Intergenerational Wealth Mobility in France over the 20th Century[1]

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Extended abstract

1. Motivation

The rise in income and wealth inequalities in developed countries (Alvaredo et al, 2017a; Piketty, 2014), and particularly in France (Garbinti et al., 2017 and Garbinti et al., 2018), is now well-documented. Such a pattern raises several concerns regarding the way resources and opportunities are distributed across individuals and how they are transferred across generations (Corak, 2013). Due to increased inequality, there is a strong concern that next generation's prospects may be more and more strongly determined by parental economic resources.

We study intergenerational wealth mobility in France between two generations for cohorts born between 1920 and 1986. We address the following questions: how strong is the correlation between the wealth of two generations? Has this correlation evolved over time? To what extent education and intergenerational transfers explain this evolution? In order to address these issues, we take the homeownership status as a proxy for wealth levels and study the evolution of the homeownership rate for the second generation depending on the wealth of the first generation.

Many papers study income or education intergenerational mobility (e.g. Auten et al. 2013, Chetty et al. 2014, Chetty et al., 2017, Corak et al., 2014, Lee and Solon, 2009, Long and Ferrie, 2013, Olivetti and Paserman, 2015). Wealth mobility is also of interest as it may be considered as a better proxy for lifetime economic resources (see Charles and Hurst, 2003; Boserup et al, 2014; Hansen, 2014; Pfeffer and Killewad 2015, Adermon et al, 2016 or Bourdieu et al. 2017). These papers find significant correlations between parents' wealth and children wealth, which may be due to bequests and inter-vivo transfers, investment in the children' human capital or to the transmission of preferences and propensity to save across generations[2]. For France, to our knowledge, only two papers study intergenerational wealth transmission and they cover either the 19th century (Bourdieu et al. 2017)) or the mid-20th century (Arrondel and Grange, 2006). Some previous papers study the role of parental wealth (or parental homeownership) on the homeownership status of their children (e.g. Smits and Mulder 2008; Mulder et al, 2015; Blanden and Machin, 2017). Studies on the dynamics of this

[1] This paper reflects the opinions of the authors and does not necessarily express the views of the Banque de France. This work is also supported by a public grant overseen by the French National Research Agency (ANR) as part of the "Investissements d'avenir" program (reference: ANR-10-EQPX-17 – Centre d'accès sécurisés aux donnés – CASD).
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[2] Charles and Hurst (2003) and Pfeffer and Killewad (2015) use data from the PSID to study intergenerational wealth mobility in the U.S. Both papers estimate intergenerational wealth elasticity around 0.4. Boserup et al. (2014) and Adermon et al. (2016) are based respectively on Danish wealth records and on several Swedish sources. These two papers estimate intergenerational wealth elasticity and rank-rank correlations. Hansen (2014) focuses on the top of the wealth distribution and study the importance of family wealth in being in top wealth percentiles based on Norwegian register of wealth.

relationship are scarce. Just a few studies focus on this dynamics, through the comparison of two periods/cohorts (Blanden and Machin, 2017; Smits and Mulder, 2008).

2. Plan of the analysis

Our contribution is threefold. First we study intergenerational wealth mobility in France between two generations for several cohorts covering the entire 20th century. We take the homeownership status as a proxy for wealth levels[3]. We study the evolution of the homeownership rate for the second generation according to the wealth of the first generation. We start by comparing the homeownership rate of the second generation depending on the homeownership status of their parents. We then go further and compare the homeownership rates of individuals whom parents also owned other real estate properties in addition to their main residence (defined as "wealthy parents") with individuals whom parents did have any real estate property.

Second we document heterogeneity in homeownership rate at various ages depending on the first generation homeownership status.

Third, we investigate some potential channels which could explain the evolution of the intergenerational wealth correlation: education (through diploma levels defined for each cohort) and intergenerational wealth transfers (gift and inheritances – To be done)

3. Data

We use all available waves of the French wealth survey[4] conducted by the French Statistical Institute (INSEE). Similarly to the SCF for the US, the French Wealth Survey collects household level detailed information on assets (financial, housing and professional assets) and liabilities, family composition, socio-economic characteristics and intergenerational transfers. In particular, we know when the homeowners acquired their main residence. To the aim of this paper, we take advantage of a specific feature of the French wealth survey: it collects retrospective information on the wealth of the parents of the reference person (and his/her partner) when she was 14 years old, including whether the parents were holding their home.

4. Preliminary results

4.1. Increasing intergenerational wealth correlation over time

- In a context of rising homeownership over the 20th century, the homeownership rate of households of the second generation whom parents were also homeowner increases more than the homeownership rate of people whom parents were not homeowner. This increase in the intergenerational wealth correlation is more pronounced at younger ages, ie. before 40 years old [Graph 1a and Graph 1b].

[INSERT Graph 1a and Graph 1b].

[3] We show that this criterion is relevant over time to discriminate between "wealthy" and "poor" households.

[4] These waves refer to the following years: 1986, 1992, 1998, 2004, 2010, 2014, 2017.

- The increase in the intergenerational wealth correlation is even larger when comparing the homeownership rates of people whom parents also owned other real estate properties in addition to their main residence with people whom parents did not have any real estate property [Graph 2a and Graph 2b].

[INSERT Graph 2a and Graph 2b].

- We test for the statistical significance of such differences. We estimate the probability to be homeowner depending on the parental homeownership status, controlling for cohort effects and allowing for differences in the effect of the parental homeownership status across cohorts (Table 1 and Table 2). We find statistically significant coefficients for the interaction term which is also increasing with younger cohorts, both when considering the probability to be homeowner before 40 years old or before 50 years old. Such a result confirms the increasing intergenerational wealth correlation in France over the 20th century.

[INSERT Table 1 and Table 2]

4.2. Education does not fully explain the increase in the intergenerational wealth correlation over time

We now turn on the role of diploma on intergenerational wealth correlation. To do so, we regress the homeownership status of the household on the cohort of the head of the household, her cohort interacted with her diploma and her cohort interacted with the homeownership status of her parents. By interacting cohort with diploma it allows us to take into account relative diploma within a cohort and to avoid considering the effect of a given diploma as fixed over time (which is very likely to not be a realistic assumption).

To represent the gap in the probability of being homeowner (at a given age) after controlling for education, we plot the following difference in conditional expectations :

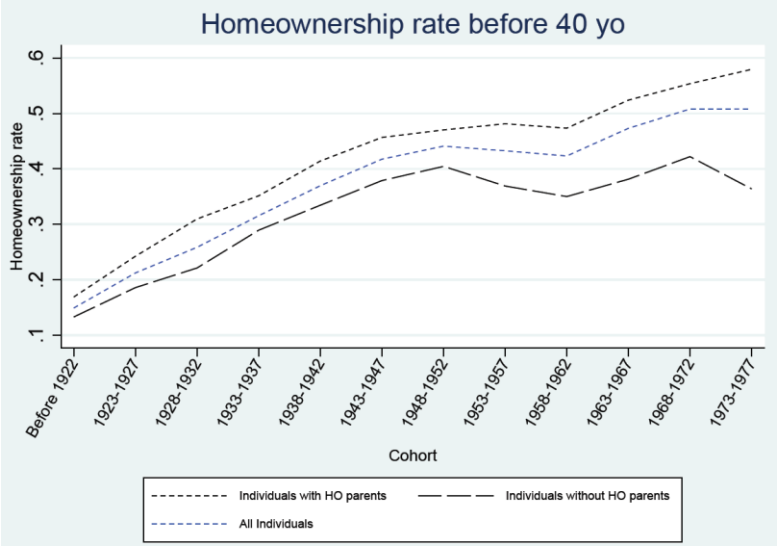
E[Y/cohort, diploma, parents homeowners] - E[Y/cohort, diploma, parents non homeowners]

As it turns out (Graphs 3a and 3b), the gradient of the effect of parental wealth remains statistically significant, even after controlling for diploma,. Interestingly, the effect of diploma just lowers the gap for the youngest cohorts.

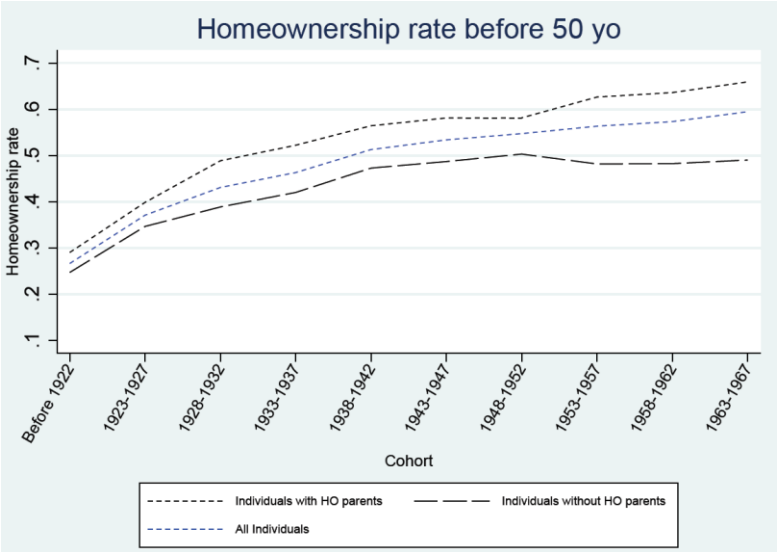
[INSERT Graph 3a and Graph 3b]

4.3. The role of intergenerational transfers : TO BE DONE

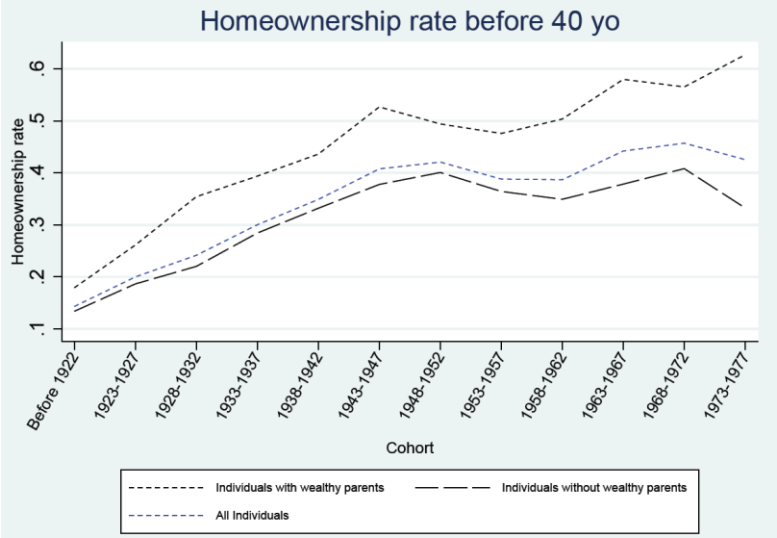
Graph1.a Homeownership rate **before 40 years** old for individuals whom parents were homeowners and for individuals whom parents were not homeowners



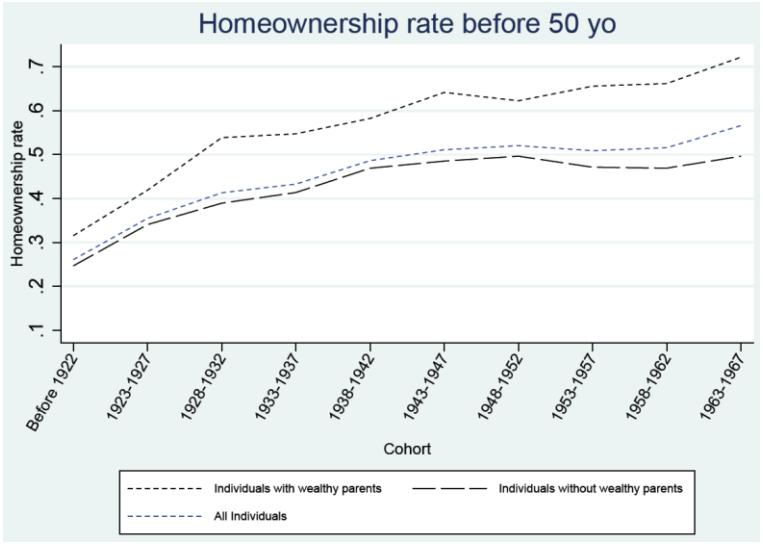
Graph1.a Homeownership rate **before 50 years** old for individuals whom parents were homeowners and for individuals whom parents were not homeowners



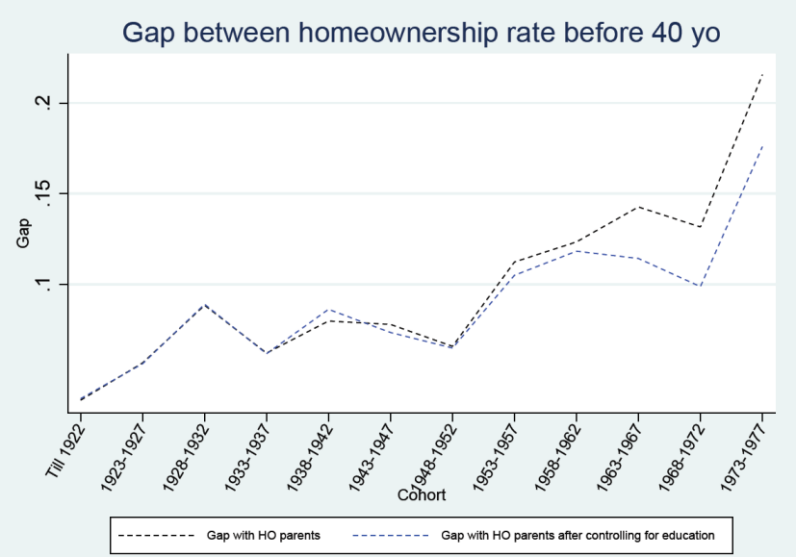
Graph2.a Homeownership rate **before 40 years** old for individuals with "wealthy parents" (parents also owned other real estate properties in addition to their main residence) and for individuals whom parents were not homeowners



Graph2.a Homeownership rate **before 50 years** old for individuals with "wealthy parents" (parents also owned other real estate properties in addition to their main residence) and for individuals whom parents were not homeowners



Graph3.a Homeownership rate **before 40 years** old for individuals whom parents were homeowners and for individuals whom parents were not homeowners (in black : without controlling for education, in blue : after controlling for education)



Graph3.b Homeownership rate **before 50 years** old for individuals whom parents were homeowners and for individuals whom parents were not homeowners (in black : without controlling for education, in blue : after controlling for education)

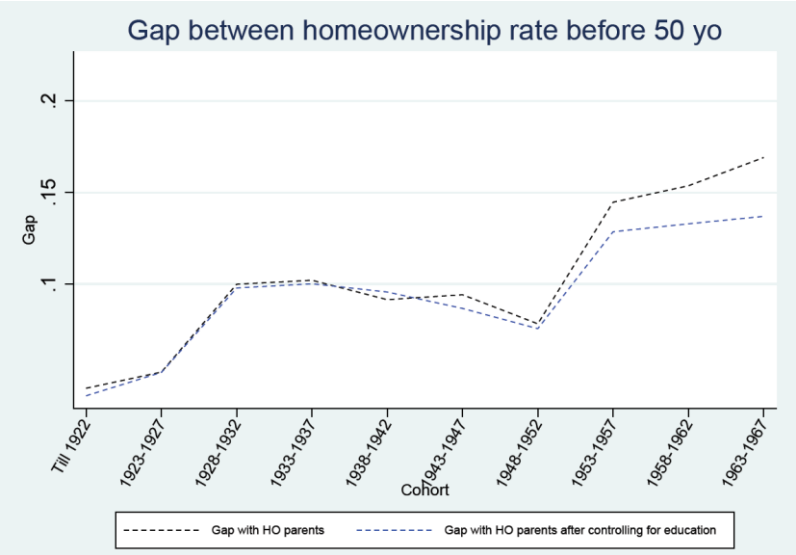


Table 1. Probability to be homeowner before 40 years old and before 50 years old depending on the parental homeownership status

	Probability of being homeowner before…			
	40 yo		**50 yo**	
Constant	0,13	***	0,25	***
Parents homeowners	0,04	***	0,04	***
Cohort*Parents homeowners				
Before 1922	(Ref.)		(Ref.)	
1923-1927	**0,02**	**ns**	**0,01**	**ns**
1928-1932	**0,05**	**	**0,06**	**
1933-1937	**0,03**	**ns**	**0,06**	**
1938-1936	**0,04**	**	**0,05**	*
1943-1947	**0,04**	**	**0,05**	**
1948-1952	**0,03**	**ns**	**0,04**	**ns**
1953-1957	**0,08**	***	**0,10**	***
1958-1962	**0,09**	***	**0,11**	***
1963-1967	**0,11**	***	**0,13**	***
1968-1972	**0,10**	***		
1973-1977	**0,18**	***		
Cohort (birth date)				
Before 1922	(Ref.)		(Ref.)	
1923-1927	0,05	***	0,10	***
1928-1932	0,09	***	0,14	***
1933-1937	0,16	***	0,17	***
1938-1936	0,20	***	0,23	***
1943-1947	0,25	***	0,24	***
1948-1952	0,27	***	0,26	***
1953-1957	0,24	***	0,23	***
1958-1962	0,22	***	0,24	***
1963-1967	0,25	***	0,24	***
1968-1972	0,29	***		
1973-1977	0,23	***		

Table 2. Probability to be homeowner before 40 years old and before 50 years old depending on having wealthy parents" (parents also owned other real estate properties in addition to their main residence) or not

	Probability of being homeowner before…			
	40		**50**	
Constant	0,13	***	0,25	***
Wealthy Parents	0,05	**	0,07	***
Cohort*Wealthy Parents				
Before 1922	(Ref.)		(Ref.)	
1923-1927	**0,03**	**ns**	**0,01**	**ns**
1928-1932	**0,09**	**	**0,08**	*
1933-1937	**0,06**	*	**0,06**	**ns**
1938-1936	**0,06**	**ns**	**0,04**	**ns**
1943-1947	**0,10**	***	**0,09**	**
1948-1952	**0,05**	**ns**	**0,06**	**ns**
1953-1957	**0,07**	*	**0,12**	**
1958-1962	**0,11**	***	**0,12**	***
1963-1967	**0,16**	***	**0,16**	**
1968-1972	**0,11**	**		
1973-1977	**0,25**	***		
Cohort (birth date)				
Before 1922	(Ref.)		(Ref.)	
1923-1927	0,05	***	0,09	***
1928-1932	0,09	***	0,14	***
1933-1937	0,15	***	0,17	***
1938-1936	0,20	***	0,22	***
1943-1947	0,24	***	0,24	***
1948-1952	0,27	***	0,25	***
1953-1957	0,23	***	0,22	***
1958-1962	0,22	***	0,22	***
1963-1967	0,24	***	0,25	***
1968-1972	0,27	***		
1973-1977	0,20	***		

References

Adermon, A., Lindahl, M., & Waldenström, D. (2016). Intergenerational wealth mobility and the role of inheritance: Evidence from multiple generations. *CEPR Discussion Papers No. 11456.*

Alvaredo, F., Chancel, L., Piketty, T., Saez, E., & Zucman, G. (2017a). Global inequality dynamics: New findings from WID. world. *American Economic Review*, *107*(5), 404-09.

Arrondel, L., & Grange, C. (2006). Transmission and inequality of wealth: an empirical study of wealth mobility from 1800 to 1938 in France. *The Journal of Economic Inequality, 4(2),* 209-232.

Auten, G., Gee, G., & Turner, N. (2013). Income Inequality, Mobility, and Turnover at the Top in the US, 1987-2010. *American Economic Review, 103(3),* 168-72.

Blanden, J., & Machin, S. (2017). Home ownership and social mobility. *Centre for Economic Performance Discussion Paper No. 1466.*

Boserup, S. H., Kopczuk, W., & Kreiner, C. T. (2014). Stability and persistence of intergenerational wealth formation: Evidence from Danish wealth records of three generations. *University of Copenhagen, Working Paper.*

Bourdieu, J., Kesztenbaum, L., Postel-Vinay, G., & Suwa-Eisenmann, A. (2014). Intergenerational wealth mobility in France, 19th and 20th century. *Review of Income and Wealth*, *35,* 13-18.

Charles, K. K., & Hurst, E. (2003). The correlation of wealth across generations. *Journal of political Economy, 111(6),* 1155-1182.

Chetty, R., Friedman, J. N., Saez, E., Turner, N., & Yagan, D. (2017). Mobility report cards: The role of colleges in intergenerational mobility. *National Bureau of Economic Research, working paper No. 23618* .

Chetty, R., Hendren, N., Kline, P., Saez, E., & Turner, N. (2014). Is the United States still a land of opportunity? Recent trends in intergenerational mobility. *American Economic Review, 104(5),* 141-47.

Corak, M. (2013). Income inequality, equality of opportunity, and intergenerational mobility. *Journal of Economic Perspectives, American Economic Association, 27(3),* 79-102.

Corak, M., Lindquist, M. J., & Mazumder, B. (2014). A comparison of upward and downward intergenerational mobility in Canada, Sweden and the United States. *Labour Economics, 30,* 185-200.

Garbinti, B., Goupille-Lebret, J., & Piketty, T. (2017). Accounting for wealth inequality dynamics: Methods, estimates and simulations for France (1800-2014). *CEPR Discussion Papers No. 11848*

Garbinti, B., Goupille-Lebret, J., & Piketty, T. (2018). Income Inequality in France, 1900-2014: Evidence from Distributional National Accounts. *Journal of Public Economics, forthcoming.*

Hansen, M. N. (2014). Self-made wealth or family wealth? Changes in intergenerational wealth mobility. *Social Forces, 93(2),* 457-481.

Lee, C. I., & Solon, G. (2009). Trends in intergenerational income mobility. *The Review of Economics and Statistics, 91(4),* 766-772.

Long, J., & Ferrie, J. (2013). Intergenerational occupational mobility in Great Britain and the United States since 1850. *American Economic Review, 103(4),* 1109-37.

Olivetti, C., & Paserman, M. D. (2015). In the name of the son (and the daughter): Intergenerational mobility in the United States, 1850-1940. *American Economic Review, 105(8),* 2695-2724.

Pfeffer, F. T., & Killewald, A. (2015). How rigid is the wealth structure and why? Inter-and multigenerational associations in family wealth. *Population Studies Center Research Report, 15-845*.

Piketty, T. (2014). Capital in the 21st century. *Harvard University Press*.

Smits A. & Mulder C. (2008). Family Dynamics and First-Time Homeownership. *Housing Studies*, 23 (6), 917-933.