## Supplementary graphs & material (not shown during lecture)

## Computing inheritance flow

$$B_t/Y_t = \mu_t m_t W_t/Y_t$$

- W<sub>t</sub>/Y<sub>t</sub> = aggregate wealth/income ratio
- m<sub>t</sub> = aggregate mortality rate
- μ<sub>t</sub> = ratio between average wealth of decedents and average wealth of the living (= age-wealth profile)
- → The U-shaped pattern of inheritance is the product of three U-shaped effects

Figure 8: The ratio between average wealth of decedents and average wealth of the living in France 1820-2008

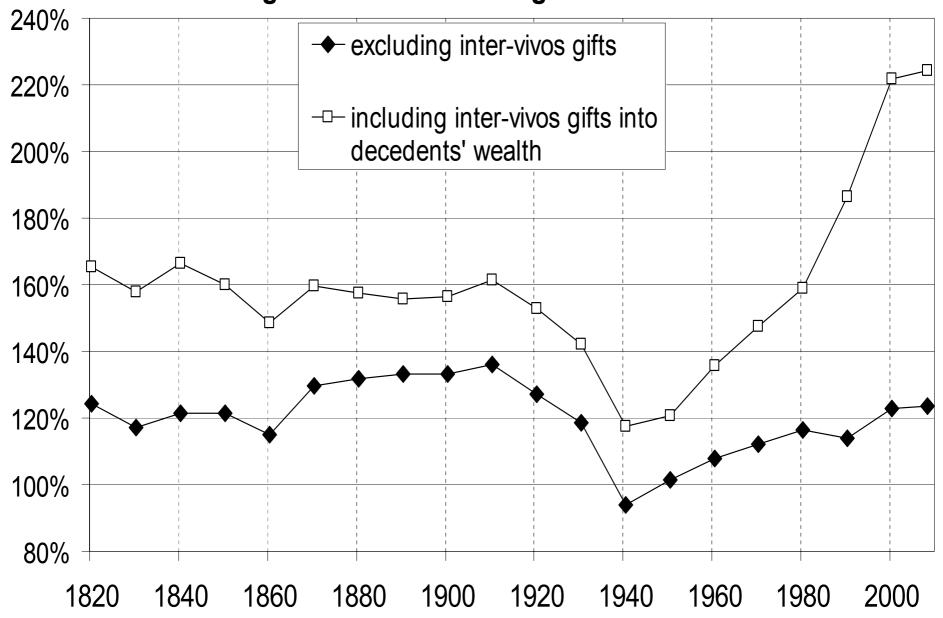


Table 2: Raw age-wealth-at-death profiles in France, 1820-2008

	20-29	30-39	40-49	50-59	60-69	70-79	80+
1827 1857	50% 57%	63% 58%	73% 86%	100% 100%	113% 141%	114% 125%	122% 154%
1887 1902	45% 26%	33% 57%	63% 78%	100% 100%	152% 172%	213% 176%	225% 233%
1912 1931	23% 22%	54% 59%	74% 77%	100% 100%	158% 123%	176% 176% 137%	237% 143%
1947 1960	23% 28%	52% 52%	77% 77% 74%	100% 100% 100%	99% 110%	76% 101%	62%
1984	19%	55%	83%	100%	118%	113%	87% 105%
2000 2006	19% 25%	46% 42%	66% 74%	100% 100%	122% 111%	121% 106%	118% 134%

Figure 13: Labor & capital shares in (factor-price) national income, France 1820-2008

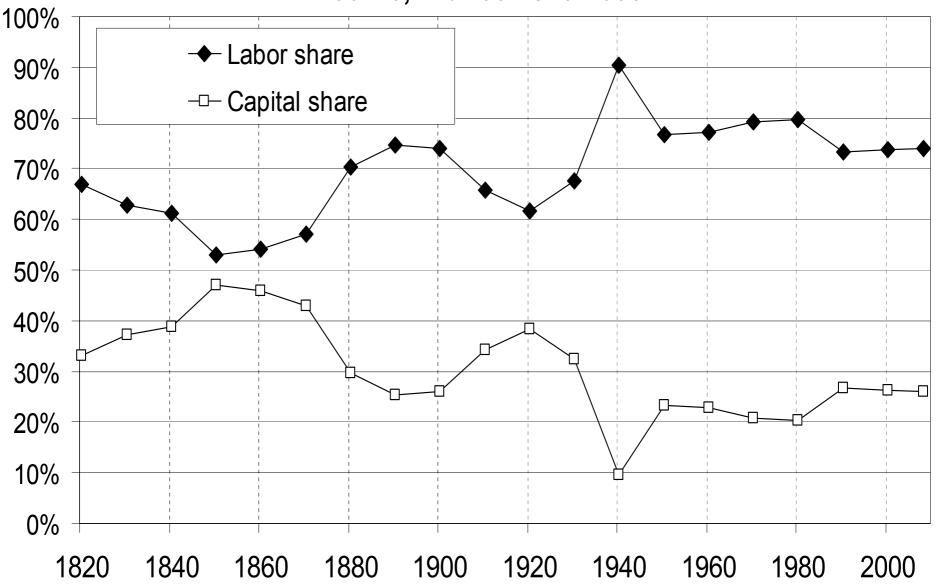


Figure 11: Private savings rate in France 1820-2008

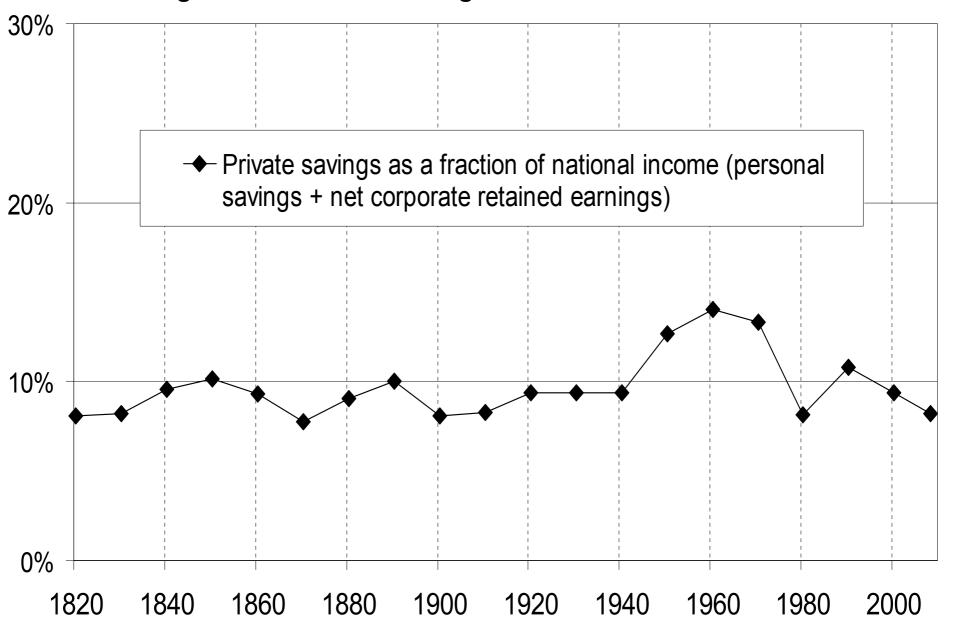


Figure 12: Observed vs simulated inheritance flow, France 1820-2050

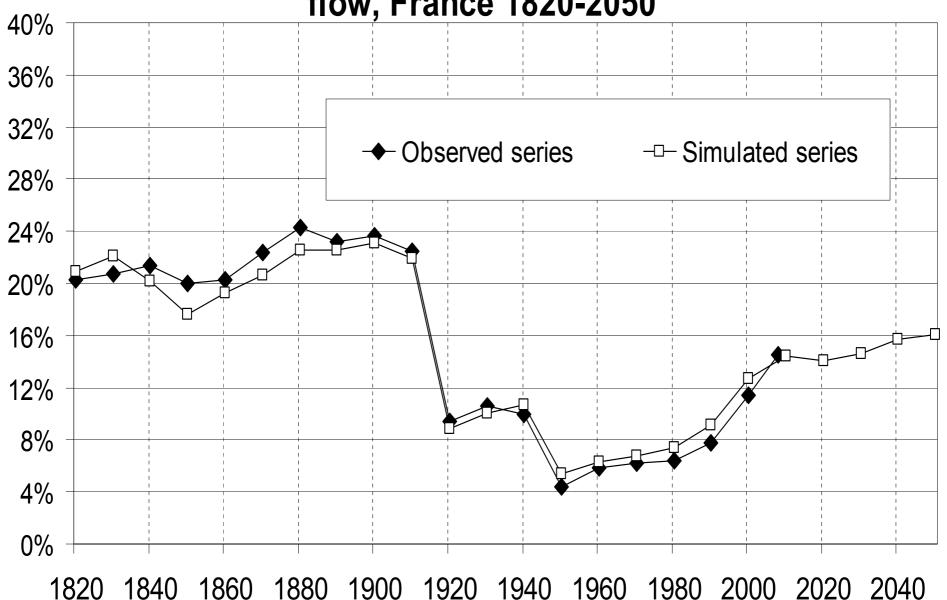


Figure 14: Rate of return vs growth rate France 1820-1910

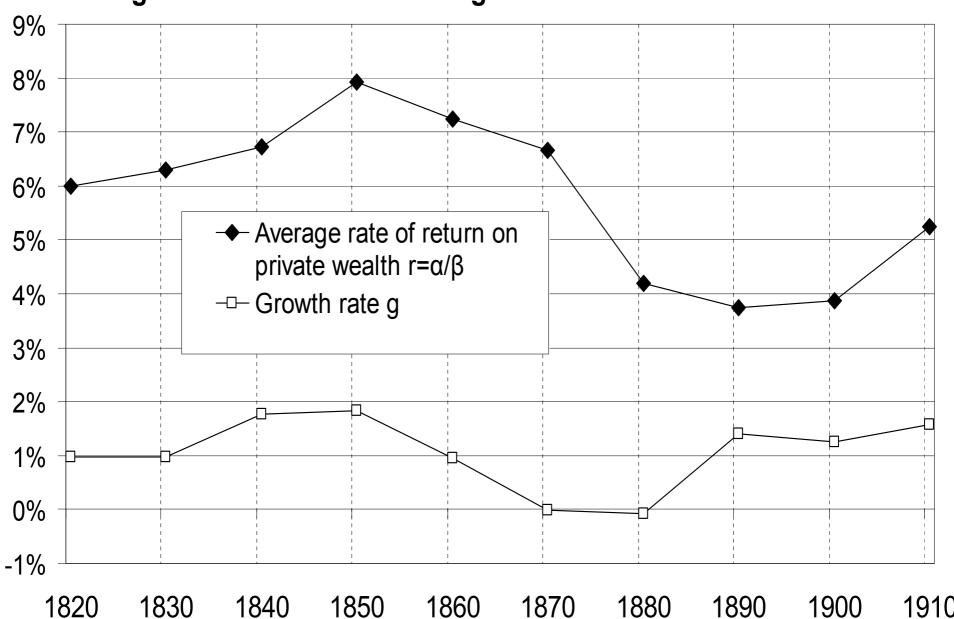


Figure 15: Capital share vs savings rate France 1820-1910

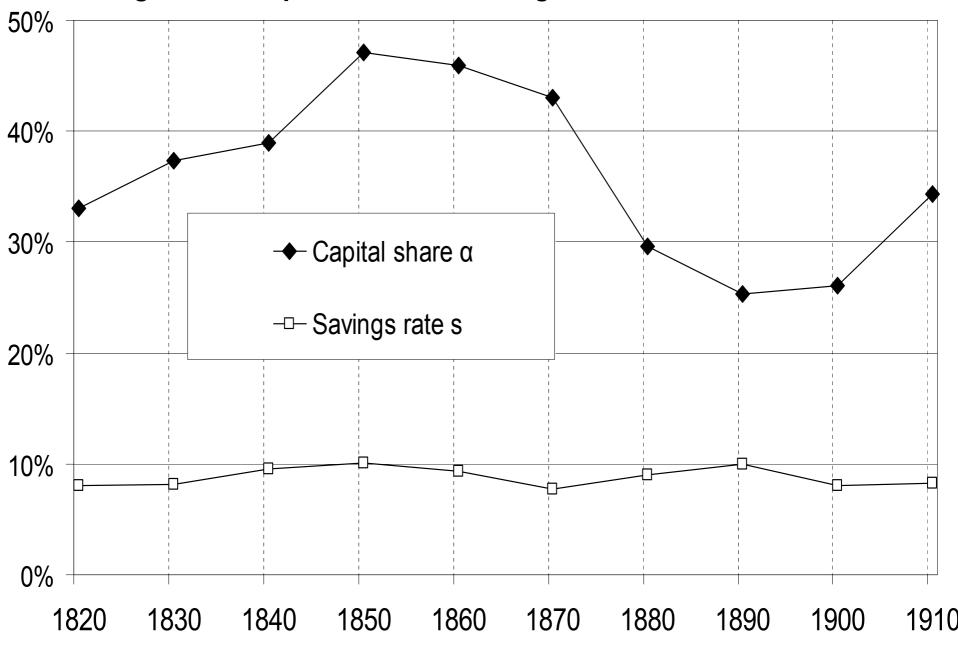
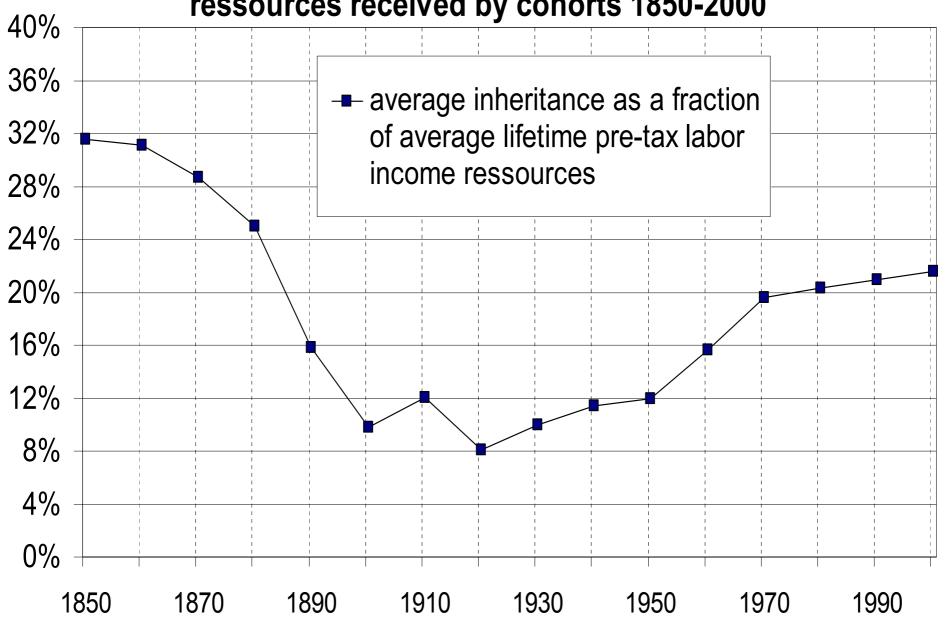


Figure 16: The share of inheritance in lifetime ressources received by cohorts 1850-2000



## Application to the share of inheritance in total wealth

- Modigliani AER 1986, JEP 1988: inheritance = 20% of total U.S. wealth
- Kotlikoff-Summers JPE 1981, JEP 1988: inheritance = 80% of total U.S. wealth
- Three problems: Bad data
- We do not live in a stationary world: lifecycle wealth was much more important in the 1950s-1970s than it is today
- We do not live in a representative-agent world → new definition of inheritance share

Figure 20: The share of inheritance in aggregate wealth accumulation, France 1900-2050 160% 140% ¬□ non-capitalized bequest share 120% → alternative definition 100% 80% 60% 40% 20% 0% 1900 1920 1940 1960 1980 2000 2040 2020

Table 1: Accumulation of private wealth in France, 1820-2009

	Real growth rate of national income	Real growth rate of private wealth	Savings- induced wealth growth rate	Capital- gains- induced wealth growth rate	Memo: Consumer price inflation
	g	g <sub>w</sub>	$g_{ws} = s/\beta$	q	p
1820-2009	1,8%	1,8%	2,1%	-0,3%	4,4%
1820-1913	1,0%	1,3%	1,4%	-0,2%	0,5%
1913-2009	2,6%	2,4%	2,8%	-0,3%	8,3%
1913-1949	1,3%	-1,7%	0,7%	-2,4%	13,9%
1949-1979	5,2%	6,2%	5,4%	0,8%	6,4%
1979-2009	1,7%	3,8%	2,8%	1,0%	3,6%

Figure 5:Wealth/disposable income ratio France 1820-2008

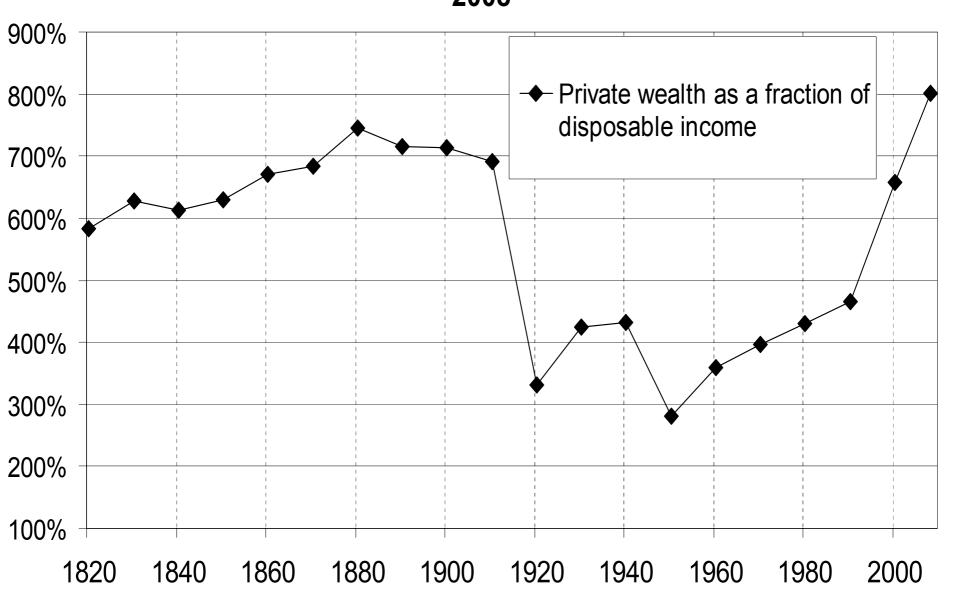
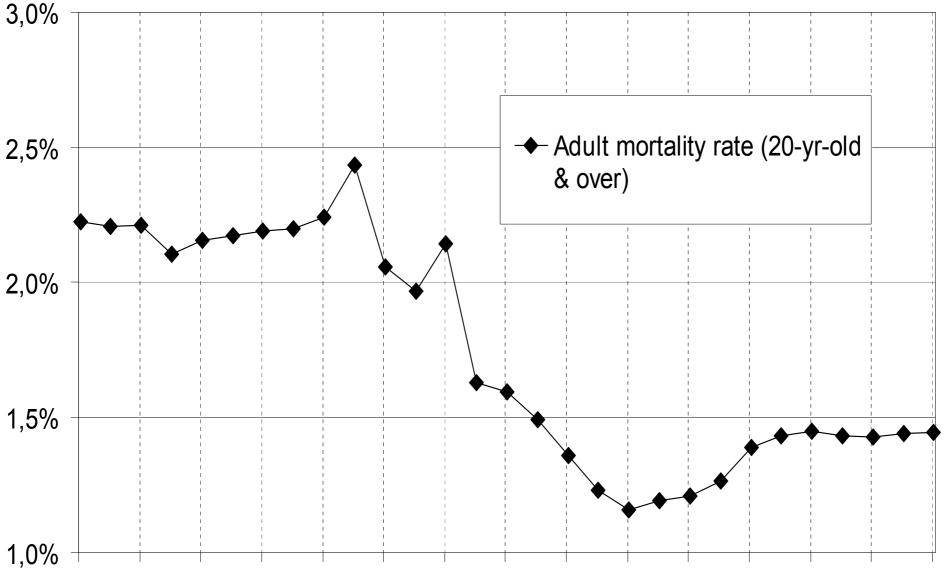
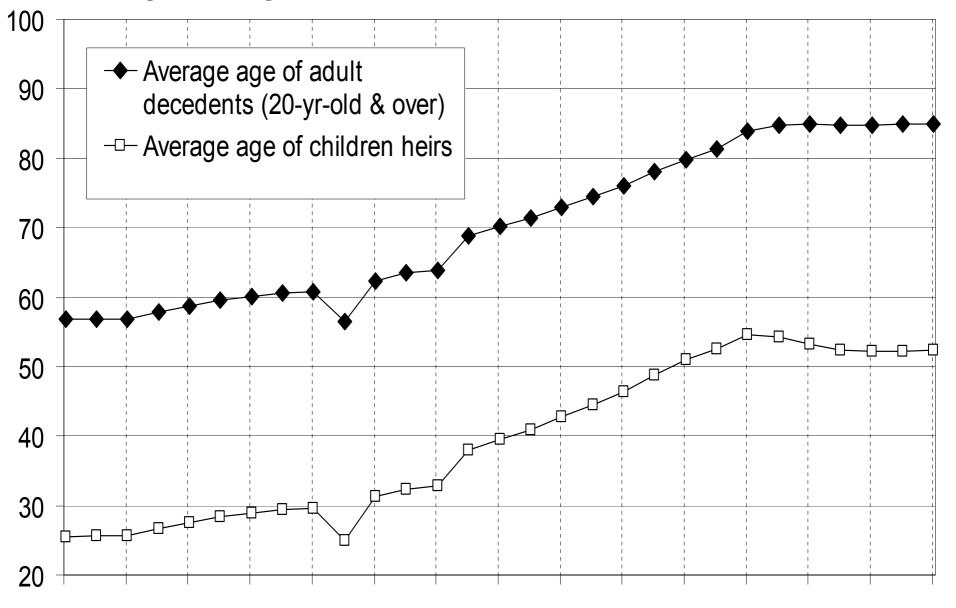


Figure 6: Mortality rate in France, 1820-2100



1820 1840 1860 1880 1900 1920 1940 1960 1980 2000 2020 2040 2060 2080 2100

Figure 7: Age of decedents & heirs in France, 1820-2100



1820 1840 1860 1880 1900 1920 1940 1960 1980 2000 2020 2040 2060 2080 2100

Figure A1: Annual inheritance flow as a fraction of national income, France 1900-2008 (annual series)

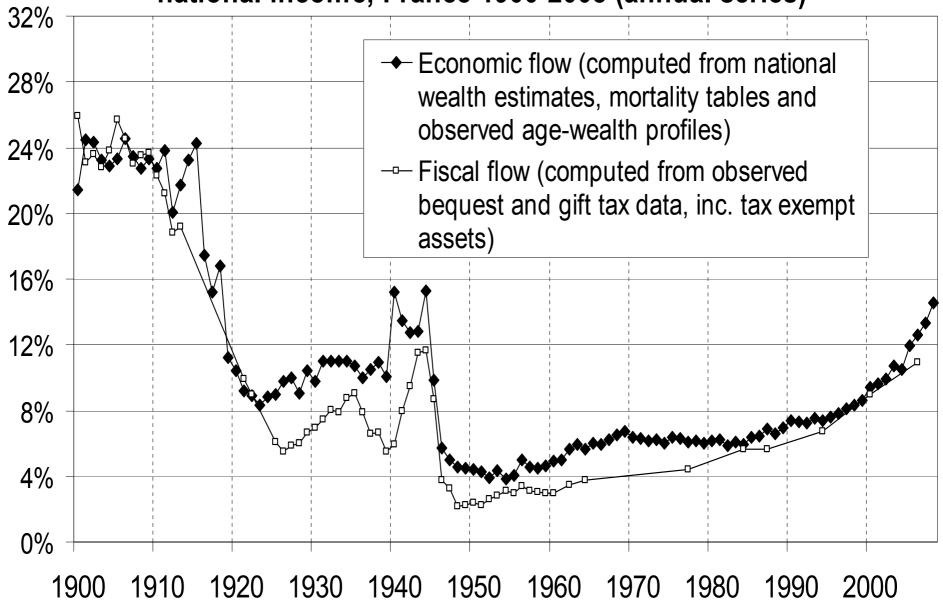
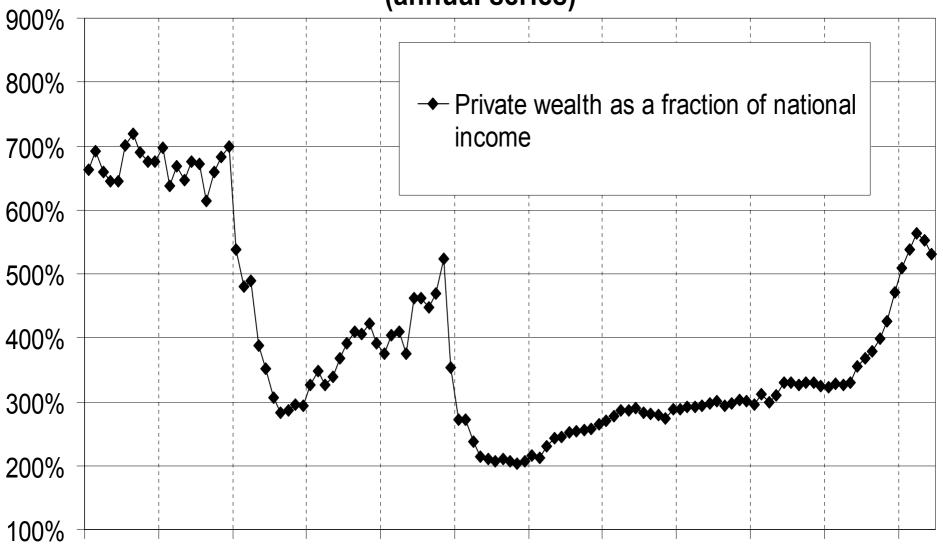


Figure A2: Wealth-income ratio in France 1896-2009 (annual series)



1896 1906 1916 1926 1936 1946 1956 1966 1976 1986 1996 2006

Figure A3: Wealth-disposable income ratio in France 1896-2009 (annual series)

