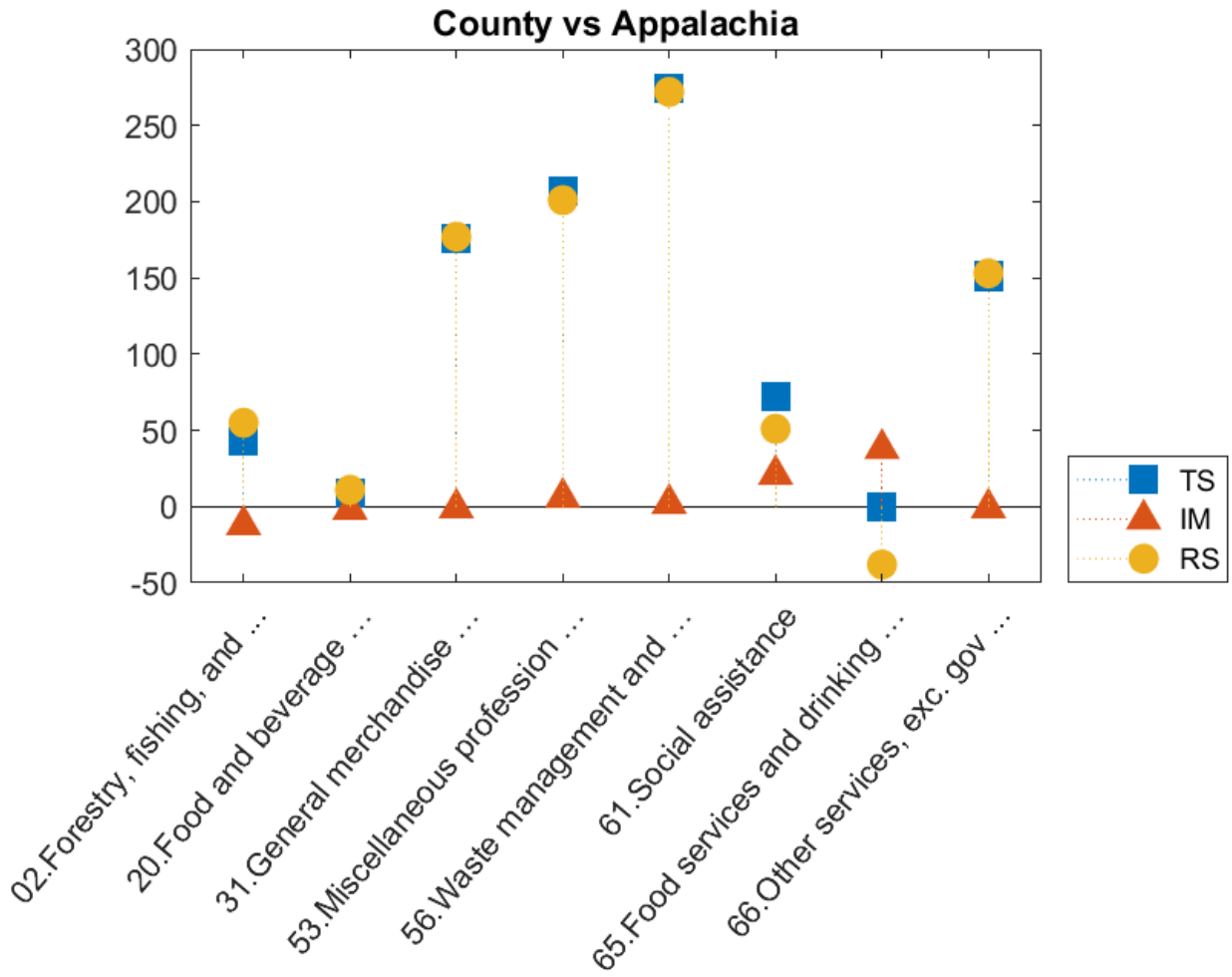


Chapter 16. Patrick County, Virginia

Patrick County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
02	Forestry, fishing, and ...	11	32	0	32	143
20	Food and beverage ...	6	4	1	3	60
31	General merchandise ...	3	172	-2	174	206
53	Miscellaneous profession ...	5	203	8	195	253
56	Waste management and ...	1	273	1	272	280
61	Social assistance	8	65	44	21	139
65	Food services and drinking ...	21	-21	36	-57	191
66	Other services, exc. gov ...	6	146	-4	150	206

Selected SSA Components for Patrick County, Virginia vs the Appalachian Region

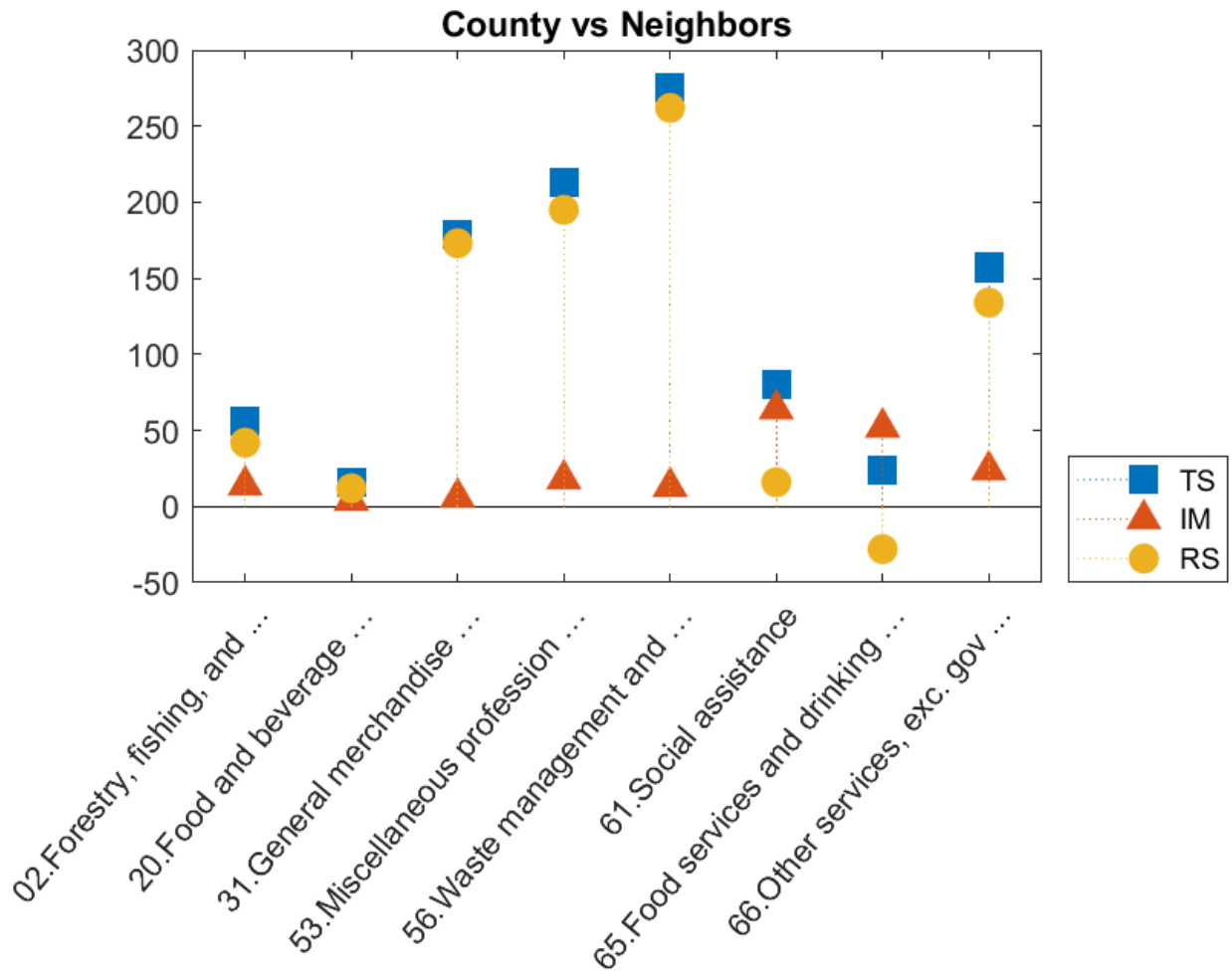


Chapter 16. Patrick County, Virginia

Selected SSA Components for Patrick County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
02	Forestry, fishing, and ...	0	43	-12	55	143
20	Food and beverage ...	0	9	-2	11	60
31	General merchandise ...	0	176	-1	177	206
53	Miscellaneous profession ...	0	207	6	201	253
56	Waste management and ...	0	274	2	272	280
61	Social assistance	0	72	21	51	139
65	Food services and drinking ...	1	0	38	-38	191
66	Other services, exc. gov ...	0	152	-1	153	206

Selected SSA Components for Patrick County, Virginia vs Neighbors



Chapter 16. Patrick County, Virginia

Selected SSA Components for Patrick County, Virginia vs Neighbors for
Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
02	Forestry, fishing, and ...	-12	56	14	42	143
20	Food and beverage ...	-6	16	4	12	60
31	General merchandise ...	-4	179	6	173	206
53	Miscellaneous profession ...	-6	213	18	195	253
56	Waste management and ...	-1	275	13	262	280
61	Social assistance	-8	80	64	16	139
65	Food services and drinking ...	-23	24	52	-28	191
66	Other services, exc. gov ...	-7	158	24	134	206

Chapter 17. Pulaski County, Virginia

Employment in Pulaski County, Virginia, declined from 15,776 in 2005 to 14,194 in 2018, for a change of -1,582, or -10.03%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Pulaski County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,776	-3,360	-1,235	-2,125
vs. Appalachia	50	-1,635	350	-1,985
vs. Neighbors	-1,953	371	-433	804

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Pulaski County, Virginia, in comparison to at least one of the three referent regions.

Chapter 17. Pulaski County, Virginia

Industry Group Membership for Pulaski County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
10	Nonmetallic mineral prod ...	F III c i	no	yes	yes	yes
15	Electrical equipment, ...	D III c i	no	yes	yes	yes
26	Chemical products	F III c i	no	yes	yes	yes
27	Plastics and rubber prod...	D III a i	no	yes	yes	yes
29	Motor vehicle and parts ...	F III a i	no	yes	yes	yes
32	Other retail	F III c iii	no	yes	yes	yes
37	Transit and ground ...	E I c iii	no	yes	yes	yes
39	Other transportation ...	E II c iii	no	yes	yes	yes
53	Miscellaneous profession ...	B V e ii	yes	no	no	yes
58	Ambulatory health care ...	B V e ii	yes	no	no	yes
61	Social assistance	B II a i	yes	yes	yes	yes
63	Amusements, gambling, ...	B V b i	yes	no	yes	yes
65	Food services and drinking ...	B II a i	yes	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Pulaski County, Virginia vs. the United States

Groups a, b, and c are from Pulaski County, Virginia vs. Appalachia

Groups i, ii, and iii are from Pulaski County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Pulaski County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Pulaski County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Pulaski County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Pulaski County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

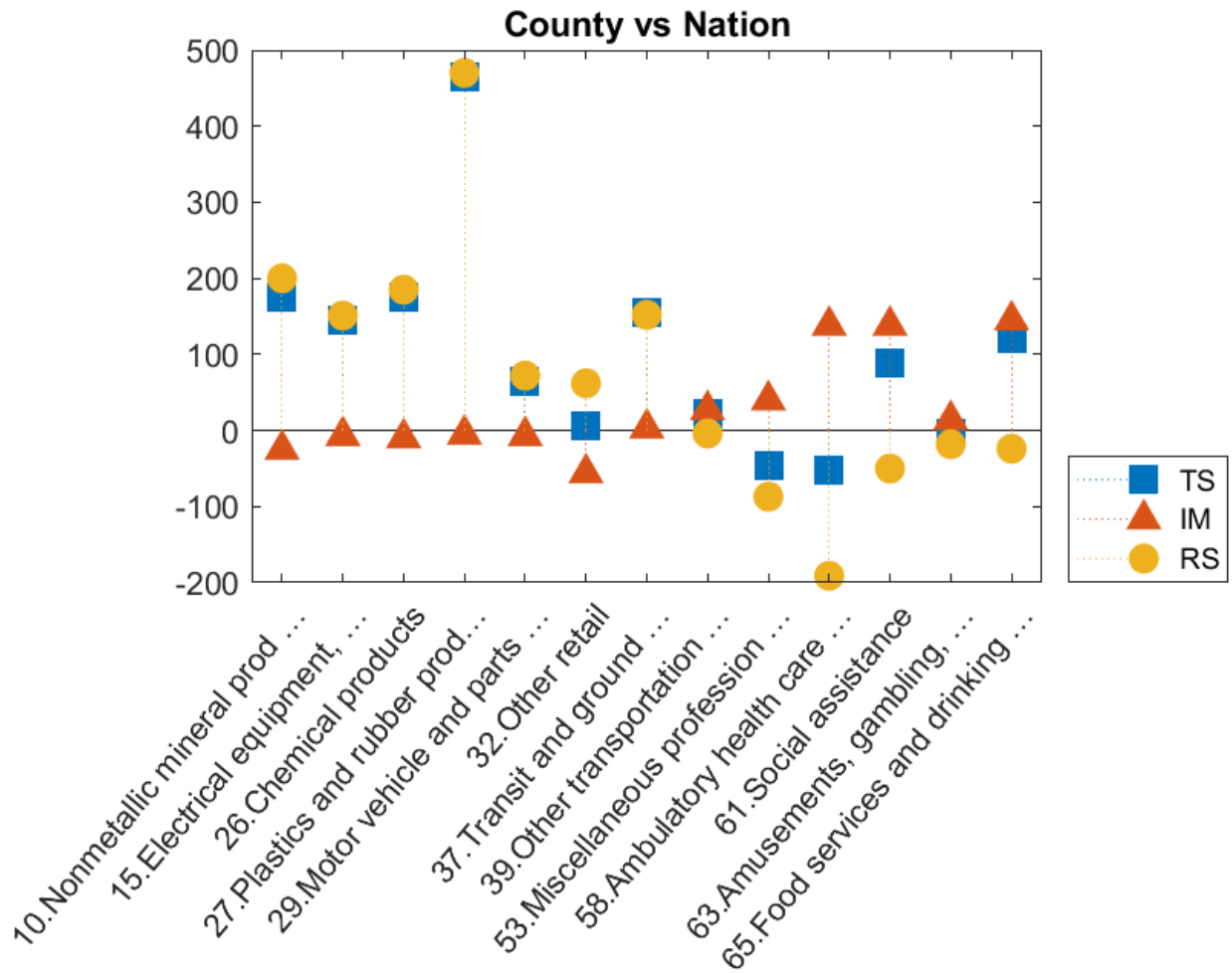
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Pulaski County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Pulaski County, Virginia vs the U.S.

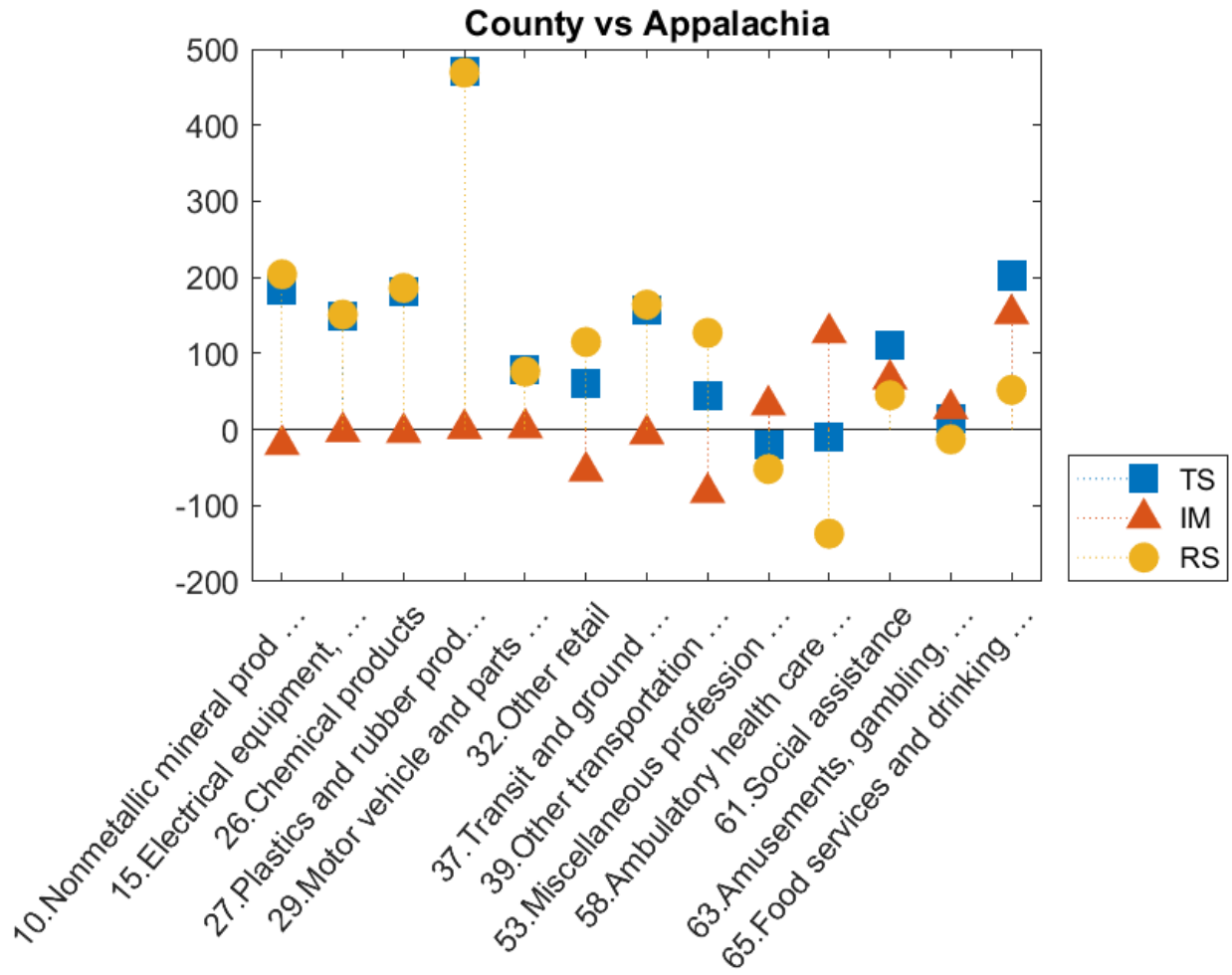


Chapter 17. Pulaski County, Virginia

Pulaski County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
10	Nonmetallic mineral prod ...	10	175	-25	200	272
15	Electrical equipment, ...	4	144	-7	151	182
26	Chemical products	7	175	-10	185	246
27	Plastics and rubber prod...	5	465	-5	470	519
29	Motor vehicle and parts ...	13	65	-7	72	191
32	Other retail	57	6	-56	62	565
37	Transit and ground ...	3	155	3	152	187
39	Other transportation ...	22	23	27	-4	236
53	Miscellaneous profession ...	27	-47	40	-87	220
58	Ambulatory health care ...	45	-53	138	-191	387
61	Social assistance	24	88	138	-50	321
63	Amusements, gambling, ...	20	-4	14	-18	189
65	Food services and drinking ...	86	121	145	-24	967

Selected SSA Components for Pulaski County, Virginia vs the Appalachian Region

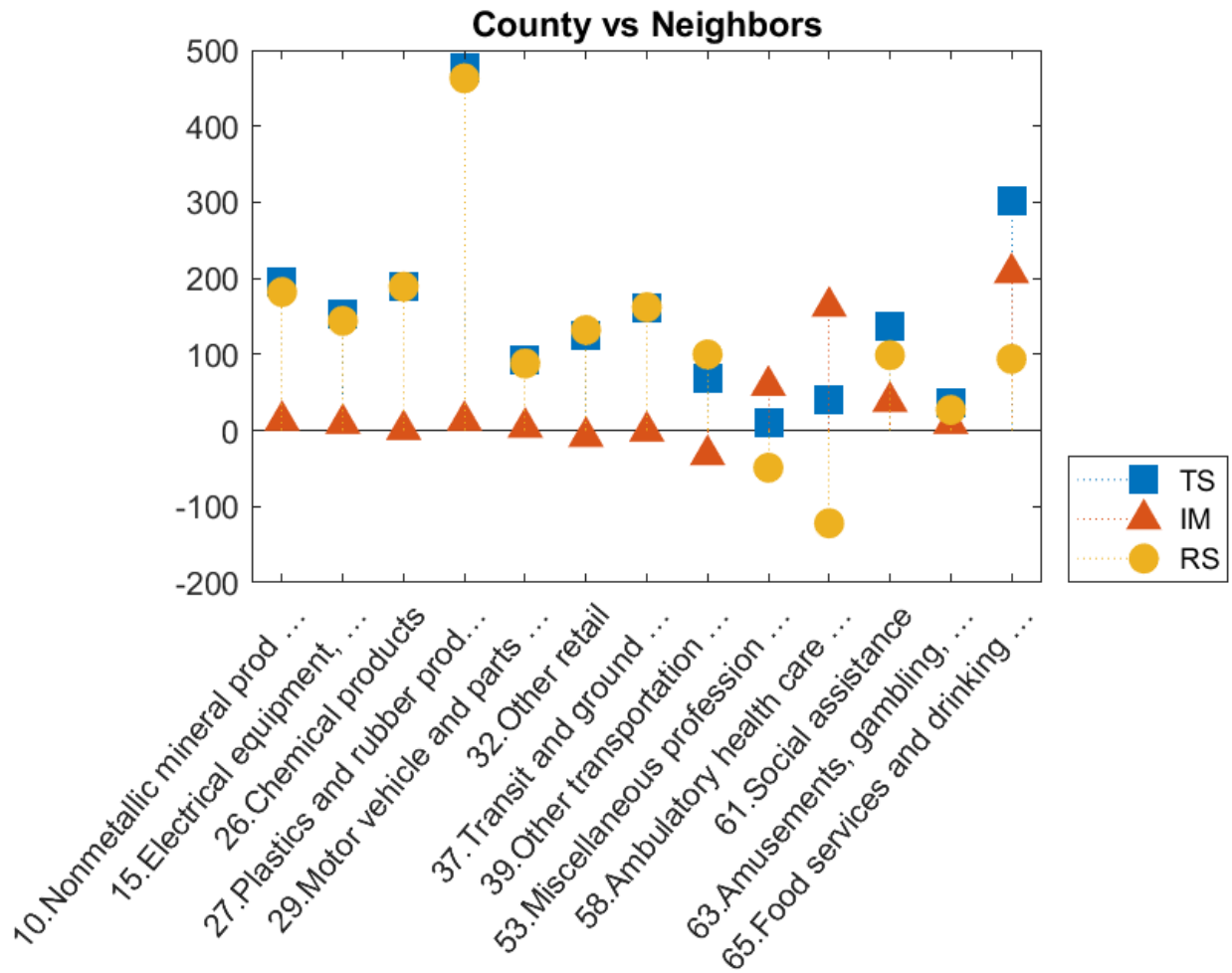


Chapter 17. Pulaski County, Virginia

Selected SSA Components for Pulaski County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
10	Nonmetallic mineral prod ...	0	184	-20	204	272
15	Electrical equipment, ...	0	148	-3	151	182
26	Chemical products	0	182	-4	186	246
27	Plastics and rubber prod...	0	470	1	469	519
29	Motor vehicle and parts ...	0	78	2	76	191
32	Other retail	2	60	-55	115	565
37	Transit and ground ...	0	158	-6	164	187
39	Other transportation ...	1	44	-83	127	236
53	Miscellaneous profession ...	1	-20	32	-52	220
58	Ambulatory health care ...	1	-10	127	-137	387
61	Social assistance	1	111	66	45	321
63	Amusements, gambling, ...	1	14	27	-13	189
65	Food services and drinking ...	3	204	152	52	967

Selected SSA Components for Pulaski County, Virginia vs Neighbors



Chapter 17. Pulaski County, Virginia

Selected SSA Components for Pulaski County, Virginia vs Neighbors for
Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
10	Nonmetallic mineral prod ...	-11	195	13	182	272
15	Electrical equipment, ...	-4	153	9	144	182
26	Chemical products	-8	190	1	189	246
27	Plastics and rubber prod...	-6	476	13	463	519
29	Motor vehicle and parts ...	-14	92	4	88	191
32	Other retail	-62	124	-8	132	565
37	Transit and ground ...	-4	161	-1	162	187
39	Other transportation ...	-24	68	-32	100	236
53	Miscellaneous profession ...	-30	10	59	-49	220
58	Ambulatory health care ...	-49	41	163	-122	387
61	Social assistance	-26	137	38	99	321
63	Amusements, gambling, ...	-22	36	9	27	189
65	Food services and drinking ...	-94	301	207	94	967

Chapter 18. Rockbridge County, Virginia

Employment in Rockbridge County, Virginia, declined from 17,210 in 2005 to 13,181 in 2018, for a change of -4,029, or -23.41%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Rockbridge County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,943	-5,969	-859	-5,110
vs. Appalachia	51	-4,083	-230	-3,853
vs. Neighbors	-573	-3,463	-715	-2,748

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Rockbridge County, Virginia, in comparison to at least one of the three referent regions.

Chapter 18. Rockbridge County, Virginia

Industry Group Membership for Rockbridge County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
19	Miscellaneous manufac ...	F III c i	no	yes	yes	yes
53	Miscellaneous profession ...	B I a i	yes	yes	yes	yes
55	Administrative and ...	A V b ii	yes	no	yes	yes
58	Ambulatory health care ...	B II b ii	yes	yes	yes	yes
61	Social assistance	B II b ii	yes	yes	yes	yes
64	Accommodation	A I a i	yes	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Rockbridge County, Virginia vs. the United States

Groups a, b, and c are from Rockbridge County, Virginia vs. Appalachia

Groups i, ii, and iii are from Rockbridge County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Rockbridge County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Rockbridge County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Rockbridge County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Rockbridge County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

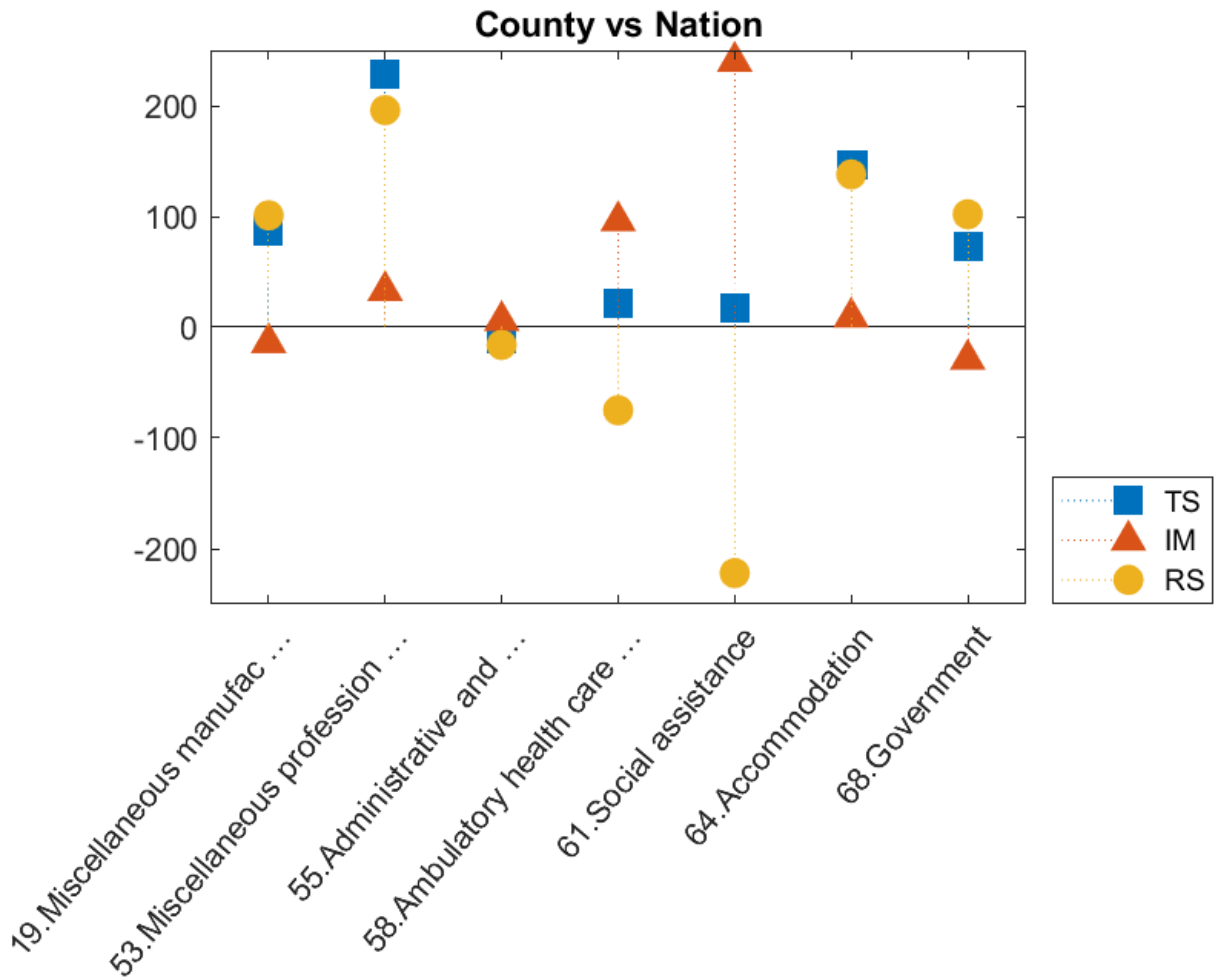
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Rockbridge County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Rockbridge County, Virginia vs the U.S.

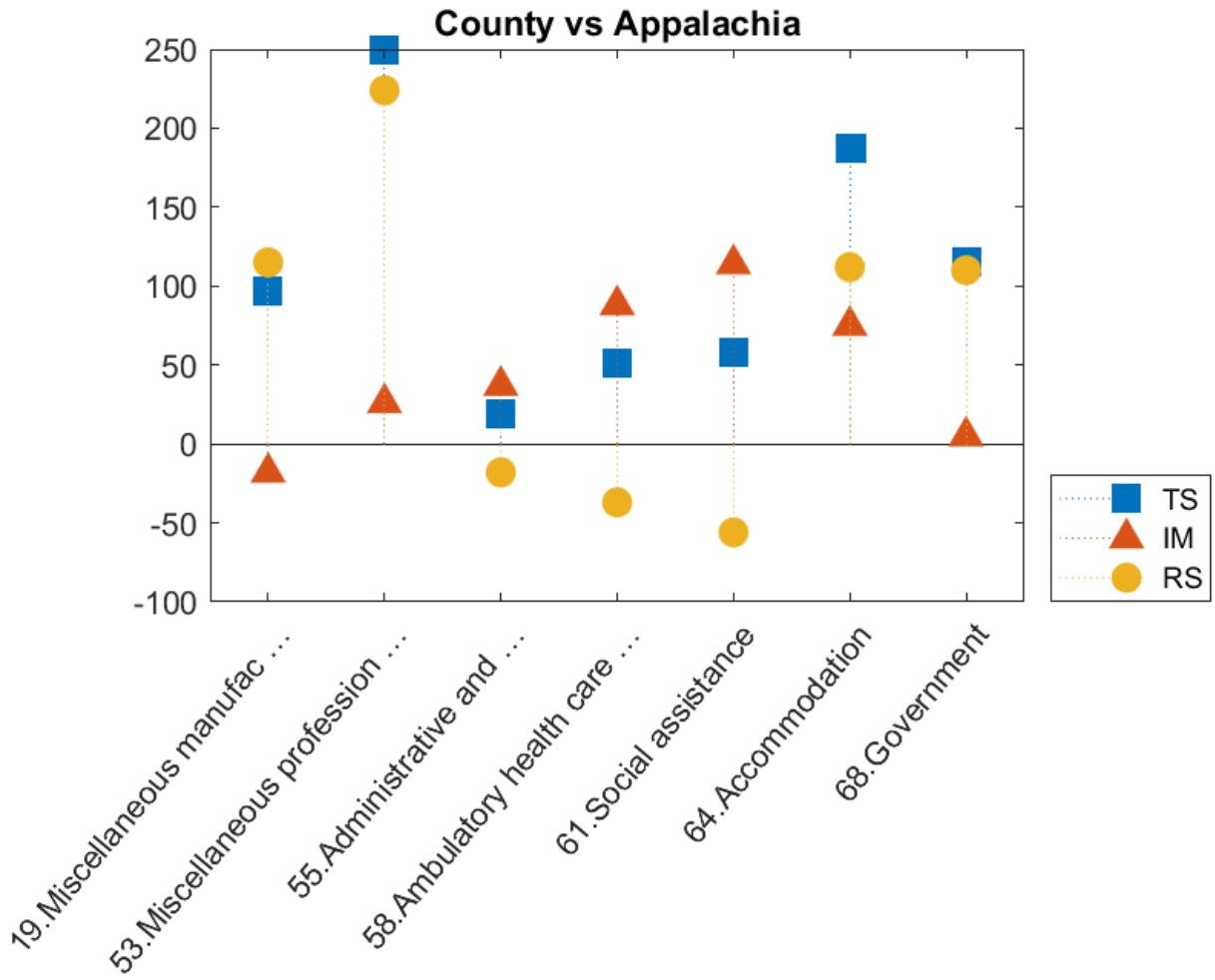


Chapter 18. Rockbridge County, Virginia

Rockbridge County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
19	Miscellaneous manufac ...	10	87	-14	101	182
53	Miscellaneous profession ...	22	229	33	196	446
55	Administrative and ...	31	-10	6	-16	291
58	Ambulatory health care ...	31	21	96	-75	325
61	Social assistance	41	18	240	-222	425
64	Accommodation	42	147	9	138	560
68	Government	43	73	-29	102	501

Selected SSA Components for Rockbridge County, Virginia vs the Appalachian Region

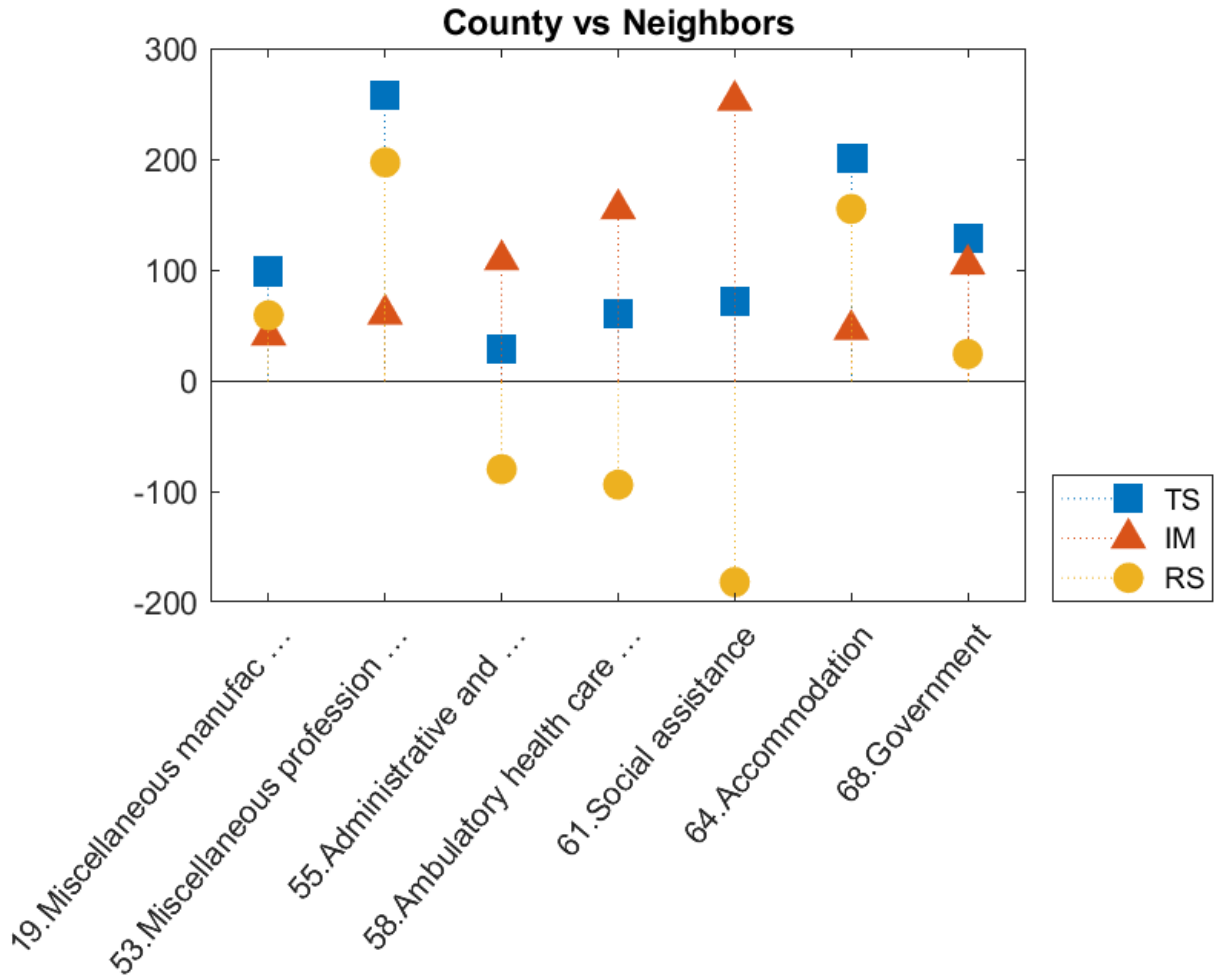


Chapter 18. Rockbridge County, Virginia

Selected SSA Components for Rockbridge County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
19	Miscellaneous manufac ...	0	97	-18	115	182
53	Miscellaneous profession ...	1	250	26	224	446
55	Administrative and ...	1	19	37	-18	291
58	Ambulatory health care ...	1	51	88	-37	325
61	Social assistance	1	58	114	-56	425
64	Accommodation	1	187	75	112	560
68	Government	1	115	5	110	501

Selected SSA Components for Rockbridge County, Virginia vs Neighbors



Chapter 18. Rockbridge County, Virginia

Selected SSA Components for Rockbridge County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
19	Miscellaneous manufac ...	-3	100	41	59	182
53	Miscellaneous profession ...	-6	257	60	197	446
55	Administrative and ...	-9	29	109	-80	291
58	Ambulatory health care ...	-9	61	155	-94	325
61	Social assistance	-12	71	253	-182	425
64	Accommodation	-12	201	46	155	560
68	Government	-13	129	105	24	501

Chapter 19. Russell County, Virginia

Employment in Russell County, Virginia, declined from 8,581 in 2005 to 6,750 in 2018, for a change of -1,831, or -21.34%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Russell County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	969	-2,800	-462	-2,338
vs. Appalachia	26	-1,862	-207	-1,655
vs. Neighbors	-1,314	-520	-463	-57

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Russell County, Virginia, in comparison to at least one of the three referent regions.

Chapter 19. Russell County, Virginia

Industry Group Membership for Russell County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
05	Mining, except coal, oil ...	F III c ii	no	yes	yes	yes
06	Support activities for ...	A II b iii	yes	yes	yes	yes
12	Fabricated metal products	F III c iii	no	yes	yes	yes
36	Truck transportation	F III c iii	no	yes	yes	yes
52	Computer systems design ...	B I a i	yes	yes	yes	yes
53	Miscellaneous profession ...	B II a i	yes	yes	yes	yes
58	Ambulatory health care ...	B II b i	yes	yes	yes	yes
61	Social assistance	B II b ii	yes	yes	yes	yes
65	Food services and drinking ...	B I a i	yes	yes	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Russell County, Virginia vs. the United States

Groups a, b, and c are from Russell County, Virginia vs. Appalachia

Groups i, ii, and iii are from Russell County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Russell County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Russell County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Russell County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Russell County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

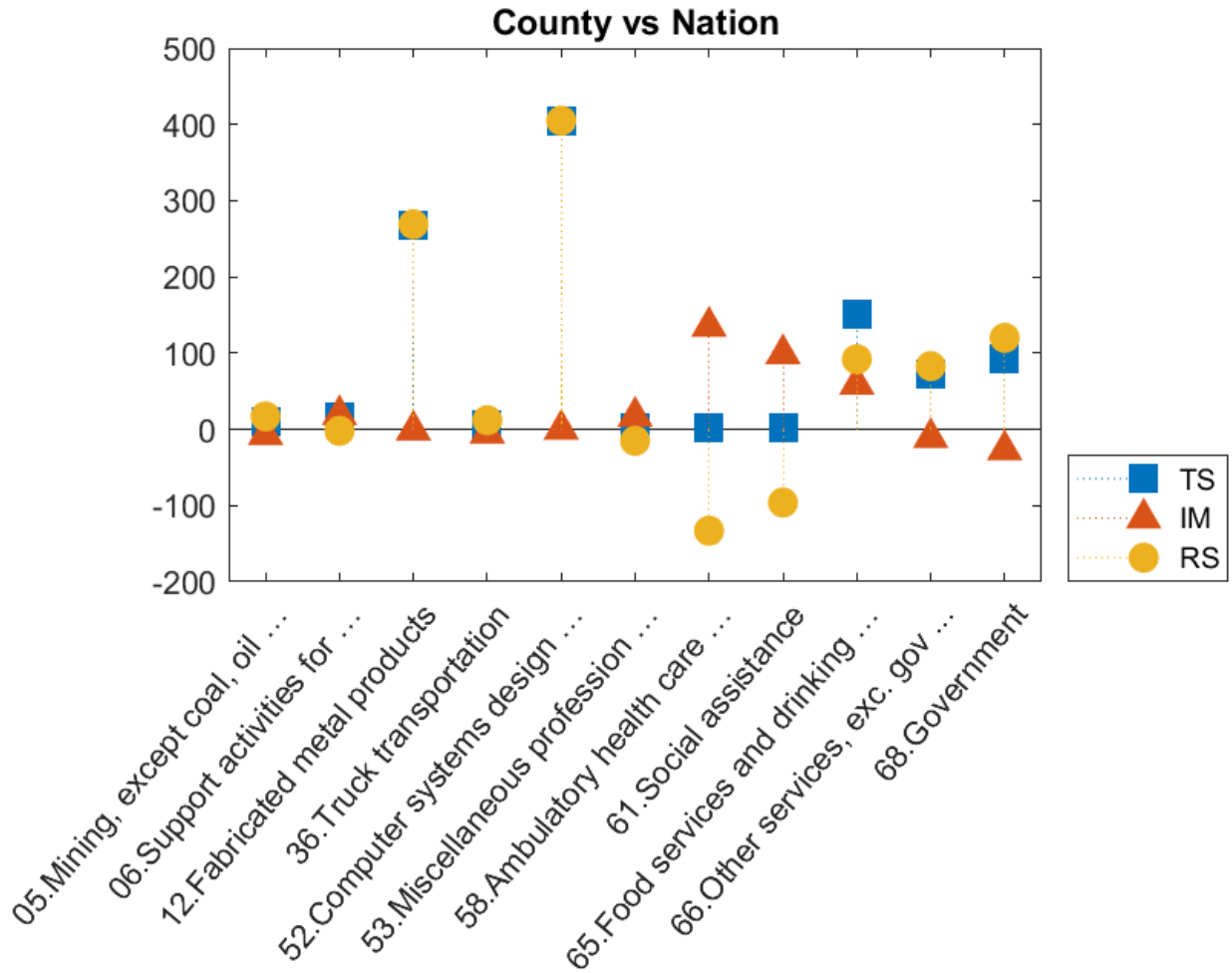
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Russell County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Russell County, Virginia vs the U.S.

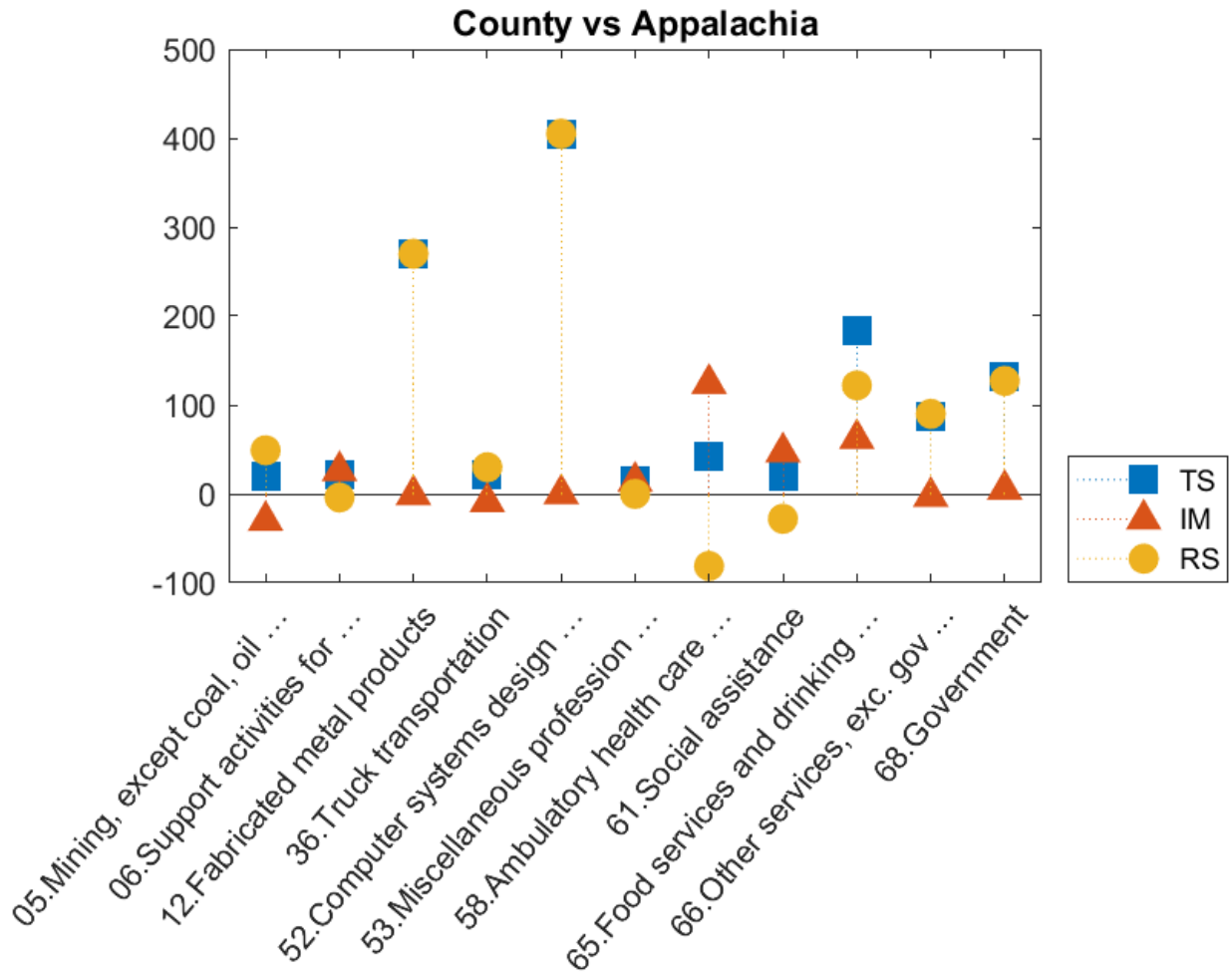


Chapter 19. Russell County, Virginia

Russell County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
05	Mining, except coal, oil ...	8	10	-7	17	94
06	Support activities for ...	5	17	19	-2	68
12	Fabricated metal products	1	268	-1	269	278
36	Truck transportation	15	7	-5	12	157
52	Computer systems design ...	0	405	0	405	405
53	Miscellaneous profession ...	12	2	17	-15	116
58	Ambulatory health care ...	43	2	135	-133	430
61	Social assistance	17	3	99	-96	172
65	Food services and drinking ...	35	151	59	92	493
66	Other services, exc. gov ...	16	72	-11	83	229
68	Government	41	93	-27	120	494

Selected SSA Components for Russell County, Virginia vs the Appalachian Region

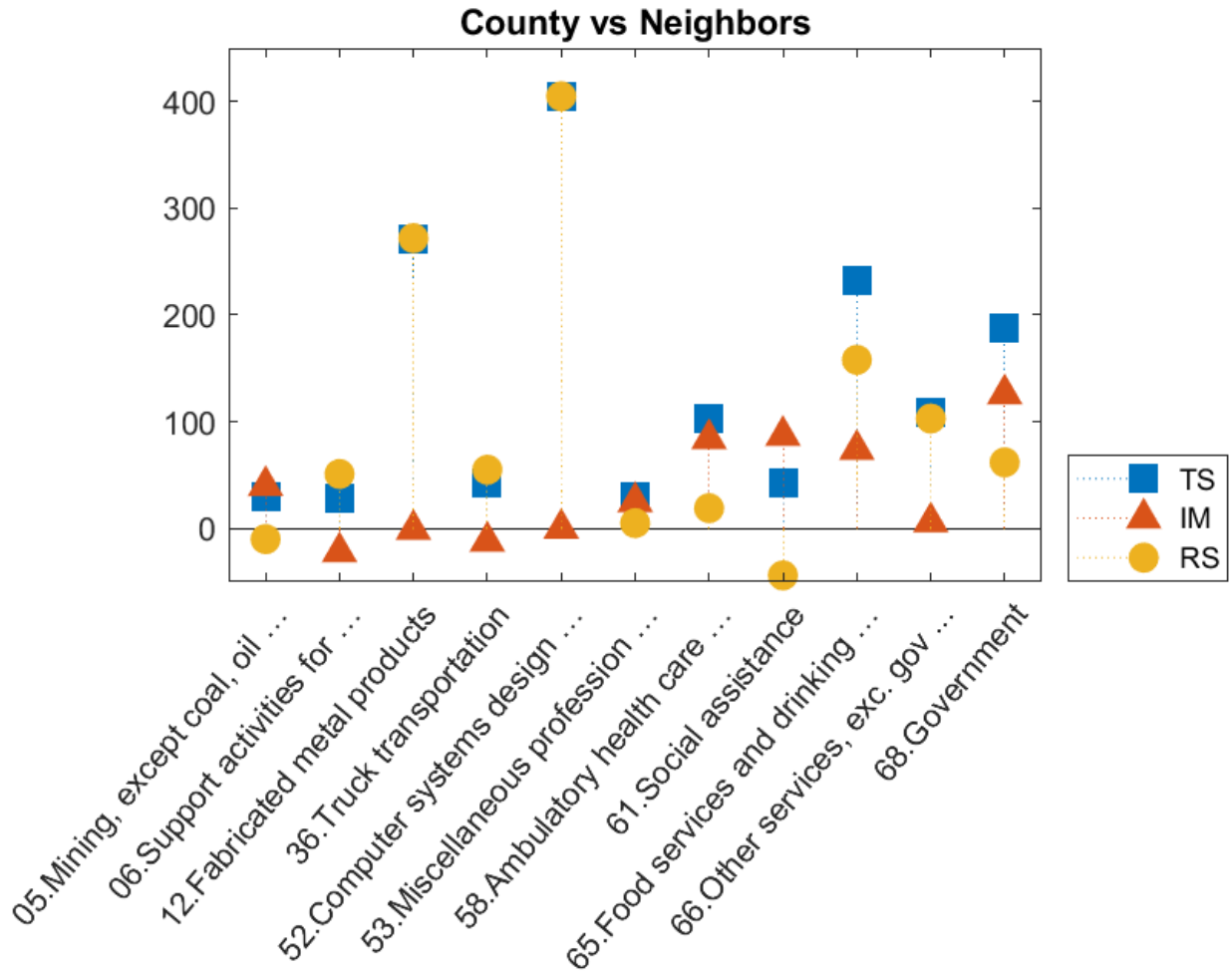


Chapter 19. Russell County, Virginia

Selected SSA Components for Russell County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
05	Mining, except coal, oil ...	0	19	-30	49	94
06	Support activities for ...	0	22	26	-4	68
12	Fabricated metal products	0	269	-1	270	278
36	Truck transportation	0	21	-9	30	157
52	Computer systems design ...	0	405	0	405	405
53	Miscellaneous profession ...	0	14	14	0	116
58	Ambulatory health care ...	1	43	124	-81	430
61	Social assistance	1	19	47	-28	172
65	Food services and drinking ...	1	184	62	122	493
66	Other services, exc. gov ...	0	87	-3	90	229
68	Government	1	132	5	127	494

Selected SSA Components for Russell County, Virginia vs Neighbors



Chapter 19. Russell County, Virginia

Selected SSA Components for Russell County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
05	Mining, except coal, oil ...	-11	30	40	-10	94
06	Support activities for ...	-7	29	-22	51	68
12	Fabricated metal products	-1	271	-1	272	278
36	Truck transportation	-21	43	-12	55	157
52	Computer systems design ...	-0	405	0	405	405
53	Miscellaneous profession ...	-16	30	25	5	116
58	Ambulatory health care ...	-59	103	84	19	430
61	Social assistance	-23	43	87	-44	172
65	Food services and drinking ...	-47	232	74	158	493
66	Other services, exc. gov ...	-22	109	6	103	229
68	Government	-55	188	126	62	494

Chapter 20. Scott County, Virginia

Employment in Scott County, Virginia, declined from 4,864 in 2005 to 4,862 in 2018, for a change of -2, or -0.04%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Scott County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	551	-548	-166	-382
vs. Appalachia	12	-15	-106	91
vs. Neighbors	-373	380	198	182

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Scott County, Virginia, in comparison to at least one of the three referent regions.

Chapter 20. Scott County, Virginia

Industry Group Membership for Scott County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
13	Machinery	F III c iii	no	yes	yes	yes
31	General merchandise	F III c iii	no	yes	yes	yes
36	Truck transportation	F III c iii	no	yes	yes	yes
43	Broadcasting and telecom	F III c iii	no	yes	yes	yes
53	Miscellaneous profession ...	B II a ii	yes	yes	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
58	Ambulatory health care ...	B V b ii	yes	no	yes	yes
61	Social assistance	B I a i	yes	yes	yes	yes
65	Food services and drinking ...	B II b ii	yes	yes	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Scott County, Virginia vs. the United States

Groups a, b, and c are from Scott County, Virginia vs. Appalachia

Groups i, ii, and iii are from Scott County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Scott County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Scott County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Scott County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Scott County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

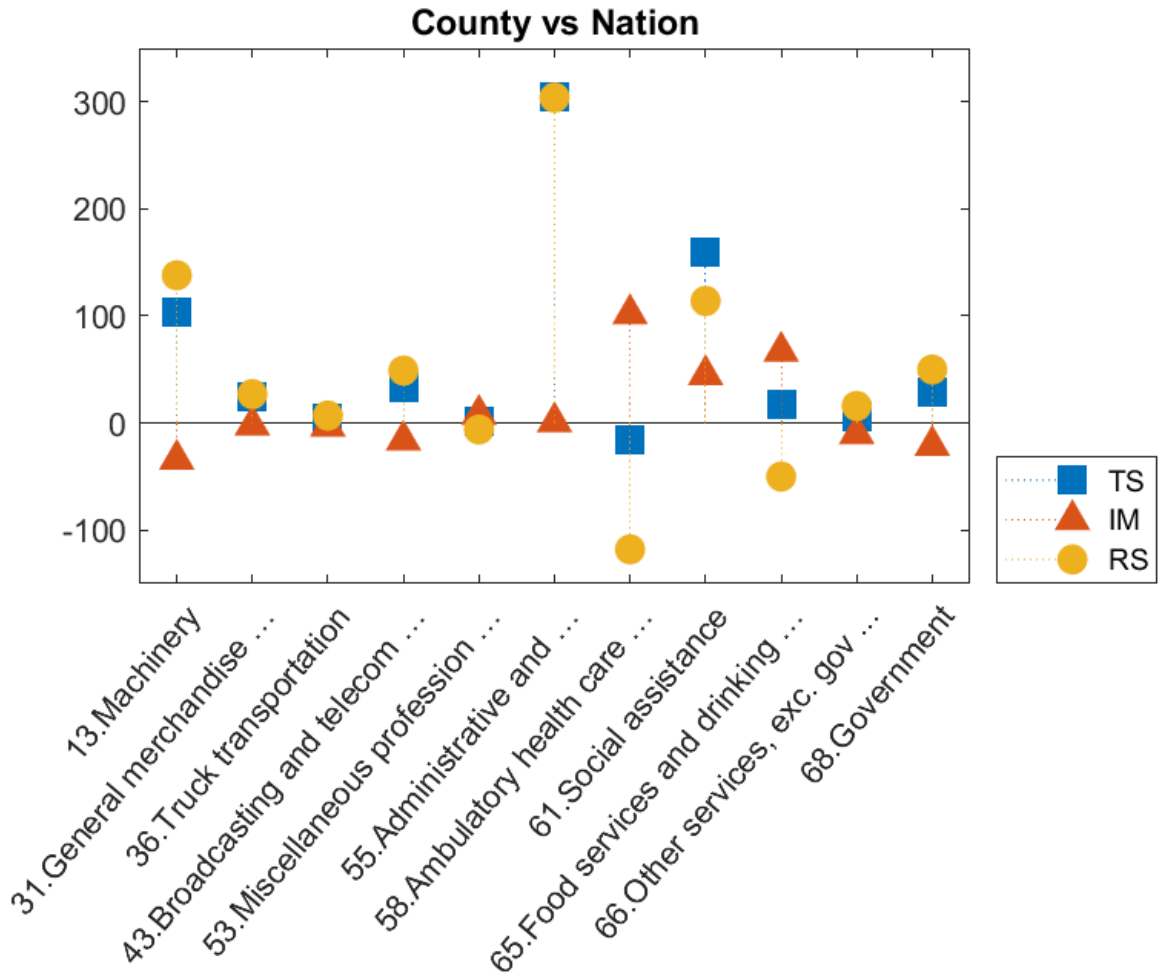
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Scott County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Scott County, Virginia vs the U.S.

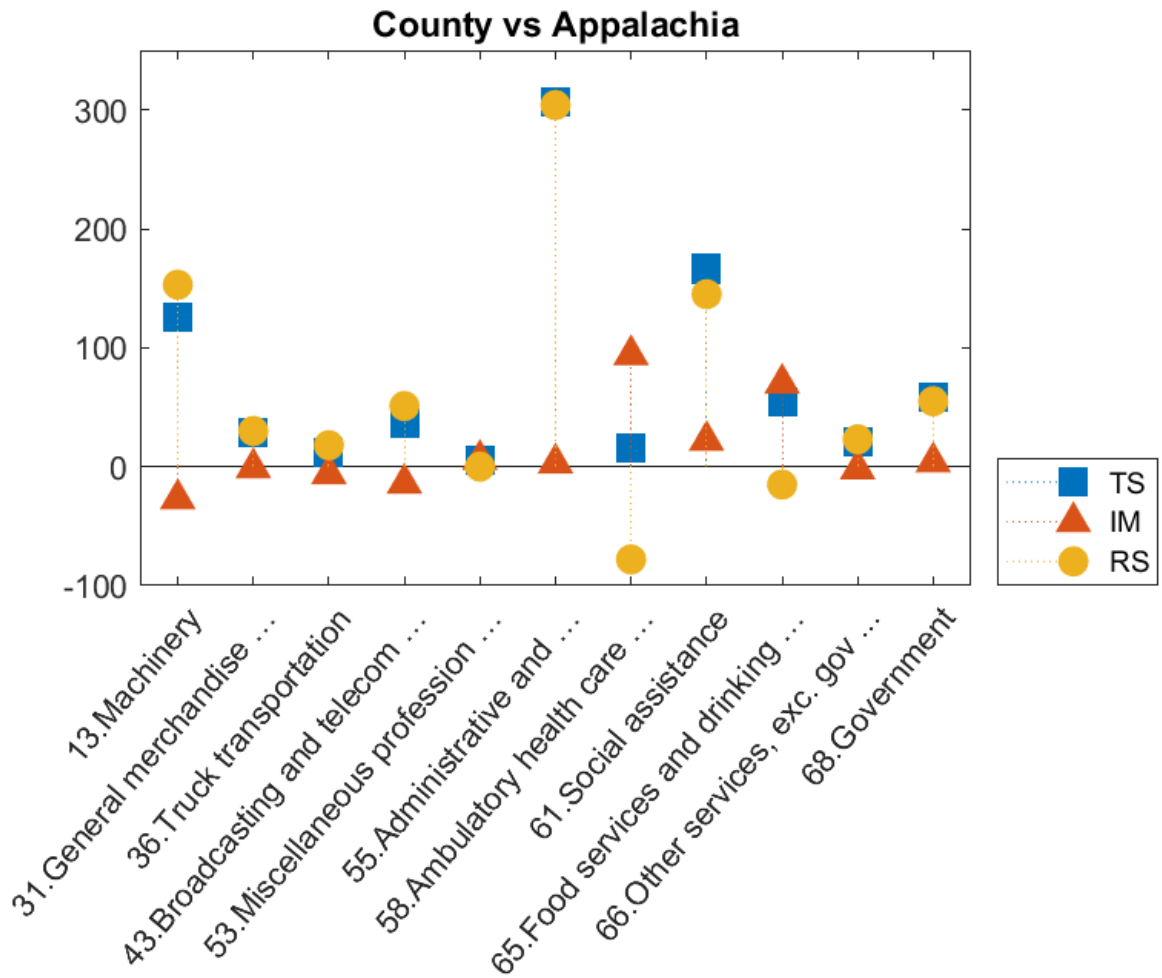


Chapter 20. Scott County, Virginia

Scott County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
13	Machinery	23	104	-34	138	331
31	General merchandise	4	25	-2	27	67
	...					
36	Truck transportation	10	4	-3	7	99
43	Broadcasting and telecom	5	33	-16	49	79
	...					
53	Miscellaneous profession ...	5	2	8	-6	52
55	Administrative and ...	3	305	1	304	331
58	Ambulatory health care ...	33	-16	102	-118	309
61	Social assistance	8	159	45	114	236
65	Food services and drinking	39	17	67	-50	405
	...					
66	Other services, exc. gov ...	15	6	-10	16	151
68	Government	31	29	-21	50	337

Selected SSA Components for Scott County, Virginia vs the Appalachian Region

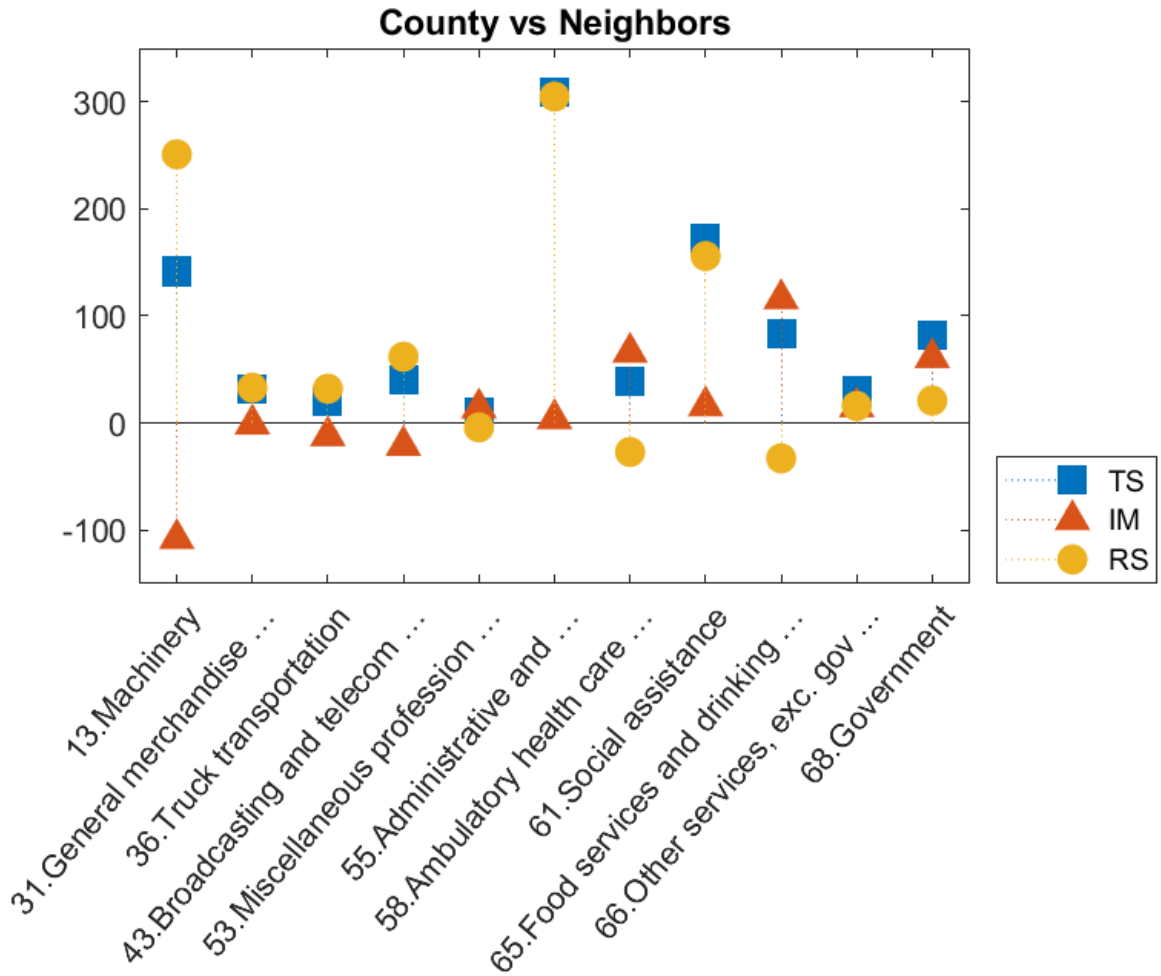


Chapter 20. Scott County, Virginia

Selected SSA Components for Scott County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
13	Machinery	1	126	-27	153	331
31	General merchandise	0	29	-1	30	67
36	Truck transportation	0	12	-6	18	99
43	Broadcasting and telecom	0	37	-14	51	79
53	Miscellaneous profession ...	0	6	6	0	52
55	Administrative and ...	0	307	3	304	331
58	Ambulatory health care ...	1	16	94	-78	309
61	Social assistance	0	167	22	145	236
65	Food services and drinking	1	55	70	-15	405
66	Other services, exc. gov ...	0	21	-2	23	151
68	Government	1	59	4	55	337

Selected SSA Components for Scott County, Virginia vs Neighbors



Chapter 20. Scott County, Virginia

Selected SSA Components for Scott County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
13	Machinery	-16	143	-108	251	331
31	General merchandise	-3	32	-1	33	67
36	Truck transportation	-7	20	-12	32	99
43	Broadcasting and telecom	-3	41	-21	62	79
53	Miscellaneous profession ...	-3	10	14	-4	52
55	Administrative and ...	-2	309	4	305	331
58	Ambulatory health care ...	-22	39	66	-27	309
61	Social assistance	-5	172	16	156	236
65	Food services and drinking	-27	83	116	-33	405
66	Other services, exc. gov ...	-10	31	15	16	151
68	Government	-21	82	61	21	337

Chapter 21. Smyth County, Virginia

Employment in Smyth County, Virginia, declined from 14,340 in 2005 to 12,170 in 2018, for a change of -2,170, or -15.13%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Smyth County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,619	-3,782	-683	-3,099
vs. Appalachia	46	-2,220	104	-2,324
vs. Neighbors	-1,946	-236	-52	-184

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Smyth County, Virginia, in comparison to at least one of the three referent regions.

Chapter 21. Smyth County, Virginia

Industry Group Membership for Smyth County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
16	Motor vehicles, bodies ...	C III b ii	yes	yes	yes	yes
28	Wholesale trade	F III c iii	no	yes	yes	yes
31	General merchandise ...	F III c iii	no	yes	yes	yes
55	Administrative and ...	A I a iii	yes	yes	yes	yes
57	Educational services	F III a i	no	yes	yes	yes
58	Ambulatory health care ...	B II b i	yes	yes	yes	yes
61	Social assistance	B II a ii	yes	yes	yes	yes
65	Food services and drinking ...	B I a i	yes	yes	yes	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Smyth County, Virginia vs. the United States

Groups a, b, and c are from Smyth County, Virginia vs. Appalachia

Groups i, ii, and iii are from Smyth County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Smyth County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Smyth County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Smyth County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Smyth County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

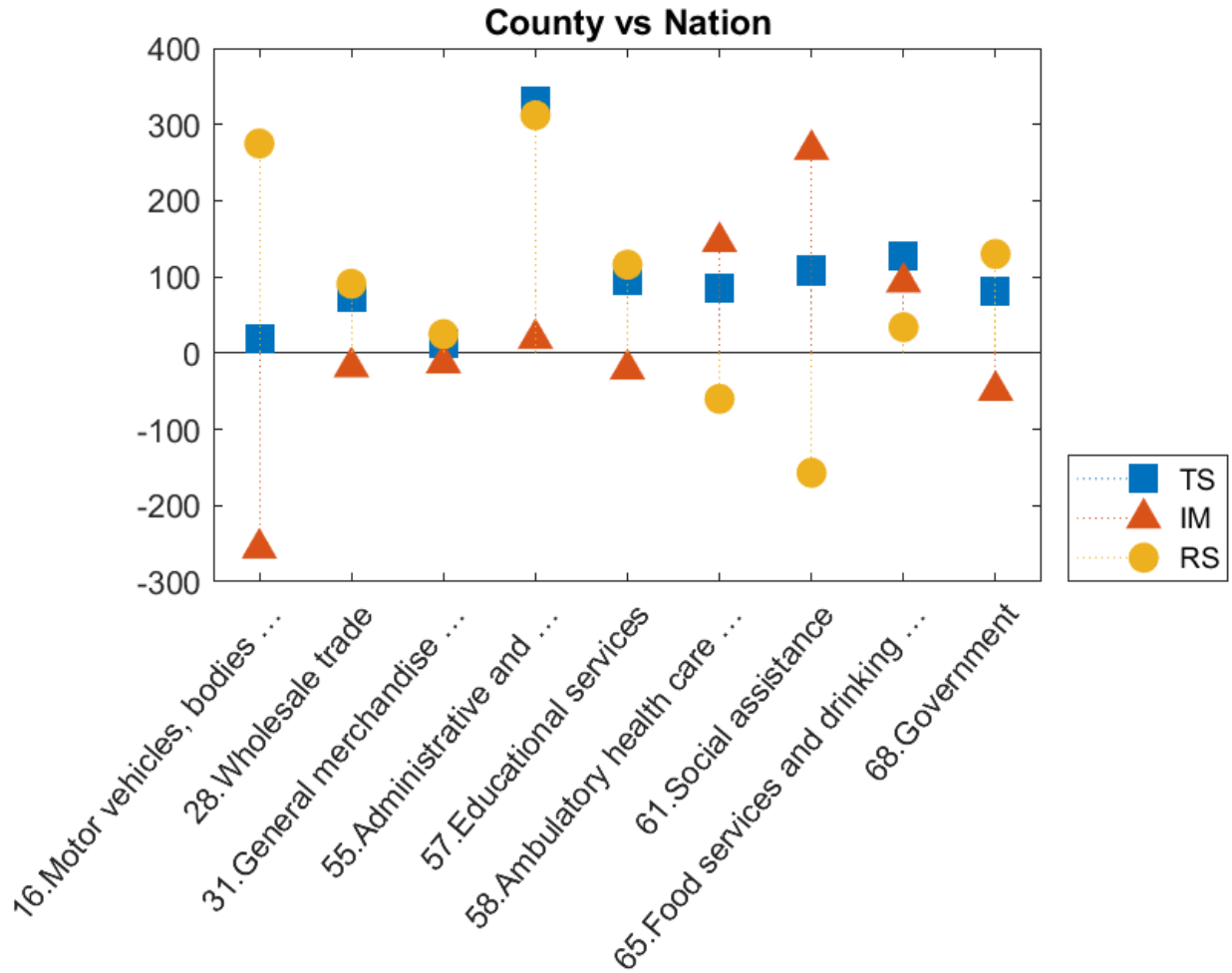
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Smyth County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Smyth County, Virginia vs the U.S.

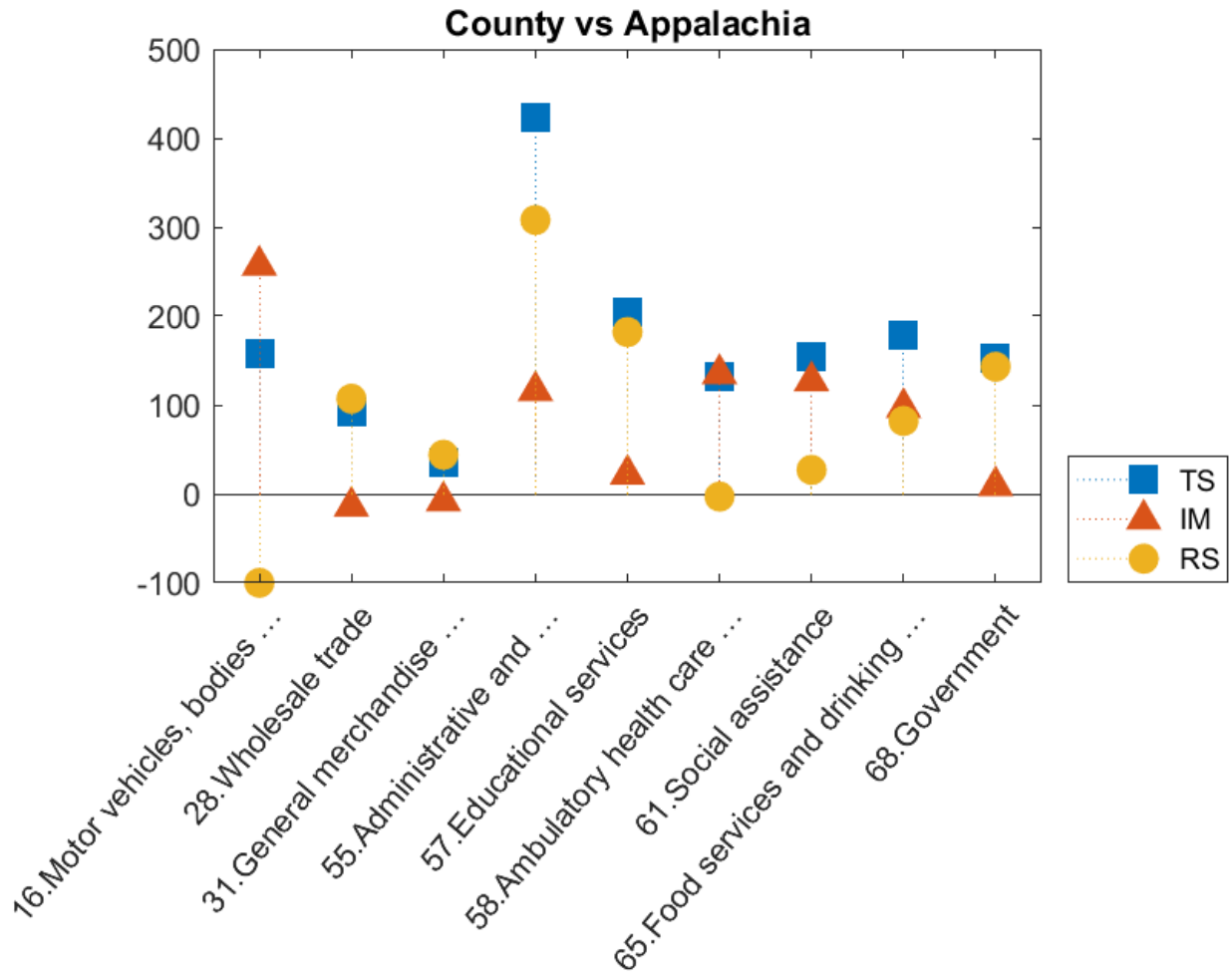


Chapter 21. Smyth County, Virginia

Smyth County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	143	19	-256	275	1,427
28	Wholesale trade	22	73	-18	91	287
31	General merchandise ...	25	12	-13	25	260
55	Administrative and ...	96	331	19	312	1,281
57	Educational services	113	95	-21	116	1,209
58	Ambulatory health care ...	47	86	146	-60	550
61	Social assistance	46	110	267	-157	563
65	Food services and drinking ...	55	127	93	34	667
68	Government	73	81	-49	130	798

Selected SSA Components for Smyth County, Virginia vs the Appalachian Region

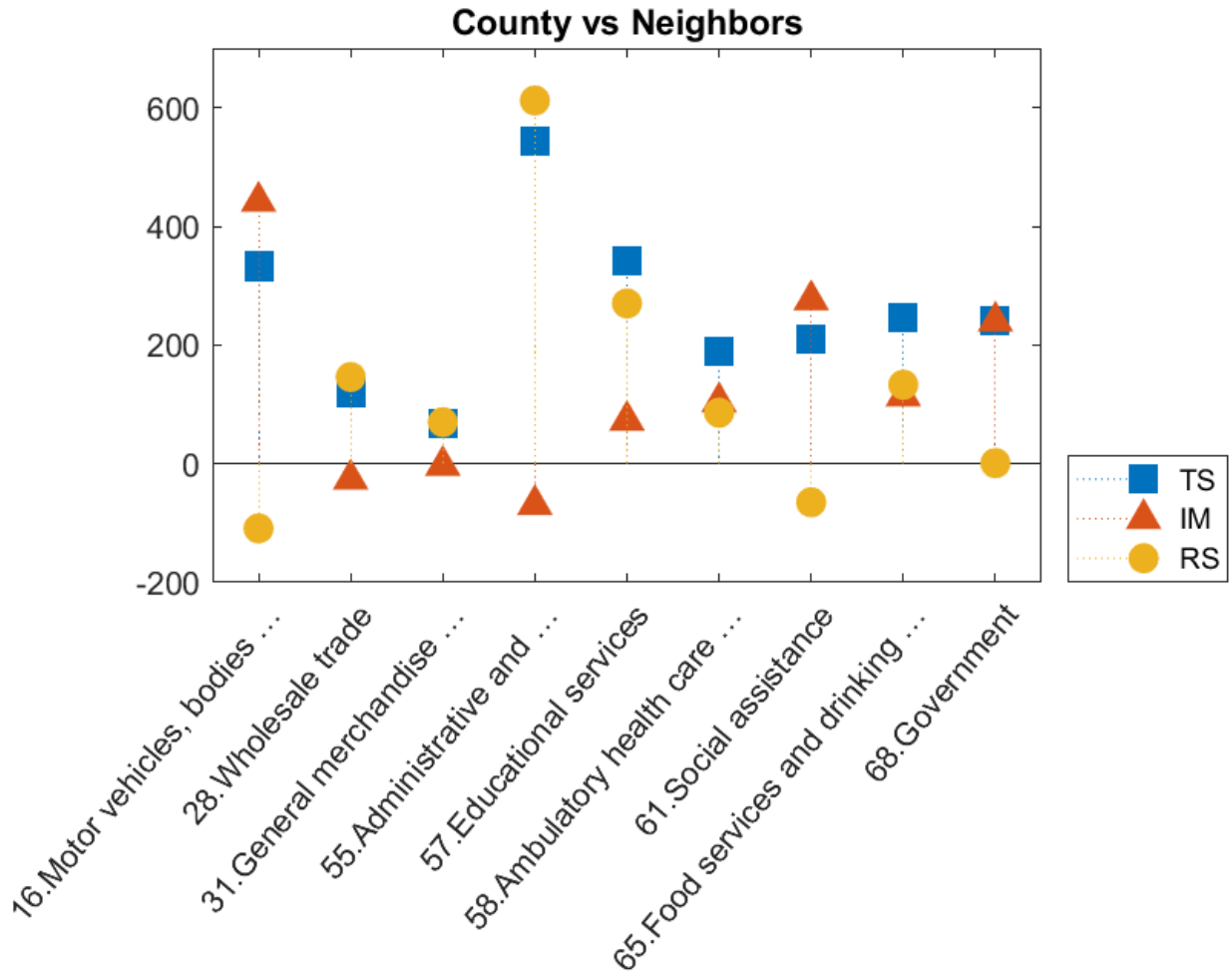


Chapter 21. Smyth County, Virginia

Selected SSA Components for Smyth County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	4	157	257	-100	1,427
28	Wholesale trade	1	93	-14	107	287
31	General merchandise ...	1	36	-8	44	260
55	Administrative and ...	3	424	116	308	1,281
57	Educational services	3	204	22	182	1,209
58	Ambulatory health care ...	1	132	135	-3	550
61	Social assistance	1	154	127	27	563
65	Food services and drinking ...	2	179	97	82	667
68	Government	2	152	9	143	798

Selected SSA Components for Smyth County, Virginia vs Neighbors



Chapter 21. Smyth County, Virginia

Selected SSA Components for Smyth County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	-171	333	442	-109	1,427
28	Wholesale trade	-26	120	-26	146	287
31	General merchandise ...	-30	67	-3	70	260
55	Administrative and ...	-116	543	-69	612	1,281
57	Educational services	-136	343	73	270	1,209
58	Ambulatory health care ...	-57	190	104	86	550
61	Social assistance	-55	211	276	-65	563
65	Food services and drinking ...	-66	247	114	133	667
68	Government	-87	241	240	1	798

Chapter 22. Tazewell County, Virginia

Employment in Tazewell County, Virginia, declined from 17,117 in 2005 to 14,741 in 2018, for a change of -2,376, or -13.88%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Tazewell County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,932	-4,303	-65	-4,238
vs. Appalachia	56	-2,435	198	-2,633
vs. Neighbors	-2,664	286	62	224

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Tazewell County, Virginia, in comparison to at least one of the three referent regions.

Chapter 22. Tazewell County, Virginia

Industry Group Membership for Tazewell County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
04	Coal Mining	F III c i	no	yes	yes	yes
13	Machinery	F III c i	no	yes	yes	yes
54	Management of companies ...	A I a i	yes	yes	yes	yes
55	Administrative and ...	A I b ii	yes	yes	yes	yes
58	Ambulatory health care ...	B V e ii	yes	no	no	yes
61	Social assistance	B I a i	yes	yes	yes	yes
65	Food services and drinking ...	B V e ii	yes	no	no	yes
68	Government	F III a i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Tazewell County, Virginia vs. the United States

Groups a, b, and c are from Tazewell County, Virginia vs. Appalachia

Groups i, ii, and iii are from Tazewell County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Tazewell County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Tazewell County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Tazewell County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Tazewell County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

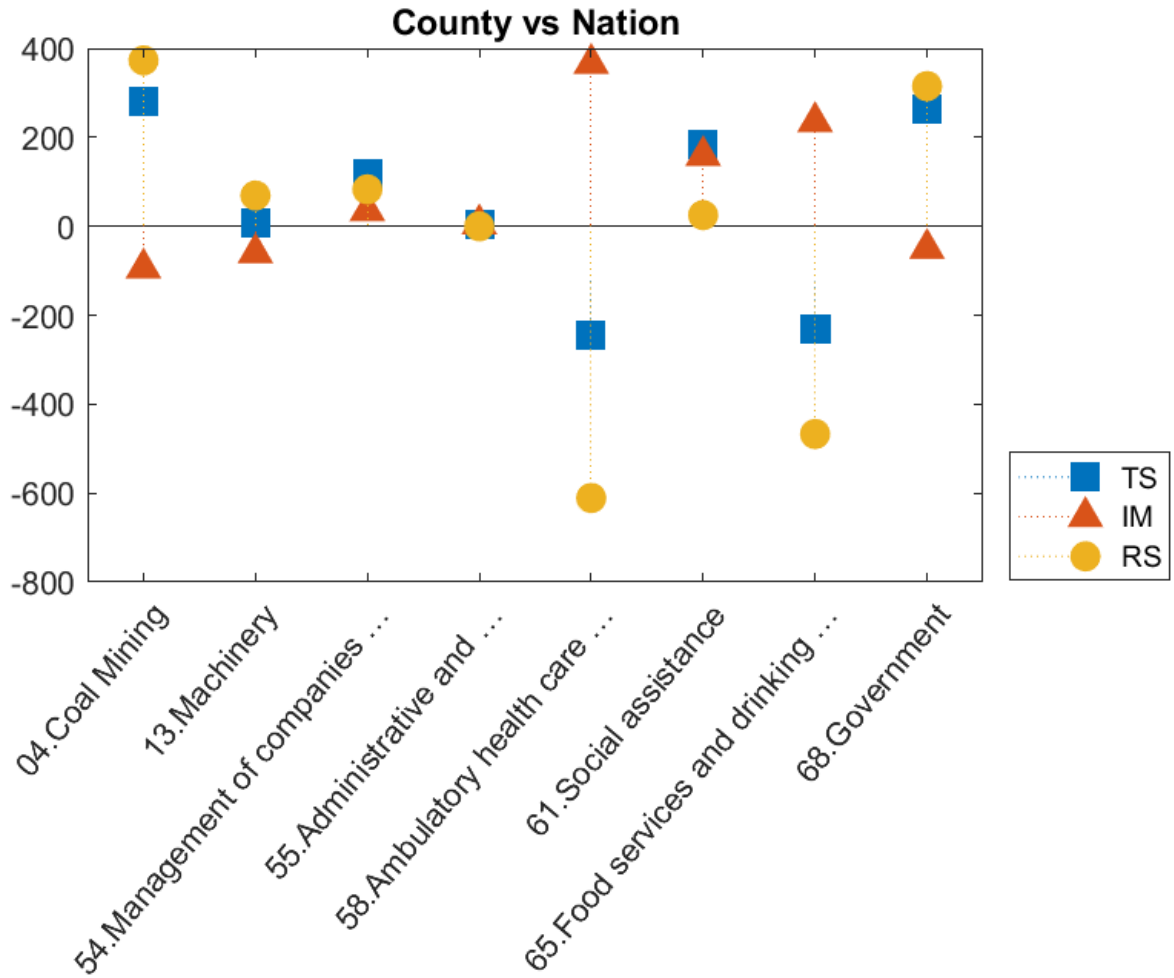
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Tazewell County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Tazewell County, Virginia vs the U.S.

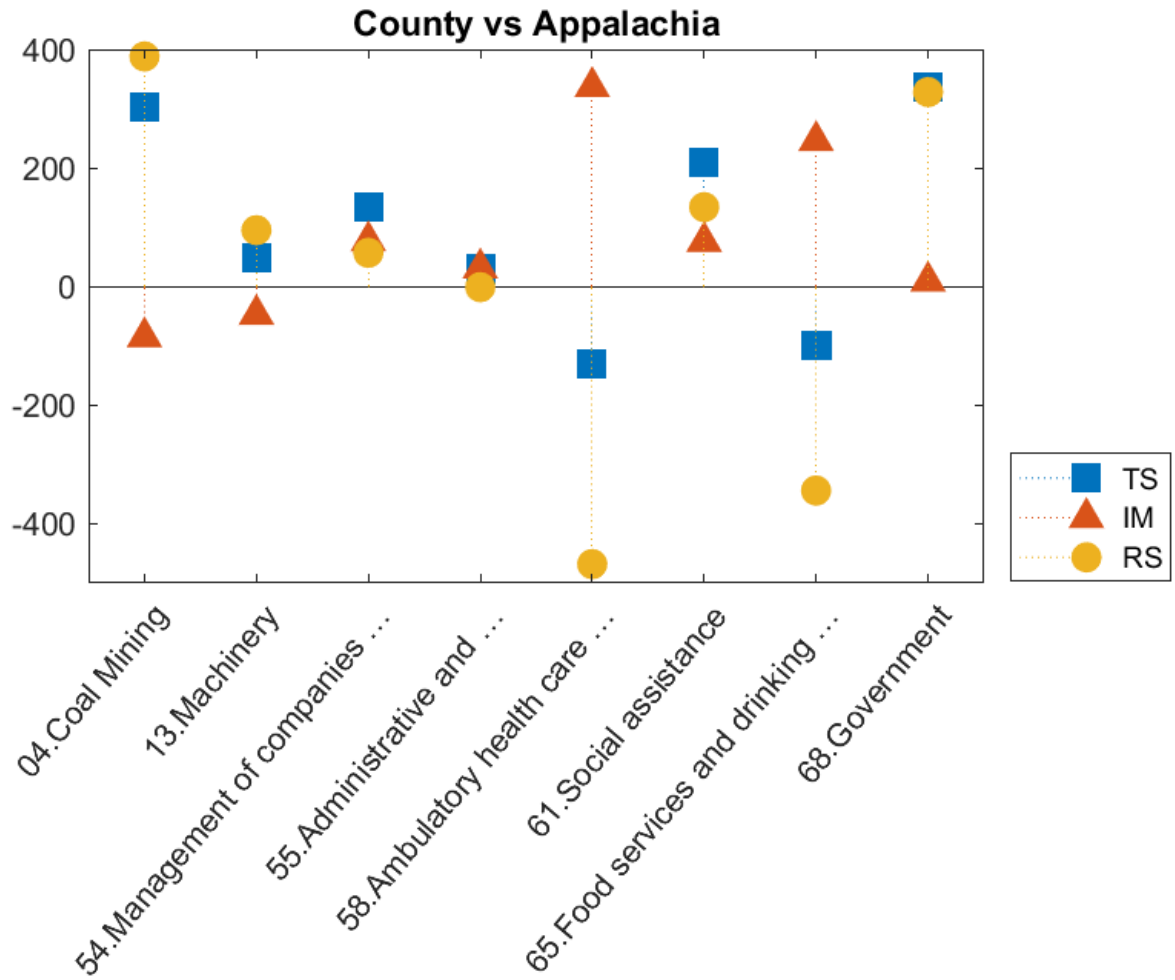


Chapter 22. Tazewell County, Virginia

Tazewell County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
04	Coal Mining	25	279	-94	373	526
13	Machinery	40	9	-60	69	409
54	Management of companies	17	118	35	83	286
	...					
55	Administrative and ...	26	5	5	-0	257
58	Ambulatory health care ...	118	-245	366	-611	915
61	Social assistance	27	184	159	25	454
65	Food services and drinking	139	-232	235	-467	1,137
	...					
68	Government	75	265	-50	315	1,001

Selected SSA Components for Tazewell County, Virginia vs the Appalachian Region

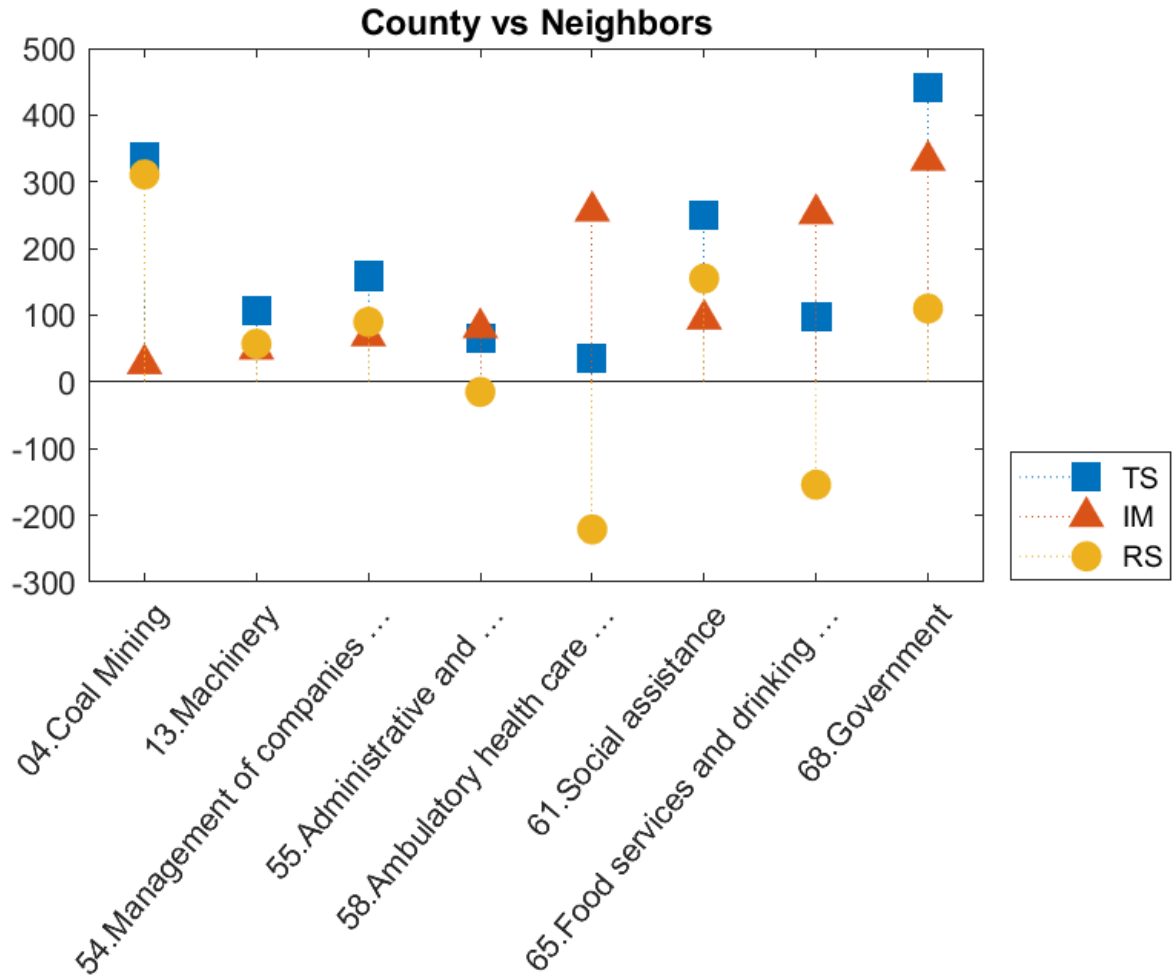


Chapter 22. Tazewell County, Virginia

Selected SSA Components for Tazewell County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
04	Coal Mining	1	303	-85	388	526
13	Machinery	1	48	-47	95	409
54	Management of companies ...	1	134	77	57	286
55	Administrative and ...	1	30	31	-1	257
58	Ambulatory health care ...	4	-131	337	-468	915
61	Social assistance	1	210	76	134	454
65	Food services and drinking ...	4	-98	246	-344	1,137
68	Government	2	337	9	328	1,001

Selected SSA Components for Tazewell County, Virginia vs Neighbors



Chapter 22. Tazewell County, Virginia

Selected SSA Components for Tazewell County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
04	Coal Mining	-35	338	27	311	526
13	Machinery	-56	106	49	57	409
54	Management of companies ...	-23	159	69	90	286
55	Administrative and ...	-35	66	81	-15	257
58	Ambulatory health care ...	-162	35	256	-221	915
61	Social assistance	-38	249	94	155	454
65	Food services and drinking ...	-191	98	252	-154	1,137
68	Government	-103	442	332	110	1,001

Chapter 23. Washington County, Virginia

Employment in Washington County, Virginia, declined from 34,533 in 2005 to 29,761 in 2018, for a change of -4,772, or -13.82%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Washington County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	3,894	-8,667	-176	-8,491
vs. Appalachia	115	-4,888	402	-5,290
vs. Neighbors	-2,236	-2,542	-244	-2,298

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Washington County, Virginia, in comparison to at least one of the three referent regions.

Chapter 23. Washington County, Virginia

Industry Group Membership for Washington County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
15	Electrical equipment, ...	D III c iii	no	yes	yes	yes
16	Motor vehicles, bodies ...	C III a i	yes	yes	yes	yes
20	Food and beverage ...	E I c i	no	yes	yes	yes
26	Chemical products	F III c iii	no	yes	yes	yes
36	Truck transportation	F III c iii	no	yes	yes	yes
53	Miscellaneous profession ...	B II a ii	yes	yes	yes	yes
58	Ambulatory health care ...	B II b i	yes	yes	yes	yes
59	Hospitals	E I a iii	no	yes	yes	yes
61	Social assistance	B II a i	yes	yes	yes	yes
65	Food services and drinking ...	B V b ii	yes	no	yes	yes
68	Government	F III a ii	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Washington County, Virginia vs. the United States

Groups a, b, and c are from Washington County, Virginia vs. Appalachia

Groups i, ii, and iii are from Washington County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Washington County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Washington County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Washington County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Washington County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

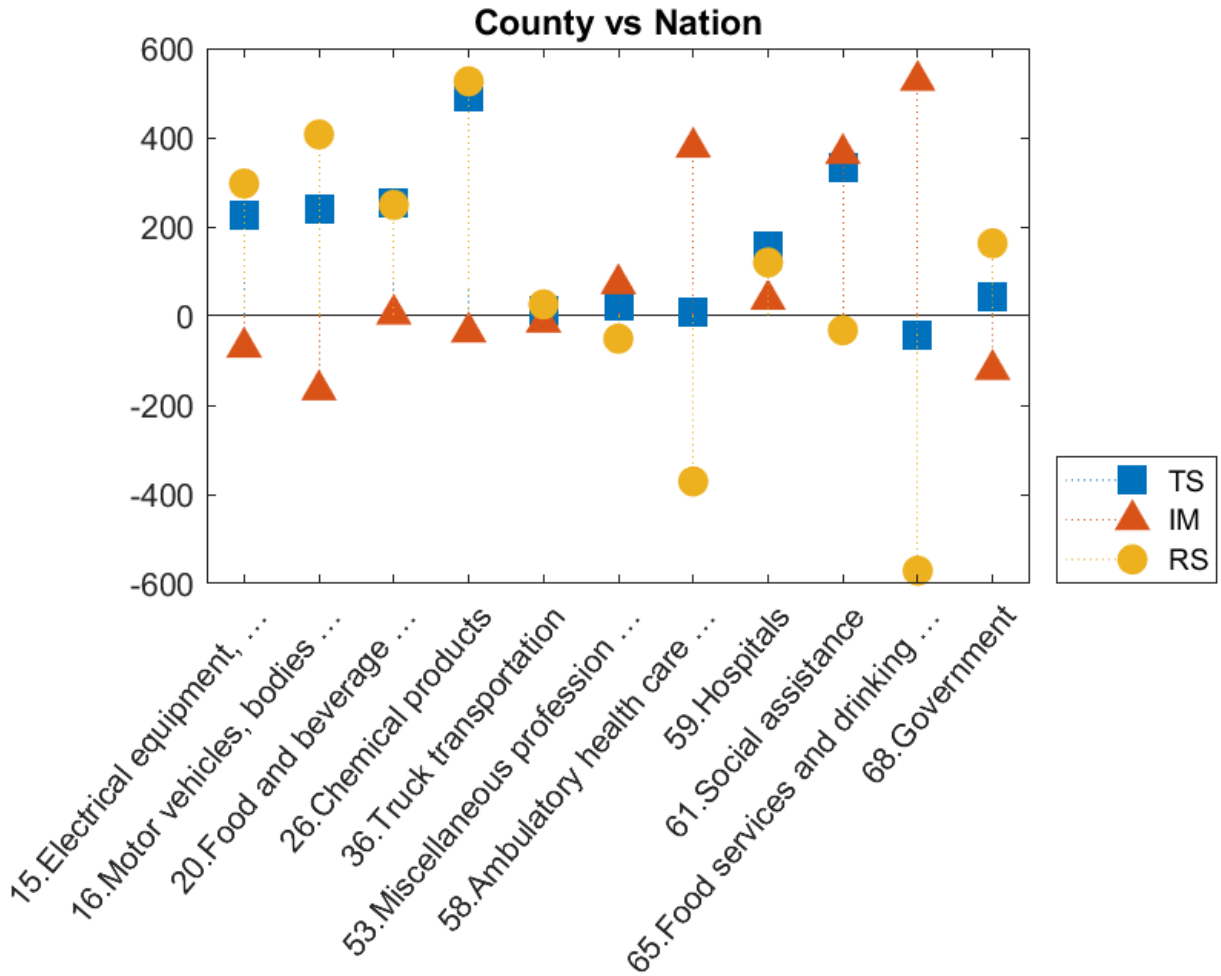
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Washington County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Washington County, Virginia vs the U.S.

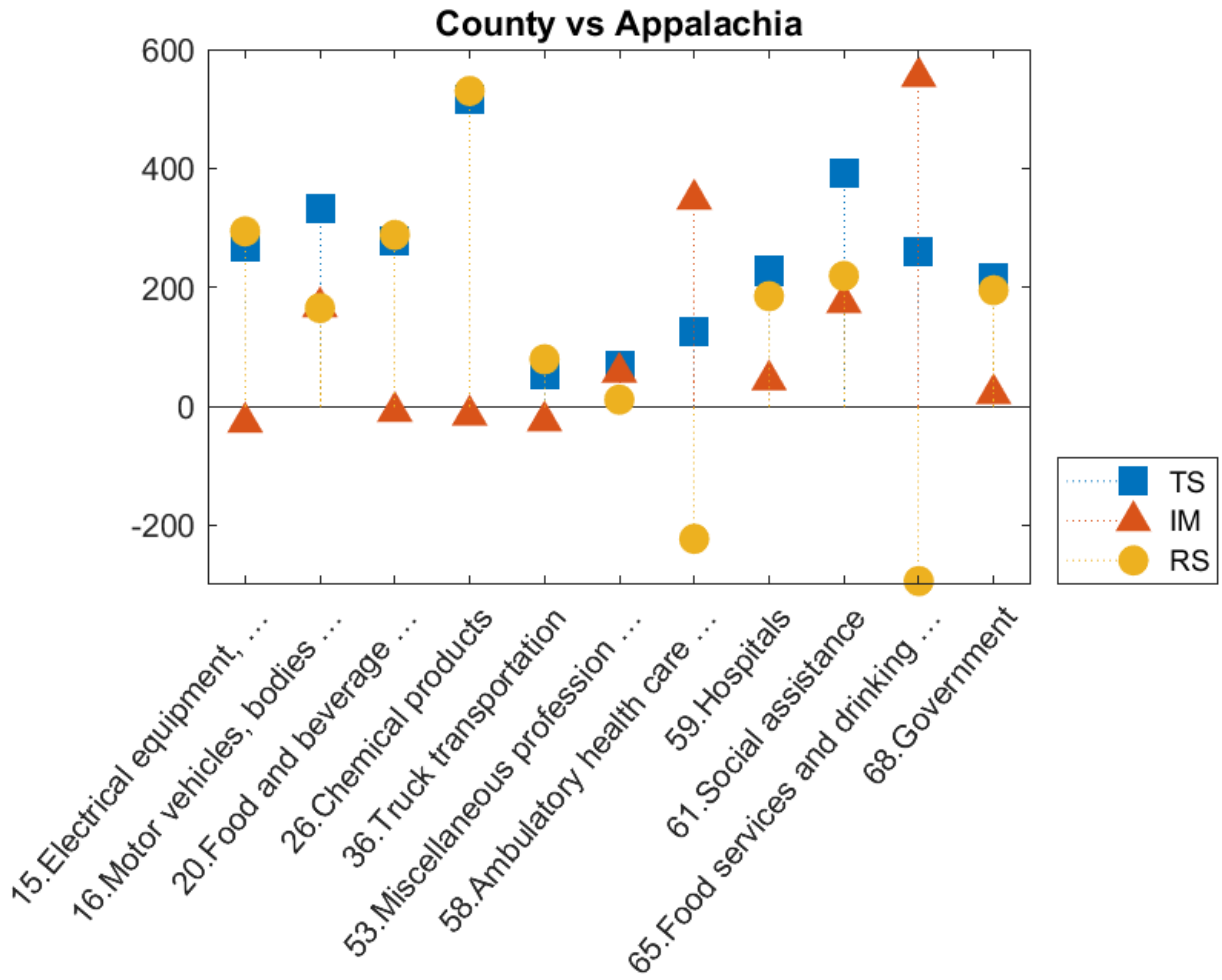


Chapter 23. Washington County, Virginia

Washington County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
15	Electrical equipment, ...	40	227	-70	297	620
16	Motor vehicles, bodies ...	92	241	-166	407	1,154
20	Food and beverage ...	26	253	4	249	514
26	Chemical products	25	490	-36	526	736
36	Truck transportation	43	12	-14	26	438
53	Miscellaneous profession ...	48	21	72	-51	498
58	Ambulatory health care ...	121	7	378	-371	1,205
59	Hospitals	74	157	37	120	888
61	Social assistance	63	332	364	-32	950
65	Food services and drinking ...	312	-43	528	-571	3,038
68	Government	179	43	-120	163	1,804

Selected SSA Components for Washington County, Virginia vs the Appalachian Region

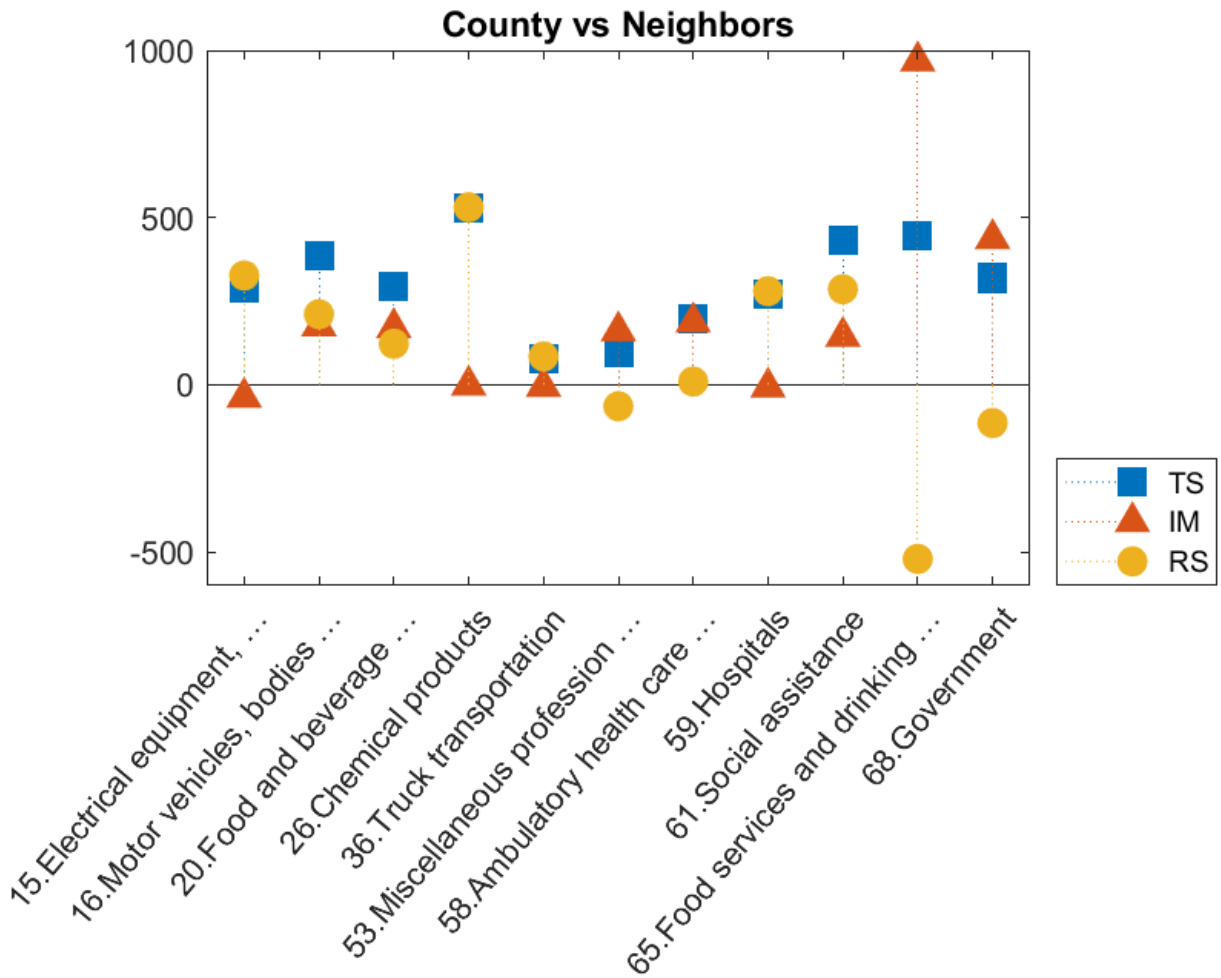


Chapter 23. Washington County, Virginia

Selected SSA Components for Washington County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
15	Electrical equipment, ...	1	267	-27	294	620
16	Motor vehicles, bodies ...	3	332	167	165	1,154
20	Food and beverage ...	1	279	-9	288	514
26	Chemical products	1	515	-15	530	736
36	Truck transportation	1	54	-25	79	438
53	Miscellaneous profession ...	1	68	57	11	498
58	Ambulatory health care ...	4	125	348	-223	1,205
59	Hospitals	2	229	44	185	888
61	Social assistance	2	393	174	219	950
65	Food services and drinking ...	9	260	554	-294	3,038
68	Government	5	216	21	195	1,804

Selected SSA Components for Washington County, Virginia vs Neighbors



Chapter 23. Washington County, Virginia

Selected SSA Components for Washington County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
15	Electrical equipment, ...	-23	290	-37	327	620
16	Motor vehicles, bodies ...	-53	387	176	211	1,154
20	Food and beverage ...	-15	294	171	123	514
26	Chemical products	-14	530	-1	531	736
36	Truck transportation	-25	80	-5	85	438
53	Miscellaneous profession ...	-28	97	161	-64	498
58	Ambulatory health care ...	-70	198	188	10	1,205
59	Hospitals	-43	273	-7	280	888
61	Social assistance	-36	431	145	286	950
65	Food services and drinking ...	-179	448	968	-520	3,038
68	Government	-102	323	437	-114	1,804

Chapter 24. Wise County, Virginia

Employment in Wise County, Virginia, declined from 19,229 in 2005 to 14,986 in 2018, for a change of -4,243, or -22.07%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Wise County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	2,165	-6,402	-150	-6,252
vs. Appalachia	63	-4,309	86	-4,395
vs. Neighbors	-3,784	-459	543	-1,002

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Wise County, Virginia, in comparison to at least one of the three referent regions.

Chapter 24. Wise County, Virginia

Industry Group Membership for Wise County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
05	Mining, except coal, oil ...	F III c iii	no	yes	yes	yes
55	Administrative and ...	A I a i	yes	yes	yes	yes
58	Ambulatory health care ...	B II b i	yes	yes	yes	yes
60	Nursing and residential ...	E I a i	no	yes	yes	yes
61	Social assistance	B II b ii	yes	yes	yes	yes
65	Food services and drinking ...	B V b ii	yes	no	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Wise County, Virginia vs. the United States

Groups a, b, and c are from Wise County, Virginia vs. Appalachia

Groups i, ii, and iii are from Wise County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Wise County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Wise County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Wise County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Wise County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

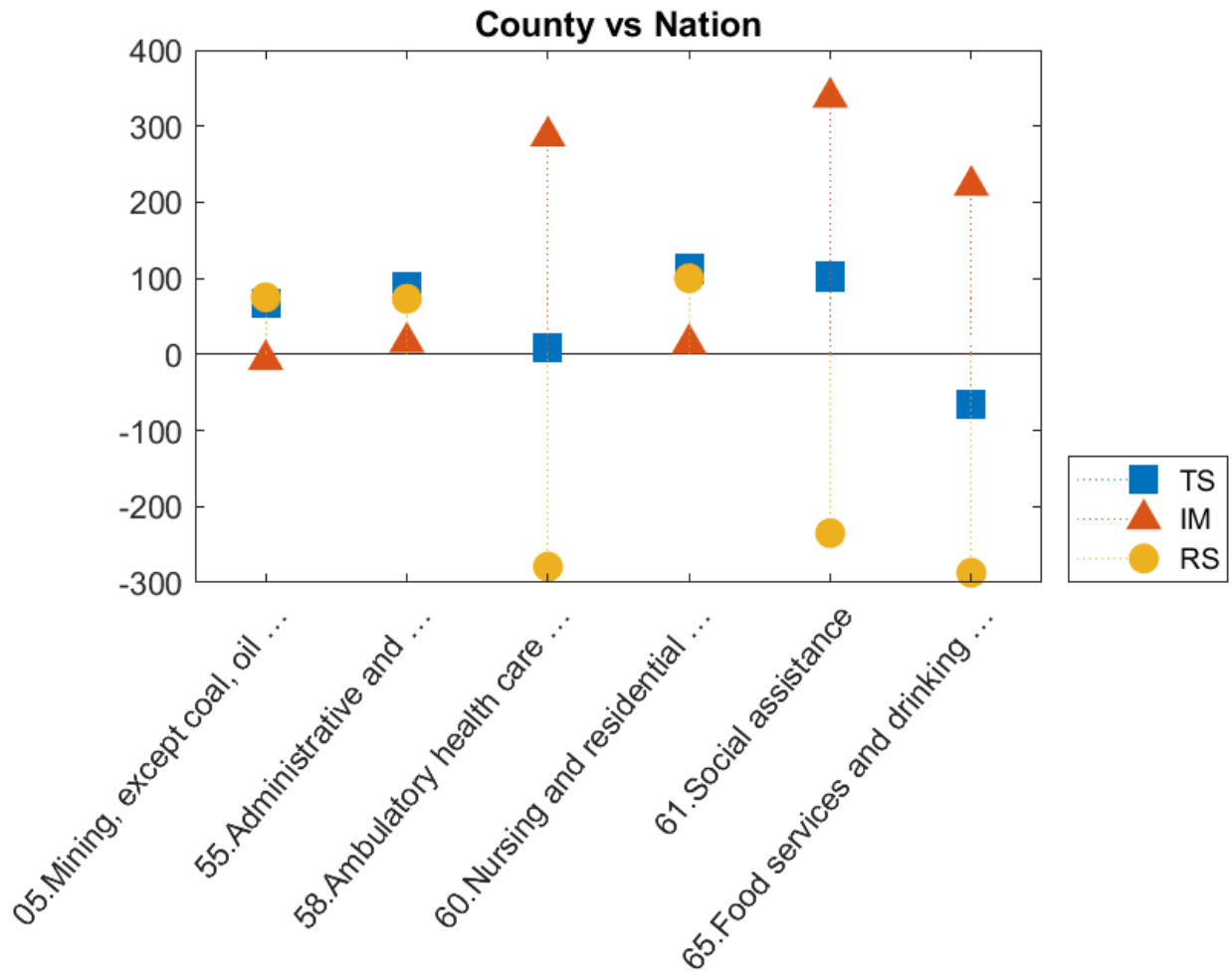
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Wise County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Wise County, Virginia vs the U.S.

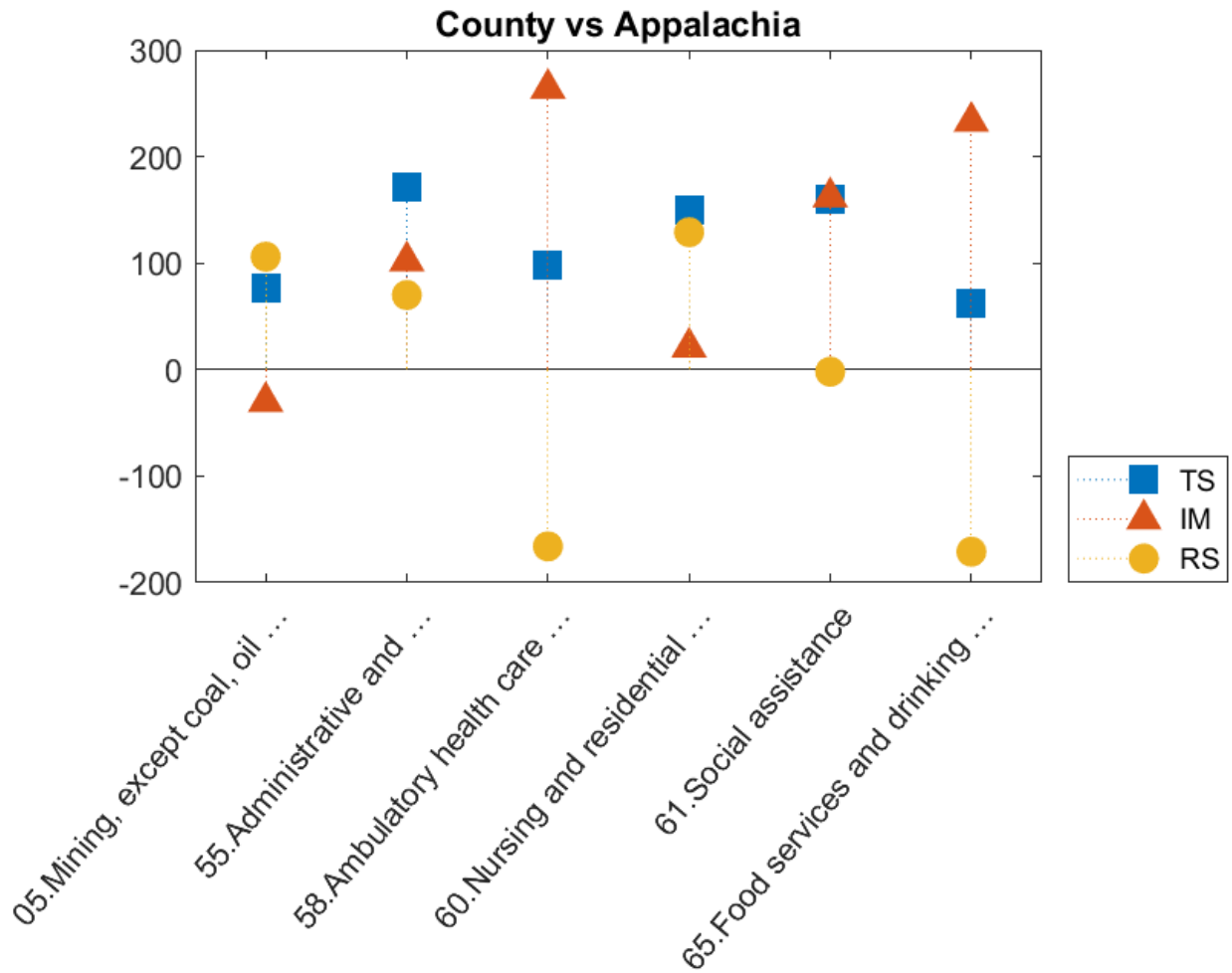


Chapter 24. Wise County, Virginia

Wise County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
05	Mining, except coal, oil ...	8	68	-7	75	151
55	Administrative and ...	85	89	16	73	925
58	Ambulatory health care ...	92	8	287	-279	920
60	Nursing and residential ...	37	114	14	100	475
61	Social assistance	58	103	338	-235	678
65	Food services and drinking ...	131	-65	222	-287	1,231

Selected SSA Components for Wise County, Virginia vs the Appalachian Region

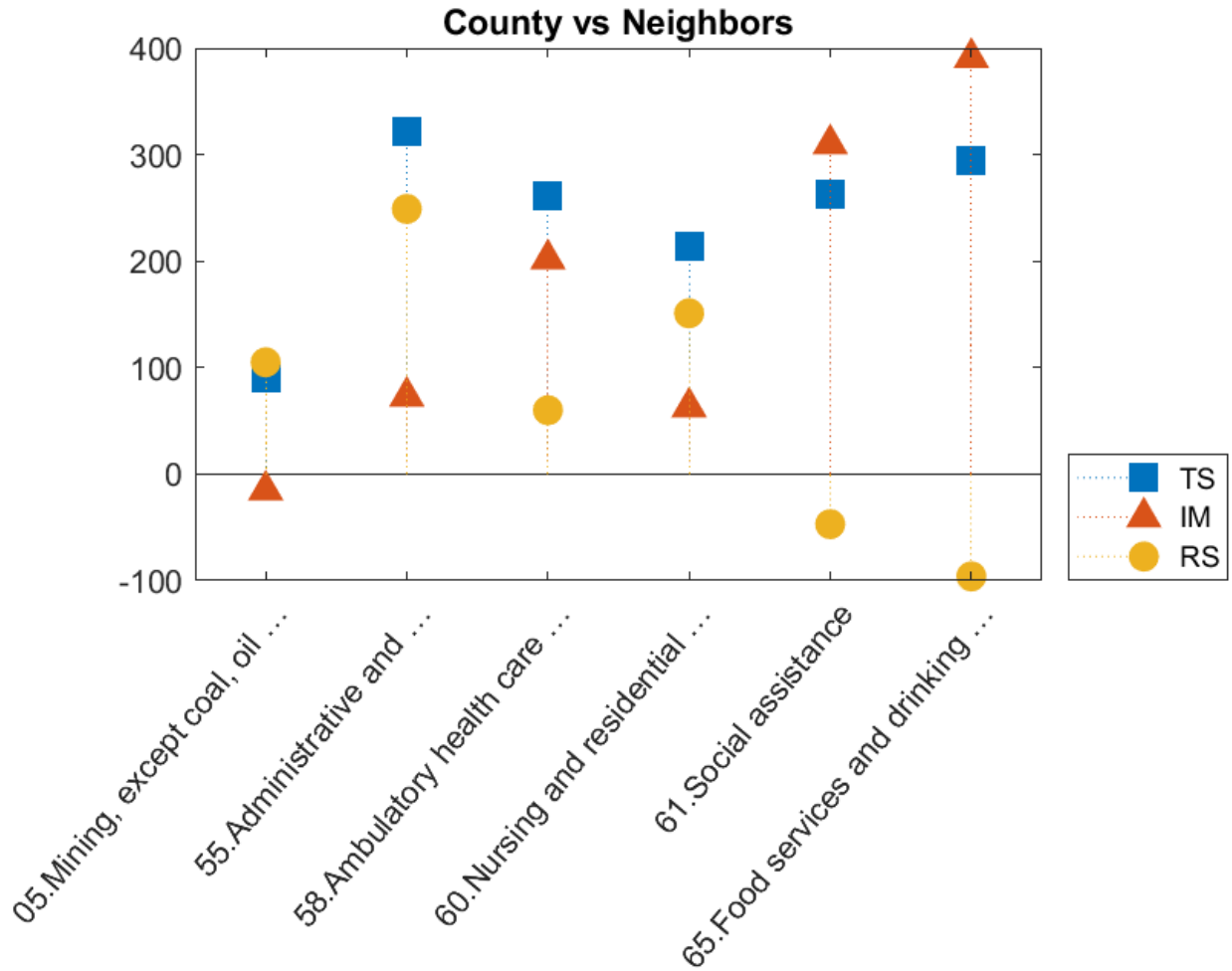


Chapter 24. Wise County, Virginia

Selected SSA Components for Wise County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
05	Mining, except coal, oil ...	0	76	-30	106	151
55	Administrative and ...	3	172	102	70	925
58	Ambulatory health care ...	3	98	264	-166	920
60	Nursing and residential ...	1	150	21	129	475
61	Social assistance	2	160	162	-2	678
65	Food services and drinking ...	4	62	233	-171	1,231

Selected SSA Components for Wise County, Virginia vs Neighbors



Chapter 24. Wise County, Virginia

Selected SSA Components for Wise County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
05	Mining, except coal, oil ...	-15	90	-15	105	151
55	Administrative and ...	-148	322	73	249	925
58	Ambulatory health care ...	-161	262	202	60	920
60	Nursing and residential ...	-64	214	63	151	475
61	Social assistance	-102	263	310	-47	678
65	Food services and drinking ...	-229	295	391	-96	1,231

Chapter 25. Wythe County, Virginia

Employment in Wythe County, Virginia, declined from 12,150 in 2005 to 11,436 in 2018, for a change of -714, or -5.88%. Readers should compare the employment values in the tables below to total county employment.

The first table shows the referent region share (NS), the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) job values for the county. The summary values shown represent sums of individual industry component values for all county industries. To be clear, the SSA components always refer to the county that is being compared to the referent region, and the NS label always refers to the county growth that would have taken place had it matched overall average growth in the referent region, which can be the United States, the Appalachian Region, or the county and its neighbors. The largest and smallest NS components in the summary table correspond to the fastest and slowest growing referent regions.

Summary Results for Wythe County, Virginia

County Summary	NS	TS	IM	RS
vs. U.S.	1,370	-2,085	-17	-2,068
vs. Appalachia	36	-758	227	-985
vs. Neighbors	-1,510	796	756	40

The next table displays the group membership categories for industries belonging to any of the first three categories (signifying a positive total share value) for the Appalachian Region or the county relative to the United States — i.e., A, B, C, I, II, or III — and for the county relative to the Appalachian Region or its neighboring counties — i.e., a, b, c, i, ii, or iii. These are the industries that have passed the first screening step, as they have proven to be positive contributors to either the Appalachian Region in comparison to the United States as a whole, or to Wythe County, Virginia, in comparison to at least one of the three referent regions.

Chapter 25. Wythe County, Virginia

Industry Group Membership for Wythe County, Virginia

Industry	Name	Group Membership	Type A or B or C	Type I or II or III	Type a or b or c	Type i or ii or iii
16	Motor vehicles, bodies ...	C III a i	yes	yes	yes	yes
20	Food and beverage ...	E I c i	no	yes	yes	yes
58	Ambulatory health care ...	B II a ii	yes	yes	yes	yes
61	Social assistance	B II b ii	yes	yes	yes	yes
64	Accommodation	A V e i	yes	no	no	yes
65	Food services and drinking ...	B V b ii	yes	no	yes	yes
66	Other services, exc. gov ...	F III c i	no	yes	yes	yes

Notes:

Groups A, B, and C are from Appalachia vs. the United States

Groups I, II, and III are from Wythe County, Virginia vs. the United States

Groups a, b, and c are from Wythe County, Virginia vs. Appalachia

Groups i, ii, and iii are from Wythe County, Virginia vs. its neighbors

Industry-Specific Results

Below we report the results for the three shift-share analyses comparing Wythe County, Virginia, to each of three referent regions: the United States as a whole, the Appalachian Region, and the region defined by Wythe County, Virginia, and its neighboring counties. The results for each of the three analyses are presented both visually and in tabular form.

The chart provides a visual display of the Total Share (TS), Industry Mix (IM), and Regional Shift (RS) components of change. The IM indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. So, a positive value here also means that the industry is growing more rapidly than the overall growth rate for the referent region. The RS component measures the actual employment change in the industry in Wythe County, Virginia, after adjusting for overall referent-region and industry-specific growth rates. A positive value here reflects better than expected industry performance, which implies that Wythe County, Virginia, might have a comparative advantage as a location for this industry. The tables also include the 2018 employment estimates for each reported industry.

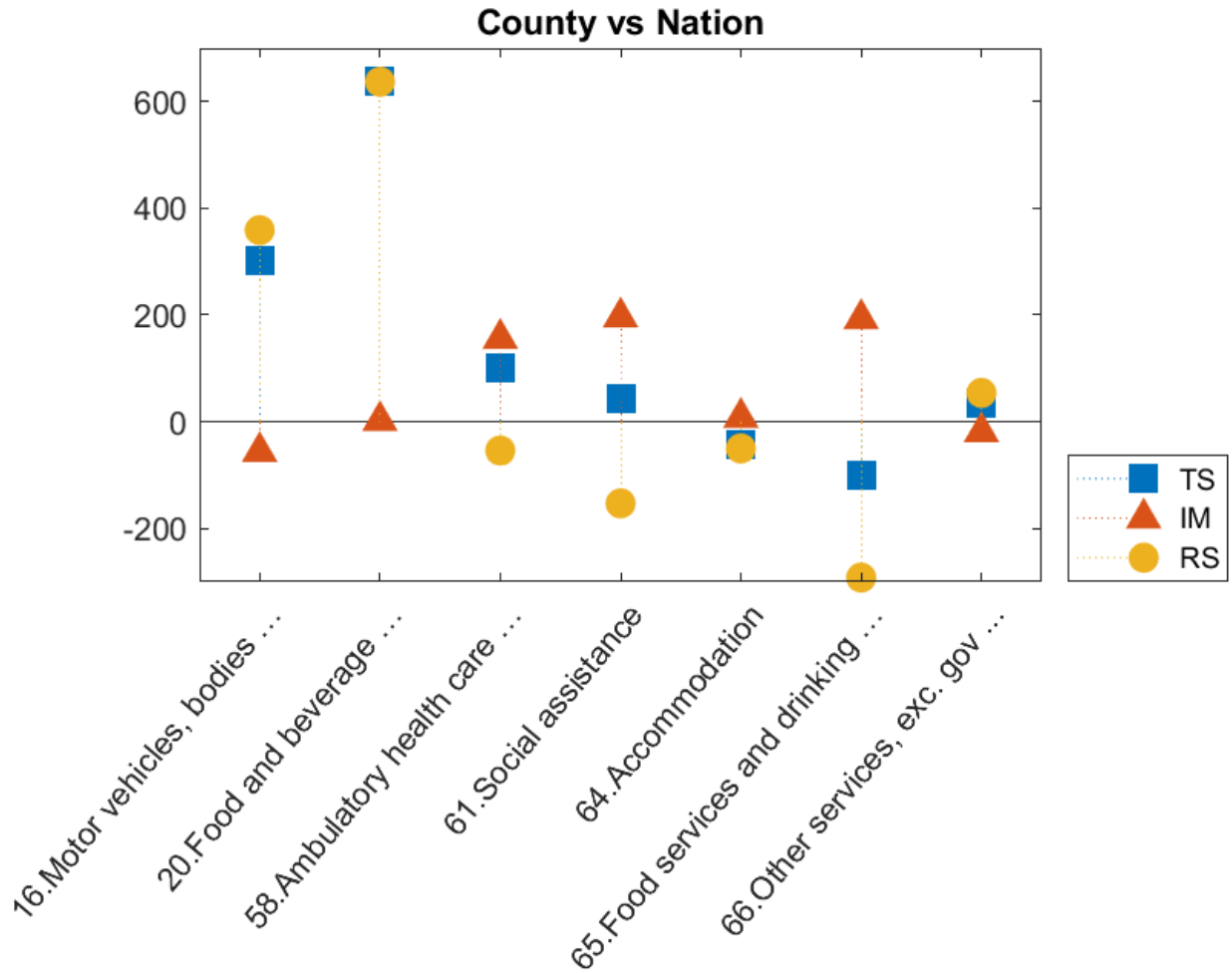
The TS component is the sum of the IM and RS components. A positive TS value also conveys a positive message, especially when both IM and RS are positive. When IM is positive but RS is negative, a positive TS indicates that although the county might not enjoy a regional comparative advantage, the industry in Wythe County, Virginia, is still growing at a faster rate than the overall referent region average. Likewise, when IM is negative and RS is positive, the implication is that the regional comparative advantage is sufficiently strong to overcome the slower than average industry growth rate.

Interpreting Different Referent Region Results

The three SSA are conducted relative to three different referent regions: (1) the United States as a whole, (2) the Appalachian Region, and (3) the region defined by the county and its neighboring counties. As such, the IM component indicates the change in industry employment that would have occurred had the industry grown at a rate equal to the difference between the industry-specific growth rate in the referent region and the overall referent-region growth rate. Likewise, the regional shift components, RS, reflect county-specific industry comparative (dis)advantages relative to those same industries in each of the three referent regions. As before, the NS label always refers to county growth that would have occurred had the county industry grown at the overall average rate of growth in the referent region.

Reporting the results for each of three referent regions enables readers to compare county performance to the United States, the Appalachian Region, and the region defined by the county and its neighboring counties. Although economic growth in Appalachia overall and by industry generally lags the rest of the United States, positive SSA components can still be useful for identifying industries that are positive contributors relative to Appalachian Region and to the more localized economy.

Selected SSA Components for Wythe County, Virginia vs the U.S.

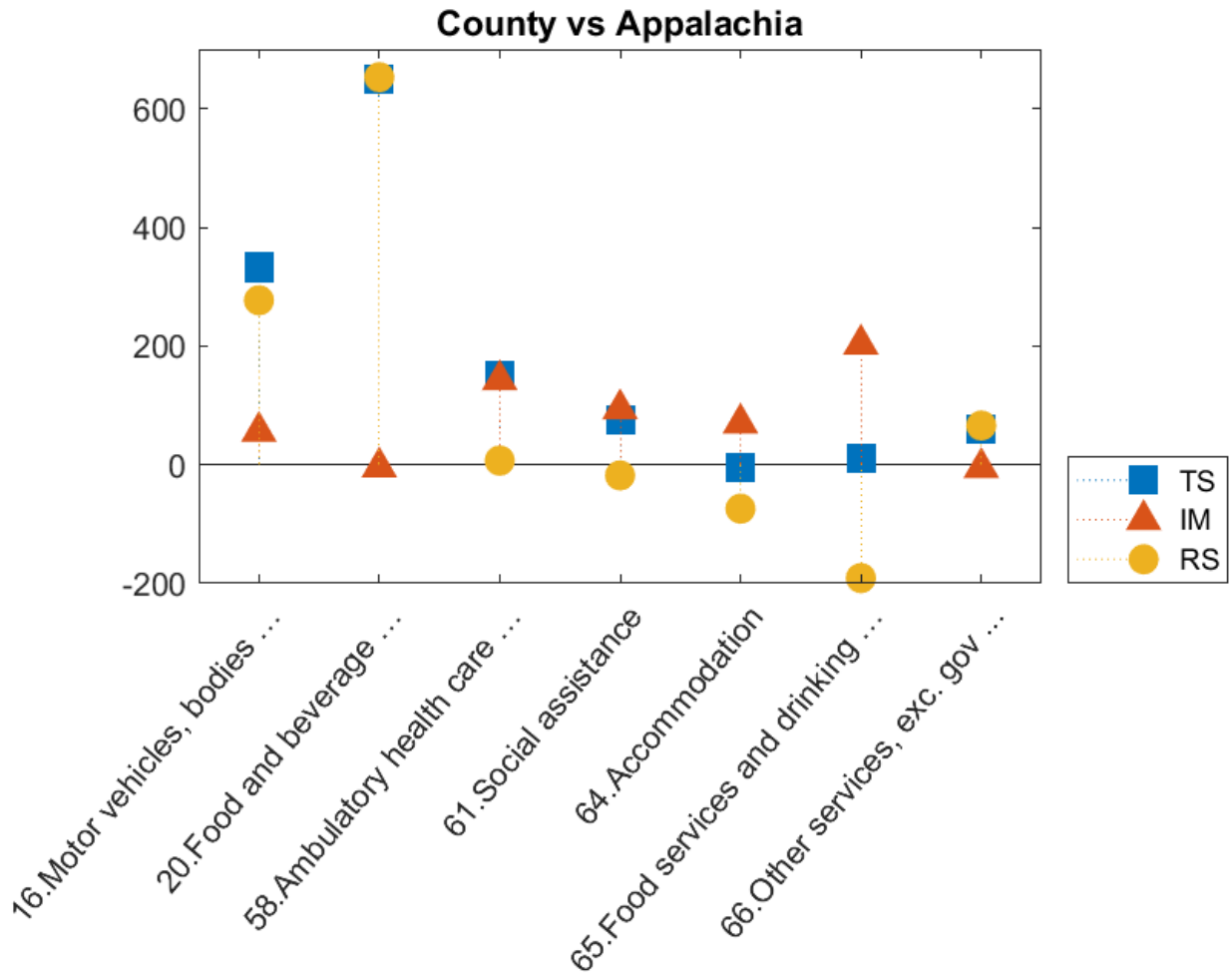


Chapter 25. Wythe County, Virginia

Wythe County, Virginia vs U.S. for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	31	303	-56	359	611
20	Food and beverage ...	11	639	2	637	747
58	Ambulatory health care ...	50	102	156	-54	596
61	Social assistance	34	43	196	-153	376
64	Accommodation	39	-42	8	-50	342
65	Food services and drinking ...	114	-99	193	-292	1,028
66	Other services, exc. gov ...	27	35	-19	54	304

Selected SSA Components for Wythe County, Virginia vs the Appalachian Region

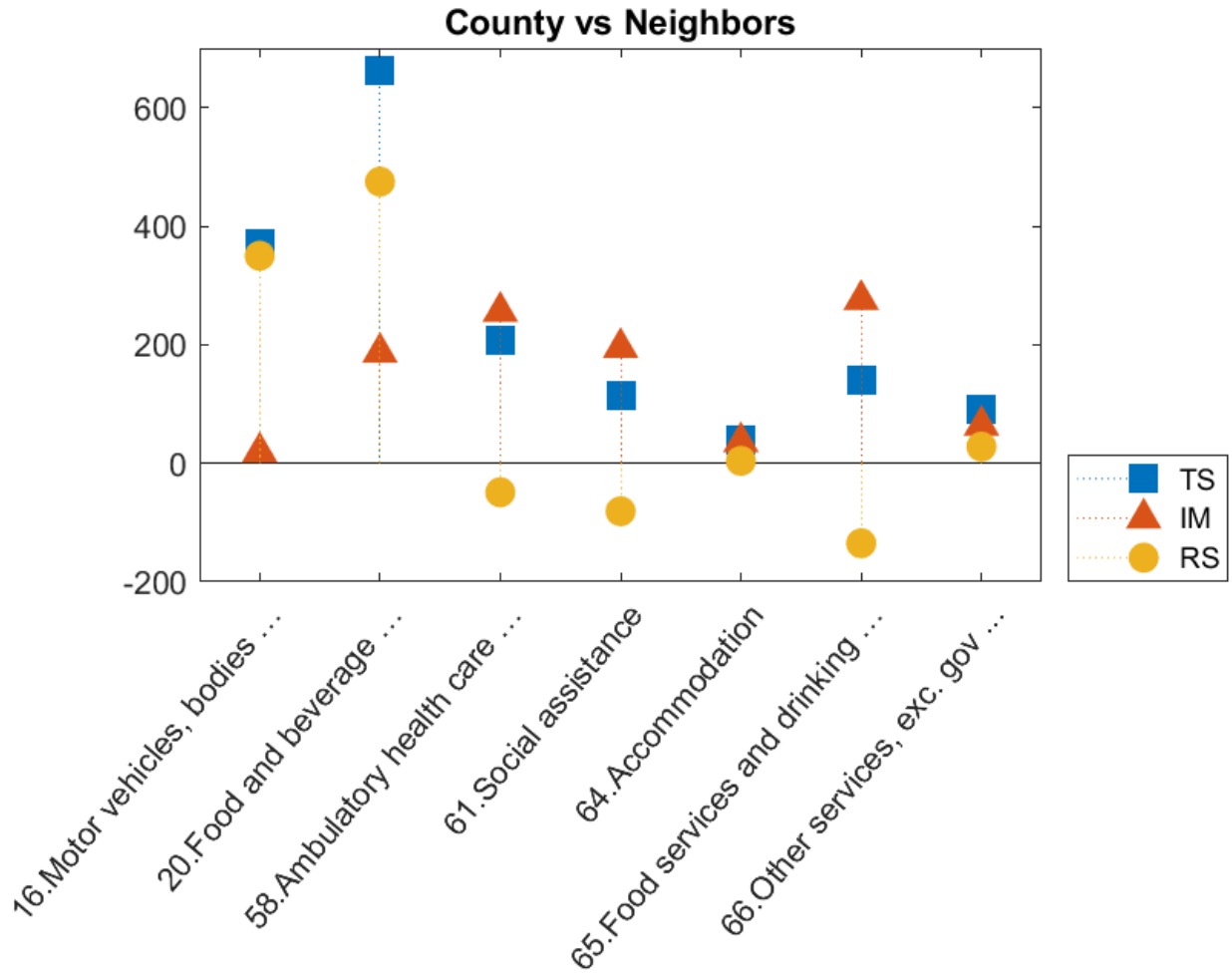


Chapter 25. Wythe County, Virginia

Selected SSA Components for Wythe County, Virginia vs the Appalachian Region

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	1	333	56	277	611
20	Food and beverage ...	0	649	-4	653	747
58	Ambulatory health care ...	2	150	143	7	596
61	Social assistance	1	76	94	-18	376
64	Accommodation	1	-4	70	-74	342
65	Food services and drinking ...	3	12	203	-191	1,028
66	Other services, exc. gov ...	1	61	-5	66	304

Selected SSA Components for Wythe County, Virginia vs Neighbors



Chapter 25. Wythe County, Virginia

Selected SSA Components for Wythe County, Virginia vs Neighbors for Selected Industries

Industry	Name	NS	TS	IM	RS	Employment 2018
16	Motor vehicles, bodies ...	-34	369	19	350	611
20	Food and beverage ...	-12	662	187	475	747
58	Ambulatory health care ...	-55	207	256	-49	596
61	Social assistance	-37	114	195	-81	376
64	Accommodation	-43	40	36	4	342
65	Food services and drinking ...	-126	141	276	-135	1,028
66	Other services, exc. gov ...	-30	92	64	28	304