



Resources, Land Abundance and Inequality: Understanding wealth-holding and Investment in Britain and its Settler Colonies, 1870-1930

by

L. Di Matteo (Lakehead University), D. Green (King's College, London) .A. Owens (Queen Mary University of London) , M. Shanahan (University of South Australia) , J. McAloon (Victoria University Wellington)

A Paper Prepared for the World Economic History Congress, Stellenbosch, South Africa, July 9-13. The financial assistance of the Social Sciences and Humanities Research Council of Canada, is gratefully acknowledged by Livio Di Matteo

Research Question

- For Britain and its Dominions, the land settlement boom of the 19th century in the frontier regions of Australia, Canada and New Zealand saw the acquisition of wealth and assets by settlers.
- A largely unexplored aspect of wealth holding and inequality is the impact of these types of transfers on wealth distribution.
- A key question is whether these transfers of cheap land resulted in greater wealth equality relative to the imperial core and whether these settler economies thereby represented a sort of safety valve for the inequality of Britain.

Summary

- This paper documents the extent of wealth inequality within Britain, Australia, Canada and New Zealand over the period 1870 and 1930
- While extreme concentrations were more prevalent in Britain, overall wealth inequality was also high across the Empire. Moreover, wealth inequality was declining in Britain while rising in the Dominions.
- Among the institutions transmitted by the empire to its Dominions was also the pattern of wealth inequality.

Economic Growth, Wealth and Inequality

- Economic growth, industrialization and inequality correlated in 19th and early 20th centuries.
- Kuznets – inverted U-hypothesis between inequality and growth
- Evidence on Kuznets Relationship:
 - Williamson, Lindert, Higgins,
 - For Canada: Alan Green, Inwood & Irwin

Factors Affecting Inequality

- Growth in income and wealth
- Population characteristics – age, cohort size
- Technology
- Globalization
- Education supply and demand for skills

Two additional ingredients in inequality

- Link between inequality and the manner in which assets are held which influences returns and subsequent distribution of wealth.
- Effect of individual windfalls in wealth as a result of natural resource rents and particularly land endowments acquired during settlement phases.

Land Policies in New World

- United States, Canada and the rest of the Americas as well as Australia and New Zealand are regions of recent European settlement and new settlers often were the recipients of grants of either “free” or heavily subsidized land.

Examples of Land Policies

- In Australia, the British Crown made grants of land to released convicts in New South Wales starting from 1788 though the practice ended in the 1830s.
- New Zealand was also interesting with the period from 1840 to 1852 being one of colonizing associations with land sales at prices deemed “high enough” to force laborers to work for landowners a few years -only in some parts of the North Island had free grants

Canada

- In Upper Canada, there were land settlement grants during the early nineteenth century that were accompanied by a massive expansion of population and economic activity.
- Canadian West: The Dominion government had a land grants policy that provided title to 160 acres of land to any settler over 18 years of age after three years of residence subject to minimum use of the land and a ten-dollar fee

The Data: Probate Wealth data

- Australia: 337 individual estates between 1905 and 1915.
- Canada: four probate data sets: Ontario 1892 (3,515 decedents), Ontario 1902 (3,476 decedents), Wentworth County, Ontario, 1872-1927 (2,516 decedents) and Thunder Bay District 1885-1930 (2,338 decedents).
- England & Wales: 1,146 individuals with wealth portfolios for the period 1870 to 1902.
- New Zealand: for Wellington and Napier. The Napier (100) estates cover the period 1888 to 1901, while the Wellington (148) estates are only for the period 1894 to 1897.

Inequality Measures

- Decile shares
- Gini Coefficient
- Theil Coefficient
- Coefficient of Variation

Comparing Wealth Shares

Table 4.1
Wealth Shares

	Top 1% Share	Top 10% Share
<i>Wentworth County (Ontario, Canada)*</i> 1872-1927	25%	64%
<i>Thunder Bay District (Ontario, Canada)*</i> 1885-1930	48%	78%
<i>Ontario*</i> 1892 & 1902	30%	57%
<i>Britain**</i> 1875	61%	74%
<i>England & Wales***</i> 1870-1902	31%	79%
<i>New Zealand****</i> 1888-1901	43%	89%
<i>Australia*****</i> 1905-1915	17%	55%

* Source: Di Matteo Micro data

**Source: 1875 Lindert microdata (Probate1.xls.)

***Source:Green & Owen microdata

**** McAloon Micro data

***** Shanahan Micro data

Inequality Measures

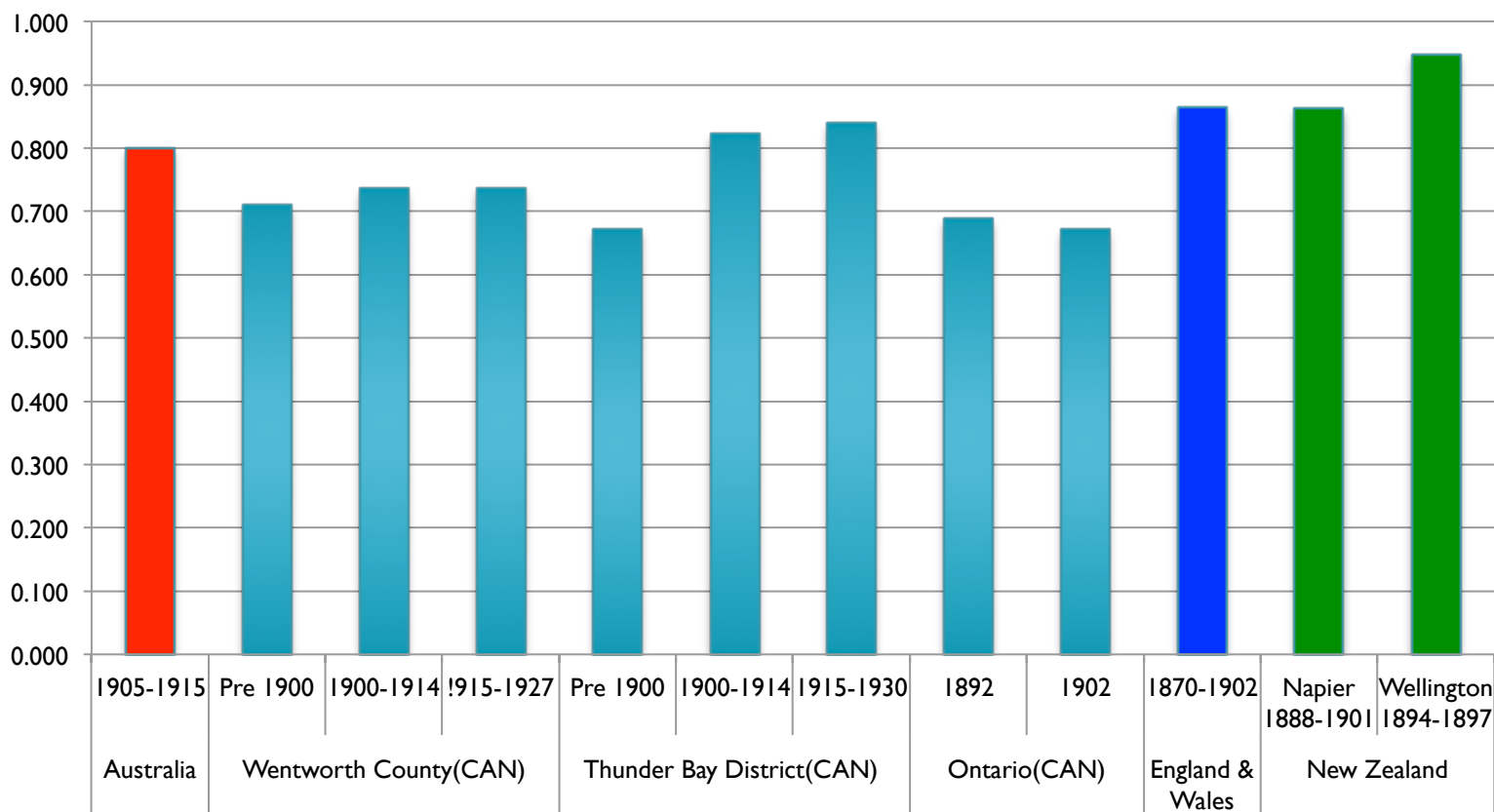
TABLE 4.2

Nominal Wealth Inequality

	Gini	Theil	Coeff of Var	Average Net Wealth(US \$)	Average Real Estate/Wealth
Canada					
<i>Wentworth County</i>					
Pre 1900	0.7086	1.0556	2.1651	8280	0.4551
1900-1914	0.7343	1.2741	3.0097	8040	0.4257
1915-1927	0.7361	1.3204	3.1505	12642	0.4069
<i>Thunder Bay District</i>					
Pre 1900	0.6700	0.8819	1.8145	2963	0.4088
1900-1914	0.8221	1.7428	3.7309	10227	0.4849
1915-1930	0.8388	2.4295	7.5458	12138	0.4088
<i>Ontario</i>					
1892	0.6875	1.2067	3.5710	7427	0.4900
1902	0.6703	1.1188	3.8730	6334	0.4346
<i>England & Wales</i>					
1870-1902	0.86336373	1.850192	3.8826	19412	0.2351
<i>New Zealand</i>					
Napier 1888-1901	0.8611	1.9444	3.7243	15750	0.4748
Wellington 1894-1897	0.9460	3.1291	6.7336	8012	0.1821
<i>Australia</i>					
1905-1915	0.7983	1.4258	2.9028	9773	0.6567

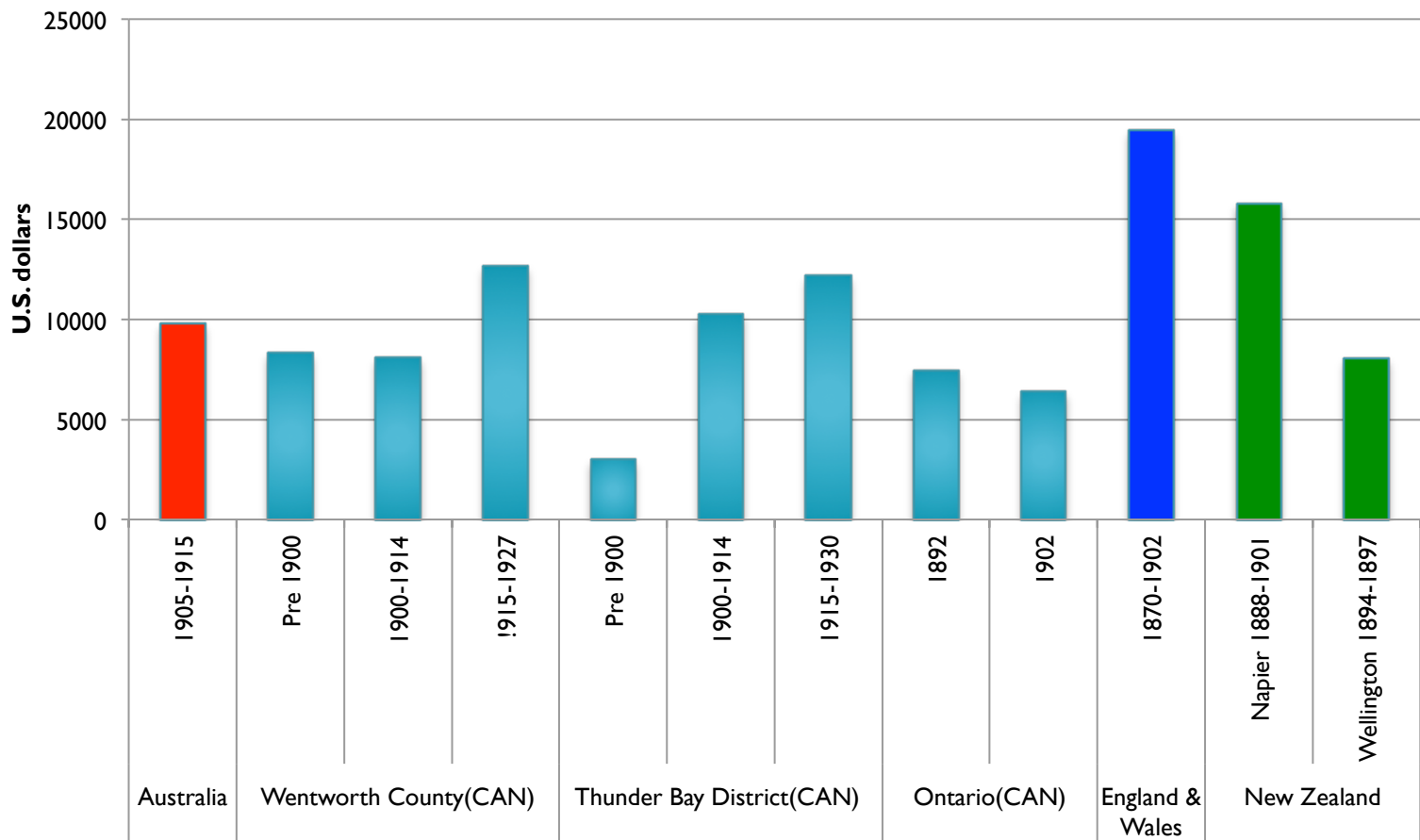
Gini Inequality Measures

Gini Coefficients for Britain and the Dominions: 1870-1930



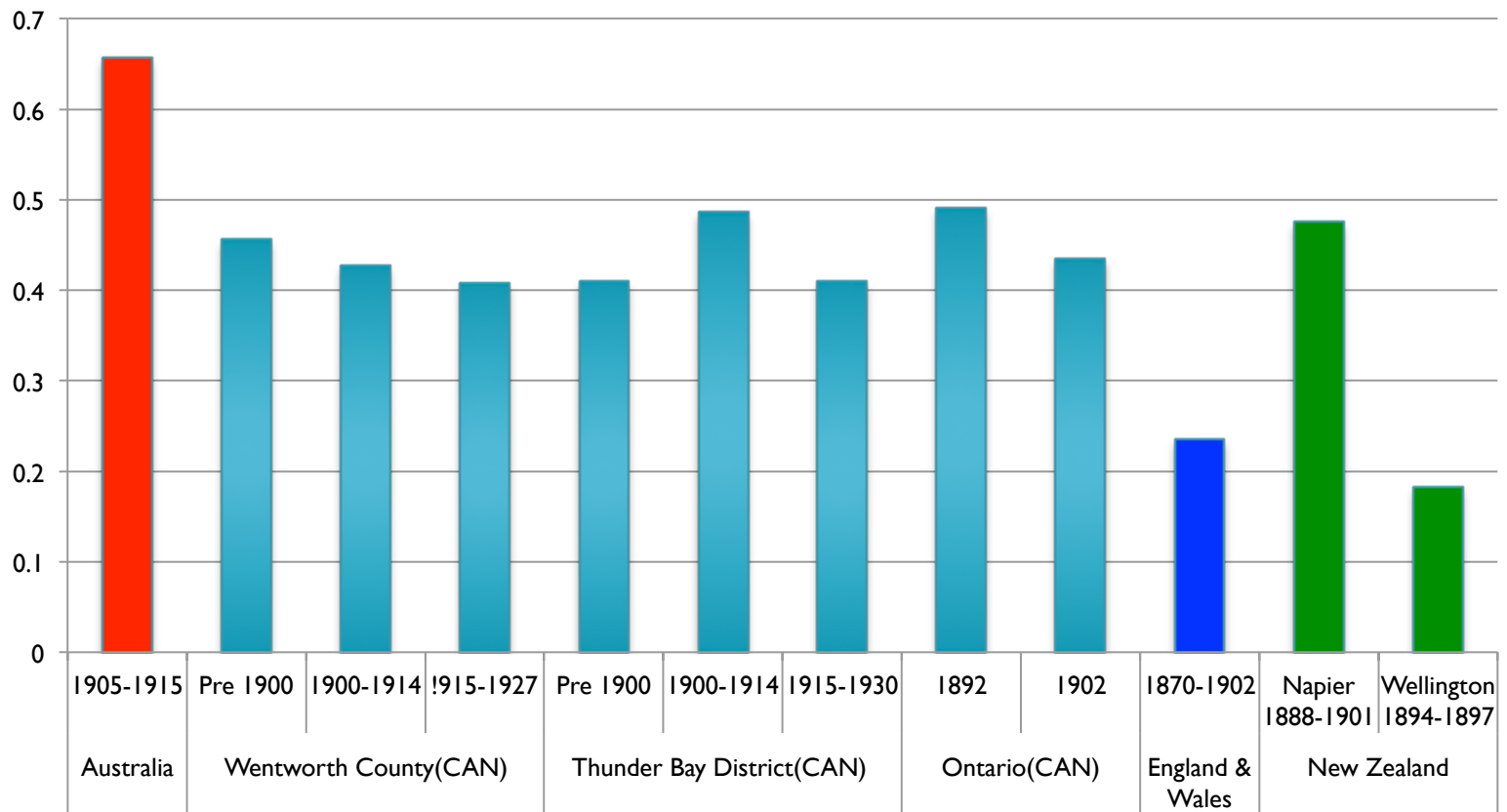
Wealth Comparisons

Average Net Wealth (\$US): Britain and the Dominions



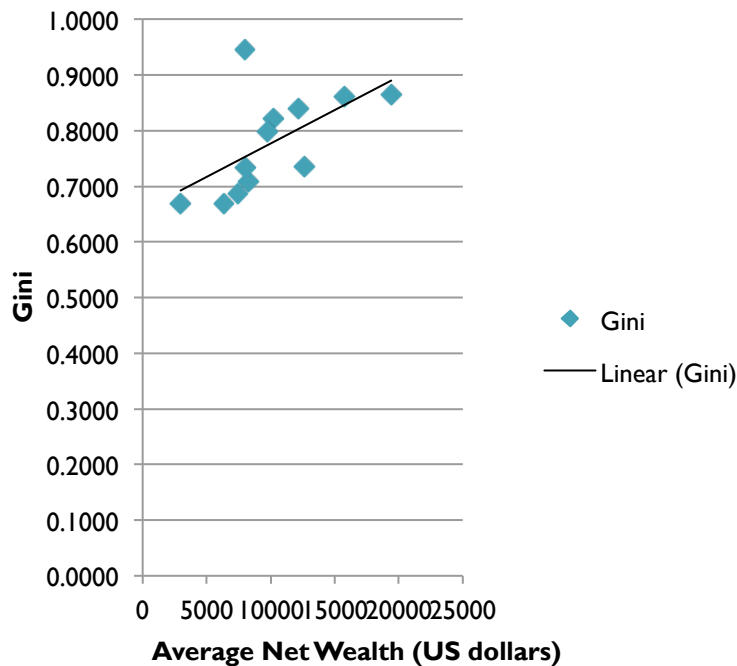
Real Estate Portfolios

Real Estate Share of Wealth for Britain and the Dominions

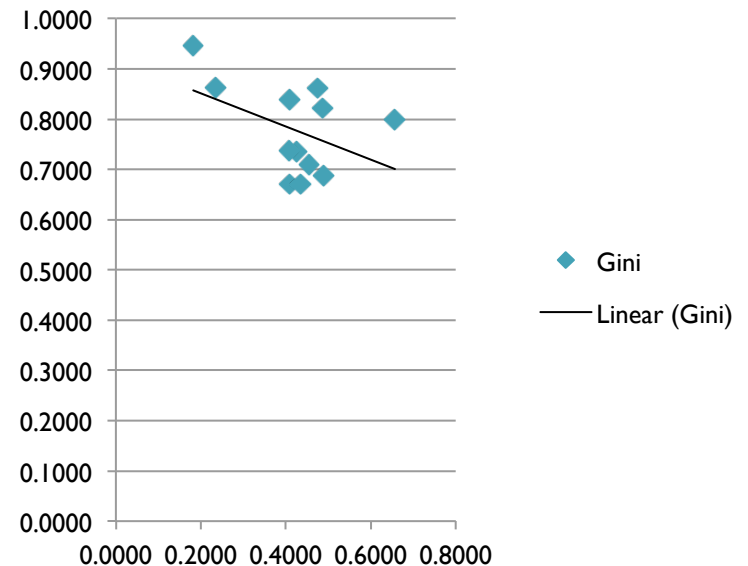


Relationships

Gini Versus Net Wealth for England and Wales and the British Settler Economies (Source: Table 4.2)



Gini Versus the Average Real Estate Share of Net Wealth for England and Wales and the British Settler Economies (Source: Table 4.2)





ANNUALIZED DATA FOR REGRESSION ANALYSIS

Annual Gini Coefficients for Wealth with Trends: 1870-1930

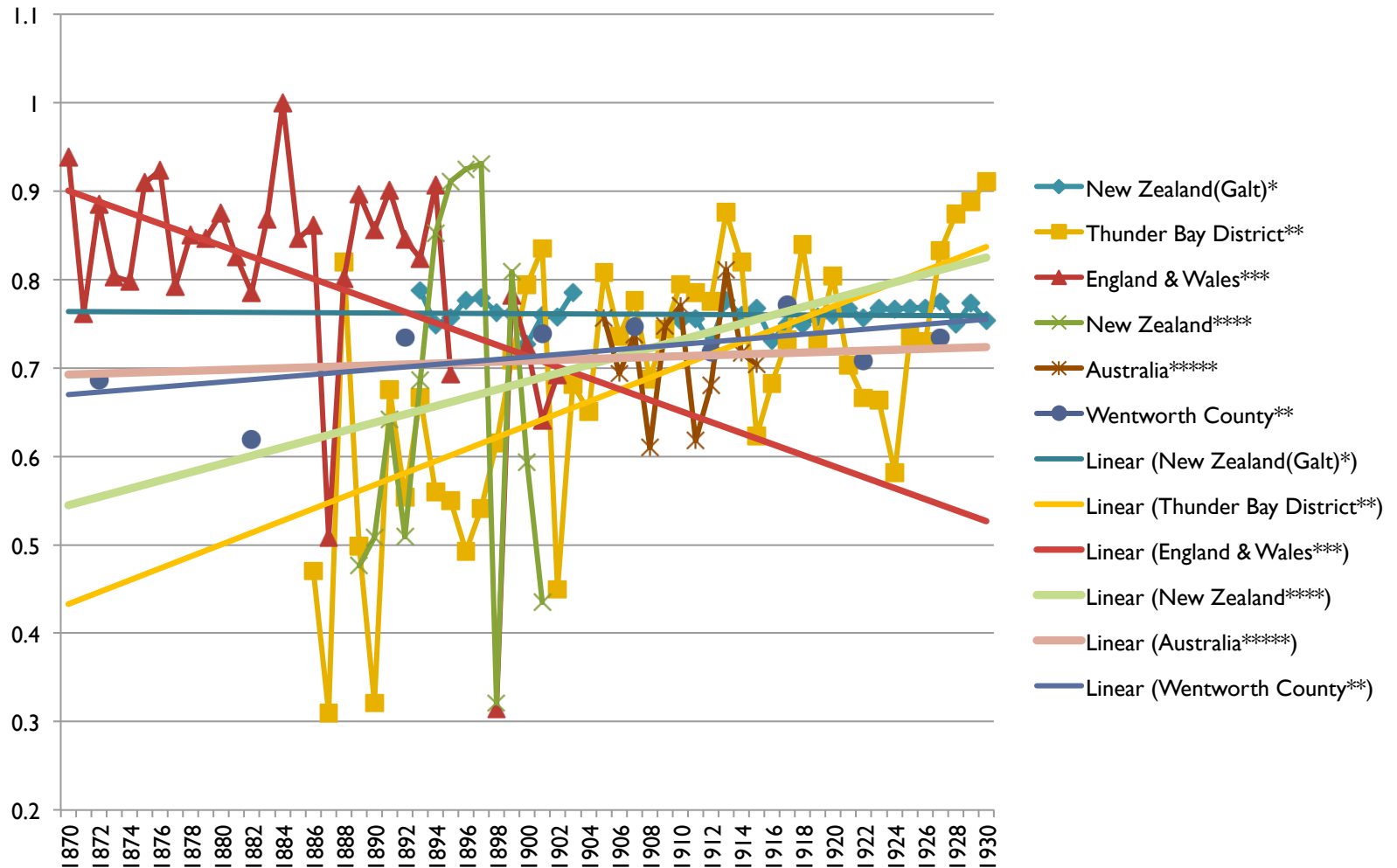


Table 4.3: Summary Statistics for Annualized Data

Variable	Obs	Mean	Std. Dev.	Min	Max
year	111	1899.793	14.94117	1870	1930
newzealand	111	0.1171171	0.3230181	0	1
australia	111	0.0990991	0.3001501	0	1
englandwales	111	0.2792793	0.4506797	0	1
canada	111	0.5045045	0.5022472	0	1
wealthavgusd	111	12379.81	11460.33	630.5	69167.03
wealthavgusdsq	111	2.83E+08	6.29E+08	397530.3	4.78E+09
rwavg	111	0.4204081	0.2120895	0.004897	1
gini	111	0.7227301	0.1451955	0.31	1
lgini	111	-0.349254	0.2360632	-1.171183	0

Results

Table 4.4: Regression Results

Variables	gini Coeff*,**	t-stat	lgini Coeff	t-stat
year	0.0013087000	1.15	0.0024684000	1.29
wealthavgusd	0.0000105000	3.42	0.0000156000	3.03
wealthavgusdsqq	-0.0000000001	-1.97	<i>-0.0000000001</i>	<i>-1.72</i>
rwavg	-0.2387568000	-3.43	-0.3855827000	-3.31
australia	0.0480407000	0.75	0.1031334000	0.96
newzealand	-0.0519627000	-1.09	-0.0911970000	-1.14
canada	-0.0166292000	-0.35	-0.0158219000	-0.20
_cons	-1.7547530000	-0.82	-5.0195090000	-1.40
Adj-R squared	0.3038		0.2595	
F (7,103)	7.8600		6.5100	

* **Bold** denotes significant at the 5% level

** *Italic* denotes significant at the 10% level

Conclusions

- Britain and its Dominions had high and persistent levels of inequality.
- Over time inequality was actually rising in the Dominion settler economies but declining in the data for England and Wales.
- Inequality varied positively with the level of wealth and inversely with the share of wealth held as real estate and these relationships appear to hold when regression analysis is used.

Final words

- If there was a safety valve for inequality in the imperial core out amongst the Dominions, it was in the form of the opportunity to acquire wealth in a new but nevertheless still quite unequal distribution.
- The mitigating factor in all this was that while there was great and persistent inequality even in the settler economies, the inverse relationship between land holding and inequality meant that the greater shares of land ownership did provide some opportunity to reduce inequality.