



**HAL**  
open science

## Inequalities and the individualization of wealth

Nicolas Frémeaux, Marion Leturcq

► **To cite this version:**

Nicolas Frémeaux, Marion Leturcq. Inequalities and the individualization of wealth. *Journal of Public Economics*, 2020, 184, pp.1-18. 10.1016/j.jpubeco.2020.104145 . hal-02491755

**HAL Id: hal-02491755**

**<https://hal.science/hal-02491755>**

Submitted on 26 Feb 2020

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

# INEQUALITIES AND THE INDIVIDUALIZATION OF WEALTH

Nicolas FRÉMEAUX\*

Marion LETURCQ†

This version: January 2020 ‡

## Abstract

We document the individualization of wealth in France between 1998 and 2015, using precise survey data on the property titles of assets. It is characterized by an increase in the share of wealth which is individualized by spouses (vs. jointly owned) and by an increase in the share of wealth held by singles. We show that the usual measures of wealth inequality, which allocate the same share of household wealth to each spouse or partner, overestimate the share of wealth held by women. This results in an underestimation of both the level and the growth of a) wealth inequality between individuals and b) the gender wealth gap. We argue for better consideration of the ownership status and intra-household distribution of wealth in the measurement of wealth inequality.

*Keywords: Wealth, individualization, wealth inequality, gender wealth gap, matrimonial property regime, France*

*JEL Classification: J12, D31, E21*

---

\*Corresponding author: LEMMA - Université Paris 2. 4 rue Blaise Desgoffe, 75006 Paris, France; nicolas.fremeaux@u-paris2.fr

†Institut national d'études démographiques (INED), Campus Condorcet, 9 Cours des Humanités, CS 50004, 93322 Aubervilliers Cedex, France; marion.leturcq@ined.fr

‡The paper has circulated under the title “Individualization of Wealth: Evidence from France.” When we started to work on this paper, Marion Leturcq was working at the Université Catholique de Louvain (Belgium). Marion Leturcq acknowledges financial support received from the European Research Council under the European Union’s Seventh Framework Programme (FP7/2007-2013) / ERC grant agreement no.269831. Nicolas Frémeaux acknowledges financial support from Labex MME-DII (ANR11-LBX-0023-01). This paper has received the support from the Fondation pour les sciences sociales, under the auspices of the Fondation de France. The authors are thankful to participants at seminars at INED, Université de Cergy-Pontoise, Université Paris 2 and Paris School of Economics as well as the participants at the Rencontres d’Aussois du labex OSE 2014, the iPops conference 2015, the ECINEQ annual meeting 2015 and 2017, the ESPE annual meeting 2016, the PAA annual meeting 2016, the EPC 2016, LAGV 2017, ESEM 2017, the workshop “Inequality within Couples” in Berlin, 2018 and the workshop “Vieillir à deux” in Paris, 2019. The authors are grateful to the editor, Nathaniel Hendren, and two anonymous referees for their insightful comments and suggestions.

# 1 Introduction

Wealth inequality has been increasing over recent decades in many countries, including the United States (Saez and Zucman, 2016; Wolff, 2016), the United-Kingdom (Alvaredo et al., 2018), and France (Garbinti et al., 2016; Solotareff and Ferrante, 2018). Studies usually overlook the way assets are held within households even if the intra-household distribution of assets can significantly affect wealth inequality. In this paper, we measure how the wealth of households is distributed between community assets (jointly held by spouses) and individual assets in France. We show that the wealth of households became more individualized over the last two decades, which contributed to an increase in wealth inequality and contributed to an even greater extent to the gender wealth gap . We believe this is the first paper that uncovers the changing ownership status of wealth and its implications for the measurement of wealth inequality.

Both administrative and survey data are usually based on households as the unit of micro-level observations, thus measuring wealth inequality between households. Household-based measures are dependent on the demographic structure of the population, suggesting that international and intertemporal comparisons of wealth inequality are difficult to interpret as soon as family demographics begin to differ across countries or periods (Bover, 2010). Going from household-based measures to individual-based measures of inequalities requires adjusting the measure of wealth inequality<sup>1</sup> for the size of the households.

A simple and common way to adjust for the size of the household is to distribute assets to its members, with the assumption that all assets are shared equally (hereafter, the *equal split assumption*). This way of adjusting for household size takes an ownership perspective, because it distributes each euro held within the household to a sole owner, even if the wealth can provide services enjoyed by all the members (such as the main residence). A less common way to adjust for the size of the household is to attribute the total value of the household’s wealth to each of its members (hereafter,

---

<sup>1</sup> Throughout the paper, “wealth inequality” will refer to inequality between individuals, unless otherwise noted.

the *fully public wealth assumption*). It takes a consumption perspective because it assumes that each member of the household has equal enjoyment of the benefits derived from the household's wealth.<sup>2</sup>

The *equal split assumption* has three caveats. First, it underestimates wealth inequality: assets are typically not distributed equally within the household (Deere et al., 2018). Second, it may distort international comparisons of wealth inequality: some local laws impose more asset sharing within the household than others, which means that the bias induced by the equal split assumption is likely to differ across countries. Lastly, within-country, intertemporal comparison of wealth inequality may also be affected: the institutional framework and individual behaviors around marriage and asset sharing may change over time. On the other hand, the *fully public wealth assumption* also has three main caveats. First, it tends to inflate the total wealth held in the population, thus comparing the distribution of a hypothetical total wealth. Second, like household-based measures, it is dependent on the family demographic structure of the population: the inflation of the total wealth is larger when the average size of a household increases. Third, the benefits of some assets, such as financial assets or business properties, may not be shared equally. Both assumptions lead to inaccurate measures of the dynamic of wealth accumulation following partnership formation and dissolution, because both assumptions overestimate the wealth of the poorest partner (and underestimate the wealth of the richest partner). Moreover, wealth could be associated with power or prestige, thus increasing the bargaining power of a spouse within the household. Neither of the two assumptions accurately proxies the bargaining power within the household associated with wealth.

In this paper, we measure wealth at the individual level, on the basis of an ownership perspective, while acknowledging that assets are not shared equally within the household. To do that, we identify the legal owner of each asset held within the household. Marital assets are held either as *individual*

---

<sup>2</sup>Both the equal split and the fully public wealth assumptions can be summarized in the same framework, which attributes to each individual an equivalized wealth  $\tilde{w}_e = \frac{w}{\lambda}$ .  $w$  is the household wealth and  $\lambda$  is an equivalence scale.  $\lambda = 2$  corresponds to the equal split assumption and  $\lambda = 1$  corresponds to the fully public wealth assumption. Some studies apply an equivalence scale between 1 and 2, allowing for shared consumption of benefits associated with some (but not all) assets (Bover, 2010; Cowell and Van Kerm, 2015; Sierminska and Smeeding, 2005).

assets by only one spouse or as *joint* assets by both spouses,<sup>3</sup> while singles hold only individual assets. Our objective is twofold. First, we document which share of the wealth of households is held as individual assets and how this share has been increasing over time. We document how changes in the characteristics of the population explain the individualization of wealth. An important contribution of our paper is to put numbers on the magnitude of the individualization of wealth in the French context and to clarify the various forces at play. Our second objective is to investigate how the individualization of wealth matters for the measurement of wealth inequality, especially for the gender wealth gap. A second important contribution of our paper is to show that both the level and the growth in wealth inequality are underestimated when all assets are assumed to be shared equally within the household.

Two unique features of the French wealth surveys enable us to disentangle individual assets from community assets within the household. First, the data displays comprehensive information about the marital status of individuals. It indicates matrimonial status (never-married, divorced, married, civil union), relationship status (single-living or couple-living), and, for marriages and civil unions, matrimonial property regimes. Matrimonial property regimes define the property rights within couples. They specify which assets are regarded as the separate property of the person who acquired it and which assets are regarded as joint property of the couple.<sup>4</sup> Second, for each asset, the survey provides the identity of the owner as well as the distribution among owners when the asset is held by several persons. To our knowledge, such specific information cannot be found in any other existing data sources, in France or in any other country.<sup>5</sup>

---

<sup>3</sup>In what follows, we will use the expressions "individual assets" and "own assets" interchangeably when referring to assets owned by only one spouse, and "joint assets" or "community assets" to refer to assets owned jointly by the two members of the couple. We use the expression "personal wealth" to refer to the wealth owned by an individual, which is composed of her individual assets and half of joint assets, and "individualized wealth" when referring to individual assets.

<sup>4</sup>The share of community assets depends largely on the local legal system, which defines the default matrimonial property regime and the options for departing from it (through prenuptial agreements, unmarried cohabitation, or a civil union), and relies on the discretionary power of the courts to redistribute assets in the event of divorce or separation. France is an interesting case because couples can choose which assets to consider as community assets within marriage through the choice of the matrimonial property regime, and the courts are obligated to follow prenuptial agreements in the event of divorce.

<sup>5</sup>In survey data, either the information about wealth is available at the household level only (in the Survey of

Our results show that wealth became more individualized in France between 1998 and 2015. The share of wealth held by singles increased from 21% to 27.2%. Among the wealth of couples, the share of wealth held as individual assets increased from 18% to 27%. Our decomposition shows that 76% of the individualization of wealth among couples is explained by the decision to opt for a matrimonial regime allowing couples to keep their assets separated. The remaining share is explained by increasing inheritance and wealth acquired before the relationship started. Wealth inequalities are significantly underestimated under the equal split assumption. In 1998, the top 10% wealth share is 1.2 pp. higher when we take the intra-household distribution of assets into account. In 2015, this gap reached 1.8 pp.. Moreover, the gender wealth gap rose from 9 pp. of the average personal wealth in the population in 1998 to 16.3 pp. in 2015. The gender gap is significantly lower and more stable when assets are assumed to be equally split within the household.

These results suggest that the redistribution of wealth within couples has fallen over time, mostly because of the decline in the community regime. When most assets are community assets regardless of the financial contribution of spouses, gender differences in wage or career on the labor market do not translate into gender differences in wealth accumulation. The gender wealth gap rocketed among married couples with a separate property regime while it remained stable among married couples with a community property regime. We investigate the role of selection into a separate property regime on the gender wealth gap and we find that its increase is explained by growing wealth inequality at partnership formation and differences in wealth accumulation.

Our results matter for public policies. Many policies assume resources are shared equally within the household. For instance, in France income and capital taxation are computed at the household level, independently of the actual distribution of income or capital within the household. The growing individualization of wealth makes it necessary to reconsider how these policies are implemented.

---

Consumer Finances for instance) or the information is incomplete (e.g., in the German Socio-Economic Panel individual information is available but the matrimonial property regime is unknown). In tax data, the level of measurement depends on the taxation system itself.

The remainder of the paper unfolds as follows. Section 2 presents the literature. Section 3 describes the features of the French context which relate to the ownership of assets. Section 4 describes the individualization of wealth and its main drivers. We investigate how the measures of wealth inequality (Section 5) and the gender wealth gap (Section 6) are affected by the individualization of wealth. Section 7 presents our conclusions.

## 2 Literature review

Our study contributes to two strands of the literature. It is related to the renewed interest in wealth following [Piketty and Zucman \(2014\)](#). In their breakthrough paper, they showed that the wealth-to-income ratio rose sharply in the late twentieth century, reaching its nineteenth-century level in many countries. The increasing stocks of wealth went along with growing wealth inequalities ([Garbinti et al., 2016](#); [Saez and Zucman, 2016](#)) and the rising role of inheritance ([Piketty, 2011](#); [Alvaredo et al., 2017](#)); both already characterized wealth in the nineteenth century. In this paper, we show that the ownership status of wealth is also changing rapidly and that the recent increase in the stock of private wealth goes along with its individualization. The individualization of wealth may characterize wealth at the beginning of the twenty-first century, because for the most part marriage and community property regimes prevailed until the 1970s in France ([Frémeaux and Leturcq, 2018](#)). Survey data suffer from inherent measurement problems due to the under-reporting of values of self-declared wealth. [Saez and Zucman \(2016\)](#) and [Garbinti et al. \(2016\)](#) overcome this problem by relying on fiscal data and national accounts to build distributional national accounts (DINA) in order to provide a comprehensive and reliable analysis of both wealth and income distributions. However, identifying individual assets within couple-headed households is not possible with fiscal data, and household wealth is usually assumed to be equally distributed between partners. Our analysis shows that studies based on fiscal data tend to underestimate wealth inequality between individuals.<sup>6</sup>

---

<sup>6</sup>It is important to note that our estimates suffer from the usual measurement errors of survey data, which probably leads to an underestimation of individual wealth. Future research should attempt to combine the advantages of the

Our study also contributes to the broad literature on gender inequalities. Recent evidence has shown that the gender wealth gap is seemingly increasing in France and stabilizing in Germany (Bonnet et al., 2014; Sierminska et al., 2018). This evolution is rather surprising, because gender gaps have been found to be decreasing in education (Schwartz and Han, 2014; DiPrete and Buchmann, 2006), the labor supply, and income (Garbinti et al., 2018). The role of various determinants in explaining the gender wealth gap has been explored in the literature: earnings (Bonnet et al., 2014; Grabka et al., 2015; Sierminska et al., 2018), occupations (Austen et al., 2014), savings (Chang, 2010; Lersch, 2017), or preferences (Cartwright, 2011). On the other hand, Edlund and Kopczuk (2009) postulate that women’s wealth is mostly inherited, as opposed to self-made wealth, therefore using the share of women in the top deciles as a proxy for the importance of inherited wealth. Our study is related to empirical studies showing that variations across countries in the type of marital and inheritance regimes matter for explaining variations in the gender wealth gap (Deere and Doss, 2006; Deere et al., 2013). Within a particular country, long-term changes in the gender wealth gap may also be related to legal changes in the types of regimes (Harbury and Hitchens, 1977; Shammass, 1994). Our paper contributes to this literature because it shows that the long-term decrease in the gender gap in labor outcomes has been offset by a simultaneous change in the marital behavior of couples in France. The gradual retreat from marriage with a community property regime weakened the redistribution mechanism induced by marriage, leading to an increase in the gender wealth gap. Our paper complements theoretical models of wealth accumulation related to marriage and labor market participation (Voena, 2015; Bayot and Voena, 2015).

---

DINA approach with a calibration for the intra-household distribution of assets.



## 3 Context and data

### 3.1 Context: individual assets and joint assets in France

In France, an asset can be held as an *individual* asset, meaning that it belongs to one and only one owner, or it can be held as a *joint* asset by the spouses.<sup>7</sup> All assets acquired by singles are legally considered individual assets. Individuals in a relationship can hold both individual and joint assets. Which assets are considered joint assets depends on the legal status of their couple. Because unmarried partners are legally considered singles, any asset they acquire is presumably held as an individual asset, but they can define a joint property title, for example, in some cases the main residence.<sup>8</sup> In this case, the property deed indicates the share each partner holds.

French married couples can choose among a menu of matrimonial property regimes, which can be broadly classified into two main systems:

1. *Community property regime*: all assets and debts accumulated during the marriage are jointly owned by the husband and wife, as long as these assets are not inherited. Assets acquired before marriage remain individual assets. However, the returns on individual assets are considered joint property.<sup>9</sup> The community of acquisitions regime<sup>9</sup> has been the default regime for married couples since 1965.<sup>10</sup> An important consequence of this property regime is that in case of separation, spouses have to share the joint assets equally, even if they contributed unequally to their acquisition.
2. *Separate property regime*: couples legally hold all their assets as well as the returns on their

---

<sup>7</sup>We restrict the definition of “joint asset” to assets jointly held by spouses. Therefore, we do not consider assets held jointly by a group of individuals (e.g., inherited assets among siblings or business assets between investors) as joint assets, because they are external to the household. For these assets, we only consider the value held by the members of the household.

<sup>8</sup>In 2015, 47% of unmarried cohabitants held their main residence as a joint asset with their partner. This share was equal to 60% for married couples with a separate property regime and to 89% for married couples with a community regime.

<sup>9</sup>Couples can also decide to opt for a full community property regime in which all assets are jointly owned by the husband and wife, including bequests, gifts, and assets acquired before marriage. Only few couples opt for a full community property regime. [Frémeaux and Leturcq \(2013\)](#) estimated that a stable share of 2% of all married couples chose this property regime over the period 1992–2010.

<sup>10</sup>For more information on the history of matrimonial property regimes in France, see [Frémeaux and Leturcq \(2018\)](#).

assets separately. This regime excludes redistribution within the household, because each asset belongs to the spouse who acquired it. As for unmarried couples, some assets may be held jointly, such as the main residence. Opting for a separate property regime comes at some moderate cost because couples have to sign a prenuptial agreement at a notary's office before marriage. Unmarried cohabiting couples are de facto subject to a separate property regime from an asset-ownership perspective.

The French civil union (PACS) was created in 1999. A PACS is signed at the town hall or at the district court and it provides couples in civil unions with legal recognition of their relationship without being married. It is similar to marriage with respect to taxation and many legal aspects of the rights and duties of partners, but it differs from marriage in some other ways. For example, it does not give the right to petition for alimony upon separation. Civil-union couples can choose their property division regime. From 1999 to 2006, the default regime was the community property regime. From 2007 onward, the separate property regime has been the default regime.<sup>11</sup>

To conclude, there are three marital statuses for couples: unmarried cohabitation, marriage, and civil union. But from an asset ownership perspective, there are only two regimes: the community property regime and the separate property regime, and we can distinguish de facto the separate property regime for unmarried cohabitation. Therefore, we consider three groups of couples: unmarried cohabitation, marriage or civil union with a community regime, and marriage or civil union with a separate property regime.<sup>12</sup>

### **3.2 Context: splitting assets upon death, divorce or separation**

At the dissolution of a partnership (death or separation), the assets are distributed according to the legal status of the ex-partners. In France, wealth transfers between spouses are rather limited as

---

<sup>11</sup>We discuss the consequence of the change of default regime for the individualization of wealth in Section 4.5

<sup>12</sup>For the sake of simplicity, the expression “married couples” (or individuals) will refer to “married or civil-union couples” (or individuals), unless otherwise noted.

compared to other countries, in terms of both inheritance and alimony rights.

When one spouse/partner dies, only married couples or civil-union partners (with a will) can inherit from their spouse/partner. The surviving spouse gets his/her own individual assets, half of the joint assets (if any), and part of the deceased spouse's wealth. When the deceased spouse has descendants, the surviving spouse receives 25% of the decedent's estate (or 100% in usufruct) and the remaining 75% is equally split between descendants. The share devoted to the surviving spouse can be increased up to 50% with a will. If there are only ascendant heirs, the statutory share of the surviving spouse would be 50% and if there are no heirs, the spouse would receive 100% of the deceased spouse's estate. Consequently, the individualization of wealth within couples weakens the position of the surviving spouse with respect to the heirs by reducing the share of joint wealth.

When spouses/partners separate or divorce, each spouse gets his/her individual assets and half of the joint assets (if any). For married couples only, courts sometimes set up alimony between spouses.<sup>13</sup> The goal is to compensate for differences in the standard of living of each spouse upon divorce when these differences result from choices made by the household (a typical example is the retreat from the labor market to raise children). Whether an alimony is set up or not and its value are at the court's discretion and this depends on how large the differences in the standard of living after divorce are, the duration of the marriage, and labor market outcomes of spouses resulting from decisions taken during the marriage but it does not depend not on the matrimonial property regime. [Jeandidier et al. \(2016\)](#) document that an alimony was set up in 20% of divorces in 2013 and its average value was 25,000 euros.

Either at the time of divorce or death, each spouse has to provide evidence of the ownership of his/her individual assets. In absence of such evidence, the asset is generally considered to be a joint asset. The matrimonial property regime is enforced by French courts. Courts have limited

---

<sup>13</sup>Couples opting for a civil union or unmarried cohabitation are not eligible for such compensation. This is the case in other countries, e.g., Canada ([Lafortune and Low, 2017](#); [Goussé and Leturcq, 2018](#)).

discretionary power on how to redistribute the household's assets between the spouses.<sup>14</sup> As a consequence, the institutional framework makes it relevant to measure wealth at the individual level.

### 3.3 Data: the French Wealth Surveys

We used repeated cross-sectional data from the 1998, 2004, 2010, and 2015 waves of the French wealth survey Patrimoine, which has been conducted since 1986. The first two waves of the survey (in 1986 and 1992) display information about wealth at the household level only, precluding analysis of the intra-household distribution of wealth before 1998. The aim of this survey is to study the personal wealth of a representative sample of French households. Wealthy neighborhoods are oversampled, and we used the sample weights to remain representative of the French population.

The survey provides information on financial assets (savings accounts, stocks, bonds, life insurance contracts, etc.),<sup>15</sup> real estate assets (the primary residence, other property, land, etc.) and business assets (buildings and land for professional use, agricultural assets, machines, etc.). The data includes a short description of each asset and a self-report evaluating its value,<sup>16</sup> and it gives the identity of the owner of the asset within the household. When an asset is held by more than one individual (as most real estate and business assets are), the survey provides a detailed description of the distribution of the asset between the household head, his/her spouse (if any), and other members of the household or persons from another household. The survey also provides a detailed biography of the household and its members (household formation, educational attainment, labor force history, etc.).

The survey provides precise information on the marital status of households. We are able to distinguish single-headed households from couple-headed households. For couple-headed households, we have information about marital status (unmarried cohabitation, civil union, or marriage) and

---

<sup>14</sup>This is not the case in other countries, such as the United States, the United Kingdom, or Austria.

<sup>15</sup>Because the pension system in France is a pay-as-you-go system, there are almost no private pension plans or pension savings. Therefore, pensions are not considered assets and do not enter into personal wealth. Individuals can decide to constitute complementary pension plans based on savings. We consider savings on these types of plans financial assets. Public pension entitlements are generally not captured in survey data because they are not known to the respondent. On this issue, see [Frick and Grabka \(2013\)](#).

<sup>16</sup>In Section 4.7, we discuss the effects of both sampling and non-sampling measurement errors on our estimates.

the matrimonial property regime (community property regime or separate property regime). Such detailed information on matrimonial property regimes is unique in survey or fiscal data.

Because we focused on the relationship between marital status and wealth accumulation, we dropped all individuals who were not the household head or her spouse. We retained households in which the oldest partner is aged 25 to 89. Most of the dropped observations were the head of the household's children (or her spouse's children). The wealth owned by members of the household other than the head and his/her spouse was small: 2.8% of the total wealth of households in 1998, 1.5% in 2004, 1.4% in 2010, and 1.7% in 2015. Moreover, some assets were shared with persons outside the household. In those cases, we adjusted the value of the asset to the value owned within the household in order to avoid double counting at the macro level. Because of potential measurement errors, we dropped individuals living in a household in which at least one spouse belonged to the top 1% of the wealth distribution.<sup>17</sup> We ended up with 16,105 individuals in 1998 (in 9,617 households), 14,754 individuals in 2004 (in 9,036 households), 20,284 individuals in 2010 (in 12,261 households), and 18,225 individuals in 2015 (in 11,102 households).

### 3.4 Defining individualized wealth

Using the information available on assets (type, date of acquisition) and on the marital status and property regime of each individual, we were able to reconstruct the personal wealth of individuals, distinguishing *individual* wealth from *joint* wealth. Individual wealth (resp. joint wealth) is given by the total value of individual assets (resp. joint assets) for each individual. Therefore, in order to disentangle individual wealth from joint wealth, we decentralized the analysis at the asset level: for each asset, we defined whether it was an individual asset, or a joint asset, or the share of the asset which could be considered a joint asset.

In the case of single-headed households, we treated all assets belonging to the head of the house-

---

<sup>17</sup>In Table 4.4 of the online appendix, we include the top 1% as a robustness test. The level of individualized wealth is larger, but the evolution remains similar.

hold as individual assets, whatever their nature and date of acquisition.

In the case of couple-headed households, we applied ad hoc coefficients of individualized wealth between 0 and 1 for each asset, depending on the property regime of the couple and the year the asset was acquired. For each type of couple, we systematically excluded financial assets acquired before marriage from joint wealth as well as private pension plans because legally they are considered individual assets. We also excluded part of the value of real estate assets when they were unequally distributed between spouses (e.g., for a 20–80% distribution, we treated 40% of the asset as jointly owned, while assessing 60% as individually owned).

In the case of unmarried cohabiting couples and couples married with a separate property regime, we attributed all other assets to individual wealth unless it could be argued that this asset was a joint asset. For example, we considered as joint assets all liquidities declared as joint assets and real estate assets when they are equally distributed between spouses. However, for these couples, we attributed financial assets to the owner declared in the survey when only one owner was declared.

For married couples with a community property regime, we considered financial assets to be joint assets if they were acquired after the date of marriage because the community property regime implies that this type of asset is a joint asset. Eventually, we considered all business assets joint assets for couples with the community regime but we considered them individual assets for the other types of couples.<sup>18</sup> A complete description of our classification of wealth into individual and joint assets is given in Table A.8 in the appendix.

All in all, our definition of *individualized wealth* is quite conservative, because we classified as *joint wealth* any asset (or share of asset) whose ownership could be debatable, so we tended to underestimate the share of individual wealth.<sup>19</sup>

---

<sup>18</sup>The way information related to the ownership of business assets is recorded in the survey changed between 1998 and 2004. After 2004, we could attribute some business assets to an individual or define them as joint assets for all types of couples. Our classification, although imprecise, allowed us to remain consistent in our definition of individual and joint wealth across waves.

<sup>19</sup>In order to test whether the main results were robust to our classification, we also applied an alternative definition of individual/joint assets, which led us to consider more assets individualized assets. Applying this definition, we find a larger individualization of wealth but the evolution over time is very similar. The results are presented in Table 2.1

The survey also gives some information on household liabilities. However, the information about the intra-household distribution of liabilities is less precise than the information about assets, so we were unable to construct the share of household's liabilities that could be attributed to each partner. Therefore, our measures of individual wealth and joint wealth refer to gross individual wealth and gross joint wealth.<sup>20</sup>

### 3.5 Descriptive statistics

Table 1 provides some descriptive statistics on the demographic composition of the population, the average, and the relative wealth of each demographic group.

The average wealth shot up from 77,700€ in 1998 to 150,200€ in 2015.<sup>21</sup> Singles tend to be less affluent than individuals in a relationship. Among individuals in a relationship, individuals living in an unmarried cohabitation were the poorest, and married individuals with a separate property regime were the richest. Among singles, never-married individuals were the poorest and widowers were the richest.

Wealth grew faster for some subpopulations, which means that their *relative* wealth changed over time. The relative wealth of individuals in a relationship remained stable to 1.02. Individuals married with a separate of property regime became relatively wealthier between 1998 and 2010 but this rise decreased sharply between 2010 and 2015.<sup>22</sup> Unmarried cohabitants became relatively wealthier while married individuals with a community property regime became poorer. The wealth of singles increased from 0.92 of the average personal wealth in the population to 0.95. This is due to an increase in the relative wealth of widowers and of divorced individuals.

The legal status of individuals in a relationship changed significantly over the period. The share

---

of the online appendix.

<sup>20</sup>In Section 4.7, we propose a sensitivity test with an estimate of the individual net wealth and we show that our results are fairly similar.

<sup>21</sup>This increase is consistent with estimates for France made by Garbinti et al. (2016) despite the measurement errors due to the declarative nature of survey data.

<sup>22</sup>This decrease is due to the change in the default regime for couples opting for a civil union, which changed the composition of this population. Excluding civil unions from the analysis leads to a large increase in the relative wealth of married individuals with a separate property regime (see Table 2.3 in the online appendix).

of individuals married with a community regime dropped by almost 12 pp. between 1998 and 2015. In contrast, the share of unmarried cohabiting individuals rose by 1.5 pp. in the population and the share of married individuals with a separate property regime rose by 4.5 pp. The sharp increase of this regime in our data between 2010 and 2015 is also due to the change in the default regime of civil unions in 2007, combined with increasing flows of entry into civil unions. In 2015, among the 9.8% of individuals in a relationship with a separate of property regime, 5.1% were married and 3.8% opted for a civil union.

The share of singles increased by 6 pp. between 1998 and 2015 as a result of an increase in the share of never-married individuals (+3 pp.) and divorced individuals (+3 pp.).<sup>23</sup> The increasing share of never-married individuals is partly explained by the delaying of first cohabitation for cohorts born in the 1950s to the 1980s and only stabilizes for cohorts born in the 1980s (Rault and Régnier-Loilier, 2015). The introduction of no-fault divorce in 1975 in France, and its 2005 reform, explains the increasing share of divorced people. This was followed by an increase in the prevalence of divorce from then on, although it increased at a slower pace between 1998 and 2015.<sup>24</sup> Divorce reform in 2005 led to a short-term increase in divorce rates in France, mostly because it shortened the duration of divorce (Chaussebourg et al., 2009).

## 4 The individualization of wealth

### 4.1 The trend: the growth of individualized wealth in the population

Figure 1 shows how wealth became more individualized over time. In 1998, roughly 20% of the total wealth of households is held as individual assets by singles. Individuals in a relationship hold 80% of wealth: 15% is held as individual assets and the remaining 65% of wealth is held as joint assets. In

---

<sup>23</sup>The evolution of the share of singles between 1998 and 2015 is consistent with the census or other French surveys (i.e., LFS and Family surveys). However, in contrast to the other data sources, the wealth survey does not depict a quasi-linear evolution over the period. This aspect partly explains the differences across subperiods.

<sup>24</sup>Importantly, the age composition of divorced people changed. According to data from the Ministry of Justice, the husband was aged 50 or more in 38% of divorces registered in 2016, whereas the share was only 14% in 1990.



2015, singles hold 27% of the total wealth of households, individuals in a relationship hold 19% of the total wealth of households as individual assets, and the remaining 53% as joint assets. The share of wealth held as individual assets remained stable between 1998 and 2004. The share of wealth held by singles rose rapidly between 2004 and 2010 and remained stable afterwards. The share of individual assets held by individuals in a relationship steadily increased between 2004 and 2015.

Table 2 describes the share of individualized wealth by the type of singles and the type of couple. All types of couples and singles contributed to an increase in the share of individualized wealth, albeit to different extents. Among couples, those couples with a separate property regime contributed the most (+4.2 pp.), followed by unmarried cohabiting partners (+1.5 pp.). The contribution of couples with a community regime remained stable despite their large demographic decrease (Table 1). Among singles, divorced individuals contributed the most (+3.2 pp.), followed by never-married individuals (+2.2 pp.) and widows and widowers (+0.8 pp., non-significant). Interestingly, the share of joint assets held by unmarried individuals and by individuals married with a separate property regime also increased over the period, while it plummeted from 60.1% in 1998 to 45.2% in 2015 for individuals who were married with a community property regime.

## 4.2 The individualization of couples' wealth: definitions

The value of the wealth of a couple  $i$  observed in period  $t$  is denoted  $w_{it}$ . It is composed of joint assets of a value  $w_{it}^J$ ; the male's individual assets of a value  $w_{it}^{Pm}$ ; the female's individual assets of a value  $w_{it}^{Pf}$ . The value of the female's wealth (resp. the male's) is the sum of her individual assets (resp. his individual assets) and half of the joint assets, therefore:  $w_{it}^f = w_{it}^{Pf} + \frac{w_{it}^J}{2}$  and  $w_{it}^m = w_{it}^{Pm} + \frac{w_{it}^J}{2}$ . The value of individual assets in the couple  $i$  is denoted  $w_{it}^P = w_{it}^{Pm} + w_{it}^{Pf}$ .

We construct an index of individualized wealth at the aggregate level as a ratio of the value of all assets owned as *individual* assets by individuals in a relationship over the total value of *all* assets owned by individuals in a relationship at time  $t$ :  $\theta_t = \frac{\sum_i w_{it}^P}{\sum_i w_{it}}$ . The index of individualized wealth at

the aggregate level  $\theta_t$  takes a wealth perspective and it answers the following question: If I observe the total wealth of the couples, which share is held as individual assets?

We complement this index with an index of the household's individualized wealth as the ratio of individual wealth to the total wealth of the household:<sup>25</sup>  $\mu_{it} = \frac{w_{it}^P}{w_{it}}$ . The average ratio  $\bar{\mu}_t$  describes how wealth is individualized within households. As such, it takes a household's perspective, answering the following question: What is the share an average household holds as individualized wealth? The two indices differ as soon as the correlation between wealth and the way assets are held is different from zero. For instance, if richer households tend to hold a larger share of their wealth as individual assets (the correlation between  $\mu$  and  $w$  would be positive), the average ratio of individual wealth within households would be lower than the index of individualized wealth at the aggregate level.

### 4.3 The individualization of wealth at the aggregate level

The individualization of wealth, measured by an increase in the index of individualized wealth at the aggregate level  $\theta_t$ , can result from various mechanisms. In order to clarify the different forces at play, we show that the index can be written as a function of three components. The proof is given in the appendix, but we explain here what these components measure.

First, the share of individualized wealth is related to the marital structure of the population. Couples can opt for a marital status or matrimonial regime that enables them to individualize their wealth, thereby fostering the individualization of wealth. Second, for a given structure of the population, the wealth of couples would be more individualized if couples holding more separate assets became relatively richer than couples holding more joint assets. Lastly, even couples holding most of their assets as joint assets may hold individual assets (such as assets acquired before marriage) and couples holding most of their assets as separate assets may hold joint assets (which is often the case for the main residence).

---

<sup>25</sup>The index of individualized wealth within the household is defined for households having non-zero wealth (roughly 4% of couples declare zero wealth, for each wave).

Breaking the index of individualized wealth into three components allows us to decompose the change in the share of individualized wealth and to evaluate the contributions of the marital structure of the population, the relative wealth of couples, and the share of individualized wealth by the type of couple. The contribution of each element depends on the order in which the decomposition is made. In our estimation, we computed the contribution of the three elements for all different orders of the decomposition and we present the average contribution of each term. Table 3 provides the results of the decomposition over the 1998–2015 period and by subperiods.

The increasing share of individualized wealth within couples is driven by two main factors: 76% (CI 95% = [63;89]) of the growth is explained by changes in the marital status of couples because they are more likely to opt for a marital status that enables them to separate their assets. 17% (CI 95% = [1;32]) of the growth is explained by a change in the composition of assets ownership for any type of couple. In contrast, the relative wealth of individuals in a relationship by marital status does not significantly contribute to the individualization of wealth of couples. Couples who tend to separate their assets did not become richer, but more couples decided to separate assets and, even when they have opted for the community regime, couples held fewer assets as joint assets.

The decomposition by subperiods shows that between 1998 and 2004 the ratio of individualized wealth within couples only increased by 1.4 pp. It increased by 4.2 pp. between 2004 and 2010: 52% of this increase (2.2 pp., CI 95% = [36;69]) is due to a change in the marital structure of the population and 40% of it (1.7 pp., CI 95% = [9;72]) is due to a change in the way couples hold their assets. Between 2010 and 2015, the ratio of individualized wealth within couples rose by 3.3 pp., and the change in the marital status of couples seems to explain most of it.

#### **4.4 The determinants of the individualization of wealth within couples**

We now focus on the determinants of the individualization of wealth at the couple level. On average, couples having non-zero wealth held 21.1% of their wealth as individualized assets in 1998, and

this average share increased to 26.8% in 2015 (see bottom part of Table 4). The average share of individualized wealth at the couple level hides large differences across types of couples. It is much larger for unmarried cohabiting couples (decreasing from 84% to 76% over the period) and couples with a separate property regime (decreasing slightly from 60.6% to 57.3%) than for couples with a community property regime (increasing slightly from 6.9% to 8.2%)<sup>26</sup>.

We analyze the determinants of the individualization of wealth within couples. Specifically, we investigate three issues: 1) What are the characteristics driving the individualization of wealth?; 2) Is the link between these characteristics and the individualization of wealth effected only through the decision to opt for a type of couple which allows more individualized wealth?;<sup>27</sup> 3) How has the link between couples' characteristics and the share of individualized wealth changed over time? We consider the two years in separate regressions. For each year, we regress the share of individualized wealth within the couple on two sets of variables: the first describes the marital history of partners, and the second describes the labor history of individuals in a relationship. In a second regression, we add binary variables for the type of couples. The results are presented in Table 4.

The individualization of wealth is strongly associated with the rank in the wealth distribution and exhibits a U-shaped pattern. Couples in the middle 40% tend to hold a lower share of individualized assets as compared to couples in the bottom 50% for both years. The individualization of wealth for couples in the top 10% is almost as large as it is for the couples in the bottom 50% in 2015. The strength of the link decreases when the legal type of couple is accounted for, but the U-shaped pattern remains.

Characteristics indicating a gap between partners (a difference in age or wealth at partnership formation)<sup>28</sup> show that more unequal couples hold a larger share of individualized wealth, especially

---

<sup>26</sup>These average also hides large differences between couples holding only joint assets and couples with full individualization. The share of intermediate cases (between no individualization and full individualization) represents 17% of couples in 1998 and 28% in 2015. More descriptive statistics are presented in Table 3.3 of the online appendix.

<sup>27</sup>In Tables 3.4 and 3.5 of the online appendix, we provide supplementary analysis about the determinants of the marital status and the determinants of the share of individualized wealth by household type.

<sup>28</sup>Information on wealth inequality at partnership formation comes from a qualitative question about the comparison of partners' wealth at partnership formation. There are four items: 1) the male partner was richer, 2) the female

when the gap favors men. Similarly, characteristics of the marital history (late partnership formation and whether [at least] one partner was married before this relationship) are associated with a larger share of individualized wealth. The strength of the link weakens when the legal type of couple is controlled for. It suggests that the association tends to be related to a greater propensity to opt for a legal type of couple allowing more individualization of wealth, and a potential protection against divorce. However, the estimated coefficient remains significantly different from zero when the type of couple is controlled for. It suggests that the same variables also affect the individualization of wealth directly, through premarital accumulation of wealth. Stronger results are found in 2015 compared to 1998.

Bequests are considered individual assets even when acquired in marriages with a community regime. Our results confirm that having received a bequest is associated with a larger share of individualized wealth, even when the type of couple is controlled for. Interestingly, when the number of full-time equivalent years of employment is larger for the male partner than for the female partner, the share of individualized wealth is lower. The strength of the link weakens when the type of couple is controlled for. It suggests that marriage with a community regime is associated with the lower participation of women on the labor market. Self-employment is often associated with a higher propensity to opt for a separate property regime in order to protect the household wealth in case of professional bankruptcy. Our results confirm that self-employment is associated with a larger share of individualized wealth, but we find an asymmetric effect: self-employment of the male partner is associated with a larger share of individualized wealth than self-employment of the female partner. Controlling for the type of couple weakens the strength of the link but it remains positive and significant for men and becomes significant in 2015 for women, suggesting that the impact does not operate only through the couple's choice of the legal structure.

---

partner was richer, 3) both had the same wealth, 4) neither of them had any assets.

## 4.5 Discussion

We found that the individualization of wealth in France has been driven partly by a change in the legal marital structure of the population and, to a lesser extent, by an increase in the share of individualized wealth for any given type of couple. We now discuss the potential drivers of these two mechanisms.

Three main drivers explain the change in the marital structure of the population. First, civil unions (PACS) are now very popular in France ([Breton et al., 2018](#)). In 2006, the default regime changed from a community property regime to a separate property regime, but we show in the online appendix that it only partly explains the individualization of wealth. Between 2010 and 2015, the share of wealth held as individualized assets within couples increased by 2 pp. (from 17.3% to 19.3%), and PACS couples explain a large share of this increase (+1.5 pp., from 0.6% to 2.1%) (Table 2.4 in the online appendix). But the change in the default regime of PACS only partly explains it. When we apply the community regime to all couples paced with a separate property regime (hence simulating a counterfactual intra-household distribution of joint vs. separate wealth), the share of wealth held as individualized assets within PACS couples would have increased from 0.5% to 1.4% (Table 2.5 in the online appendix) and the individualization would have continued to rise. Second, the decline of marriage is associated with both a later age at marriage and a lower propensity to marry altogether ([Toulemon, 1996](#)). Its corollary is the increasing share of unmarried cohabiting couples and richer unmarried couples as they accumulate wealth before marriage. Third, separate property regimes became more common over the period. The share of married couples with a separate property regime has increased continuously since the 1970s, reaching 20% of newlywed couples in France in 2010 ([Frémeaux and Leturcq, 2018](#)). Newlywed couples opting for a separate property regime are richer, more unequal at partnership formation than other couples, and more likely to be in a second marriage ([Frémeaux and Leturcq, 2013](#)).

The increasing share of individualized wealth for any given type of couple is driven by two

mechanisms. Premarital accumulation of wealth fosters the individualization of wealth because assets acquired before marriage are considered separate assets. Premarital accumulation of wealth has increased as a result of increasing age at first marriage (Mignot, 2010) and remarriage rates. The share of couples involving at least one divorced spouse increased from 14% of all couples in 1998 to 19% in 2015. Moreover, inherited wealth (bequests and gifts) are considered separate assets, even for the community of acquisitions regime in France. Inherited wealth is becoming increasingly important in the wealth of households (Piketty, 2011), fostering the individualization of wealth.

#### **4.6 The individualization of wealth by age groups and cohorts**

We replicate our measure of the individualization of wealth at the aggregate level by age groups and cohort groups, based on the age of the oldest partner (online appendix, Tables 2.3 and 2.4). It measures the share of individualized wealth in the wealth of this particular group.

Our results show that the share of individualized assets among couples rose for all age groups: +7 pp. for the 25–45 group, +8 pp. for the 45–60 group, and +4 pp. for the 60–89 group. For all age groups, the individualization is driven by the increasing share of individualized wealth held by couples in a separate property regime.

The share of individualized wealth held by cohorts born in 1920–1944 remained stable between 1998 and 2010. It increased by 3 pp. between 1998 and 2015 for the 1945–1964 cohorts, driven by couples in a separate property regime. It also remained stable for the 1965–1979 cohorts but the stability hides two opposing trends: the share of wealth held as individualized assets by unmarried couples decreased over time, while the share of wealth held as individualized assets by couples with a separate property regime increased over time.

Our results show that the individualization of wealth is a massive phenomenon, driven by all age groups and all cohorts. On top of the individualization of wealth within couples, the share of wealth held by singles also increased for all age groups and cohort groups.

## 4.7 Sensitivity analysis

The asset composition of wealth has changed over time due to the growth of the value of real estate assets. We analyze to what extent the individualization of wealth is affected by the changing composition of wealth. Table 2.12 in the online appendix shows that all types of assets became more individualized over the period, and this trend is stronger for financial and business assets.

We perform three analyses testing how our measure is sensitive to the asset composition of wealth. Our first test consists in neutralizing the changing relative prices of assets by valuating all real estate assets to their 2015 values (Table 4.1 of the online appendix). We find that the large increase in real estate value has partially offset the individualization of wealth. Our second test consists in replicating our analysis without business assets because information relative to the identification of owners for these assets changed after the 1998 wave. Excluding these assets results in a slightly lower individualization of wealth over time. Our third test consists in measuring the individualization of wealth based on a personal wealth net of liabilities, which is based on an approximation of individualized liabilities. Taking liabilities into account decreases the share of joint assets held by couples and increases the share of assets held by singles but the growth remains similar. Couples tend to hold real estate as joint assets and liabilities are mostly related to home ownership. Lastly, we test the sensitivity of our analysis to the sample. We replicated the analysis, now including the top 1% of the population which initially had been excluded. A larger share of wealth is individualized but changes in the share of individualized wealth remain roughly similar to what was previously estimated.

## 5 Measuring wealth inequality

### 5.1 The individualization of wealth and wealth distribution

We investigate the individualization of wealth across distributional groups: the bottom 50% of the distribution (P0-P50), the middle 40% (P50-P90), and the top 10% (P90-P100). For each group, we



distinguish the share of wealth held by singles from individualized assets and joint assets held by individuals in a relationship. Figure 2 presents the results.<sup>29</sup> The share of individualized wealth is larger for wealthier individuals and it increased over time for all distributional groups.

In 1998, the bottom 50% group held 9.8% of all assets: 1.9% was held by singles and 7.9% by couples. Among couples, 11% of the wealth of couples is held as individualized assets ( $\frac{0.9}{7.9} \approx 11\%$ ). The middle 40% held 51% of all assets: 9.3% was held by singles and 41.7% by couples. Among couples, the share of individualized assets is slightly larger than for poorest group, because they held 13.5% of their assets as individualized assets. The top 10% group held 39.2% of all assets: 9.8% was held by singles, 29.4% by couples. Individuals in a relationship from the top 10% exhibit the largest share of individualized wealth: they held 25% of their assets as individualized assets.

The share of individualized wealth increased over time for all distributional groups. It rose significantly faster for the top 10% than for the other groups, confirming that the individualization of wealth is driven by the richest individuals. The wealth share of the bottom 50% decreased to 8.9% (2% held by singles, 0.9% as individualized assets by individuals in a relationship, and 6% as joint assets). Their share of individualized wealth within couples increased from 11% to 13%. The share of wealth held by the middle 40% group decreased to 46.3%, with 11.3% held by singles and 35% by couples. Within couples from the middle 40%, the individualization of wealth increased from 13.5% to 16.5%. The top 10% held 44.8% of all assets: 13.9% was held by singles, and 30.8% by couples. The share of individualized wealth within couples increased from 25% in 1998 to 41% in 2015.

## 5.2 The measure of wealth inequalities

We compare the wealth shares of the bottom 50% of the distribution, the middle 40%, and the top 10% based on four ways of measuring wealth inequality: 1) a households-based measure, measuring wealth inequality between households; 2) an individuals-based measure under the assumption of fully

---

<sup>29</sup>See also Table 5.1 of the online appendix for detailed estimates.

public wealth, assigning the couple's wealth to each partner; 3) an individuals-based measure under the equal split assumption, assigning half of the couple's wealth to each partner; 4) an individuals-based measure, using our measure of individualized wealth.

According to Figure 3,<sup>30</sup> the households-based measure of wealth inequality shows a larger wealth inequality than all individuals-based measures of wealth inequality. A comparison of individuals-based measures of wealth inequality indicates that wealth inequality appears to be the highest when considering individualized wealth, the lowest when measured under the equal split assumption, and intermediate when measured under the fully public wealth assumption. Comparing the results obtained using individualized wealth to those using the equal split assumption, we find that the wealth share of the top 10% is 1.2 pp. (significant at 90%) larger when individualized wealth is considered in 1998. The gap between the two measures increased to 1.8 pp. in 2015 (significant at 90%). The bias due to this simplifying assumption increased by 50% over time, which is consistent with our results for the individualization of wealth. All four measures of wealth inequality show an increase in wealth inequality, indicating that the wealth share of the top 10% increased by 5 pp. (under the equal split assumption) to 5.6 pp. (using individualized wealth).

The measure of wealth inequality based on individualized wealth differs from the measure based on the equal split assumption because it redistributes assets within the household. Therefore, it ought to show a larger wealth inequality. The individualization of wealth affects all distributional groups unequally, thus redistributing wealth between distributional groups. Moreover, the growing individualization of wealth over time resulted in a larger increase in wealth inequality compared to what is measured under the equal split assumption. Therefore, assumptions overlooking the intra-household distribution of wealth tend to underestimate both its level and its growth.

We compare wealth inequality for different age and cohort groups (Table 5.1 in the online appendix). A similar pattern seems to emerge for all groups, although our estimates are not precise.

---

<sup>30</sup>Table 5.2 of the online appendix presents the detailed estimates. We also present a comparison of the Gini index based on the four ways of measuring wealth inequality.

Slight differences between groups are worth noting: the bias induced by the equal split assumption tends to be larger for recent cohorts (born in 1965–1979), and for younger groups (aged 25–44). The bias seems to be increasing with time for all age groups but as cohorts grow older, it remains stable for all cohorts.

The underestimation of wealth inequality induced by the equal split assumption may be more severe than what our estimates suggest. We rely on survey data, which underestimate both the aggregate wealth and the level of inequality. For France, the [European Central Bank \(2013\)](#) estimates that the mean net wealth per capita is 1/3 lower in the survey data we use than in national accounts. Missing wealth in the survey is likely to be unevenly distributed. We find a top 10% wealth share of 45% in 2015 while [Garbinti et al. \(2016\)](#) estimated a share of around 55% with their Distributional National Accounts. Our estimates suggest that the richest individuals hold a larger share of their assets as individualized assets, meaning that unobserved wealth in the survey is likely to be held as individualized assets. If that were the case, we would underestimate both the individualization of wealth and wealth inequality.<sup>31</sup>

## 6 The gender wealth gap

### 6.1 The increasing gender wealth gap: the role of the individualization of wealth

We measure the gender wealth gap relative to the average personal wealth, thus controlling for the large increase in the value of wealth over the period. Let  $\bar{w}_t$  give the average personal wealth in period  $t$ ,  $\bar{w}_t^m$  and  $\bar{w}_t^f$  give the average personal wealth in period  $t$  for males and females respectively.

Let  $\Gamma_t$  be the gender wealth gap, relative to the average personal wealth at date  $t$ . It is defined as:

$$\Gamma_t = \frac{\bar{w}_t^m - \bar{w}_t^f}{\bar{w}_t}.$$

---

<sup>31</sup>Wealth inequality is also likely to be affected by tax evasion ([Alstadsaeter et al., 2019](#)). However, this bias is common to both survey data and administrative data even though the bias may vary across data sources. As tax evasion often occurs in the declaration of financial and business assets, which are more individualized, the individualization of wealth could be even more severe than what we would estimate on the basis of fiscal data, even if we could observe individualized wealth from fiscal data.

The measure of the gender wealth gap is severely affected by the assumption about the intra-household distribution of assets (see Figure 4a). In 1998, we measure a gender wealth gap of 2.7% of the average personal wealth under the equal split assumption, while it reaches 9% when the intra-household distribution of assets is taken into account. In 2015, the difference between the two measures is even more striking: we found a gender wealth gap of 6.9% with the equal split assumption and of 16.3% without it.<sup>32</sup> Both measures find an increasing gender wealth gap over the period: under the equal split assumption, it increased by 4.2 pp. against 7.3 pp. with our measure.<sup>33</sup>

Figure 4b shows that the gender wealth gap increased among both singles (from 8% to 23% of the average personal wealth) and individuals in a relationship (from 8% to 13%), when intra-household inequality is taken into account.<sup>34</sup>

In order to examine the link between the gender wealth gap and the individualization of wealth, we show that the gender wealth gap  $\Gamma_t$  can be written as a function of several elements. The proof is given in the appendix, but we explain here what these components measure. First, it is unambiguously related to the gender wealth gap among singles. Second, the gender wealth gap in the population is related to the share of individualized assets within couples and to the distribution of individualized assets within couples. Males holding a larger share of individualized assets within the household would unambiguously increase the gender wealth gap in the population. The share of individualized assets has an ambiguous impact on the gender wealth gap, because it depends on how individualized assets are distributed within the household. However, males typically hold a larger share of individualized wealth than females, which means that an increase in the share of wealth held as individualized wealth would increase the gender wealth gap. Third, the gender wealth gap is associated with the share of singles in the population and to their relative wealth, but their impact

---

<sup>32</sup>We also measure the gender wealth gap under the fully public wealth assumption. The gap increased from 7.4% to 9.3% between 1998 and 2015. The estimates are provided in Table 5.2 in the online appendix.

<sup>33</sup>When the intra-household distribution of assets is taken into account, we find that the gender wealth gap rose from 7,000 euros in 1998 to 24,000 euros in 2015. The gender wealth gap is lower in France than in Germany. According to [Sierminska et al. \(2018\)](#), the gender wealth gap was equal to 30,700€ in 2012 in Germany.

<sup>34</sup>Figure 4 and Table 5.10 of the online appendix display the gender wealth gap by age groups. The gender wealth gap increased for all age groups, and the rise was larger for individuals aged 40 to 69.

on the gender wealth gap is ambiguous. If the gender wealth gap tends to be larger among singles than among couples, an increase in the share of singles in the population or in their relative wealth would be associated with an increase in the gender wealth gap in the population.

Writing the gender wealth gap  $\Gamma_t$  as a function of the different elements mentioned above allows us to decompose its increase and to evaluate the contribution of changes in its components. The results depend on the order in which the elements are introduced in the decomposition, so we computed the contribution of the elements for all the different orders of the decomposition and we present in Table 5 the average contribution of each term.

The growing gender wealth gap over the 1998–2015 period is driven by the gender wealth gap among singles (51% of the growth), although it is not precisely estimated (CI 95%=[-6;108]). The second driver of the gender wealth gap is the increasing share of individualized wealth among couples (43% of the growth; CI 95%=[30;55]). The change in the gender wealth gap cannot be attributed to changes in the composition of the population in terms of singles/couples (despite the large increase in the share of singles in the population), but rather to changes in the wealth composition of singles as well as changes in the ownership status of wealth among couples.

The decomposition by subperiods indicates that the gender wealth gap increased by a steady 0.021–0.028 of an average personal wealth for each subperiod, though the subperiod increase is not precisely estimated. The increasing gender wealth gap between 2004 and 2010, and between 2010 and 2015 is significantly related to both the increasing share of individualized wealth among couples and the gender gap among singles (though less precisely estimated). The share of singles and couples, as well as the relative wealth of singles compared to couples, is not associated with an increase in the gender wealth gap for all subperiods. The contribution of other parameters is not precisely estimated.

We analyze the determinants of the gender wealth gap in Table 6. To do so, we regressed the relative personal wealth (personal wealth divided by the average personal wealth during the period) on dummies for year and interaction terms between gender and year dummies. The coefficients on the

interaction terms between gender and year dummies give the average gap between males and females in relative personal wealth, therefore showing the gender wealth gap. It allows us to sequentially add variables controlling for the structure of the population such as: age, marital status, education, self-employment and inheritance. We find a significant gender wealth gap, which is rising over time. Adding variables controlling for the age, marital and educational structure of the population only slightly affects the level and the growth of the gender wealth gap. Controlling for self-employment and having received a bequest significantly reduces the level gender wealth gap (but not its growth). These results suggest that the increase in the gender wealth gap is not related to the demographic structure of the population.

## 6.2 The gender wealth gap within couples

Figure 4c plots the gender wealth gap for three distinct types of couples. The gender wealth gap among married couples with a separate property regime surged from 20% of an average personal wealth in 1998 to 57% of an average personal wealth in 2015<sup>35</sup>. In the meantime, the gap remained low and stable for married couples with the community regime at around 5% of an average personal wealth. Among unmarried couples, the gender wealth gap declined from 22% to 16%.

We can draw two conclusions from Figure 4c. First, the community property regime is associated with a low level of gender wealth inequality. Second, a large share of individualized assets is not necessarily associated with a large gender wealth gap. Although unmarried couples hold a larger share of individualized wealth than married couples with a separate property regime (Table 4), the gender wealth gap is much larger among the latter.

We expect the drivers of inequality to differ across couples. For couples married with a community property regime, the gap should be explained by a preexisting gap or gaps in inheritance.<sup>36</sup> For

---

<sup>35</sup>The slight decrease between 2010 and 2015 is due to the growing share of civil unions in this group. If we focus only on married couples with a separate property regime, the gap increases between 2010 and 2015.

<sup>36</sup>According to [Arrondel and Laferrère \(1992\)](#) only 8% of estates were shared unequally between siblings in the mid-1980s. Unequal sharing was not related to the gender of the child.

unmarried couples or couples with a separate property regime, the gender wealth gap could also be explained by gender differences in wealth accumulation during the relationship. To investigate this issue, we regressed the gender wealth gap on a dummy indicating the type of couple, the year of observation, and whether the partners have been in this relationship for more than 10 years (column 1). Then, we added interaction terms between these three variables (column 2). We add controls for characteristics of couples defined prior to the relationship (previous marriage, comparison of wealth when partners met, age when they met and age difference, and education) (column 3) and for characteristics defined during the relationship (number of years of full-time activity on the labor market, self-employment of spouses, having received a bequest)<sup>37</sup> (column 4).

Table 7 presents the results. Column 1 confirms that the gender gap is significantly higher for unmarried couples and married couples with a separate property regime, compared to married couples with a community property regime. We do not find that couples in a long-lasting relationship exhibit a different gender wealth gap. In column 2, a larger gender wealth gap is found for unmarried couples, but the difference has not significantly changed over time (even though the coefficient is large). In contrast, married couples with a separate property regime did not exhibit a significantly different gender wealth gap in 1998 but did show a large and significant gender wealth gap in 2015. Long-lasting couples display a larger gender wealth gap as compared to more recent couples with the same type of property regime in 2015 but the coefficients are not significant. The inclusion of control variables (columns 3 and 4) reinforces the results. The results suggest that the growth of the gender wealth gap among couples is driven by married couples with a separate property regime, both recently formed couples and long-lasting relationships.

Several mechanisms may be at stake. First, a stronger selection of more unequal couples into the separate property regime may explain why recently formed couples with a separate property regime

---

<sup>37</sup>Wealth inequality due to inherited wealth could also be present when spouses met. However, the average age for receiving a bequest or a gift increased over the past decades in France, which makes it more likely one would inherit during the relationship than before (Dherbécourt, 2017), for most couples.

are more unequal in 2015. A second hypothesis is that there has been a change in the composition of couples: couples may have become more unequal at partnership formation (because of their marital history), and more unequal couples opt for a separate property regime, explaining the rise of this regime. The increasing gender wealth gap within long-lasting couples may be driven by a different rate of wealth accumulation between males and females within the household. This is possibly due to different career choices.<sup>38</sup> An alternative explanation is selection into divorce. If more equal couples are more likely to divorce among married couples with a separate property regime, we would observe more unequal couples among married couples with a separate property regime than among couples with a community property regime.

### 6.3 The gender wealth gap between singles

Figure 4d displays a surging gender wealth gap for widowers and widows. The gender wealth gap between never-married men and women is smaller and rather stable until 2010. Between 2010 and 2015, the gender gap increases. For divorced people, the evolution of the gap is less clear. For all categories, the evolution over the period is not statistically significant, suggesting a large heterogeneity within each category, which may come from their past matrimonial decisions.

The gap among divorced or separated individuals or between widowers and widows could be partly explained by past relationships through different mechanisms: 1) men and women have unequal wealth at divorce, separation, or death, due to the individualization of wealth; 2) men are more able to accumulate wealth after a divorce, separation, or the death of their spouse; 3) there are gender differences in remarriage rates (Cassan et al., 1999).<sup>39</sup>

---

<sup>38</sup>Additional analyses related to the mechanisms behind the gender gap are presented in Tables 5.11, 5.12, and 5.13 in the online appendix. For the separate property regime, the results show that differences in labor market participation generate inequality between spouses only when the male partner had been working for a longer period. We find a similar result for self-employment. Inequality generated by inherited wealth is symmetrical: the gender wealth gap increases when the male partner has received a bequest and it decreases when the female partner has received a bequest.

<sup>39</sup>The current version of the wealth survey prevents us from providing appropriate tests of these hypotheses. Specifically, we do not know the past matrimonial property regime, and information about the year of divorce/separation is imprecise in the current surveys. The next wave of the survey will include a longitudinal dimension and a specific questionnaire about the divorce process, which opens avenues for further research on wealth accumulation after divorce and more generally on the gender gap among singles.



## 7 Conclusion

Using French survey data, we measured how households' wealth is distributed between joint assets and individual assets. Wealth became more individualized in France between 1998 and 2015, because of both the increasing share of wealth held by singles and the individualization of wealth within couples. It mainly comes from the growing share of the separate property regime and, to a lesser extent, from increasing inheritance and wealth accumulated before marriage. Standard measures of wealth inequality overlook the intra-household distribution of wealth, thus underestimating the level and growth of wealth inequality, especially the gender wealth gap.

We can infer that the trend of the individualization of wealth started back in the 1970s, when marriage rates started to decline sharply and prenuptial agreement rates started to increase (Frémeaux and Leturcq, 2018). The individualization is likely to keep increasing over the next decades because inherited wealth may keep growing (Piketty, 2011), rising the share of individualized assets and the likelihood of opting for a separate property regime (Frémeaux and Leturcq, 2013).

How do other countries compare to France in terms of individualization of wealth? The share of wealth which can be individualized varies across countries, because it depends largely on the institutional framework. France is typical of countries where the default matrimonial property regime imposes partial community of assets but couples can easily separate their assets within marriage and the discretionary power of courts to redistribute assets across spouses upon separation is limited, which is the case for most European countries and in Latin America (World Bank, 2012). The discrepancy between the actual personal wealth and the personal wealth measured under the equal split assumption is likely to be lower in countries imposing community of assets on couples (such as in most states in the U.S. or provinces in Canada) or in countries imposing large wealth transfers between spouses at death or divorce. Our results indicate that the individualization of wealth is largely driven by changes in the demographic behavior of couples, such a later marriage and a higher risk of divorce. These changes are observed in most developed countries, suggesting a potential individualization of

wealth in other countries. Property regimes are usually unobserved in administrative data, except in Italy. [Bayot and Voena \(2015\)](#) show that the share of newlywed couples opting for a separate property regime increased from 41% to 67% between 1995 and 2011, suggesting a large individualization of wealth among newlywed couples in Italy.

We believe this paper opens new avenues for future research. First, a more careful analysis of the role of behaviors and attitudes related to the individualization of wealth and wealth inequality is needed. Second, our results imply that there are new issues related to public policy, especially in terms of income, wealth, and inheritance taxation.

## References

- Alstadsaeter, Annette, Niels Johannesen, and Gabriel Zucman**, “Tax Evasion and Inequality,” *American Economic Review*, 2019, 109 (6), 2073–2103.
- Alvaredo, Facundo, Antony B. Atkinson, and Salvatore Morelli**, “Top wealth shares in the UK over more than a century,” *Journal of Public Economics*, 2018, (162), 26–47.
- , **Bertrand Garbinti, and Thomas Piketty**, “On the Share of Inheritance in Aggregate Wealth: Europe and the USA, 1900–2010,” *Economica*, 2017, (84), 239–260.
- Arrondel, Luc and Anne Laferrère**, “Les partages inégaux de successions entre frères et soeurs,” *Economie et Statistique*, 1992, (256), 29–42.
- Austen, Siobhan, Therese Jefferson, and Rachel Ong**, “The Gender Gap in Financial Security: What We Know and Don’t Know about Australian Households,” *Feminist Economics*, 2014, (3), 25–52.
- Bank, The World**, “Removing barriers to economic inclusion. Measuring gender parity in 141 countries,” Technical Report 2012.

- Bayot, Denrick and Alessandra Voena**, “Prenuptial Contracts, Labor Supply and Household Investments,” Technical Report 2015.
- Bonnet, Carole, Alice Keogh, and Benoit Rapoport**, “Quels facteurs pour expliquer les écarts de patrimoine entre hommes et femmes en France ?,” *Economie et Statistique*, 2014, (472-473), 101–123.
- Bover, Olympia**, “Wealth inequality and household structure: US vs. Spain,” *Review of income and Wealth*, 2010, 56 (2), 259–290.
- Breton, Didier, Magali Barbieri, Hippolyte d’Albis, and Magali Mazuy**, “L’évolution démographique récente de la France. Naissances, décès, unions et migrations : à chacun sa saison,” *Population*, 2018, 73 (4), 623–692.
- Cartwright, Edward**, *Behavioral economics*, Routledge, New-York, 2011.
- Cassan, Francine, Magali Mazuy, and François Clanché**, “Refaire sa vie de couple est plus fréquent pour les homes,” *Histoires de familles, histoires familiales: les résultats de l’enquête Famille de*, 1999, 1999, 223–231.
- Chang, Mariko Lin**, *Shortchanged: Why women have less wealth and what can be done about it*, Oxford University Press, Oxford, 2010.
- Chaussebourg, Laure, Valérie Carrasco, and Aurélie Lermenier**, “Le Divorce,” Technical Report, Ministère de la Justice, [http : //www.justice.gouv.fr/art\\_pix/1\\_stat\\_divorce\\_20090722.pdf](http://www.justice.gouv.fr/art_pix/1_stat_divorce_20090722.pdf) Juin 2009.
- Cowell, Frank A and Philippe Van Kerm**, “Wealth inequality: A survey,” *Journal of Economic Surveys*, 2015, 29 (4), 671–710.

- Deere, Carmen Diana, Abena D. Oduro, Hema Swaminathan, and Cheryl R. Doss,** “Property rights and the gender distribution of wealth in Ecuador, Ghana and India,” *Journal of Economic Inequality*, 2013, (11), 249–265.
- **and Cheryl R. Doss,** “The Gender Asset Gap: What Do We Know and Why Does it Matter,” *Feminist Economics*, 2006, 12 (1-2), 1–50.
- , **Ravi Kanbur, and Frances Stewart,** “Horizontal inequalities,” in Joseph Stiglitz and Jean-Paul Fitoussi et Martine Durand, eds., *For Good Measure: Advancing Research on Well-being Metrics Beyond GDP*, Paris: OECD, 2018.
- Dherbécourt, Clément,** “Peut-on éviter une société d’héritiers ?,” *France Stratégie, Note d’analyse* 51, Janvier 2017.
- DiPrete, Thomas A and Claudia Buchmann,** “Gender-specific trends in the value of education and the emerging gender gap in college completion,” *Demography*, 2006, 43 (1), 1–24.
- Edlund, Lena and Wojcieh Kopczuk,** “Women, wealth and Mobility,” *American Economic Review*, 2009, 99 (1), 146–178.
- European Central Bank,** “The Eurosystem household finance and consumption survey: results from the first wave,” *Statistical Paper Series*, 2013, (2).
- Frémeaux, Nicolas and Marion Leturcq,** “Plus ou moins mariés: l’évolution du mariage et des contrats de mariage en France,” *Economie et Statistique*, 2013, 462-463, 125–151.
- **and –** , “Prenuptial agreements and matrimonial property regimes in France, 1855–2010,” *Explorations in Economic History*, 2018, 68, 132 – 142.
- Frick, Joachim R. and Markus Grabka,** “Public pension entitlements and the distribution of wealth,” in Janet C. Gornick and Markus Jantti, eds., *Income inequality: Economic disparities and the middle class in affluent countries*, Stanford: Stanford University Press, 2013.

- Garbinti, Bertrand, Jonathan Goupille-Lebret, and Thomas Piketty**, “Accounting for Wealth Inequality Dynamics: Methods, Estimates and Simulations for France (1800-2014),” *WID.world WORKING PAPER SERIES No 2016/5*, 2016.
- , – , and – , “Income Inequality in France 1900-2014: Evidence from Distributional National Accounts (DINA),” *Journal of Public Economics*, 2018, *162*, 63–77.
- Goussé, Marion and Marion Leturcq**, “More or Less Unmarried. The Impact of Legal Settings of Cohabitation on Labor Market Outcomes,” Technical Report 2018.
- Grabka, Markus M., Jan Marcus, and Eva Sierminska**, “Wealth distribution within couples,” *Review of Economics of the Household*, 2015, *13* (3), 459–486.
- Harbury, C. D. and D. M. W. N. Hitchens**, “Women, Wealth and Inheritance,” *The Economic Journal*, 1977, *87* (345), 124–131.
- Jeandidier, Bruno, Cécile Bourreau-Dubois, and Julie Mansuy**, “Le mariage est-il encore synonyme de protection pour les femmes en cas de divorce? Le rôle de la prestation compensatoire,” juin 2016. XIXe colloque international de l’AIDELF - Strasbourg.
- Lafortune, Jeanne and Corinne Low**, “Tying the double-knot: The role of assets in marriage commitment,” *American Economic Review P&P*, 2017, *107* (5), 163–167.
- Lersch, Philipp**, “The Marriage Wealth Premium Revisited: Gender Disparities and Within-Individual Changes in Personal Wealth in Germany,” *Demography*, 2017, *54* (3), 961–983.
- Mignot, Jean-Francois**, “L’écart d’âge entre conjoints,” *Revue française de sociologie*, 2010, *51*, 281–320.
- Piketty, Thomas**, “On the Long-Run Evolution of Inheritance - France 1820-2050,” *Quarterly Journal of Economics*, 2011, *61* (11), 1071–1131.

- **and Gabriel Zucman**, “Capital is Back: Wealth-Income Ratios in Rich Countries, 1700-2010,” *Quarterly Journal of Economics*, 2014, 129 (3), 1255–1310.
- Rault, Wilfried and Arnaud Régnier-Loilier**, “La première vie en couple : évolutions récentes,” *Population & Sociétés*, 2015, 521.
- Saez, Emmanuel and Gabriel Zucman**, “Wealth Inequality in the United States since 1913: Evidence from Capitalized Income Tax Data,” *Quarterly Journal of Economics*, 2016, 131 (2), 519–578.
- Schwartz, Christine R. and Hongyun Han**, “The Reversal of the Gender Gap in Education and Trends in Marital Dissolution,” *American Sociological Review*, 2014, 79 (4), 605–629.
- Shammas, Carole**, “Re-assessing the Married Women’s Property Acts,” *Journal of Women’s History*, 1994, 6 (1), 9–28.
- Sierminska, Eva and Timothy Smeeding**, “Measurement issues: equivalence scales, accounting framework and reference unit,” *Luxembourg Income Study. Luxembourg*, 2005.
- , **Daniela Piazzalunga, and Markus M. Grabka**, “Transitioning towards more equality? Wealth gender differences and the changing role of explanatory factors over time,” GLO Discussion Paper 2018.
- Solotareff, Rosalinda and A. Ferrante**, “Entre 1998 et 2015, le patrimoine double, mais diminue pour les 20% les moins dotés,” in “Les revenus et le patrimoine des ménages,” Insee Références, 2018.
- Toulemon, Laurent**, “La cohabitation hors mariage s’installe dans la durée,” *Population*, 1996, 51 (3), 675–715.
- Voena, Alessandra**, “Yours, Mine and Ours: Do Divorce Laws Affect the Intertemporal Behavior of Married Couples,” *American Economic Review*, 2015, 105 (8), 2295–2332.

**Wolff, Edward N**, “Deconstructing Household Wealth Trends in the United States, 1983-2013,”  
Technical Report, National Bureau of Economic Research 2016.

Table 1: Descriptive statistics by marital status

	1998			2004			2010			2015		
	Wealth (mean) ×1,000	Wealth (rel. to mean)	Share in pop.	Wealth (mean) ×1,000	Wealth (rel. to mean)	Share in pop.	Wealth (mean) ×1,000	Wealth (rel. to mean)	Share in pop.	Wealth (mean) ×1,000	Wealth (rel. to mean)	Share in pop.
All individuals	77.7 ( 95.8)	1.00	100%	104.0 ( 130.2)	1.00	100%	154.4 ( 233.1)	1.00	100%	150.2 ( 249.0)	1.00	100%
Singles	71.7 ( 103.8)	0.92 ( 1.34)	22.8%	91.7 ( 137.7)	0.88 ( 1.32)	23.4%	143.6 ( 244.2)	0.93 ( 1.58)	27.5%	142.8 ( 269.7)	0.95 ( 1.80)	28.6%
<i>including:</i> Never-married	62.1 ( 100.0)	0.80 ( 1.29)	8.8%	77.4 ( 130.6)	0.74 ( 1.26)	8.6%	116.0 ( 221.7)	0.75 ( 1.44)	10.4%	111.5 ( 240.1)	0.74 ( 1.60)	12.3%
Divorced	70.3 ( 108.0)	0.90 ( 1.39)	5.7%	89.4 ( 134.9)	0.86 ( 1.30)	6.8%	147.6 ( 250.2)	0.96 ( 1.62)	8.2%	144.4 ( 271.0)	0.96 ( 1.80)	8.7%
Widower	82.7 ( 103.9)	1.06 ( 1.34)	8.4%	109.2 ( 145.6)	1.05 ( 1.40)	8.0%	172.4 ( 259.8)	1.12 ( 1.68)	8.9%	191.9 ( 304.2)	1.28 ( 2.03)	7.6%
In a relationship	79.5 ( 93.2)	1.02 ( 1.20)	77.2%	107.8 ( 127.6)	1.04 ( 1.23)	76.6%	158.5 ( 228.6)	1.03 ( 1.48)	72.5%	153.1 ( 240.1)	1.02 ( 1.60)	71.4%
<i>including:</i> Unmarried cohabitant	40.9 ( 76.0)	0.53 ( 0.98)	11.5%	62.5 ( 102.9)	0.60 ( 0.99)	13.0%	95.1 ( 181.6)	0.62 ( 1.18)	13.9%	97.6 ( 194.6)	0.65 ( 1.30)	13.0%
Married (com. assets)	83.1 ( 90.0)	1.07 ( 1.16)	61.2%	110.4 ( 120.9)	1.06 ( 1.16)	58.5%	159.9 ( 208.8)	1.04 ( 1.35)	52.4%	152.4 ( 206.7)	1.01 ( 1.38)	49.4%
Married (sep. assets)	129.6 ( 132.8)	1.67 ( 1.71)	4.5%	192.2 ( 192.9)	1.85 ( 1.85)	5.1%	289.9 ( 378.6)	1.88 ( 2.45)	6.2%	237.7 ( 396.8)	1.58 ( 2.64)	9.0%

Data: INSEE, Enquête Patrimoine (1998, 2004, 2010, and 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90.

Standard deviations in parentheses.

Note: For each year, the panel provides: the average personal wealth for the subgroup of the population (expressed in thousands 2015 euros); the average personal wealth for the subgroup of the population, expressed in the average personal wealth in the population for this year; the share of the population this subgroup represents. In 1998, the average personal wealth of an individual in a relationship was equal to 79,500 euros, which corresponds to 1.02 of the average personal wealth for this year ( $79.5/77.7 = 1.02$ ). Individuals in a relationship represented 77.2% of the population.



Table 2: Individualization of wealth by groups of the population

	1998	2004	2010	2015
<b>Share of individualized wealth (S)+(C)</b>	<b>35.0%</b> [ 33.7; 36.2]	<b>35.7%</b> [ 34.5; 37.0]	<b>42.9%</b> [ 41.6; 44.2]	<b>46.5%</b> [ 45.0; 48.0]
<b>Share of wealth held by singles (S)</b>				
All singles (S1)+(S2)+(S3)	21.0% [ 20.0; 22.0]	20.6% [ 19.6; 21.6]	25.6% [ 24.5; 26.7]	27.2% [ 25.8; 28.6]
<i>including:</i>				
Never married (S1)	7.0% [ 6.3; 7.7]	6.4% [ 5.7; 7.1]	7.8% [ 7.0; 8.7]	9.2% [ 8.2; 10.1]
Divorced (S2)	5.1% [ 4.4; 5.8]	5.8% [ 5.2; 6.4]	7.8% [ 7.1; 8.6]	8.3% [ 7.4; 9.3]
Widower (S3)	8.9% [ 8.1; 9.7]	8.4% [ 7.6; 9.2]	9.9% [ 9.2; 10.7]	9.7% [ 8.6; 10.8]
<b>Share of individualized wealth held by couples (C)</b>				
All couples (C1)+(C2)+(C3)	14.0% [ 13.0; 14.9]	15.1% [ 14.2; 16.1]	17.3% [ 16.1; 18.5]	19.3% [ 17.9; 20.7]
<i>including:</i>				
Unmarried cohabitant (C1)	4.3% [ 3.8; 4.9]	4.8% [ 4.1; 5.5]	5.3% [ 4.5; 6.1]	5.8% [ 5.0; 6.7]
Married (community of assets) (C2)	5.3% [ 4.8; 5.9]	5.6% [ 5.0; 6.1]	5.1% [ 4.5; 5.7]	5.0% [ 4.4; 5.5]
Married (separation of assets) (C3)	4.3% [ 3.7; 4.9]	4.8% [ 4.2; 5.4]	6.9% [ 6.1; 7.7]	8.5% [ 7.3; 9.7]
<b>Joint wealth held by couples</b>				
Share of joint wealth (J1)+(J2)+(J3)	65.0% [ 63.8; 66.3]	64.3% [ 63.0; 65.5]	57.1% [ 55.8; 58.4]	53.5% [ 52.0; 55.0]
<i>including:</i>				
Unmarried cohabitant (J1)	1.8% [ 1.4; 2.1]	3.0% [ 2.6; 3.5]	3.3% [ 2.9; 3.7]	2.6% [ 2.2; 3.0]
Married (community of assets) (J2)	60.1% [ 58.7; 61.5]	56.5% [ 55.0; 58.0]	49.1% [ 47.7; 50.6]	45.2% [ 43.6; 46.7]
Married (separation of assets) (J3)	3.2% [ 2.7; 3.7]	4.7% [ 4.0; 5.5]	4.7% [ 4.1; 5.2]	5.7% [ 5.1; 6.3]

Data: INSEE, Enquête Patrimoine (1998, 2004, 2010, and 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90.

95% confidence intervals in brackets. Standard errors estimated by bootstrap, 1000 replications.

Notes: In 1998, 21% of wealth is held by singles, 14% of wealth is held as individualized assets by individuals in a relationship, and 65% of wealth is held as joint wealth by individuals in a relationship. The wealth held by singles (21%) can be broken down into: 7% held by never-married individuals, 5.1% by divorced individuals, and 8.9% by widows or widowers. The individualized wealth held by individuals in a relationship (14%) can be broken down into: 4.3% held by unmarried cohabiting individuals, 5.3% held by married (or pacsed) individuals in a community property regime, and 4.3% by married (or pacsed) individuals with a separate property regime.

Table 3: Decomposition of the change in the ratio of individualized wealth for individuals in a relationship (1998–2015)

	Change in ratio indiv. wealth within couples $\Delta\theta$ (1)=(2)+(3)+(4)	Change in ratio of indiv. wealth within couples ( $\Delta\theta$ ) due to changes in:		
		distrib. of couples by types $\Delta\alpha_k$ (2)	rel. wealth by couples types $\Delta\nu_k$ (3)	ratio of indiv. wealth within couples by type $\Delta\theta_k$ (4)
1998–2004	0.014 [ -0.002, 0.030] 100%	0.013 [ 0.005, 0.021] 94% [ 37, 151]	0.011 [ 0.002, 0.019] 77% [ 17, 136]	-0.010 [ -0.023, 0.003] -70% [ -161, 21]
2004–2010	0.042 [ 0.025, 0.059] 100%	0.022 [ 0.015, 0.029] 52% [ 36, 69]	0.003 [ -0.005, 0.011] 7% [ -11, 25]	0.017 [ 0.004, 0.030] 40% [ 9, 72]
2010–2015	0.033 [ 0.010, 0.056] 100%	0.034 [ 0.022, 0.047] 104% [ 66, 143]	-0.014 [ -0.026, -0.001] -42% [ -80, -4]	0.012 [ -0.004, 0.028] 38% [ -12, 87]
1998–2015	0.089 [ 0.067, 0.110] 100%	0.067 [ 0.056, 0.079] 76% [ 63, 89]	0.007 [ -0.004, 0.018] 8% [ -5, 20]	0.015 [ 0.001, 0.028] 17% [ 1, 32]

Data: INSEE, Enquête Patrimoine (1998, 2004, 2010, 2015). Sample: all individuals in a relationship, older than 25 and younger than 90.

95% confidence intervals in brackets, computed by bootstrap (1000 reps).

Notes: over the 1998–2015 period, the ratio of individualized wealth within couples increased by 8.9 pp. The decomposition shows that: 76% (6.7 pp.) of this increase is due to changes in the distribution of couples by type of couple; 8% (0.7 pp.) of this increase is due to changes in the relative wealth of couples by type of couple; 17% (1.5 pp.) of this change is due to the increasing share of individualized wealth within couples by type of couple.

Table 4: Determinants of individualization within couples (1998 and 2015)

	(1)	(2)	(3)	(4)
	1998		2015	
	Share of indiv.	Share of indiv.	Share of indiv.	Share of indiv.
Unmarried		0.730*** (0.010)		0.605*** (0.009)
Sep. assets		0.501*** (0.013)		0.435*** (0.010)
Wealth: P0–50	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Wealth: P50–90	-0.152*** (0.009)	-0.057*** (0.007)	-0.165*** (0.009)	-0.094*** (0.007)
Wealth: P90–100	-0.092*** (0.016)	-0.032** (0.011)	-0.034* (0.016)	0.001 (0.012)
At meeting: no wealth	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
At meeting: man richer	0.091*** (0.012)	0.028** (0.008)	0.127*** (0.012)	0.069*** (0.009)
At meeting: woman richer	0.042** (0.014)	0.001 (0.010)	0.118*** (0.013)	0.039*** (0.010)
At meeting: equal wealth	-0.024* (0.011)	-0.017* (0.008)	0.005 (0.011)	-0.002 (0.009)
None received bequest	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
M received bequest, W not	0.061*** (0.012)	0.070*** (0.008)	0.035** (0.011)	0.059*** (0.009)
W received bequest, M not	0.077*** (0.013)	0.075*** (0.009)	0.053*** (0.012)	0.065*** (0.009)
Both received bequest	0.066*** (0.014)	0.077*** (0.010)	0.003 (0.013)	0.061*** (0.010)
Man's age at meeting $\leq$ 21	-0.028** (0.011)	-0.012 (0.007)	-0.045*** (0.010)	-0.019* (0.008)
Man's age at meeting: 22–30	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Man's age at meeting $\geq$ 31	0.122*** (0.015)	0.062*** (0.011)	0.199*** (0.014)	0.085*** (0.011)
Age diff M-F $\in$ [0, 1]	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Age diff. M-F $\in$ [2, 5]	0.000 (0.012)	-0.011 (0.008)	0.016 (0.012)	0.010 (0.009)
Age diff. M-F $\geq$ 6	-0.005 (0.015)	-0.010 (0.010)	-0.021 (0.015)	0.010 (0.012)
Age diff. M-F $<$ 0	0.025 (0.013)	-0.009 (0.009)	0.038** (0.012)	0.029** (0.010)
At least one spouse was married before	0.152*** (0.014)	0.000 (0.010)	0.062*** (0.013)	0.025* (0.010)
Nb. y. of FT act.: F $>$ M	0.035** (0.014)	0.013 (0.010)	-0.011 (0.012)	-0.002 (0.009)
Nb. y. of FT act.: M $>$ F (0–5 y.)	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
Nb. y. of FT act.: M $>$ F (6–15 y.)	0.015 (0.012)	0.002 (0.008)	-0.012 (0.012)	0.006 (0.009)
Nb. y. of FT act.: M $>$ F (16y.+)	-0.038** (0.012)	0.011 (0.009)	-0.051*** (0.012)	0.021* (0.010)
None self-employed	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>	<i>Ref.</i>
M self-employed, W not	0.052*** (0.015)	0.032** (0.011)	0.085*** (0.013)	0.035*** (0.010)
W self-employed, M not	-0.022 (0.025)	-0.029 (0.017)	0.033 (0.019)	0.044** (0.014)
Both self-employed	0.006 (0.017)	0.014 (0.012)	-0.000 (0.019)	-0.011 (0.015)
Constant	0.382*** (0.020)	0.102*** (0.014)	0.433*** (0.020)	0.141*** (0.016)
N	6,219	6,219	6,873	6,873
r <sup>2</sup>	0.216	0.610	0.240	0.551
Average (all couples)	21.1%	[37.4]	26.8%	[39.8]
Average (unmarried)	83.8%	[33.2]	76.1%	[37.9]
Average (married - comm.)	6.9%	[20.4]	8.2%	[21.7]
Average (married - sep.)	60.6%	[38.4]	57.3%	[39.9]

Standard errors in parentheses. Standard deviation in brackets.

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Each observation represents a couple. The left-hand side variable is the share of individualized assets among the couple's total wealth. All regressions also include controls for: a dummy variable if the couple has at least one child, male's education (no education, low vocational, secondary education completed, higher education—bachelor's or less, higher education—master's or more) and the comparison of partner's education (same level, male more educated, female more educated).

Table 5: Decomposition of gender wealth gap

	Change in the gender wealth gap	Change in the gender wealth gap due to changes in:					
		Gender wealth gap among singles	Rel. wealth of singles and couples	Share of singles and couples	Gender gap in individualized wealth within couples	Share of individualized wealth within couples	Adjustment term
1998–2004	0.025 [ -0.016, 0.066] 100%	0.008 [ -0.027, 0.042] 31% [ -108, 170]	-0.000 [ -0.001, 0.001] -1% [ -5, 4]	0.000 [ -0.000, 0.001] 0% [ -2, 2]	0.007 [ -0.014, 0.029] 29% [ -57, 115]	0.005 [ -0.001, 0.011] 21% [ -4, 46]	0.005 [ -0.005, 0.014] 19% [ -18, 57]
2004–2010	0.028 [ -0.017, 0.073] 100%	0.014 [ -0.024, 0.052] 50% [ -87, 186]	0.001 [ -0.001, 0.002] 2% [ -3, 8]	0.002 [ -0.002, 0.005] 6% [ -6, 18]	0.002 [ -0.023, 0.027] 7% [ -82, 97]	0.016 [ 0.008, 0.024] 58% [ 30, 86]	-0.007 [ -0.016, 0.003] -24% [ -58, 11]
2010–2015	0.021 [ -0.035, 0.077] 100%	0.015 [ -0.032, 0.062] 73% [ -152, 298]	0.001 [ -0.001, 0.002] 2% [ -6, 11]	0.001 [ -0.000, 0.002] 4% [ -1, 10]	-0.004 [ -0.034, 0.026] -19% [ -161, 123]	0.012 [ 0.003, 0.021] 57% [ 15, 99]	-0.004 [ -0.013, 0.006] -18% [ -63, 27]
1998–2015	0.074 [ 0.024, 0.124] 100%	0.037 [ -0.005, 0.080] 51% [ -6, 108]	0.000 [ -0.001, 0.002] 1% [ -1, 3]	0.003 [ -0.002, 0.008] 4% [ -2, 11]	0.007 [ -0.022, 0.035] 9% [ -29, 48]	0.031 [ 0.022, 0.041] 43% [ 30, 55]	-0.006 [ -0.015, 0.004] -8% [ -20, 5]

Data: INSEE, Enquête Patrimoine (1998, 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90.

95% confidence intervals in brackets, estimated by bootstrap (1000 reps)

Notes: over the 1998–2015 period, the gender wealth gap increased by 7.4% of the average personal wealth. The decomposition shows that: 51% (3.7 pp.) of this increase is due to changes in the gender wealth gap among single men and women; 1% (0.0 pp.) of this increase is due to changes in the relative wealth of singles in the population; 4% (0.3 pp.) of this change is due to changes in the share of singles in the population; 9% (0.7 pp.) is due to changes in the gender wealth gap in individualized wealth within couples; 43% (3.1 pp.) is due to the increasing share of individualized wealth within couples; and the rest is due to changes in the adjustment term.

Table 6: Determinants of the gender wealth gap, all individuals

	Outcome: relative personal wealth				
	(1)	(2)	(3)	(4)	(5)
Female × 1998	-0.075*** (0.023)	-0.059*** (0.022)	-0.074*** (0.022)	-0.052** (0.021)	0.000 (0.020)
Female × 2004	-0.099*** (0.022)	-0.085*** (0.022)	-0.099*** (0.022)	-0.105*** (0.021)	-0.048** (0.020)
Female × 2010	-0.129*** (0.022)	-0.120*** (0.021)	-0.131*** (0.021)	-0.114*** (0.021)	-0.059*** (0.020)
Female × 2014	-0.156*** (0.021)	-0.142*** (0.021)	-0.149*** (0.021)	-0.136*** (0.020)	-0.075*** (0.019)
N	68821	68821	68821	67613	67613
r2	0.002	0.043	0.063	0.140	0.209
<b>Controls:</b>					
Year dummies	Y	Y	Y	Y	Y
Age groups	N	Y	Y	Y	Y
Marital status (single vs. couple)	N	Y	N	N	N
Detailed marital status	N	N	Y	Y	Y
Educational attainment	N	N	N	Y	Y
Self-employed and bequest	N	N	N	N	Y

Standard errors in parentheses

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Data: INSEE, Enquêtes Patrimoine (1998, 2004, 2010, 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90.

Each observation represents an individual. The left-hand side variable is the relative personal wealth (personal wealth divided by the average wealth for a given year). The coefficient for the variables "Female" interacted with the year dummies give the gender gap in relative personal wealth and its evolution over time. All regressions include year dummies. The marital status indicates if the individual is single; the detailed marital status controls for: married (community of assets), married (separate assets), unmarried, never married, divorced, widow; Age groups are: [25-29], [30-39], [40-49], [50-59], [60-69], [70-79], [80-89]; Educational attainment is defined as: no education, low vocational, secondary education completed, higher education—bachelor's or less, higher education—master's or more; Self-employed is a dummy indicating if the individual is self-employed, and Bequest is a dummy variable indicating if the individual received a bequest.

Table 7: Determinants of the gender wealth gap among couples, 1998 and 2015

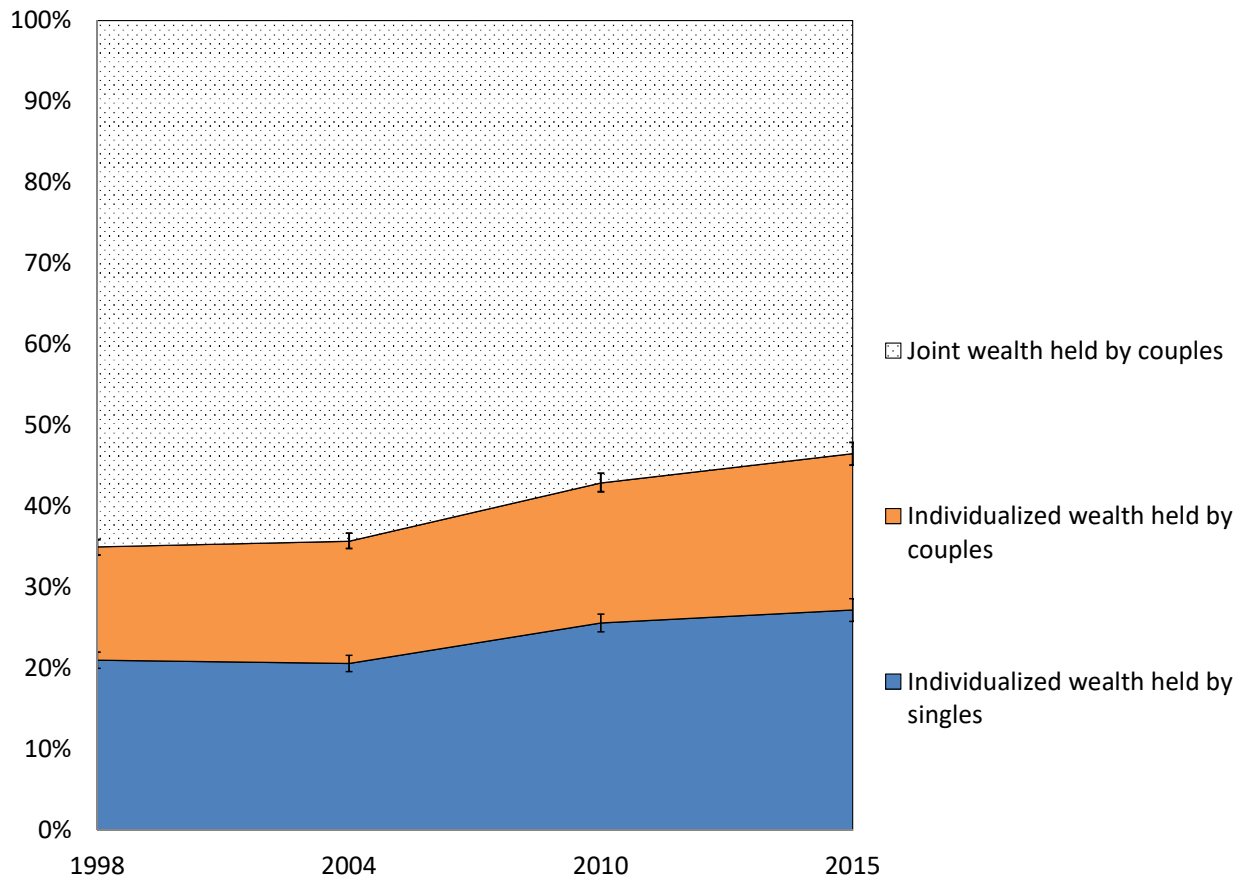
	(1)	(2)	(3)	(4)
Year 2015	0.022 (0.019)	0.050 (0.063)	0.026 (0.062)	0.025 (0.061)
Duration>10y.	-0.033 (0.025)	-0.042 (0.043)	0.019 (0.044)	-0.017 (0.043)
Duration>10 × 2015		-0.053 (0.067)	-0.029 (0.066)	-0.019 (0.065)
Unmarried	0.125*** (0.029)	0.141* (0.057)	0.124* (0.056)	0.138* (0.055)
Unmarried × 2015		-0.147 (0.085)	-0.104 (0.084)	-0.121 (0.082)
Unmarried × Duration>10		0.059 (0.090)	0.035 (0.089)	0.060 (0.087)
Unmar. × Dur.>10 × 2015		0.125 (0.121)	0.101 (0.119)	0.078 (0.116)
Sep. assets	0.398*** (0.034)	0.188 (0.103)	0.125 (0.103)	0.078 (0.100)
Sep. assets × 2015		0.253* (0.129)	0.313* (0.127)	0.374** (0.124)
Sep. assets × Duration>10		-0.067 (0.125)	-0.063 (0.124)	-0.048 (0.121)
Sep. assets × Dur.>10 × 2015		0.159 (0.155)	0.105 (0.154)	-0.027 (0.150)
<u>Controls:</u>				
Previous marriage	N	N	Y	Y
Comparison of wealth when couple met	N	N	Y	Y
Male's age and age difference	N	N	Y	Y
Male's diploma and comparison of diploma	N	N	Y	Y
Comparison in the number of years of activities	N	N	N	Y
Self-employed status (male and female)	N	N	N	Y
Received a bequest (male and female)	N	N	N	Y
N	13522	13522	13522	13522
r <sup>2</sup>	0.013	0.016	0.041	0.090

Standard errors in parentheses; \*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

Data: INSEE, Enquêtes Patrimoine (1998, 2015). Sample: all individuals in a relationship, older than 25 and younger than 90.

Each observation represents a couple. The left-hand side variable is the relative gender wealth gap observed for this couple (gender wealth gap divided by the average personal wealth for a given year). The control variables include: a dummy indicating if one partner has been previously married; a comparison of wealth at couple formation (man richer, woman richer, equally rich, no assets); male's age at couple formation (dummy lower than 21, between 21 and 30 and more than 30); age difference between partners (male older by 0 or 1 y., male older by 2 to 5 years, male older by 6 years or more, woman older); male's education (no education, low vocational, secondary education completed, higher education—bachelor's or less, higher education—master's or more; comparison of partner's education (same level, male more educated, female more educated; comparison of the number of equivalent of years of full-time activity on the labor market (female more years of FT activity, male has 0 to 5 years more, male has 6 to 15 years more, male has 16 years or more; self-employment (none (ref.), only male, only female, both); has received a bequest (none, only male, only female, both).

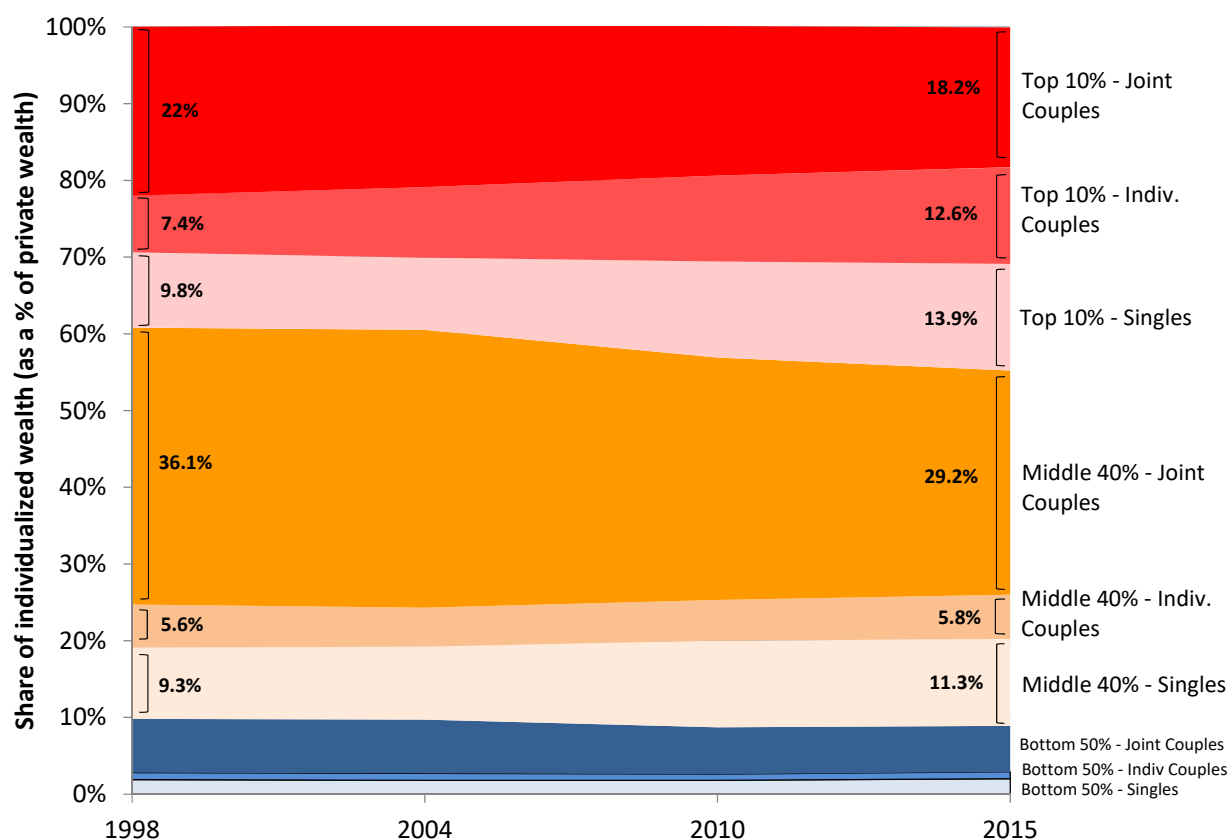
Figure 1: Share of individualized wealth (1998–2015)



Data: INSEE, Enquêtes Patrimoine (1998, 2004, 2010, and 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90.

Note: the blue area represents the share of individualized wealth held by singles, the orange area represents the share of individualized wealth held by individuals in a relationship. The remaining wealth is composed of the joint assets held by couples. In 2015, 27.2% of all individualized wealth was held by singles, 19.3% was held by individuals in a relationship. The total share of individualized wealth was equal to 46.5%. The vertical bars represent the 95% confidence intervals (estimated by bootstrap).

Figure 2: Share of individualized wealth along the wealth distribution (1998–2015)

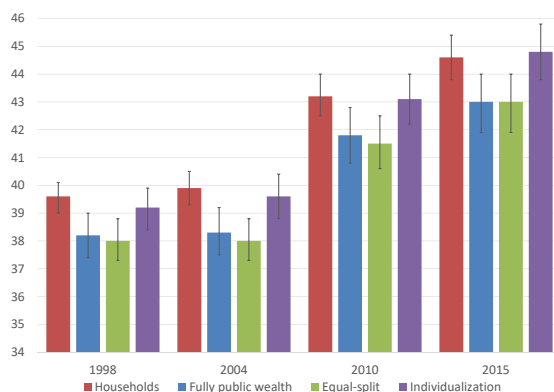


Data: INSEE, Enquêtes Patrimoine (1998, 2004, 2010, and 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90.

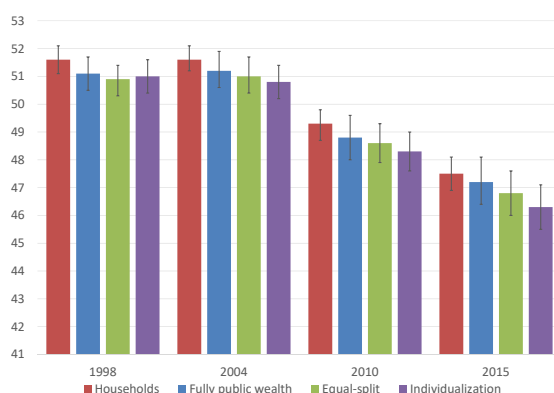
Note: for each distributional group, wealth is divided into three parts: the joint wealth held by individuals in a relationship (“joint couples”), the individualized wealth held by individuals in a relationship (“indiv. couples”) and the wealth held by singles. In 1998, 22% of the aggregate wealth was held as joint assets by couples in the top 10% distributional group, 7.4% was held as individualized assets by couples in the top 10% distributional group and 9.8% was held by singles in the top 10% distributional group.



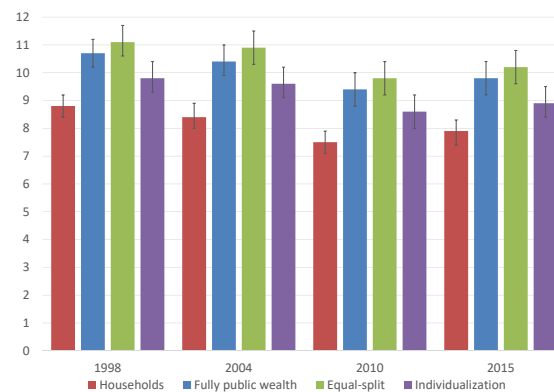
Figure 3: Wealth inequality, measured by wealth shares across distributional groups (1998–2015)



(a) Wealth share of the top 10% distributional group



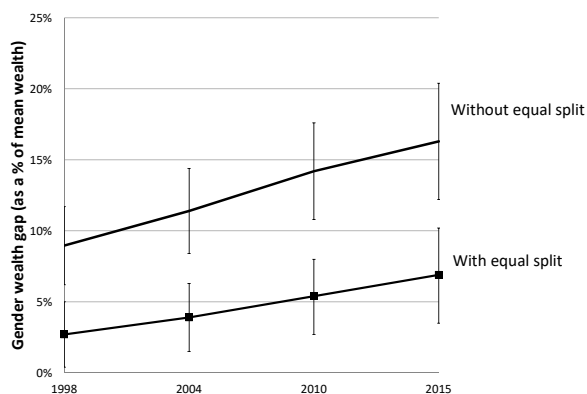
(b) Wealth share of the middle 40% distributional group



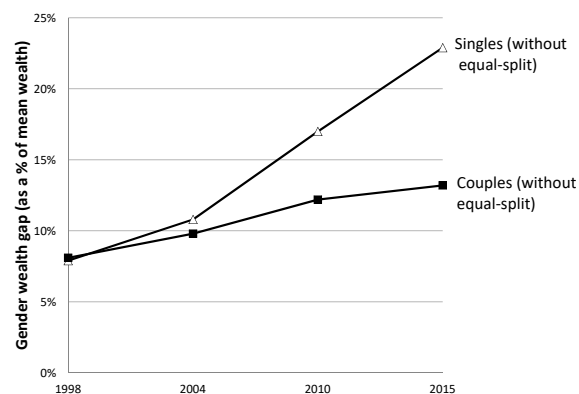
(c) Wealth share of the bottom 50% distributional group

Data: INSEE, Enquêtes Patrimoine (1998, 2004, 2010, and 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90. The vertical lines represent the 95% confidence intervals (estimated by bootstrap). Notes: In panel (a), the first bar (red) gives the wealth share held by the top 10% when wealth is measured at the household level. The second bar (blue) gives the wealth share held by the top 10% when wealth is measured at the individual level and each partner is assigned the total wealth of the couple (fully public wealth). The third bar (green) gives the wealth share of the top 10% when the wealth of the couple is equally shared between partners (equal split assumption). The fourth bar (purple) gives the wealth share of the top 10% when the intra-household distribution of wealth is taken into account.

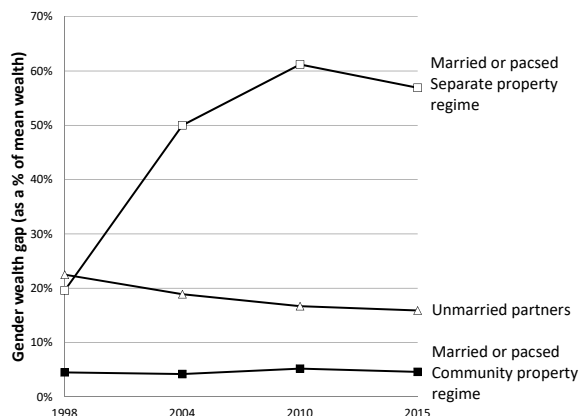
Figure 4: Gender wealth gap (as a % of the average personal wealth), by marital status (1998–2015)



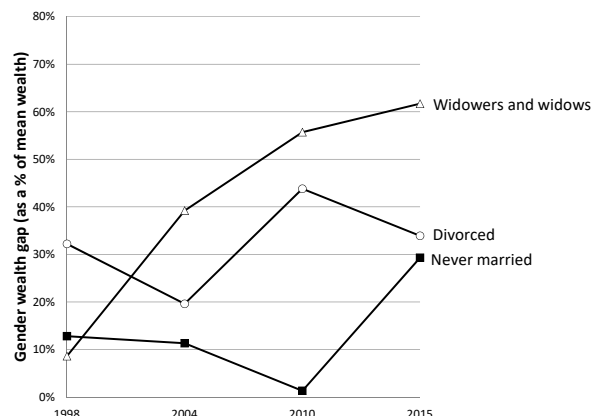
(a) Individualized vs. equal split



(b) Singles vs. couples



(c) By type of couple



(d) By type of singles

Data: INSEE, Enquêtes Patrimoine (1998, 2004, 2010, and 2015). Sample: all individuals, single or in a relationship, older than 25 and younger than 90.

Note: The gender wealth gap is expressed as a percentage of an average personal wealth observed in the year of the sample. In 1998, the gender wealth gap in the population is equal to 9% of the 1998 average personal wealth. In 2015, the gender wealth gap in the population is equal to 16.3% of the 2015 average personal wealth (Figure 4a). In 1998, the gender wealth gap among married (or paced) couples with a separate property regime is equal to 19.6% of the 1998 average personal wealth. In 2015, the gender wealth gap among married (or paced) couples with a separate property regime is equal to 57% of the 2015 average personal wealth (Figure 4c). For Figure 4a, the vertical bars represent the 95% confidence intervals (estimated by bootstrap).

# A Appendix

## Proposition 1

The ratio  $\theta_t$  is an index indicating to what extent individuals in a relationship hold their assets as individual assets. Changes in  $\theta_t$  are closely related to changes in the marital status of couples.

Let the subscript  $k$  indicate a couple of type  $k$ , which can be: cohabiting couples, married couples with a community property regime, and married couples with a separate property regime. We denote  $\alpha_{kt}^c$  the share of individuals in a relationship of type  $k$  in the total number of individuals in a relationship at time  $t$ , so that  $\sum_k \alpha_{kt}^c = 1$ .  $\nu_{kt}^c$  gives the average wealth of individuals in a relationship of type  $k$  over the average wealth of individuals in a relationship at time  $t$ .  $\nu_{kt}^c = \frac{\bar{w}_{kt}^c}{\bar{w}_t^c}$ , where  $\bar{w}_{kt}^c$  is the average wealth of an individual in a relationship of type  $k$ , while  $\bar{w}_t^c$  is the average wealth of an individual in a relationship, at time  $t$ .  $\theta_{kt}$  is the share of individualized wealth among the total wealth of individuals in a relationship of type  $k$ , at time  $t$ .  $\theta_{kt}$  is defined as  $\theta_{kt} = \frac{W_{tk}^P}{W_{tk}^C}$ .

**Proposition 1**  $\theta_t$  can be written as:

$$\theta_t = \sum_k \alpha_{kt}^c \nu_{kt}^c \theta_{kt}. \quad (1)$$

*Proof of proposition 1:*

Let subscript  $k$  define couples of type  $k$ . There are  $K$  types of couples. We can then define the value of individualized wealth held by couples  $W_t^{PC} = \sum_k W_{tk}^{PC}$ , where  $W_{tk}^{PC}$  is the value of individualized wealth held by couples of type  $k$ .

$$\theta_t = \frac{W_t^{PC}}{W_t^C} = \sum_k \frac{W_{tk}^{PC}}{W_t^C}. \text{ We can rewrite: } \frac{W_{tk}^{PC}}{W_t^C} = \frac{W_{tk}^{PC}}{W_{tk}^C} \times \frac{W_{tk}^C}{W_t^C}. \text{ We can rewrite: } \frac{W_{tk}^C}{W_t^C} = \frac{N_{tk}}{N_{tC}} \times \frac{\bar{w}_{tk}^C}{\bar{w}_t^C}.$$

We define  $\theta_k = \frac{W_{tk}^{PC}}{W_{tk}^C}$ , which is the share of individualized wealth among the wealth of individuals in a relationship  $k$ . We define  $\frac{N_{tk}}{N_{tC}} = \alpha_{kt}^c$ . We define  $\frac{\bar{w}_{tk}^C}{\bar{w}_t^C} = \nu_{kt}^c$ .

## Proof of proposition 2

$\Gamma_t$  is written as

$$\Gamma_t = \frac{\bar{w}_t^m - \bar{w}_t^f}{\bar{w}_t}.$$

We decompose the gender wealth gap  $\Gamma_t$  as a function of the share of singles  $\alpha_t$ , the relative wealth of singles  $\nu_t$ , the share of individualized wealth among couples  $\theta_t$ , the gender gap among singles (hereafter denoted  $\gamma_t = \frac{\bar{w}_t^{mS} - \bar{w}_t^{fS}}{\bar{w}_t^S}$ ), the gender wealth gap in individualized wealth among individuals in a relationship (hereafter denoted  $\rho_t = \frac{\bar{w}_t^{mCP} - \bar{w}_t^{fCP}}{\bar{w}_t^{CP}}$ ), and an adjustment term (denoted  $\epsilon_t$ ). The gender wealth gap in  $t$  can be written as:

**Proposition 2:**  $\Gamma_t = \Gamma(\gamma_t, \nu_t, \alpha_t, \theta_t, \rho_t, \epsilon_t) = \gamma_t \alpha_t \nu_t + \rho_t \theta_t (1 - \alpha_t \nu_t) + \epsilon_t$ .

*Proof of proposition 2: (we dropped the subscript  $t$  to simplify the notation)*

$$\Gamma = \frac{\bar{w}_m}{\bar{w}} - \frac{\bar{w}_f}{\bar{w}} = \frac{\bar{w}_{ms} - \bar{w}_{fs}}{\bar{w}_s} \frac{\bar{w}_s}{\bar{w}} \frac{n_s}{n} + \frac{\bar{w}_{mc} - \bar{w}_{fc}}{\bar{w}_c} \frac{\bar{w}_c}{\bar{w}} \frac{n_c}{n} + \left( \frac{\bar{w}_{ms} - \bar{w}_{mc}}{\bar{w}} \right) \left( \frac{n_{ms}}{n_m} - \frac{n_s}{n} \right) - \left( \frac{\bar{w}_{fs} - \bar{w}_{fc}}{\bar{w}} \right) \left( \frac{n_{fs}}{n_f} - \frac{n_s}{n} \right).$$

We define:  $\gamma = \frac{\bar{w}_{ms} - \bar{w}_{fs}}{\bar{w}_s}$ . It gives the gender wealth gap between singles. We define  $\gamma' = \frac{\bar{w}_{mc} - \bar{w}_{fc}}{\bar{w}_c}$  gives the gender wealth gap within couples. We can show that:  $\gamma' = \frac{\bar{w}_{mc} - \bar{w}_{fc}}{\bar{w}_c^P} \times \frac{\bar{w}_c^P}{\bar{w}_c} = \rho \theta$ . The gender wealth gap within couples is equal to the share of individualized wealth within couples  $\theta$ , weighted by the gender wealth gap in individualized wealth within couples  $\rho$ .

We define  $\frac{\bar{w}_s}{\bar{w}}$  and  $\frac{\bar{w}_c}{\bar{w}}$  give the relative wealth of couples and singles. Using the same notation as in proposition 1,  $\frac{\bar{w}_s}{\bar{w}} = \nu$  and  $\frac{\bar{w}_c}{\bar{w}} = \frac{1 - \alpha \nu}{1 - \alpha}$ .

We define  $\frac{n_s}{n} = \alpha$  and  $\frac{n_c}{n} = 1 - \alpha$ : they give the share of singles and the share of couples.

We define  $\epsilon = \left( \frac{\bar{w}_{ms} - \bar{w}_{mc}}{\bar{w}} \right) \left( \frac{n_{ms}}{n_m} - \frac{n_s}{n} \right) - \left( \frac{\bar{w}_{fs} - \bar{w}_{fc}}{\bar{w}} \right) \left( \frac{n_{fs}}{n_f} - \frac{n_s}{n} \right)$ , which compares the wealth of singles to the wealth in individuals in a relationship. It is considered an adjustment term. It is different from zero if the share of singles is higher among men (or women), i.e., if the sex ratio among singles is unbalanced. If that is the case, this term adjusts for differences in wealth between singles and couples.

Table A.8: Summary of the construction of individual assets, depending on the marital contract

	<b>Cohabiting couple and Separate property regime</b>	<b>Community of acquired assets and Full community</b>
<b>Real estate</b> (Main home, other real estate properties, etc.)	<ul style="list-style-type: none"> <li>• Polarized case 100%-0% or 0%-100%: 0% attributed to joint wealth</li> <li>• Equality case 50%-50%: 100% attributed to joint wealth</li> <li>• Intermediate case <math>x\%-(1-x)\%</math>: <math>2 \times \min(x, 1-x)</math> attributed to joint wealth</li> <li>• Remark: bequests always considered as individualized wealth</li> </ul>	<ul style="list-style-type: none"> <li>• Polarized case 100%-0% or 0%-100%: 0% attributed to joint wealth</li> <li>• Equality case 50%-50%: 100% attributed to joint wealth</li> <li>• Intermediate case <math>x\%-(1-x)\%</math>: <math>2 \times \min(x, 1-x)</math> attributed to joint wealth</li> <li>• Remark: bequests always considered as individualized wealth</li> </ul>
<b>Liquidities</b> (Savings accounts, etc.)	<ul style="list-style-type: none"> <li>• If declared as common: 100% attributed to joint wealth</li> <li>• If one partner declared as owner: 0% attributed to joint wealth</li> </ul>	<ul style="list-style-type: none"> <li>• If declared as common: 100% attributed to joint wealth</li> <li>• If one partner declared as owner: 100% attributed to joint wealth (difficult to prove the legal owner in case of divorce)</li> </ul>
<b>Financial assets</b> (Stocks and bonds, life insurance, etc.)	<ul style="list-style-type: none"> <li>• If declared as common: 100% attributed to joint wealth</li> <li>• If one partner declared as owner: 0% attributed to joint wealth</li> </ul>	<ul style="list-style-type: none"> <li>• If declared as common: 100% attributed to joint wealth</li> <li>• If one partner declared as owner: 100% attributed to joint wealth (difficult to prove the legal owner in case of divorce)</li> <li>• Exception of retirement savings through employers (<i>Retraites supplémentaires</i>)</li> </ul>
<b>Business assets</b> (Tools, buildings, land, non-quoted stocks)	<ul style="list-style-type: none"> <li>• 0% is attributed as joint wealth</li> <li>• If the asset is said to be joint, half of the value is attributed to each partner</li> </ul>	<ul style="list-style-type: none"> <li>• 100% is attributed as joint wealth</li> </ul>