

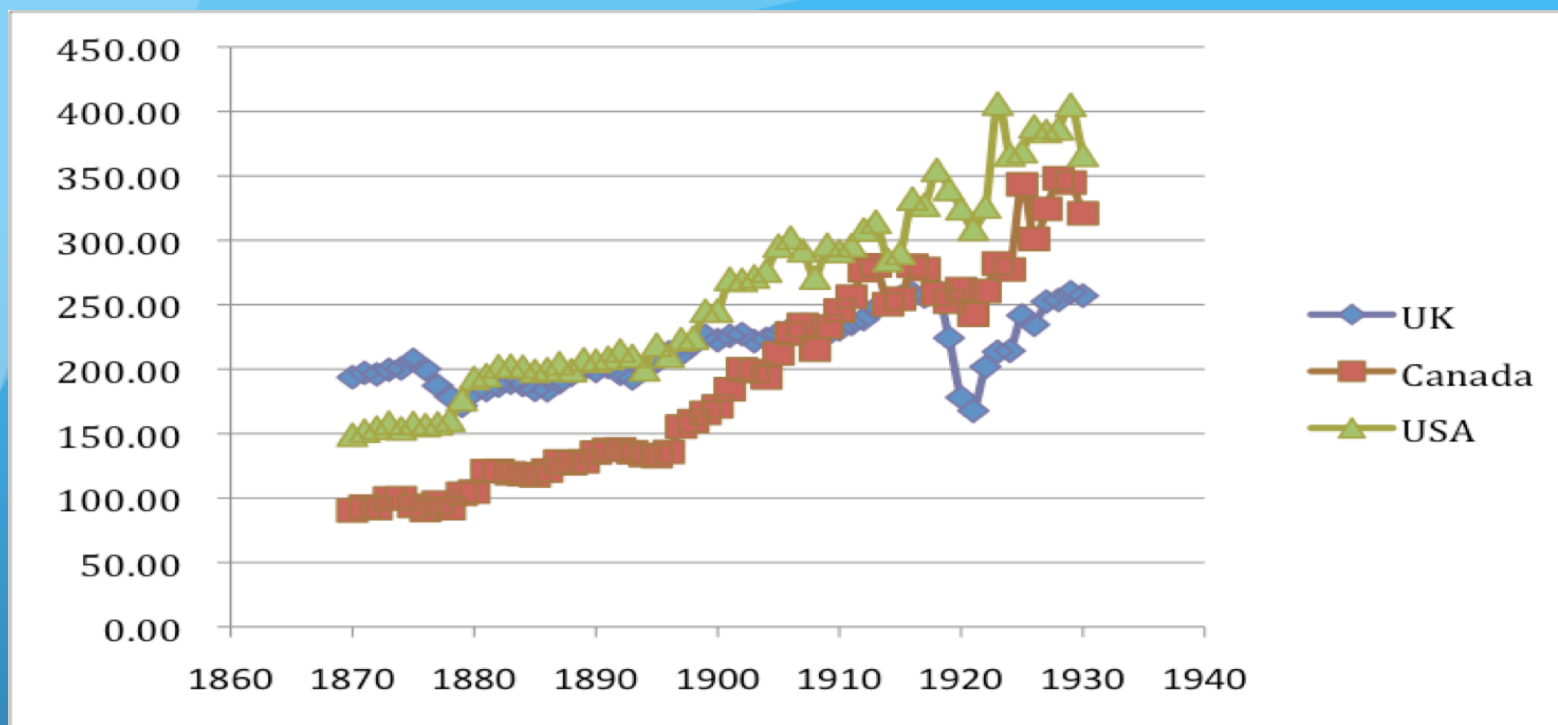
Reconciling Macro and Micro Evidence on Economic Growth in the Post-Confederation Era

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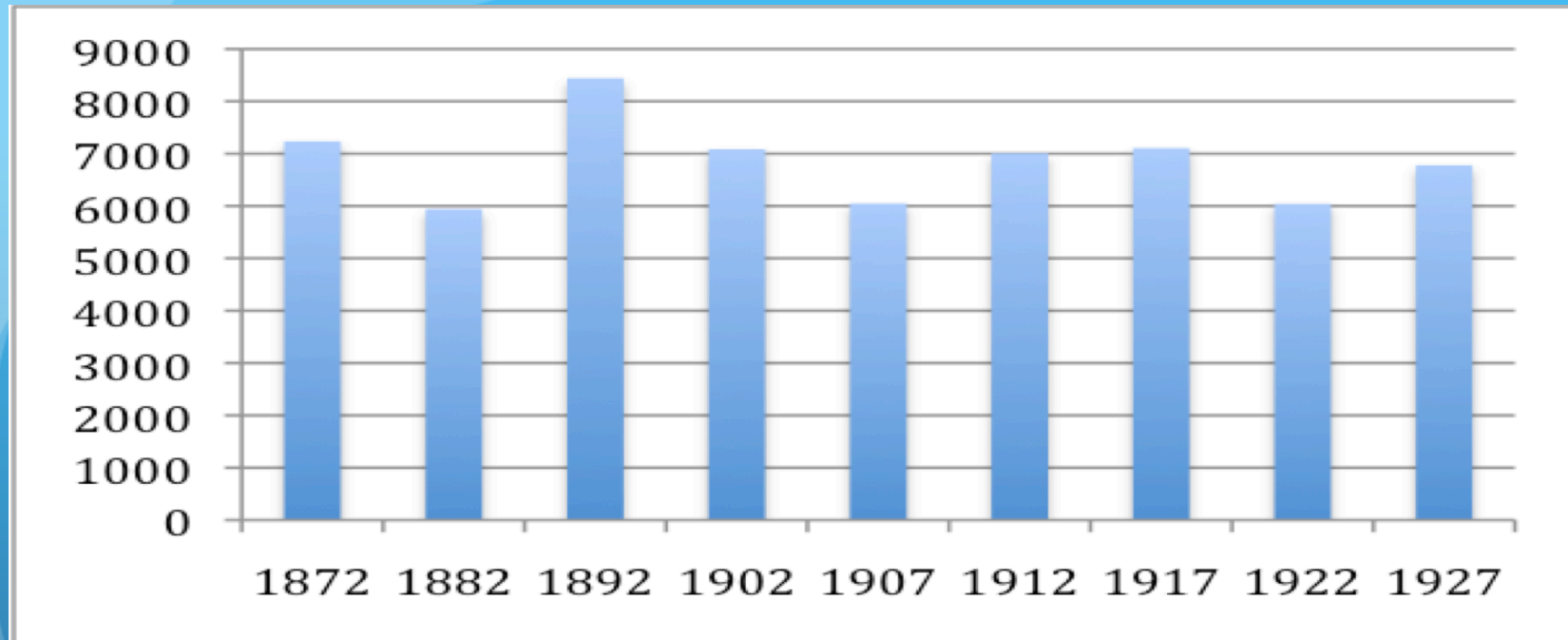
The Micro-Data

- Wentworth County probate estates
- Time span: 1872-1927
- N=2,516



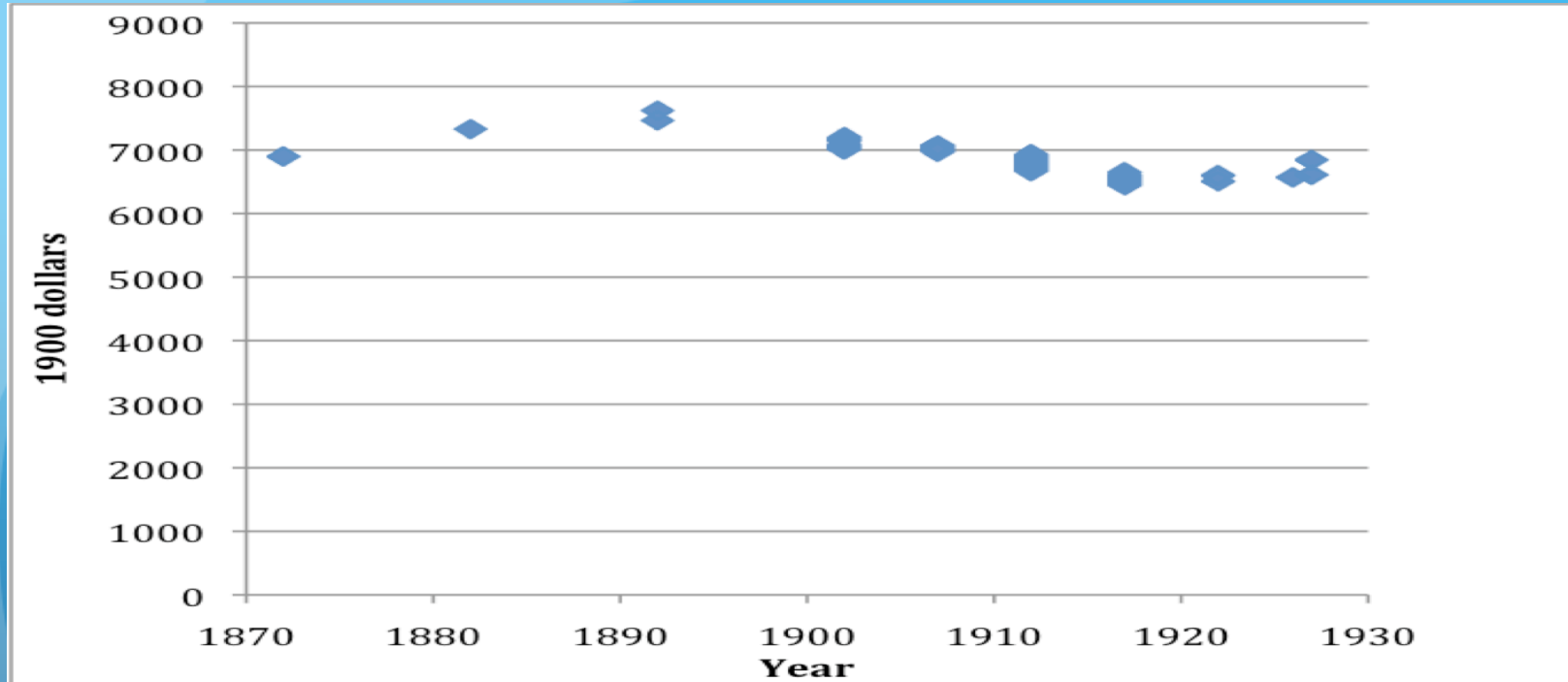
Real Per Capita GDP (1900=100): 1870-1930 (U.S. dollars)

From 1870 to 1930, average annual rate of growth of real per capita GNP was 0.6 percent for the UK, 1.7 percent for the United States and a 2.3 percent for Canada



Average Wealth (1900 dollars) for Wentworth County, Ontario, 1872 to 1927

Despite robust growth of Canadian economy, average real wealth (1900 dollars) over the period 1872 to 1927 in Wentworth County was essentially constant

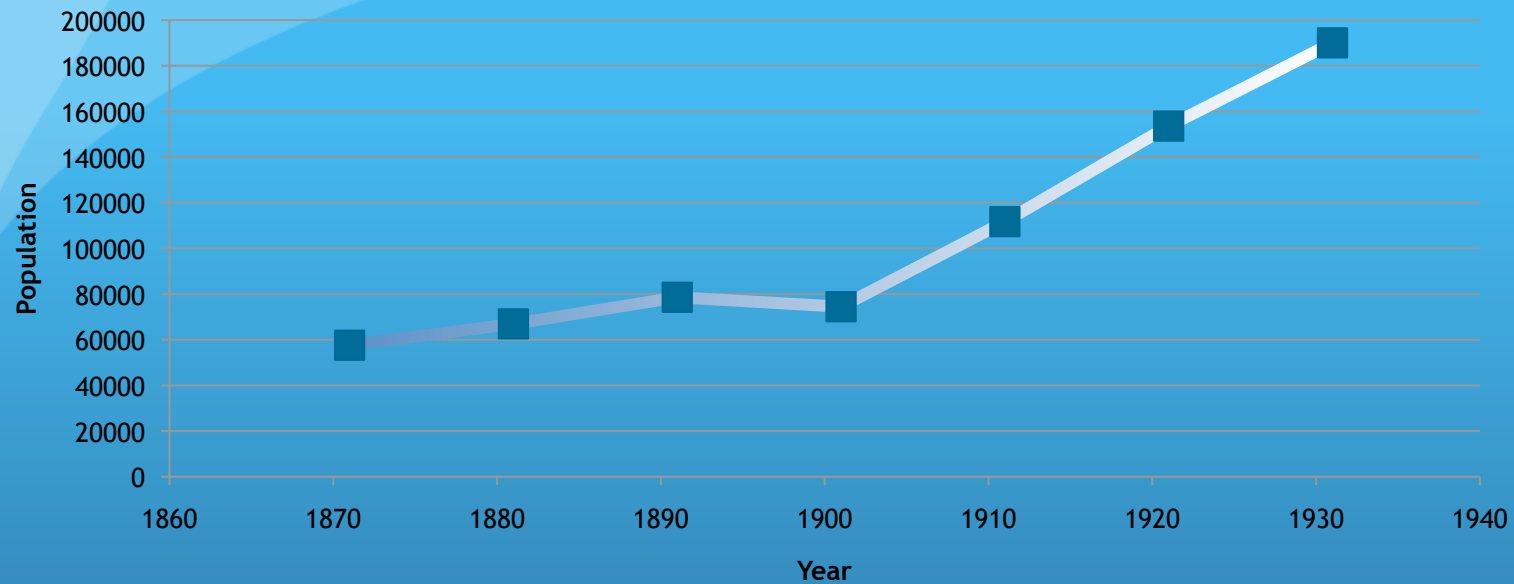


**LOWESS Smooth of Real Wealth versus Year
(bandwidth=0.8), Wentworth County, 1872-1927**

N=2,516

Potential Explanations?

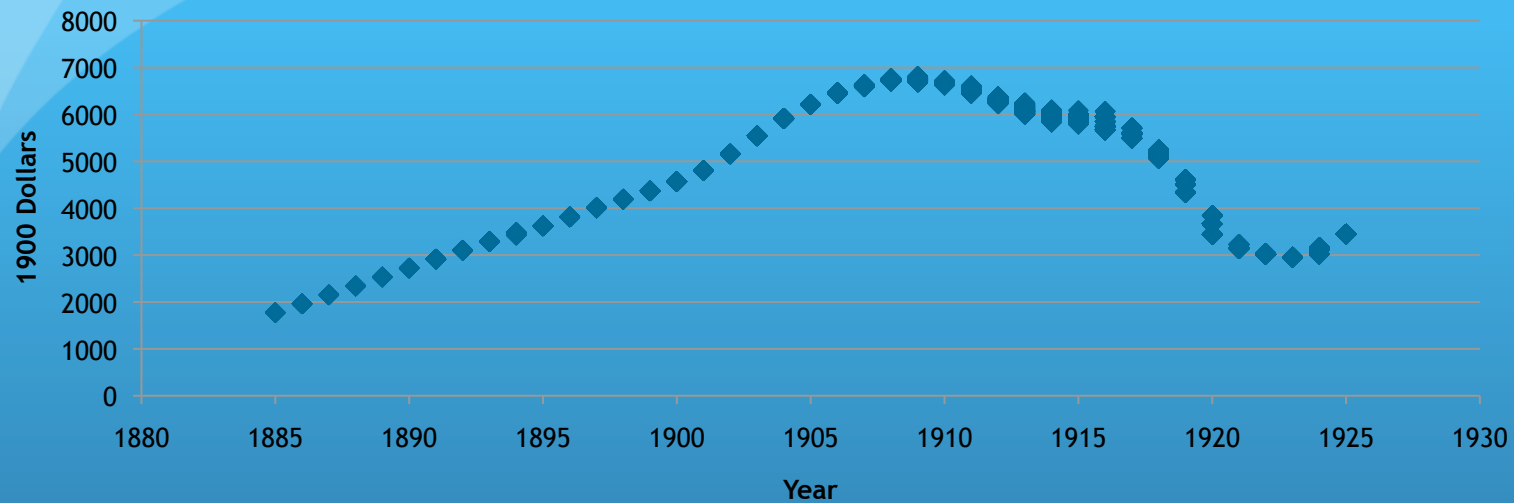
- Perhaps Wentworth County exceptionally disconnected from economy



Wentworth County Population

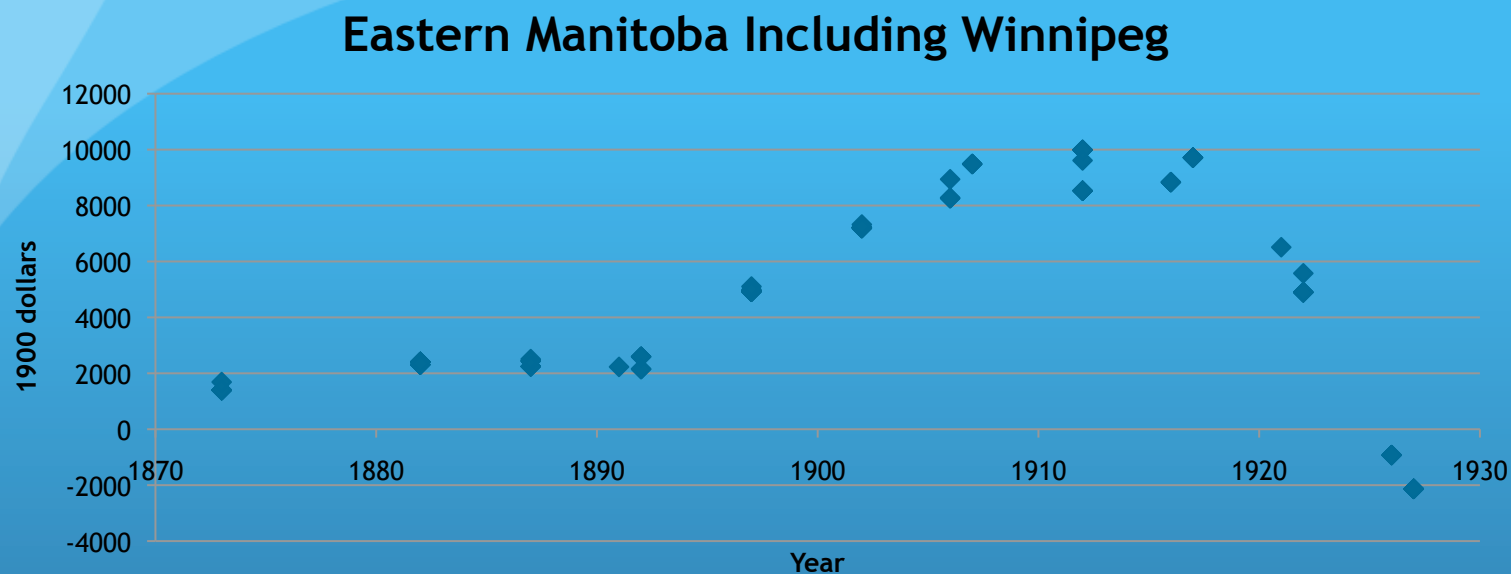
- From 1871 to 1921, Wentworth County population grew 167% compared to 81% for Ontario and 138% for Canada

Thunder Bay District



Thunder Bay District

- Thunder Bay District (1885-1925) also shows a level of wealth in the 1920s not much higher than at the start of the period
- LOWESS Smooth (bwidth=0.8); n=1,780



Eastern Manitoba (including Winnipeg)

- Results similar to Thunder Bay District
- LOWESS Smooth bwidth=0.8
- N=55

Other Explanations

- Individual probate wealth lags increases in GDP
- Result of price deflator used to construct real values
- *An economy in transition - winners and losers*

Economic Change in 19th and 20th Centuries

- Industrialization. Agriculture's share of Canadian GDP declines from 38% to 21% between 1870 and 1920.
- Ontario's rural population share drops from 78% in 1870 to 39% by 1930.
- Proportion of Ontario men employed in agriculture drops from 53% in 1891 to 27% by 1931.
- Proportion of gainfully employed women rises from 3.8% in 1891 to 9.2 percent in 1931. Married Women's Property Acts.
- Savings to GDP ratio rises from 9% in 1870s to 16% in early 20th century. New asset category growth.

Evidence of Change in Wentworth Wealth Data

Livio Di Matteo, Economics Lakehead

Source	SS	df	MS	Number of obs = 2516		
Model	1216.39525	20	60.8197626	F(20, 2495) = 31.26		
Residual	4854.78092	2495	1.94580397	Prob > F = 0.0000		
				R-squared = 0.2004		
				Adj R-squared = 0.1939		
Total	6071.17617	2515	2.41398655	Root MSE = 1.3949		

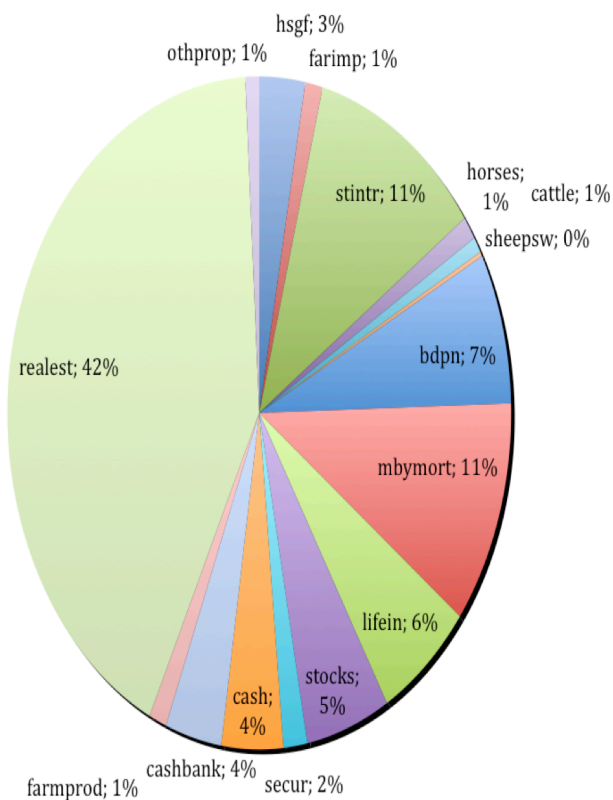
lrwelt	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
yearprob	-.0128112	.0023822	-5.38	0.000	-.0174825	-.0081399
testsignname	.9831914	.0615761	15.97	0.000	.8624459	1.103937
male	.1700815	.1257002	1.35	0.176	-.076406	.4165691
children	.048624	.0131213	3.71	0.000	.0228941	.0743538
married	.3638235	.084401	4.31	0.000	.1983203	.5293267
marspd	.3908874	.0933493	4.19	0.000	.2078374	.5739373
buildingtr~s	-.5920963	.1622579	-3.65	0.000	-.9102702	-.2739224
service	-.285146	.2370262	-1.20	0.229	-.7499342	.1796423
government	-.5212002	.196212	-2.66	0.008	-.9059553	-.136445
fishhunt	-.0874951	.8101477	-0.11	0.914	-1.676126	1.501136
forestry	3.631687	1.407199	2.58	0.010	.8722885	6.391086
manufact	-.1844746	.1364143	-1.35	0.176	-.4519716	.0830223
mining	.125831	1.397215	0.09	0.928	-2.613989	2.865651
profession	.2564202	.164079	1.56	0.118	-.0653248	.5781653
trade	.2931294	.1462914	2.00	0.045	.0062644	.5799944
transcomm	-.5862773	.2021966	-2.90	0.004	-.9827676	-.1897869
laborer	-1.578144	.1715838	-9.20	0.000	-1.914605	-1.241683
retired	.0131813	.1218445	0.11	0.914	-.2257454	.252108
occindeter~e	-.5010592	.1507793	-3.32	0.001	-.7967246	-.2053938
urban	.0231431	.076057	0.30	0.761	-.1259982	.1722843
_cons	31.36212	4.530748	6.92	0.000	22.4777	40.24653

Regression Results

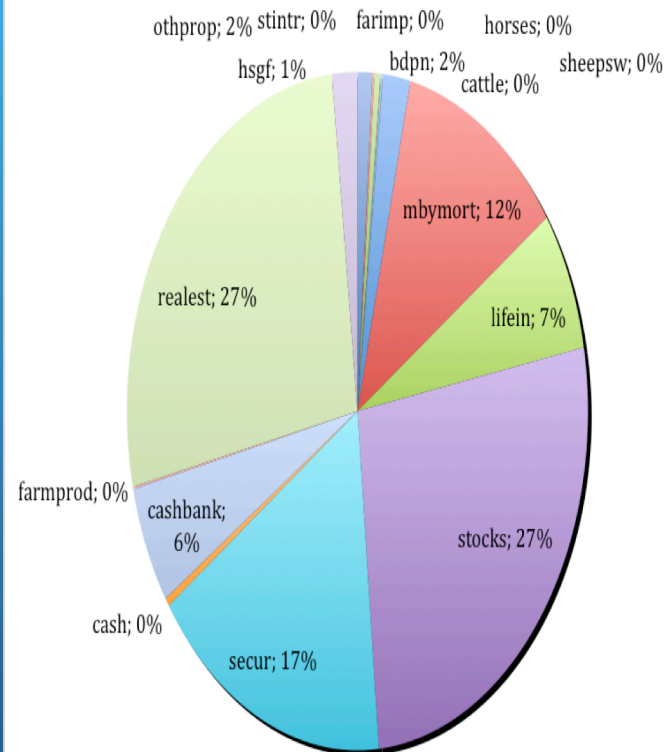
- Wealth declines at 1.3% per year
- Positive and significant relationship with testacy & literacy, children, being married. Trade and professions have more wealth than agricultural employment.

Change in Portfolio Composition

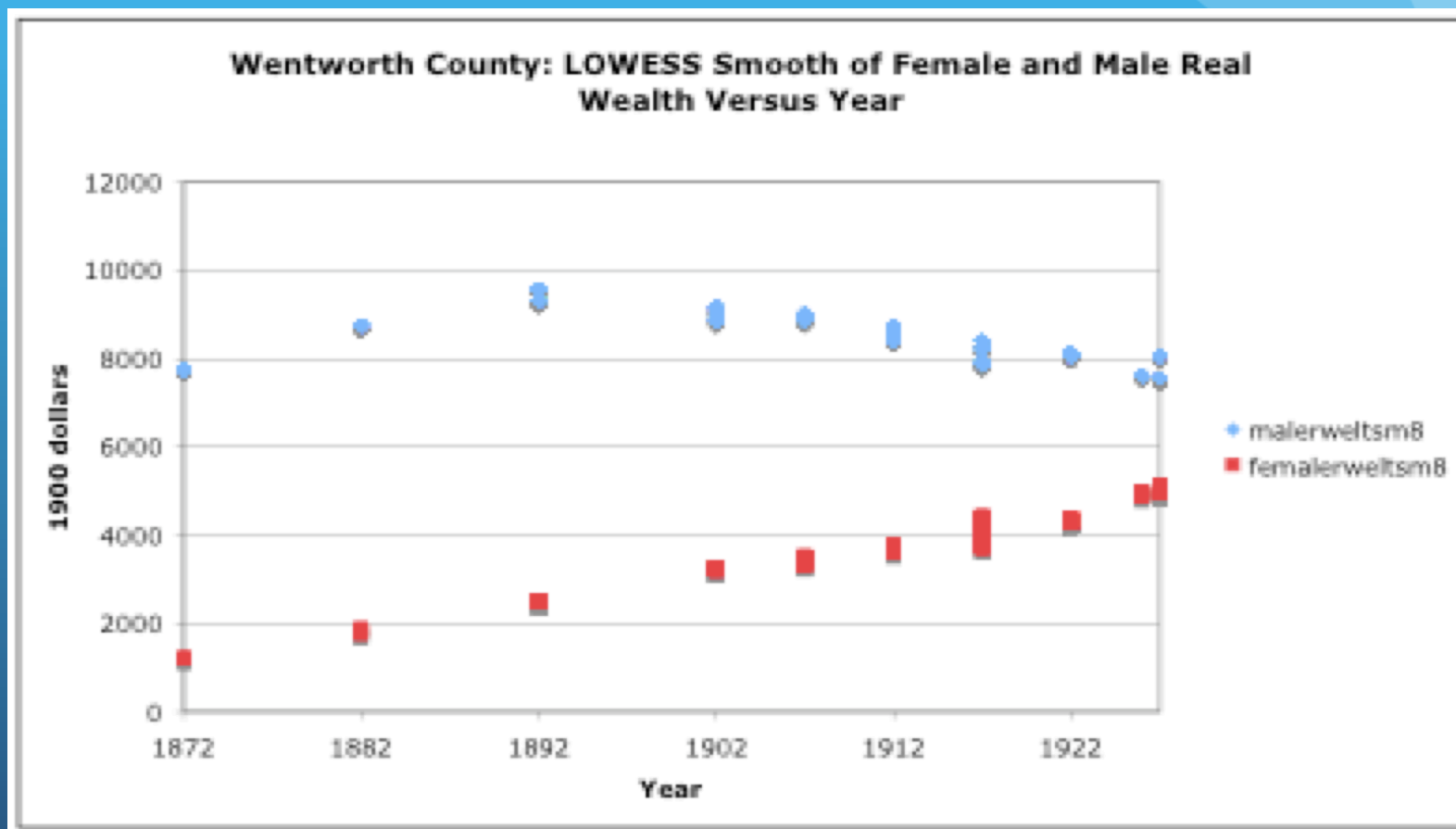
1882



1927



Male and Female Real Wealth

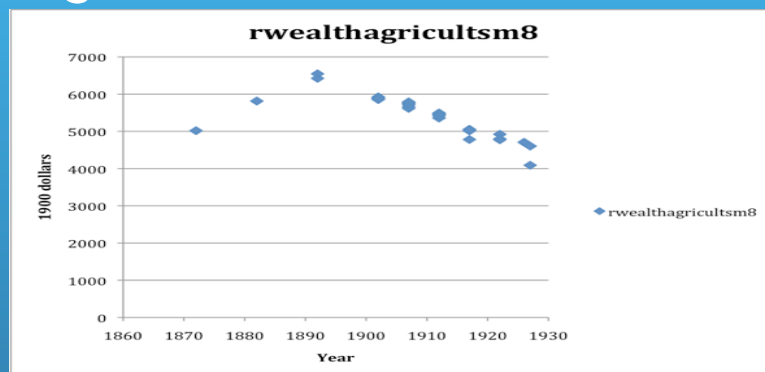


Wealth By Occupational Categories

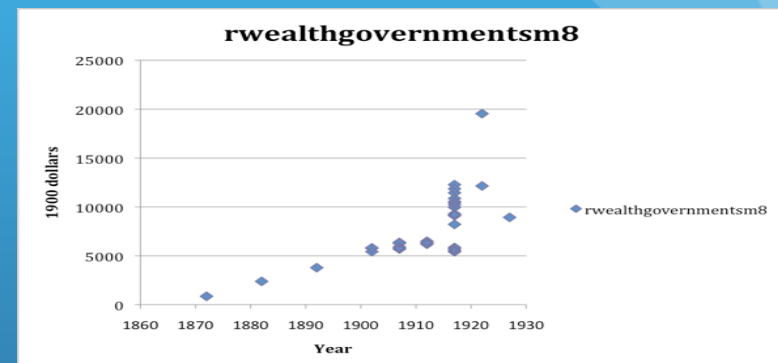
- Increases in real wealth for the occupational categories of government, transportation and communications, and laborers.
- Decline in agriculture.
- Growth in services after 1900.
- Other occupations had somewhat more mixed results: building trades, manufacturing, professions, trade.
- World War I period seems to be a break period.

LOWESS SMOOTHS BY OCCUPATIUN

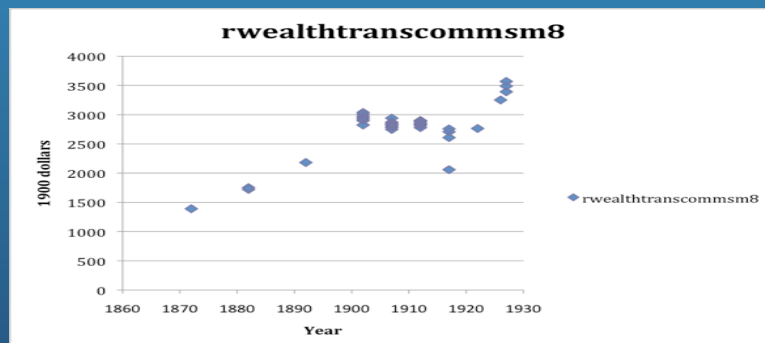
Agriculture



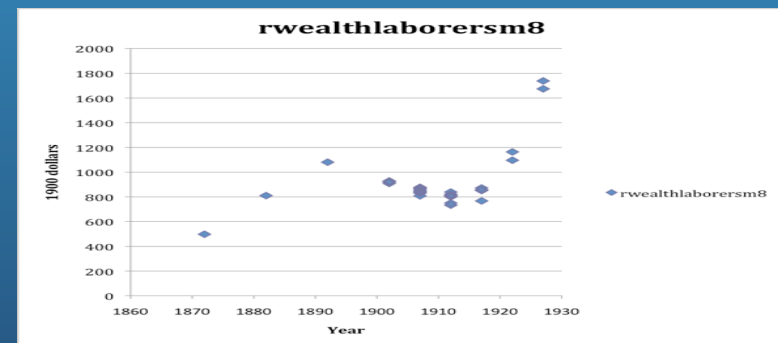
Government



Transport & Communications

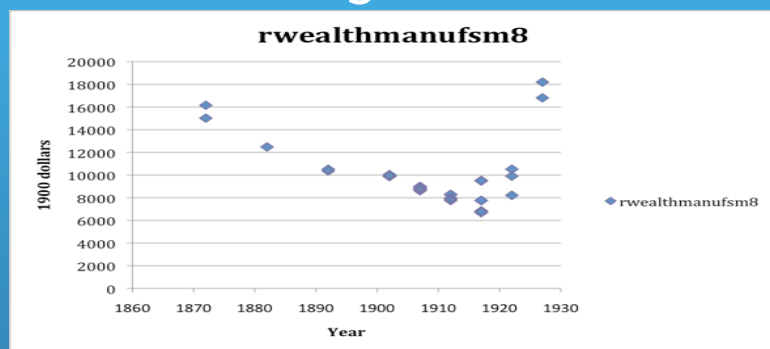


Labourers

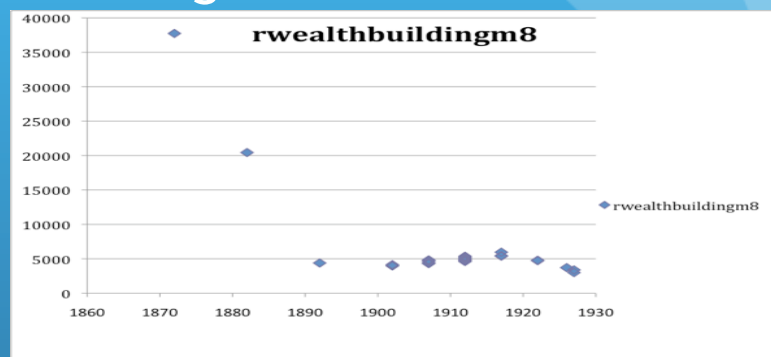


More Occupational Smoothing

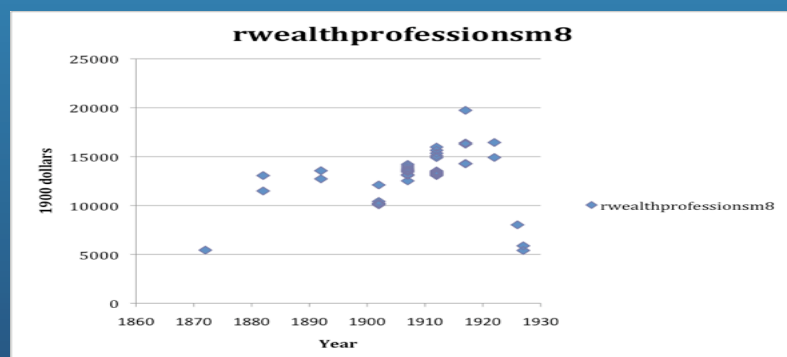
Manufacturing



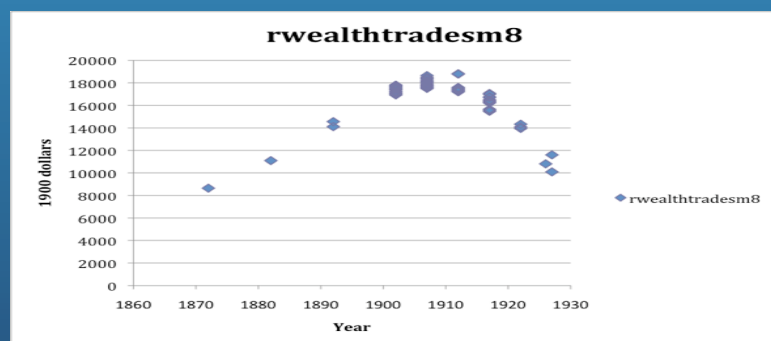
Building Trades



Professions



Trade and Merchandising

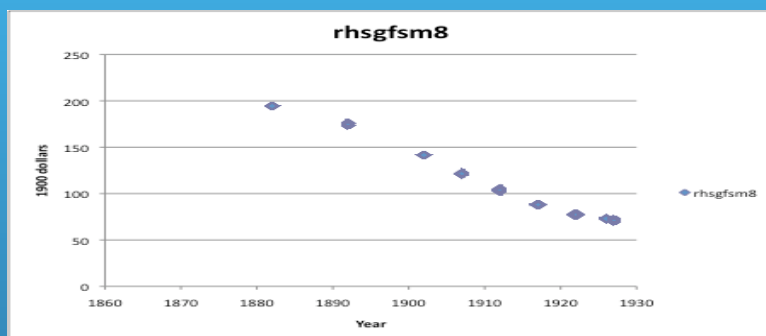


Real Wealth by Asset Categories

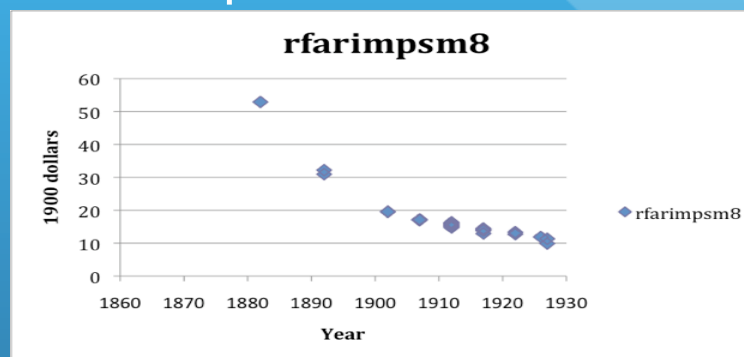
- declines in the categories of household goods and furniture, farm implements and horses.
- real estate crash of the early 1890s in the Golden Horseshoe area may have had lingering effects
- declines in stock in trade and book debts and promissory notes perhaps reflecting the decline of small local business and personal lending. Mortgages decline after 1910.
- Stocks and securities however show substantial increases over time

Asset Category Smoothing

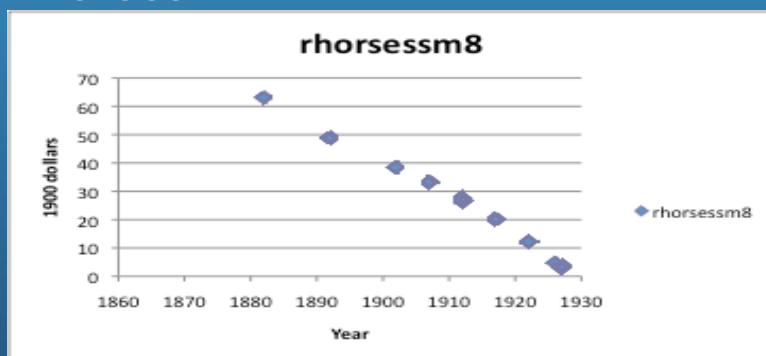
Household Goods



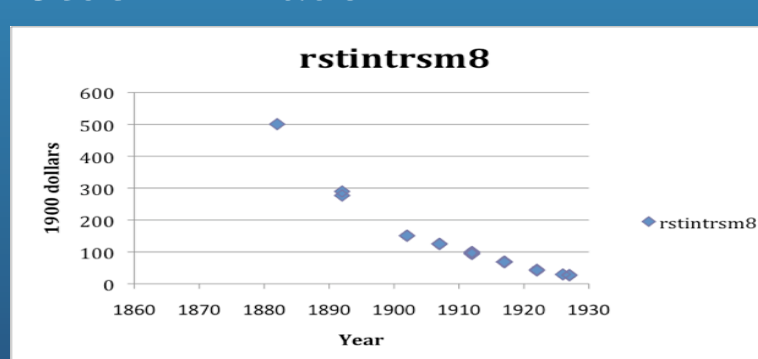
Farm Implements



Horses

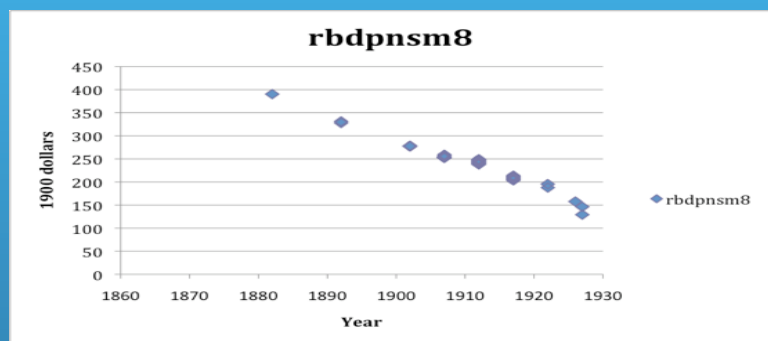


Stock in Trade

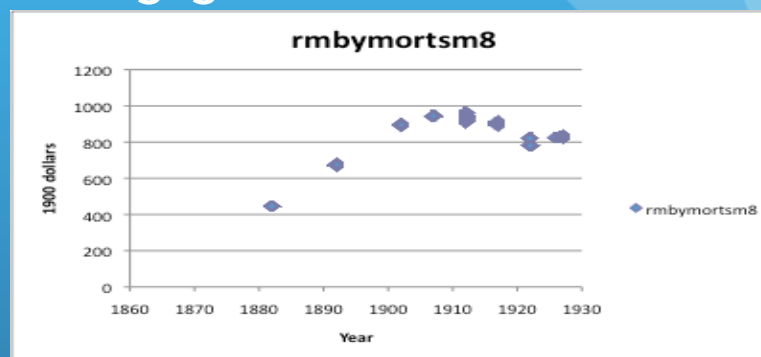


More Asset Categories

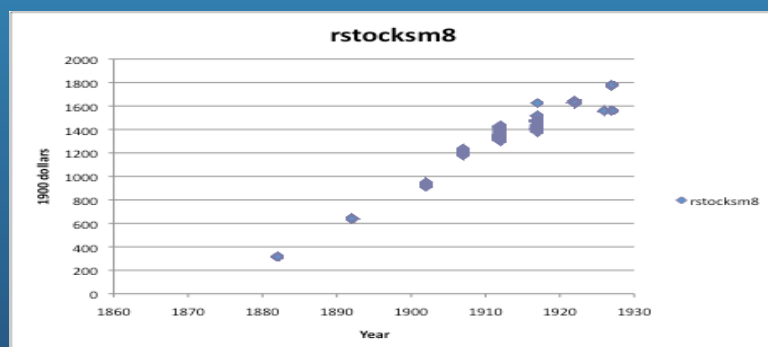
Book Debts



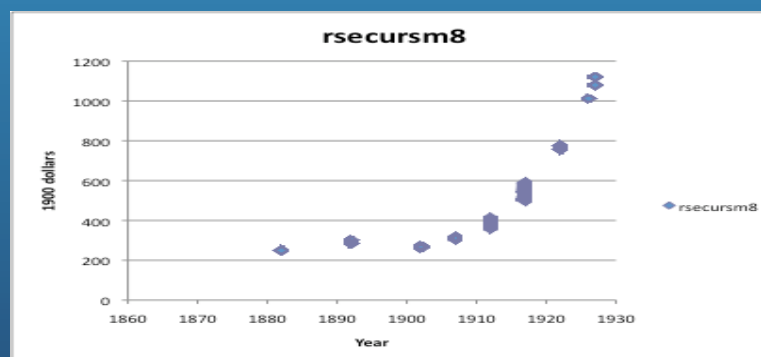
Mortgages



Stocks and Shares

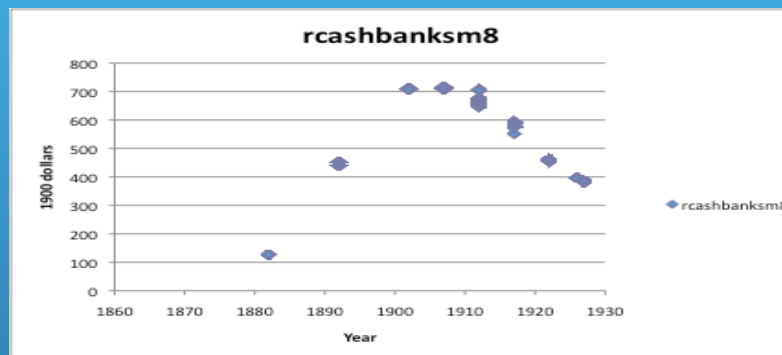


Securities

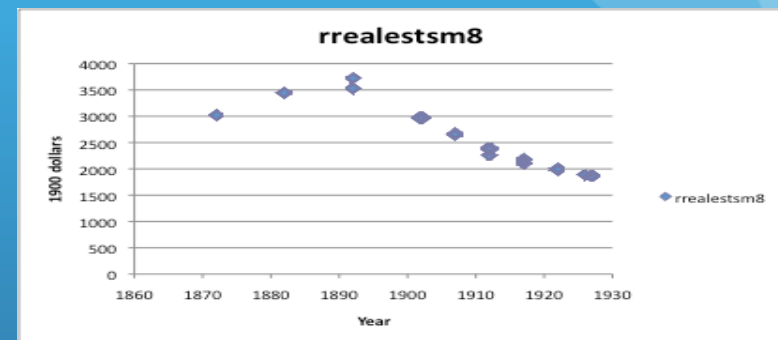


Even More Asset Categories

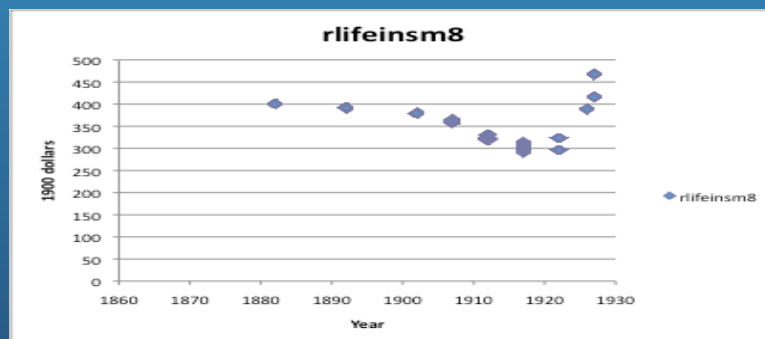
Cash in Bank



Real Estate



Life Insurance



Conclusions

- A rising tide does not float everyone's boat.
- Rising national economic output masks economic change and tumult that affects economic sectors and individuals differently.
- In Wentworth County:
 - Women's wealth rose, men's wealth declined.
 - Public sector, transportation and general labour benefitted. Other sectors more mixed.
 - Investment in financial assets seems to have paid off better than real estate