

The Macroeconomic Impact of the American Civil War

Joseph Davis
Vanguard Group

Marc Weidenmier
Chapman University and NBER



BATTLE OF ATLANTA

Previous Research

- Berry (backcasting)
- Gallman –GDP estimate based census (not to be used a reliable annual measures)
- Balke and Gordon (1989) and Rpmmer (1989) revised Gallman's estimates. But don

Davis (2004) IP Index

- Based on city commerce reports
- New York City
- Chicago
- Cincinnati
- Boston
- Philadelphia
- New Orleans
- Charleston

Appendix Table 1

A LIST OF INDEX COMPONENTS & THEIR RELATIVE IMPORTANCE

1860 value-added weights for IP index, in percentage points

Major industry groups	U.S.	North	South
Quantity-based index component			
Food & Kindred Products	13.8%	12.7%	24.6%
Wheat flour	6.7%	6.6%	8.5%
Whiskey (not yet included)	1.6%	1.7%	0.6%
Refined sugar consumption	1.5%	1.7%	0.4%
Hog packing (not yet included)	0.9%	0.7%	3.3%
Beef packing (not yet included)	0.4%	0.3%	1.5%
Bacon (not yet included)	0.5%	0.3%	1.6%
Salted mackerel	0.1%	0.1%	0.0%
Rice cleaning & rice flour	0.0%	0.0%	0.3%
Lard oil and tallow (not yet included)	0.1%	0.1%	0.0%
Cottonseed oil & oil cake (not yet included)	0.0%	0.0%	0.3%
Manufactured chewing tobacco (not yet included)	2.1%	1.3%	8.1%
Textiles & Textile Products	21.2%	22.4%	9.3%
Cotton textiles	20.3%	21.51%	9.0%
Bagging (not yet included)	0.1%	0.1%	0.1%
Cordage and rope (not yet included)	0.7%	0.8%	0.1%
Lumber & Wood Products	11.7%	10.7%	22.1%
Lumber shipments	11.7%	10.7%	22.1%
Printing & Publishing	6.9%	7.2%	3.5%
Newspaper publishing	6.9%	7.2%	3.5%
Chemical & Fuel Products	8.2%	8.2%	8.5%
Anthracite coal	2.5%	2.9%	2.0%
Bituminous coal & coke	2.4%	2.4%	2.5%
Whalebone	0.0%	0.0%	0.0%
Sperm oil refining	0.1%	0.1%	0.0%
Whale oil refining	0.1%	0.1%	0.0%
Petroleum refining	0.5%	0.6%	0.0%
Soap and candles	1.7%	1.9%	0.5%
Turpentine, crude	0.2%	0.0%	1.3%
Turpentine, distilled (spirits of)	0.5%	0.0%	3.8%
Tar and pitch	0.0%	0.0%	0.1%
Rosin	0.0%	0.0%	0.2%
Leather & Leather Products	11.1%	11.5%	7.3%
Sole leather receipts (not yet included)	7.6%	7.9%	4.6%
Dry and green hide receipts	3.5%	3.6%	2.7%
Metals & Metal Products	12.1%	12.4%	9.7%
Pig iron production	9.4%	9.5%	8.6%
Gold mining	1.6%	1.7%	0.3%
Coppersmithing (not yet included)	0.7%	0.7%	0.3%
Lead smelting (not yet included)	0.1%	0.1%	0.1%
Copper mining (not yet included)	0.4%	0.4%	0.5%
Transport Equipment & Machinery	15.0%	15.0%	15.0%
Shipbuilding, merchant vessels	5.7%	4.9%	6.3%
Shipbuilding, naval vessels	1.2%	1.0%	1.3%
Locomotives	5.4%	6.6%	7.4%
Fire engines, hand-powered	0.4%	0.4%	0.0%
Fire engines, steam-powered	0.9%	0.8%	0.0%
Musical pipe organs	0.4%	0.4%	0.0%
Pocket watches	0.7%	0.6%	0.0%
Telescopes	0.2%	0.2%	0.0%

Figure 1
Northern and Southern Industrial Production, 1840-1900
(1859/60=100)

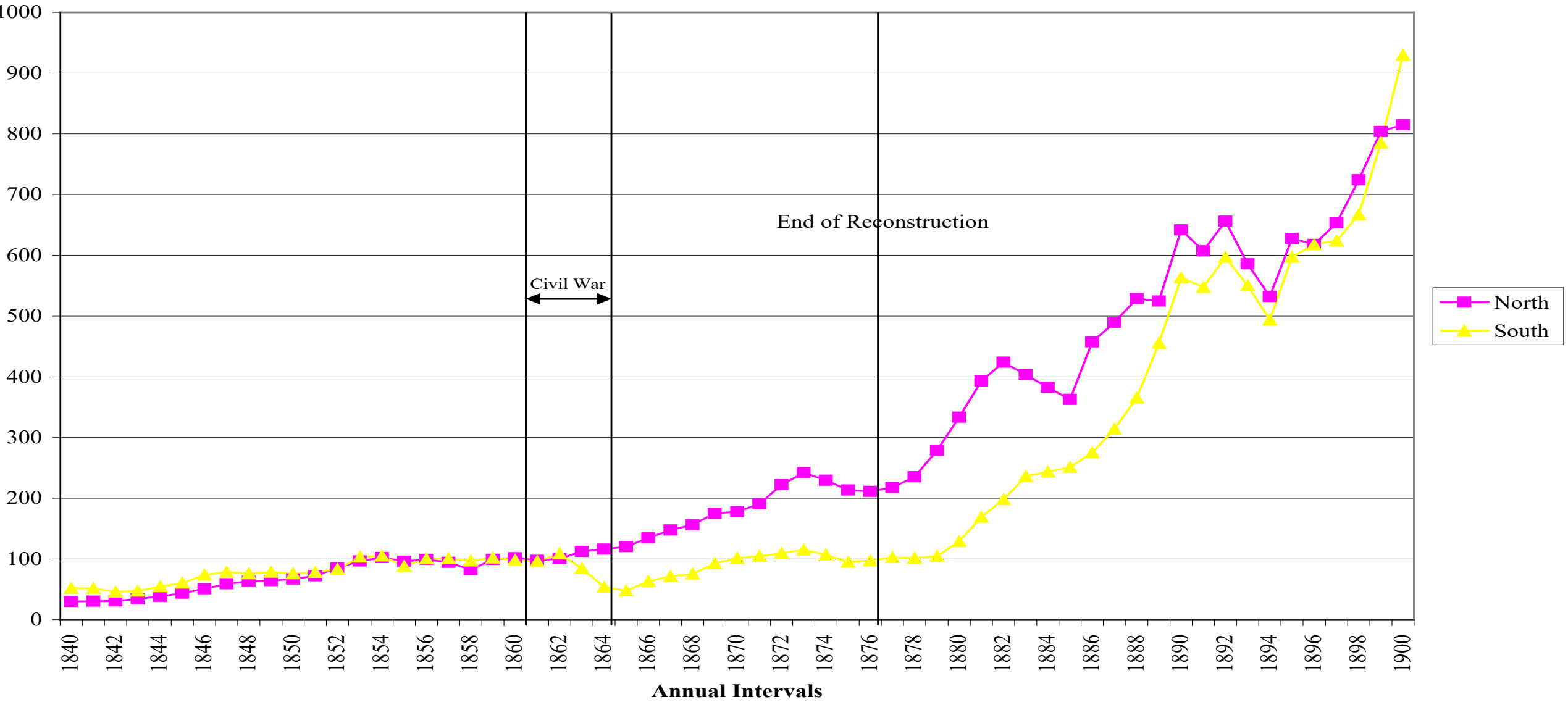


Table 1
Northern and Southern Industrial Production
Growth Rates
(percent per annum)

Period	North	South
Whole Period (1840-1900)	6.02	5.75
Antebellum(1840 -1860)	6.62	3.72
Civil War(1861- 1865)	3.56	-11.69
Reconstruction (1865-1877)	5.16	5.73
Postbellum(1865 -1900)	5.96	8.85

Table 2
Zivot-Andrews Structural Break Tests for Northern Industrial Production

Break Test	Minimum T-Test	Break Date
Intercept	-3.612	1857
Trend	-3.468	1891
Intercept and Trend	-4.089	1855
Observations	61	

* significant at 10%; ** significant at 5%; *** significant at 1%

Table 3
Zivot-Andrews Structural Break Tests for Southern Industrial Production
 * significant at 10%; ** significant at 5%; *** significant at 1%

Break Test	Minimum T-Test	Break Date
Intercept	-3.268	1863
Trend	-3.598	1875
Intercept and Trend	-4.982**	1863
Observations	61	

- significant at 10%; ** significant at 5%;
 - *** significant at 1%

Figure 2
Ratio of Southern to Northern Industrial Production, 1840-1900
(1859/1860=100)

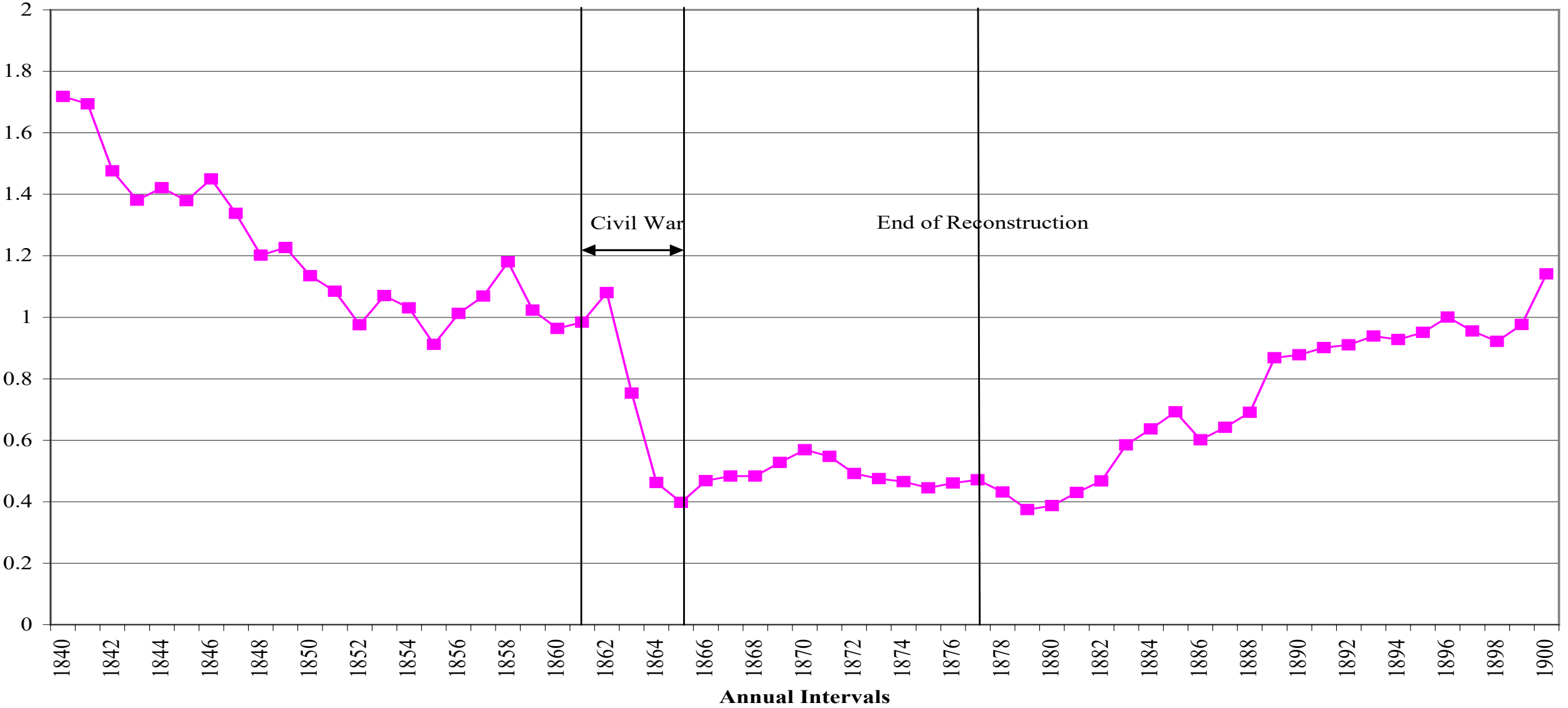


Table 4
Zivot-Andrews Structural Break Tests
for the Ratio of Southern to Northern Industrial Production

Break Test	Minimum T-Test	Break Date
Intercept	-3.477	1863
Trend	-3.595	1876
Intercept and Trend	-5.091**	1863
Observations	61	

- significant at 10%; ** significant at 5%;
 - *** significant at 1%

Figure 3
Northern Capital and Non-Capital Intensive Industries
(1859/1860=100)

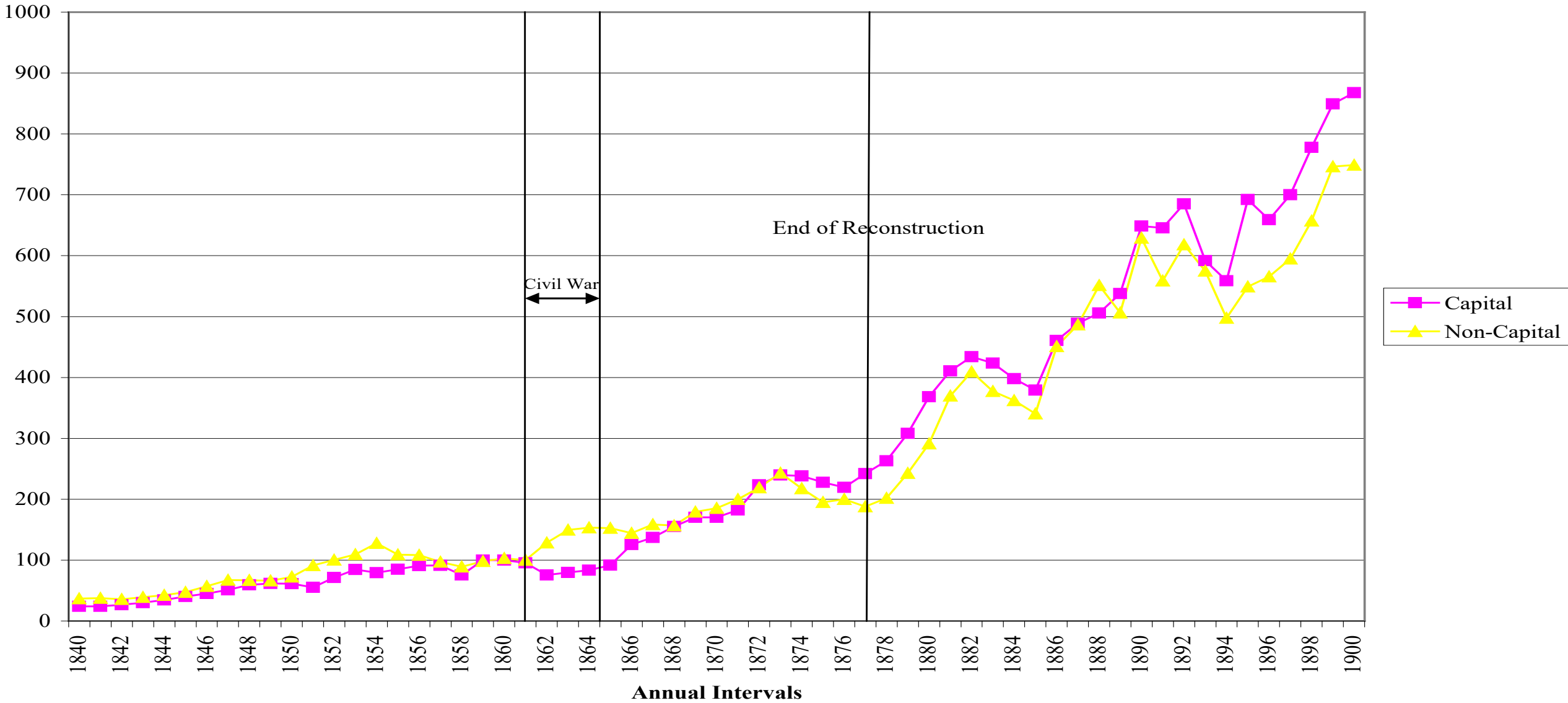


Figure 4
Ratio of Northern Capital to Non-Capital Intensive Industries
(1859/1860=100)

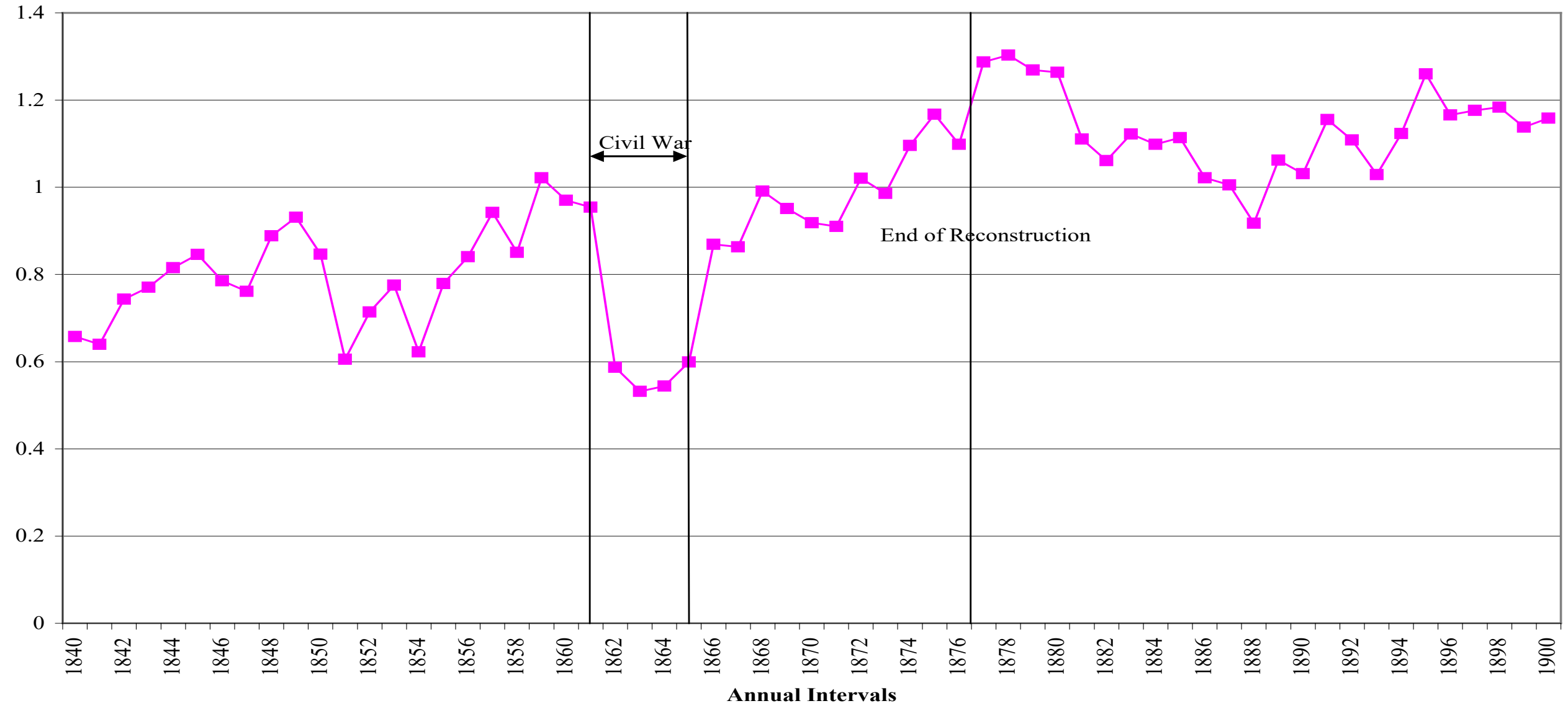


Table 5
Northern Capital and Non-Capital Intensive Industrial Production, 1840-1900
Growth Rates
(percent per annum)

Period	Capital Intensive	Non-Capital Intensive
Whole Period (1840-1900)	6.74	5.73
Antebellum (1840-1860)	8.04	5.80
Civil War (1861-1865)	-1.09	8.83
Reconstruction (1865-1877)	8.99	2.09
Post-Reconstruction (1877-1900)	6.15	6.92
Postbellum	6.19	5.26

Figure 5
Southern Capital and Non-Capital Intensive Industries
(1859/1860=100)

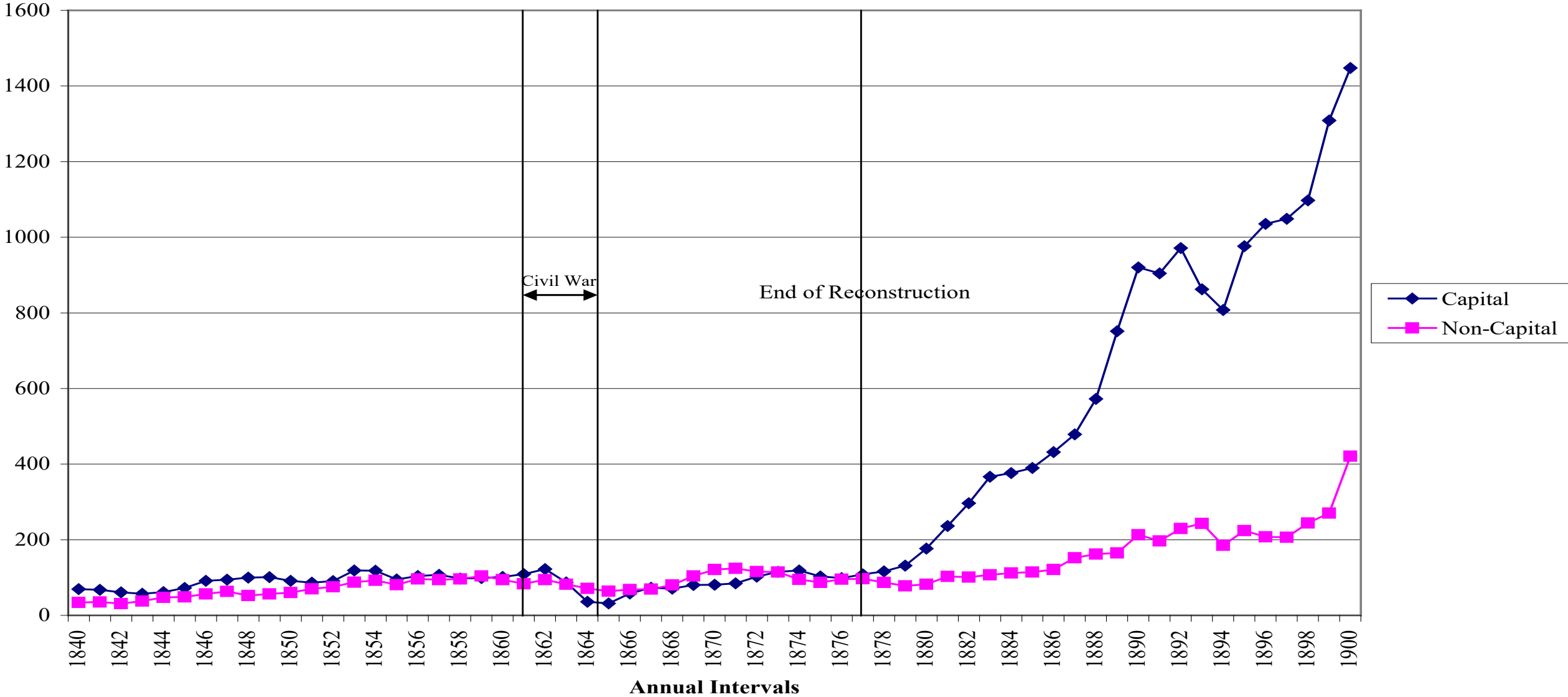


Figure 6
Ratio of Southern Capital to Non-Capital Intensive Industries
(1859/1860=100)

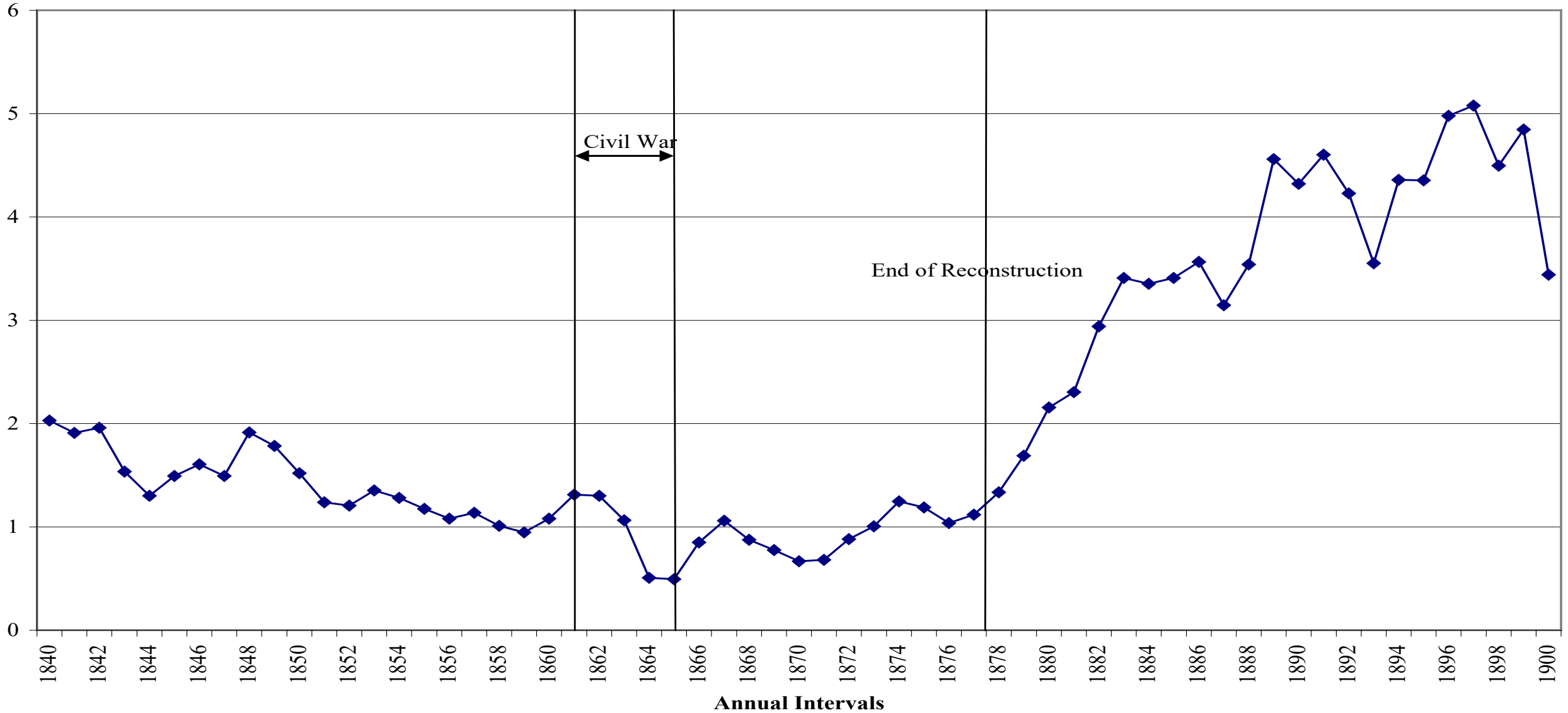


Table 6
Southern Capital and Non-Capital Intensive Industrial Production, 1840-1900
Growth Rates
(percent per annum)

Period	Capital Intensive	Non-Capital Intensive
Whole Period (1840-1900)	6.92	5.20
Antebellum (1840-1860)	2.58	5.88
Civil War (1861-1865)	-16.09	-6.98
Reconstruction (1865-1877)	12.90	4.22
Post-Reconstruction (1877-1900)	12.59	7.77
Postbellum	12.70	6.56

Figure 8
Ratio of Southern Non-Capital to Northern Non-Capital Intensive Industries
(1859/1860=100)

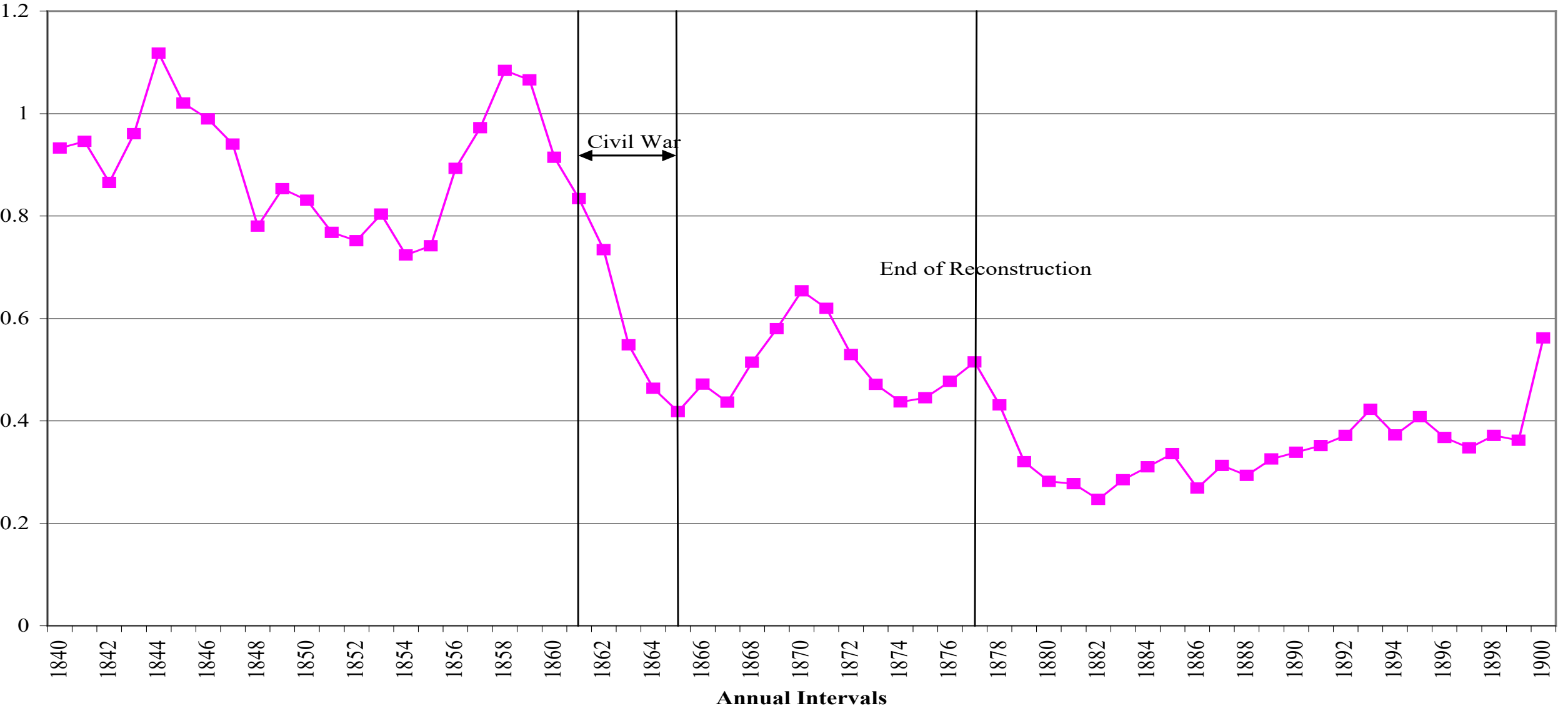
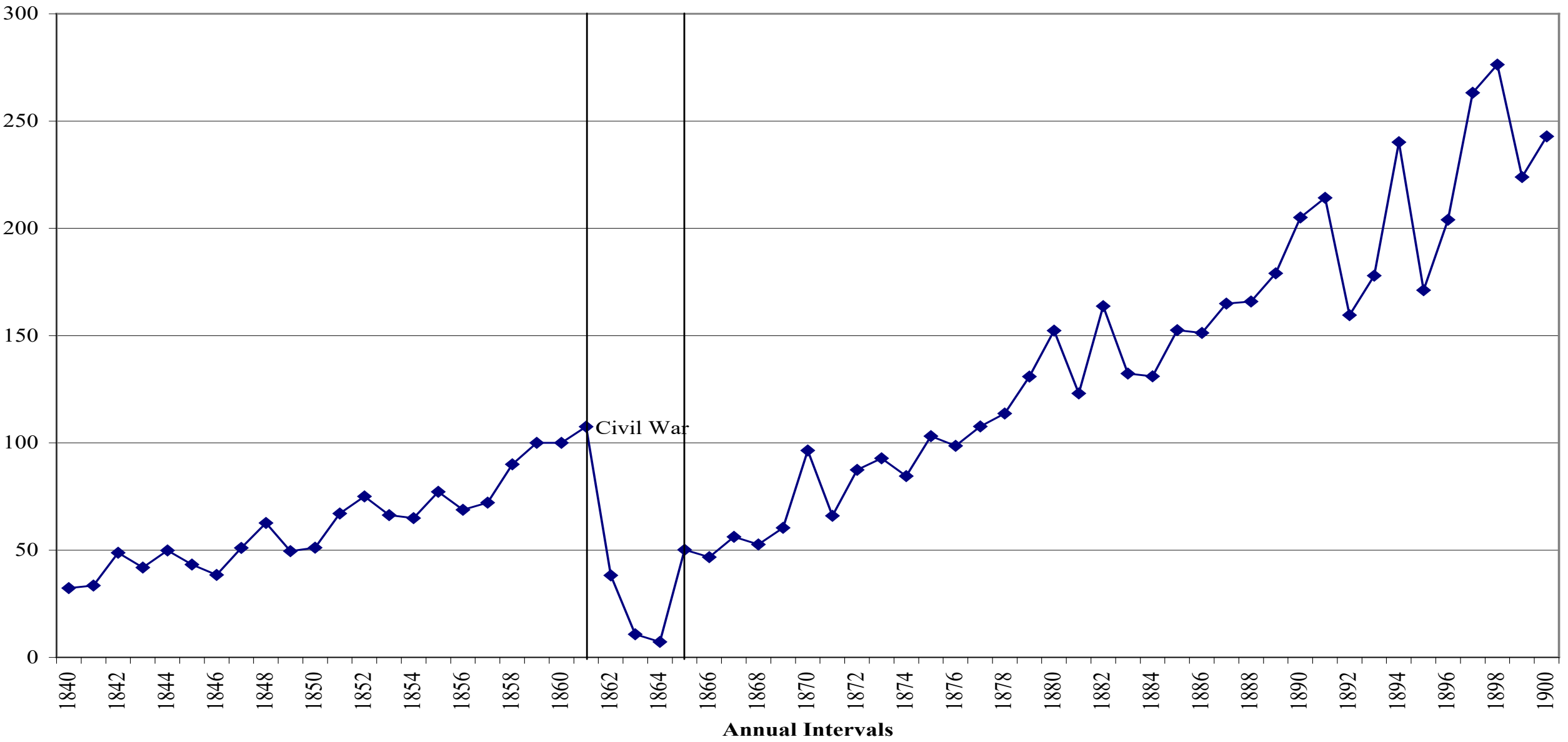


Table 7
Zivot-Andrews Structural Break Tests
for the Ratio of Southern to Northern Industrial Production

Break Test	Minimum T-Test	Break Date
Intercept	-5.48***	1862
Trend	-4.00	1864
Intercept and Trend	-5.475**	1862
Observations	61	

Figure 9
US Cotton Production 1840-1900



Conclusion