

How gender, marital status, and gender norms affect savings goals

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Abstract

Setting savings goals can increase wealth accumulation behaviour, yet it depends on how challenging the goals are. Using rarely available savings goals data from 1,760 clients of an advisory investment firm, we identify gender attitudinal differences in goals amounts: men choose more ambitious savings goals than women, independently from expected life-long earnings. This, however, holds only for individuals living in a couple, for which men's savings goals reach the highest levels. Based on insights from qualitative research (56 semi-structured interviews of 60 participants), we argue that these differences originate from gender-normative roles assigned to members within the households. Most women are assigned to daily budget management, exacerbating worries about financial security issues in the short term and negatively impacting savings goals. This observation holds even when women, rather than men, manage long-term investment for the household. Men's assignment to long-term financial planning is related to optimism and ambition with regards to their savings goal choice, but these attitudes remain conditional on the fact that they do not deal with day-to-day budget management.

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Keywords: Savings goal, Gender wealth gap, Gender norms, Goal-setting theory, Behavioural economics

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Introduction

With the increasing pressure on individuals and households to take care of their own financial security when planning for the long run, defining appropriate savings goal amounts is essential in this process.¹ Many studies have argued that pursuing challenging and specific goals is self-fulfilling: it improves the motivation to adopt behaviours that will allow individuals to attain them (for reviews see Latham & Locke, 2007; Locke & Latham, 2002). Focusing on savings behaviour, this line of research has specifically argued that individuals with ambitious savings goals will be more committed to saving and thereby end up wealthier (Choi et al., 2017; Hsiaw, 2013; Karlan & Zinman, 2018; Ülkümen & Cheema, 2011). Understanding consumers' savings goals is thus of crucial interest for researchers since it may have predictive power over wealth accumulation behaviour.

In this paper, we use a gender perspective to investigate the question of how attitudinal differences influence savings goal choices of investors. By *attitudinal differences*, as opposed to economically-based differences, we mean any personal differences that can affect savings goal choice and that occur beyond the influence of differences in expected earnings, either linked to labour income (i.e. the gender pay gap) or financial income (i.e. based on varying risk taking). Showing attitudinal differences crucially contributes to a better understanding of the gender wealth gap occurring at retirement age. If women's attitude towards savings goals is to aim low, they will more likely end-up with inadequate savings in their old age.

A key aspect of this study is to explore if and how gender attitudinal differences in savings goal setting is influenced by gender roles formed within households in opposition to single men and single women who are the sole adult of their household. We presume a stronger influence of gender norms on financial attitudes within couples, resulting from the separation of financial tasks based on gender-normative roles (Bertrand, 2011; Bertrand et al., 2015; Ke, 2021; Noone et al., 2010; Shurchkov & Geen, 2019). We thus move beyond the view that gender attitudinal differences in investment decisions are intrinsic and explore how norms, in other words the social and cultural context, influence investment decisions.

¹ Such recommendations have also reached the policy sphere with for instance the OECD recommending to encourage the use of savings goals which is presented as one of the positive behaviours that may improve financial resilience (Atkinson & Messy, 2012).

The empirical investigation is based on two datasets. We first employ a unique quantitative dataset containing rarely available information on the personal savings goal choices of 1,760 UK clients of an advisory investment firm. We then explore a qualitative sample of 60 UK investors addressing issues related to the management of savings and investments. The qualitative data provides explanatory insights with regard to specific attitudes that underlie gender attitudinal differences and allows us to anchor mechanisms put forward in the theoretical framework in individuals' real-life situations (Bell et al., 2018; Harrison III, 2013).

Our quantitative results show that men choose more ambitious savings goals than women even after controlling for anticipated differences in life-long labour and financial earnings. We estimate that the gender difference in savings goal amount due to attitudinal differences is at least 20.6%. Yet, this holds only for individuals living in a couple, married or not, and not for those in a single adult household, leading us to presume an impact of gender roles within households. Importantly, only men's goal setting behaviour seems changed (i.e. increasing goals amount) by the fact of being in a couple (i.e. married or cohabiting). Women's attitude towards savings goals is stable regardless of their couple status.

Our qualitative findings confirm this pattern of results, revealing a clear division of financial roles assigned to members of the couple which in turn influences savings goals. The fact that women choose relatively low savings goals regardless of their marital status originates from being predominantly assigned to day-to-day budget management. This forces them to focus on daily budget management concerns which exacerbate their worries about financial security issues in the short term. As a result, their attitude towards savings goals is affected by wanting to access funds in the case of adverse events, by pessimism with respect to the occurrence of economic shocks and by seeking to secure a comfortable rather than ambitious lifestyle during retirement. The quantitative observation that single men choose savings goal amounts that are similar to women's (that is relatively low compared to those of men in a couple) can be explained by the fact they are unable to avoid such daily financial tasks, and hence develop similar attitudes to those of women. Men in a couple furthermore benefit from a gender-normative division of tasks. Often assigned to long-term financial planning, they tend to adopt a performance logic of wealth accumulation, focusing on rapid growth, being more optimistic and pursuing aspirational living standards during retirement, leading them to set ambitious savings goals. Even when the woman of the couple

takes on the long-term planning responsibility for the household, the fact that the man will not take charge of the day-to-day budget financial tasks maintains the traditional gender gap in attitudes towards goals within these households. Thus, the key take-home message of the paper is that within households, regardless of differences in the personal income of the spouses or financial earnings based on differential asset holdings, men and women differ significantly in their savings goal amounts, and the main reason for that is role division - originating from gender norms – that produces varying attitudes towards the accumulation of savings.

To the best of our knowledge, whereas an important amount of research in economics and finance has shown that men and women differ in the way they form decisions, our paper is the first to provide evidence of this type of difference in savings goal setting.² One reason might be the lack of accessibility to precise administrative savings goals data. The analysis provided here directly adds to a literature that has documented, through survey data, gender attitudinal differences in the inclination to engage in long-term financial planning and its effects on wealth differences between men and women (Grace et al., 2010; Jacobs-Lawson et al., 2004; Lusardi & Mitchell, 2008; Moen et al., 2000).³ Our results allow us to refine this analysis by suggesting that policy measures intended to motivate women to increase their use of planning could be less effective than expected in terms of improving wealth accumulation due to differences in savings goal settings. As such, the paper extends insights gained from the literature which explores the gender wealth gap independent of gender differences in life-long expected labour and financial earnings (see e.g. Arano et al., 2010; Blau & Kahn, 2017; Kleven et al., 2019; Neelakantan & Chang, 2010; Sundén & Surette, 1998). Gender attitudinal differences in savings goals, especially in the context of married or cohabiting households, contribute to a persistent gender wealth gap and need to be recognized in discussions on reducing the gender wealth gap.

An innovative contribution of our paper relates to our findings on the separation of roles within households and its leading influence on savings goals. This complements a recently growing stream of literature putting forward the influence of gender norms on economic behaviour (e.g. job choice, retirement planning, investment decision) and economic outcomes (e.g. life-time personal income and wealth) of individuals within households

² For literature reviews see e.g. Croson & Gneezy (2009) and Bertrand (2011).

³ More generally, a wide literature has documented a link between individuals' propensity to plan for the use of money and wealth accumulation. See for instance Ameriks et al., (2003); Lusardi & Mitchell (2008); Lynch et al. (2010); Van Rooij et al. (2012)

(Akerlof & Kranton, 2000; Bertrand et al., 2015; D’Acunto, 2015; D’Acunto et al., 2020; Ke, 2021). In line with this literature, our study shows that, for the case of savings goals, one should ignore the view that gender attitudinal differences are essentially intrinsic and unavoidable. We are especially close to the work of D’Acunto et al. (2020) who show, investigating individuals’ inflation expectation in everyday consumption decisions, that gender-normative roles, and particularly women’s assignment to day-to-day household tasks such as grocery shopping, shape women’s pessimistic attitudes towards economic expectations. We extend the scope of their findings to savings goals and show that psychological traits often attributed to women in the scope of finance, like pessimism or a lack of interest in long-term financial achievement, and their downward effect on savings goals are a consequence of their financial role in the household.

Finally, being the first study using field data to explore the attitudinal determinants of savings goal choices, the paper extends a recent literature in behavioural economics that investigates theoretically or experimentally how individuals set and design goals in a general framework (Falk & Knell, 2004; Hsiaw, 2013; Koch & Nafziger, 2011, 2020)

The paper is organized as follows. Section 2 presents the theoretical background of this study. Section 3 discusses our quantitative data and Section 4 introduces our qualitative research. Section 5 then provides a discussion of the results’ contributions to the literature and concludes the paper.

1. Theoretical background

Our objective with this study is to identify whether there exist gender attitudinal differences in savings goal setting with the aims of, first, disentangling their influence from purely income-related factors, and secondly, defining their underlying mechanisms.⁴ In other words, we want to find out if, for the same level of life-time income, men and women differ in their targeted savings goals, and the underlying reasoning for these differential goals. As such, the study essentially relates to the literature analysing gender differences in attitudes and their interplay with the literature analysing the determinants of goals’ choice.

⁴ As such, in the spirit of Hsiaw (2013), we depart from the standard intertemporal consumption model (e.g. the life-cycle model by Modigliani & Brumberg, 1954) by positing that savings goals depend on behavioural factors that go beyond purely rational economic considerations.

Whereas gender attitudinal differences towards savings goals have remained an unexplored field of study, there already exists a wide range of studies that have investigated the extent to which gender attitudinal differences influence individuals' economic and financial behaviour. Many of these differences may arguably interfere in the way individuals form their savings goals. Most of them make us lean towards the assumption that men may choose more challenging savings goals than women. Men have, for instance, been found to be more optimistic than women with respect to economic expectations (Jacobsen et al., 2014; Bertrand, 2011). There is also evidence that men and women differ in self-confidence, especially with regards to financial tasks where women have been found to perceive themselves as less financially inclined (Barber & Odean, 2001; Bucher-Koenen et al., 2021; Estes & Hosseini, 1988). Both optimism and self-confidence, as pillars of *self-efficacy*, are key psychological factors leading individuals to choose challenging goals (Bandura & Locke, 2003; Latham & Locke, 2007). These attitudinal differences could therefore play a role in determining whether men and women differ in their choice of a savings goal amount.

Men and women are also depicted as having a different propensity to plan for the long run and to think about long-term financial concerns. It has been shown, using survey data, that women are less likely to plan for retirement than men (Jacobs-Lawson et al., 2004; Lusardi & Mitchell, 2008; Moen et al., 2000). Similarly, qualitative research has argued that men aspire to specific objectives in terms of what their standard of living should be at retirement. They presume that "retirement will be another stage in life which will provide for a lifestyle appropriate for their current standard of living." (Grace et al., 2010:174). Women, on the other hand, are found to adopt "a life course perspective, which makes no assumptions or predictions about future life stages, but one that views outcomes as contingent on the circumstances of one's life" (Grace et al., 2010:174). Research has also provided evidence that men tend to have greater appetite for competition compared to women (Beckmann & Menkhoff, 2008; Niederle & Vesterlund, 2007; Shurchkov & Geen, 2019). We argue that the combination of a greater focus on long-term financial expectations combined with a more developed spirit of competition may increase men's aspirational mindset. Based on the psychology literature on savings goal choice, we believe that such a mindset may result in the willingness to achieve more challenging savings goals (Klein et al., 2008; Smithers, 2015).

There is also some discussion in the literature centring on gender attitudinal differences in risk taking where women are argued to be more risk-averse than men when investing (see Charness and Gneezy 2012 for a meta-analysis). This difference may primarily

influence savings goal amount through the channel of expected life-time income. This is because, by taking more financial risk than women, men benefit more from the risk-premia paid to investors over the long-term (Neelakantan & Chang, 2010).⁵ Beside income considerations, women's greater risk-aversion may further be associated with unambitious goals. As suggested by Bertrand (2011), risk-aversion might directly relate to the above-mentioned pessimism that is generally associated with choosing less challenging goals (Bandura & Locke, 2003; Latham & Locke, 2007). If women's risk-averse attitude consists in overweighting the probability and the severity of negative economic outcomes (Bertrand, 2011), it may lead them to expect difficulties in accumulating wealth culminating in unambitious savings goals.

Many influential studies support the view that gender varying attitudes originate from cultural explanations (Akerlof & Kranton, 2000; Bertrand, 2011; Bertrand et al., 2015; Gneezy et al., 2009; Nelson, 2016; Shurchkov & Geen, 2019). A compelling example is the study of Gneezy et al. (2009). The authors experimentally show that, in a matrilineal society, the gender gap in competition appetite is reversed as compared to the one observed in patriarchal societies. The bottom-line argument of this literature is to argue that economic agents behave according to social prescriptions associated with their gender identity. Men behave *manly* and women behave *femininely* because deviating from these social prescriptions often leads to an internal feeling of incongruence and discomfort (Akerlof & Kranton, 2000). An interesting illustration of this mechanism can be found in the study of Shurchkov & Geen (2019) that shows that women at work tend to shy away from competition through fear of being badly evaluated by their colleagues if deviating from the gender stereotype of women not being competitive. It is also documented that the gender gap in the willingness to compete and being self-confident is highly dependent on whether the task to perform is considered a stereotypical male task (Bordalo et al., 2019; Dreber et al., 2011; Große & Riener, 2010). Conformance to gender norms may therefore explain a large part of the gender attitudinal differences depicted above.

In the scope of personal financial management, gender norms prescribe that men would be keener to, and more knowledgeable at, dealing with financial calculations, investment or risk-taking, whereas women would supposedly be less able to perform these tasks (Joseph, 2013). An illustration of the influence of these prescriptions of attitudes can be

⁵ More on this in the quantitative empirical section.

found in the study of Carr & Steele (2010) who provide experimental evidence of a relationship between stereotype threat and financial decision-making. If women were made aware *before* the experiment that the tasks were mathematical and logical reasoning tasks and asked to report their gender identity, they scored higher on loss and risk aversion than not being made aware of stereotypical task and reporting gender identity beforehand. On the men's side D'Acunto (2015) shows, through lab experiments, that priming masculinity with blog excerpts depicting male/female stereotypical traits also increased men's preference for risk.⁶ Relying on this literature we expect that attitudinal gender differences in savings goals are influenced by the extent of gender norms influencing financial management.

Related to that, a growing stream of the literature has put forward that economic and financial behaviour, and the concomitant outcomes are underlaid by gender norms leading men and women to adopt different roles within the household (Bertrand et al., 2015; Carr & Steele, 2010; Ke, 2021; Montag, 2015). We argue that gender-normative roles that are assigned to men and women living in a couple, may influence savings goal attitudes, and hence the way they set their savings goals. The household finance literature has already provided evidence that the marital context modifies the attitude and behaviour of individuals, and that it does so in a different fashion for men than for women (Love, 2009; Lundberg et al., 2003; Lyons et al., 2008). More precisely, it has been documented that gender-normative roles determine the task division within couples, with primarily men being assigned the role of the financial provider of the household and with women being in charge of domestic chores and caring duties. On the wives' side this role assignment is materialized by the fact that, as mothers, they are more likely to be the one of the couples who interrupts their career, or reduces their working time, to raise the children of the household (see e.g. Blau & Kahn, 2000, 2017; Kleven et al., 2019). Strikingly, recent studies have found that even when women earn more, they tend to be mainly responsible for caring duties, upholding gender-normative roles (McMunn et al., 2020). This conformance to gender stereotype attitudes is likely reinforced by the *motherhood penalty* that is the fact that in the workplace, working mothers encounter systematic disadvantages in pay, perceived competence, and benefits relative to men and to childless women (Correll et al., 2007). Here it has been argued that gender norms shape wives' income-related attitudes so pervasively that it could even lead to refraining themselves from occupying well paid jobs if it implies that their income will too

⁶ See also Weaver et al. (2013) who experimentally shows that when men are asked to perform tasks that are deemed "unmanly" or "feminine", they tend to feel threatened in their manhood. In order to restore their "man status," they are subsequently more likely to be more aggressive in their attitude to investment risk.

sharply exceed that of their husband (Bertrand et al., 2015). These self-effacement attitudes with respect to their potential contribution to the household resources, lead us to consider the possibility that gender norms may impact women's financial objectives, aspirations, and hence savings goals.

Oppositely, on the husbands' side, this traditional separation of roles, and the increase of women's domestic work, enables a focus on increasing the economic resources of the household, that corresponds to the traditional view of a men's role within the household. Due to women taking over the main caring role, men are freed from this responsibility and can invest more time in career progression, reflected in their higher earnings (Chun & Lee, 2001)⁷ and wealth (Díaz-Giménez et al., 1997; Lyons et al., 2008; Schmidt & Sevak, 2006). This has once again become clear during the current pandemic where predominantly women took over the higher workload within the home and were negatively affected concerning their job prospectus while men were able to increase their output, as exemplary shown in journal publications within academia (Forman, 2020; Kitchener, 2020). Evidence shows that a strong driver in married men's committed attitude towards increasing the household's economic resources is the arrival of children in the household (Hundley, 2000; Kuziemko et al., 2018). In correspondence to a *motherhood penalty*, men experience a *fatherhood premium* on the job market that, in the opposite way, may accentuate the adoption and the internalization of this breadwinner role by husbands (Correll et al., 2007). Based on this literature we would expect that men in a couple choose their savings goals with different objectives and aspirations compared to their wives.

Closer to the scope of this study, recent work within the household finance literature has shown how gender norms also prescribe different roles for money management and financial planning. It is for instance well documented that, concerning savings for the long run, retirement planning often remains a task associated with the husband in a couple (Ke, 2018, 2021; Noone et al., 2010). Further, Fonseca et al. (2012) and Hitczenko (2016) find using survey data on US consumers, that women in a couple are more likely than men to report that they are responsible for the day-to-day budget management in the form of dealing with the household short-term financial questions, shopping and paying the bills. An interesting result from the study of D'Acunto et al. (2020) is that gender roles shape men and women's economic expectations in a different fashion. More precisely, women's focus on

⁷ The authors suggest it is part of the explanation for why married men's earnings are not only higher than that of their wives but also higher than that of single women and men.

prices due to their assignment to day-to-day grocery chores leads them to be pessimistic in their inflation expectations as compared to men. In the same line, we expect that the separate financial roles of spouses will produce different attitudes towards savings goals. This way of separating the financial chores and responsibilities is evidently impossible for a single-headed household who cannot allow themselves to neglect one or the other part of their financial horizons. Therefore, if gender norms have an impact on individuals' financial attitude and savings goal choices, we should observe a stronger gender gap within couples, and a less pronounced (or even absent) one for individuals out of a couple.

2. The link between gender and savings goals

2.1. Quantitative data: our sample

For our quantitative investigation, we use a unique dataset based on individual investment decisions taken from March to August 2017 by 1,760 investors from a large UK investment advisory firm. In our sample, the names of individuals are anonymized and only a numerical identifier for each one was provided by the firm. The sample comprises 777 women (44.1%) and 940 men (53.8%) with an average age of 58.6 years and the majority being married (59.8%). For the remaining 2.1% of the clients in our sample there are no details about their gender. For 986 clients the level of income (*Income*) is available with an average income of £30,840. This amount is close to the UK national average personal income that was £33,400 for 2016 (UK government HMRS, 2018). 1,089 clients reported the value of their personal gross wealth (*Assets*) representing an average gross wealth of £339,543.⁸ Table 1 defines the variables used in the study whereas summary statistics of variables used in this study are provided in Table 2.

[TABLE 1 NEAR HERE]

[TABLE 2 NEAR HERE]

Our data contains the savings goals (*Savings goal*) chosen by each client in the sample. This represents the amount of savings that clients aim to have accumulated at a defined future time horizon (*Goal duration* is the number of years until the goal term). The average age of

⁸ Based on the median of the sum of value of *Assets*, plus the *Initial savings amount* weighted by the consumer ownership percentage of savings. Comparison with the Office for National Statistics figure is less easy since it is provided in *net* (i.e. £259,400 in 2016; ONS, 2018a).

the client at the goal term (*Age + Goal duration*) is 69.18. This suggests that on average clients invest for the retirement period. Also, the gender difference in the age at the goal term, of about two years in favour of women (70.02 versus 68.40), could mean that the gender differences in life-expectancy is endogenized by clients when choosing their goals.⁹ The whole investment process, including savings goal settings, is done with the assistance of an Independent Financial Advisor (IFA). This reasonably leads us to think that the data is based on a choice process that is done seriously, and that savings goal amounts are not completely irrelevant or unrealistic. IFAs are independent workers but they exclusively sell investment products from the advisory investment firm.

Products consist of pre-mixed managed portfolios divided into five levels of risk exposure (from *defensive* to *aggressive*). Clients decide the initial lump sum or regular payment that they want to invest in a portfolio, along with the investment horizon. They then choose one of the five portfolios in which to invest, according to their risk preference. Based on these settings entered in a software, advisors can display by means of graphs on their computer the projected income that a client can anticipate to earn. Projected rates of return associated to the riskiness of each portfolio are derived from estimates by the asset management company MorningStar (*Proj. rate of return*). Clients also choose between four main investment options: a Self-Invested Personal Pension¹⁰ (*SIPP*) that is a UK government-approved personal pension scheme; an Individual Savings Account¹¹ (*ISA*); a General Investment Account¹² (*GIA*); or a combination of these vehicles¹³. Clients need to report whether they plan to do a one-off withdrawal of their savings at the investment term or if withdrawals will be spread over time (“Once you begin withdrawing money from your investment, how long do you expect to continue withdrawing funds?¹⁴”). Most clients invest their own money, but a few of them (less than 5% of our sample) invest jointly (up to 50% of savings).

With respect to the representativeness of our data, we have already noted that the average annual income in our sample is similar to that of the UK population. Focusing on ISAs

⁹ Between 2015 and 2017, UK males’ life expectancy was 79.2 years and females 82.9 years (Office for National Statistics, ONS, 2019a).

¹⁰ SIPPs allow tax rebates on contributions in exchange for limited accessibility (savings become freely accessible after the consumer has reached 55 and drawdowns are taxable as income after the first 25% drawdown).

¹¹ The firm only offers Stocks & Shares ISAs. Clients can invest up to £20,000 a year in an ISA and be exempted from income and capital gains tax.

¹² Investing via GIA is usually for investors that have used up their annual ISA allowance.

¹³ Very few clients (less than 2%) have chosen to invest through *Investment bonds* or *Off-shore bonds*.

¹⁴ This question is part of a questionnaire that also comprises an attitude to risk test.

holders in our sample (69% of our sample hold an ISA), we show that they compare well with the national population of ISA holders (UK government HMRS, 2020). Figures A1, A2, and A3 in the *Supporting information* in the appendix respectively compare the distributions of ISA holders based on age, gender and income. To summarize, our sample of Stocks & Shares ISAs holders is somewhat older, containing slightly more women, and earning a little less compared to national figures. However, our data is such that it is reasonable to think that the conclusions of our quantitative study based on this sample are relevant for the general UK population of investors (further explanatory comments are provided in the *Supporting information*). With respect to investment amounts, a relevant source of comparison to national figures is from a database from the Office for National Statistics (ONS thereafter), addressing individuals' pension wealth (ONS, 2019b). It shows that the median amount invested in this vehicle is £30,000 for individuals surveyed between 2014 and 2016 against £25,659 in our sample. The amount from our sample appears to be below but clearly in the same order of magnitude than that of investors at the national level. This tends to further confirm the view that our sample presents no major distortion in comparison with the population of UK investors.

2.2. Empirical approach

With the help of the above dataset, we explore differences in savings goals beyond differential earnings from labour or assets. As aforementioned, in a standard intertemporal choice model, assuming that agents behave rationally and display homogeneous time preferences (i.e. if there are no attitudinal differences across individuals), only differences in earnings should lead to different savings goals. Gender attitudinal differences underlying savings goals can therefore explain the difference in savings goals that remains if we control for expected gender differences in life-long earnings.

2.2.1. Econometric model

Our approach is to estimate the following model:

$$Savings\ goal = \alpha + \beta_1 \cdot Woman + \beta_2 \cdot Fin.\ earnings + \beta_3 \cdot Lab.\ earnings + \beta_4 \cdot Demo + \beta_5 \cdot X + u \quad (\text{Equation 1})$$

The dependent variable *Savings goals* is the logarithm of the savings goal amount chosen by clients. *Woman* is a binary variable taking the value 1 if the client is a woman and 0 otherwise. *Demo* is a vector of socio-demographic variables containing information on clients' marital status (i.e. seven dummy variables: *Civil Union*, *Cohabiting*, *Divorced*, *Married*, *Separated*, *Single*, *Widow(er)*)¹⁵, current age (*Age*), and age entitlement to state pension (*State pension age*) which can vary depending on gender (see Table 2). Controlling for the *State pension age* is important in the case where clients match the term of their savings goals with the age at which they will stop working and start benefiting from state pensions. We remove from the whole analysis clients whose gender is “not recorded”, which represents 37 observations, leaving us with a sample of 1,623 clients.

The terms *Fin earnings* and *Lab.earnings* stand respectively for clients' financial and labour earnings. These are included in the model to control for potential gender differences in earnings over life. Financial earnings (*Fin. Earnings*) over the life cycle are likely to be gender biased due to differential risk preferences, leading to differences in projected rate of returns of individual portfolios in the long run (Arano et al., 2010; Jianakoplos & Bernasek, 1998; Neelakantan, 2010; Neelakantan & Chang, 2010; Sundén & Surette, 1998). We therefore put the variable *Portfolio risk* in the model, which is an ordered categorical variable taking the value 1 to 5: the value 1 translates clients' choice for the most cautious portfolio supplied by the firm, and 5 their choice for the most aggressive portfolio. This variable should capture the gender gap in risk-taking at the origin of varying expectations in terms of financial return. Since clients are explicitly made aware by their advisor, of the projected expected return associated to the riskiness of their portfolio (based on estimates by the asset management company MorningStar), this variable may accurately capture financial earnings that clients should take into account in their inter-temporal budget constraint.

Lab.earnings in the model is to control for the gender pay gap which may affect the intertemporal budget constraint of clients and their expected wealth accumulation. The gender pay gap is shown to be based on the following factors disadvantaging women's earnings over life (see e.g. Blau & Kahn, 2000, 2017; Kleven et al., 2019): working in less well-remunerated occupations; suffering pay discrimination, and having their career interrupted or working hours reduced due to childcare duties (i.e. the *child penalty*).

¹⁵ *Single* individuals are people who live by themselves and have never been married nor had children. *Separated* individuals live by themselves, have never been married but had children in a previous relationship.

Lab.earnings is defined as the logarithm of an individual's income (*Income*). This leads us to continue our analysis on a sample restricted to clients who provided information about their income (i.e., 967 observations) to which we remove another 9 observations for clients who reported an income of zero, leaving us with a sample of 958 observations. We acknowledge that *Income* should control for a significant part of the gender pay gap but not the whole gender pay gap over the life cycle. In order to improve the control for the influence of the *past* gender pay gap, we add the (logarithm of) initial savings that are invested (*Initial savings amount*) as a control variable. This variable accounts for individuals past accumulated savings until the day of the studied investment in our sample, and hence it should capture the gender differences in pay until then. We have to remove a further 147 clients from the analysis who have opened an account with an initial savings amount of zero, leaving us with 811 observations. We have, however, no variable to improve the control for clients' expected variations in future gender pay gap. A solution to this lack of information is to remove relatively young clients from the sample before running our regressions. Data from the ONS indicate that both gender differences in the number of hours worked and the hourly pay gap tend to reach a maximum and remain stable for people in age categories above 50 (ONS, 2018b). This is related in particular to the fact that after a certain age the *child penalty* will no longer affect women's income expectations (Kleven et al., 2019).

We introduce variables which are chosen concomitant with the savings goals. These are captured in the vector X and consists of *Goal duration*, *Time continuing withdraw* and dummy variables of the investment vehicles chosen by clients (i.e. *SIPP*, *ISA*, *GIA*). Although including these variables is not essential to the argument of this paper, examining the sensitivity of the gender variable to them may be interesting. A lower gender effect due to presence of X variables would mean that a gender bias in savings goals is interrelated with a gender bias in other investment choices. In addition, introducing these variables and still finding a significant gender gap in savings goals would be evidence for the existence of a truly specific gender attitudinal difference.

Finally, we also add a variable measuring the share of the investment that is personally, rather than jointly, owned by the studied investor (*Investment ownership percentage*). This is to control for the few cases where the savings goal amount is the one set for a joint investment. All variables are defined in Table 1 and have their summary statistics in Table 2.

In order to test whether the gender gap in savings goals varies according to the marital status of clients, we next estimate Equation 1 for clients who live in a couple (i.e. either in a

civil union, cohabiting or married), and then for clients who are not. We also estimate the following model:

$$\begin{aligned}
 \text{Savings Goal} = & \alpha + \beta_1 \cdot \text{Woman} + \beta_2 \cdot \text{Couple} + \beta_3 (\text{Woman} \times \text{Couple}) \\
 & + \beta_5 \cdot \text{Lab. earnings} + \beta_6 \cdot \text{Fin. earnings} + \beta_7 \cdot \text{Demo} + u
 \end{aligned}
 \tag{Equation 2}$$

$\text{Woman} \times \text{Couple}$ is an interaction term that takes the value 1 if individuals are women in a couple, and 0 otherwise. By estimating the effect of this interaction variable, along with the coefficients of *Woman* and *Couple*, we can examine whether the gender effect in savings goals is significantly stronger among individuals who are in a couple as compared to among individuals who are not. This is the case if β_3 is significantly different from zero.¹⁶

2.2.2. Results

Regression (1) in Table 3 shows a strong gender gap in *Savings goal*, that is significant at the 1% level. In economic terms, it represents a difference of 23.7% in the savings goal amount, in favour of men (i.e., $e^{-0.27} - 1 = -0.237$).¹⁷ In other words, women set lower savings goals than men by 23.7%, without that being explained by the independent variables in our baseline regression (1) of Table 3. This gender gap exists even as we control for variables forming the intertemporal budget constraint. Although a little lower, the coefficient β_1 remains statistically significant in regression (2) when we restrict the estimation to clients aged above 50 (women set lower savings goals than men by 20.6%, i.e. $e^{-0.231} - 1 = -0.206$). This result supports the idea of a gender gap in savings goals choice that goes beyond a gender gap in earnings through the life-cycle and suggests that there exist attitudinal differences between men and women.¹⁸

¹⁶ For this latter model, marital status dummies are removed from *Demo* to avoid collinearity issue with *Couple*. To have consistencies across our estimates, we remove these dummy variables from estimations using restricted samples on the criterion of being in a couple or not, leaving unchanged the statistical significance of our outcome.

¹⁷ $\beta_1 = \log \frac{(\text{Savings goal}_{\text{woman}})}{(\text{Savings goal}_{\text{man}})} = -0.27 \equiv \% \Delta \text{ Savings goal} = e^{-0.27} - 1 = -0.237$

¹⁸ The lack of significance of the coefficient on *Income* seems contradictory with the view that greater earnings should positively influence savings goals. Further investigation shows that the effect of *Income* is in fact strongly correlated with savings goals (see Table A1 in the online *Supporting Information*) but confounded and mostly captured by the inclusion of *Initial savings amount* which we posited participate in controlling for the gender earnings gap.

[TABLE 3 NEAR HERE]

In regression (3) of Table 3, controlling for additional variables linked to goal and investment choices (i.e., variables in X) tends to lower the gender gap but it nevertheless remains statistically significant at the level of 1%. This suggests our baseline estimation is robust and the attitudinal gender gap in savings goals appears to be independent of other aspects of clients' investment decisions. Sensitivity tests investigating the effect of introducing variables in X one by one, show that the greatest drop in the gender effect estimate is due to introducing the dummy *SIPP*.¹⁹ This result means that the choice of lower savings goals by women is consistent with women's lower likelihood to choose a SIPP structure (and a greater likelihood to choose ISAs) as an investment vehicle which offers tax rebates on contributions in exchange for limited accessibility. It can therefore be argued that one attitudinal difference underlying women's choice of a lower savings goal is associated to a greater preference for being able to access their money.²⁰

Regression (4) shows that the gender gap in savings goals is stronger among clients who live in a couple whereas regression (5) shows it is not significant among individuals who are not. The coefficient of the interaction *Woman* \times *Couple* in regression (6) is significant at the 1% level. This confirms that the difference in the gender gap between the two couple statuses is significant. Figure 1 allows us to visualize the difference between men and women in savings goals: we observe a strong gender gap in favour of men in the case of clients living within a couple, but this gap 'disappears' from a statistical point of view in the case of clients living outside of a couple. This result appears to validate the view developed in our theoretical section about the role of gender norms and how separate gender roles within households may lead to different attitudes when it comes to savings goals. It also implies that gender attitudinal differences underlying savings goals choices are not based on generic or intrinsic gender differences but that it is the marital status that mostly matters. Figure 1 also shows that the discrepancy between the two marital household situations (in versus out of a couple) is mainly led by a sharp shift in men's behaviour who choose much more challenging goals when living in a couple compared to when they are not. Women's savings goals are in contrast almost unchanged across couple statuses. From a theoretical perspective, such strong

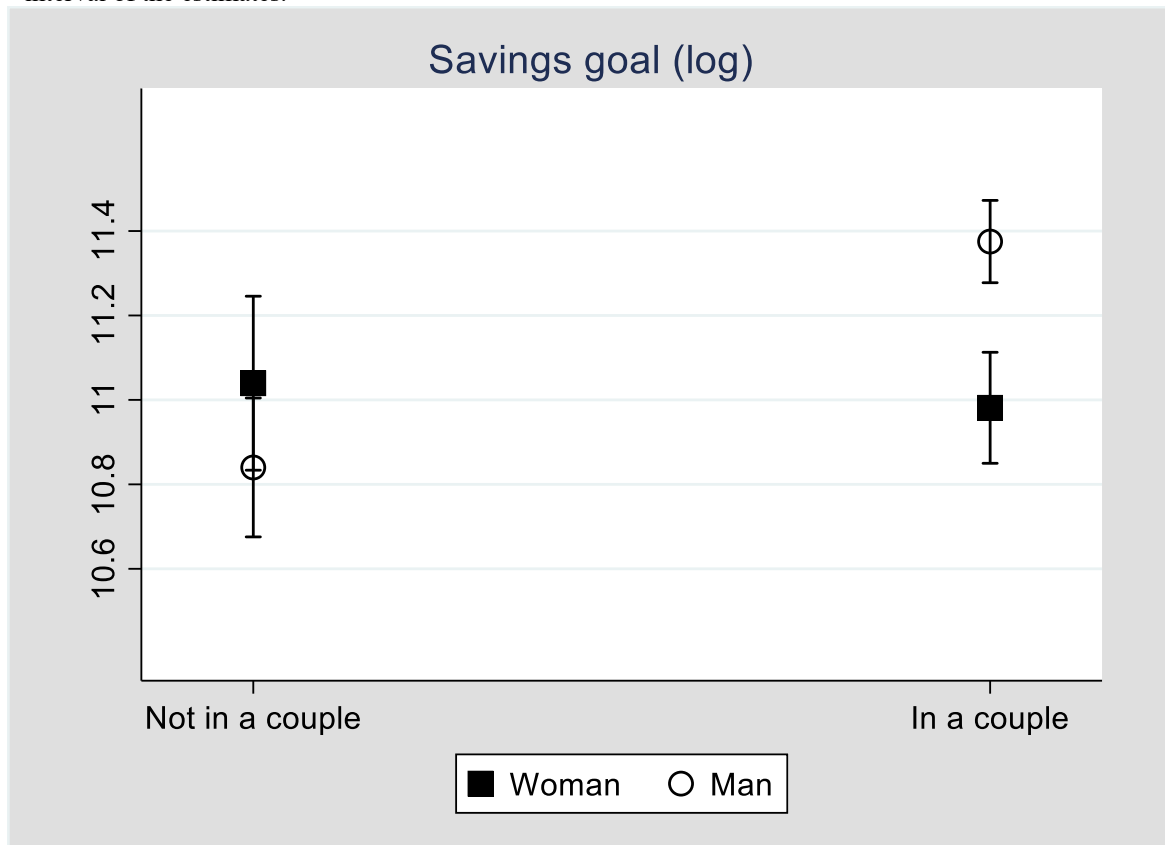
¹⁹ Sensitivity tests are reported in the online *Supporting Information*, see Table A1

²⁰ A drop in the gender coefficient also occurs when *Goal duration* is introduced in the regressions. It is induced by the evident link between the choice of a savings goal amount and the duration chosen in order to achieve the goal.

savings goal amount chosen by men in a couple corroborate the thesis that they behave in accordance with their traditional role of main financial provider of the household.

FIGURE 1.
Savings goals by gender and couple status

Note: This figure shows the *Savings goals* (logarithm) of women and men conditional to whether they are in a couple (*Couple* = 1) or not (*Couple* = 0). Estimates are derived from Regression 6 of Table 3 (using *margins* in Stata). Squares and circles represent the estimates. Vertical bars represent the 95% confidence interval of the estimates.



We performed the same analysis but using more specific marital statuses to investigate the gender gap in savings goal. We look at it among *Married*, *Cohabiting*, *Single*, *Divorced* and *Separated* (together), and *Widow(er)* clients. We did not extend these comparisons with clients in a *civil union* because their number was too small (they represent only 0.2% of the sample). Graphical results are reported in Figure 2. Our main conclusions are robust to this approach. First, no matter what type of couple clients are in, we find again that the gender gap in savings goal amounts is significantly in favour of men whereas this is not the case in the situation where clients are the sole adult of their household. The case of widow(er) even shows the opposite result: widows choose more ambitious goals than widower. In addition,

we further confirm our result on men’s sharp rise in saving goals amount when comparing those *out of a couple* with those *in a couple*. We just note that it appears less effective when comparing divorced men with men in a couple (either *married* or *cohabiting*). A possible explanation for that is that divorced men, like men in a couple, are more likely to have children, and hence they may somewhat maintain for themselves the status of financial provider that they had when they were married, leading them to keep aiming greater savings goals amounts. On the side of women, to the exception of widows, the absence of significant difference is still clearly observed at this level of detail.

FIGURE 2.
Savings goals by gender and marital status

Note: This figure shows the *Savings goals* (expressed in logarithm) of women and men conditional to their marital statuses. Estimates are derived from estimating the interaction effect on savings goals of the gender variable combined with the marital status dummies (using *margins* in Stata). Squares and circles represent the estimates. Vertical bars represent the 95% confidence interval of the estimates.



We follow the procedure of Oster (2019) to investigate whether our baseline result is affected by unobserved heterogeneity, and more specifically an omitted variable bias. We first estimate the parameter δ , that is, the degree of selection on unobservables relative to observables which would be necessary to explain away the result. A value of $\delta = 1$ suggests the observables are at least as important as the unobservables whereas if δ is above this cut-

off, observables explain more than the potentially omitted variables, suggesting a relatively limited bias. We report δ for all specifications of Table 2 where the gender variable is significant and note that it is well above 1 in all cases. This leads us to conclude that our existing control variables already capture the largest part of confounding explanations for the effect of gender on savings goal amount. As a further check related to control for unobserved heterogeneity, we test the sensitivity of our baseline estimate of the gender effect by sequentially adding control variables present in regression 1 of Table 3 (see Table A1 in the online *Supporting information*). We see, in conformance with the theory, that the largest drop in the coefficient capturing the gender effect occurs when including variables related to financial and labour income (i.e., *Portfolio risk*, *Income* and *Initial savings amount*). The persistent effect of a gender variable validates the view of gender attitudinal differences in the way savings goals are set.

This section has provided quantitative evidence of the existence of a gender gap in savings goals that goes beyond gender differences in earnings. If men and women choose different goal amounts, it is not only because they face different budget constraints but also because of gender differences in attitude underlying their savings goal choices, as suggested in our theoretical framework. We have noted that part of this result was influenced by more marked concerns over money availability by women who tend to choose more liquid savings accounts than men (i.e., ISAs rather than SIPP). This provides a first hint on the nature of gender differences in attitudes towards saving goals, since it can be related to women's tendency to pessimism with respect to economic expectations (e.g. Jacobsen et al., 2014). This trait may reduce long-term savings goals since, the literature shows, it can lead individuals to perceive their intertemporal budget constraint as tighter. Then we have shown that this gender attitudinal difference in savings goals is not generic but related to the marital status of individuals. It only exists within households made of a couple and is based on a specific attitude of men in this situation who tend to choose challenging savings goals, whereas women's couple status seems to have no influence on their goals.

3. Exploration of mechanisms

3.1. Qualitative data and method

Conducting qualitative research to explore the impact of gender on savings goal choice allows us to substantiate the claim made in the previous section that men and women have different

self-projections for their financial future. 56 semi-structured interviews with 60 individuals were conducted between July 2016 and April 2017. To recruit participants, purposive sampling, a non-probabilistic sampling process which is widely used in qualitative research, was employed (Punch, 2013). Based on having the capacity to save and invest, medium (III-VIII income deciles) and high-income households (IX-X income deciles) were chosen. The income ranges were based on the Wealth and Assets Survey, a longitudinal survey of households conducted by the ONS in the UK. Recruitment of interviewees took place through participating in community events, for instance summer festivals, running advertisements in supermarkets, on community websites and social media, and through personal networks. As a result, 56 interviews with men (40% of interviewees) and women (60% of interviewees) were conducted. In a few cases, the interviews were conducted with two household members.

Interviewees had an average annual income of £32,013 which is similar to our quantitative sample where the average annual income is £30,841. Wealth is not easy to compare across the two samples since, for the qualitative data, interviewees reported *household* gross wealth (on average £780,633) whereas (a subsample of) clients from the quantitative sample provided the gross value of their assets at the *individual* level (on average £339,542). Nevertheless, the wealth figures indicate that both samples are in the same order of magnitude and reflect middle to high wealth investors. A more detailed description of interview participants can be found in Table 4.

[TABLE 4 NEAR HERE]

The interviews lasted on average 60 minutes with the longest interview being two hours long and the shortest being 45 minutes. The interviews were audio-recorded, transcribed and anonymized before thematically analysing them in three main steps (Bell et al., 2018). First, inductive coding was undertaken to avoid a theoretically biased selection of codes. This was followed by a constant comparative method in order to discover emergent themes. This method means regularly revisiting prior analysed data and refining codes (Blaikie, 2009). The goal has been to find similarities and differences in the categories and identify how they are interrelated. After having developed a theme guide, transcripts were revisited to better understand the meanings individuals attributed to these different themes. To represent participants' views, quotations have been selected and are provided in the following analysis.

3.2. Qualitative insights

The quantitative analysis above showed significant gender attitudinal differences in savings goals that are not dependent on difficulties in meeting financial plans due to income and/or wealth but are connected to marital status. While men's savings goals change dependent on if they are in a couple or not, women's savings goals remain the same. Our qualitative analysis will now look into potential underlying mechanisms being at play which explain this differential savings goals behaviour. As aforementioned in our theoretical section, we move beyond the assumptions of inherent gender differences and explore the impact of gender-normative roles on financial attitudes and decisions.²¹ Put differently, rather than seeing differential savings goal behaviour as inextricably linked to gender, we argue that the adoption of gender-normative roles influence the savings goal settings of men and women.

Two approaches to financial planning within the household became clear when analysing statements made by interviewees. In the first instance, which was also the dominant approach in the interview data, we find that household members seem to have adopted gender-normative roles within the management of household finances (as shown in the illustrative case 1 in the online *Supporting information*). Supporting statements for the separation of financial chores where women manage short-term financial decisions such as shopping and men manage the long-term retirement planning could be found here: “the deal is Amy organizes life and then I make sure we save properly for it” (Isaac). Interestingly, while a discourse of equality is employed (“we’ve got some very core and common values” [Tobias]), it is one partner making the long-term financial decisions:

“I do most of the spreadsheet, every new thing I bounce off her and say *look I am thinking about doing this, what do you think?* So she often has some very good questions which makes me then dig a little bit further, erm, and then we decide jointly really but she, she, erm, [pause], she relies a lot on my advice. She asks the questions and if I satisfy myself, she’s ok with it.” (Baron).

Despite ‘bouncing’ everything off her and mentioning that they make decisions jointly, he closes the statement with saying that she relies a lot on him and, if he is satisfied, the investment is made. Hence, although he consults with her, he is the one conducting the research and

²¹ Limitations to the argument of inherent traits have been shown to originate amongst other reasons from one's own confirmation bias when conducting research (Nelson, 2012).

ultimately in charge of the strategy. Arguably, this results in women reacting to, but not acting within, long-term financial decisions.

Similarly, as shown in the illustrative case 2 in the online *Supporting information*, even when seeking compromises in decisions directly affecting the family such as a house purchase or the kind of home contents insurance, financial investments are made by the husband. In spite of not legitimizing gender-normative roles in dividing the financial management of the household discursively, they emerge in households' financial practices. Budgeting is left to females ("I don't know, I left it to my wife" [Joseph]) and males take on the responsibility for determining future household finances, independent of the income of the household members ("my salary is more than his" [Emily]):

"So he sort of watches things what's going on [...] and things, I just leave that to him because he does it. So not one of my jobs really (laughing). I do the day-to-day accounts, he does the forecasting. It works." (Fern, both a similar annual income)

Interestingly, the interview participant uses the term "jobs" when declaring that long-term financial planning is not part of her tasks within the households, reinforcing a clear task division between husband and wife.

Strikingly, members of households who conform to this task division have not only internalized gender-normative roles of financial responsibilities but also developed differential financial strategies. Men who are responsible for the household's long-term financial strategy seem to have internalized norms of being financially inclined ("I would consider myself financially literate" [Baron]) and are confident in investing ("I'm quite confident, in my own judgment, on what I do" [James]). They focus on amassing monetary profits ("I want capital growth" [Baron], see also online *Supporting information* Section 2.3) resulting in setting more ambitious goals than their partners ("I'm probably a bit more ambitious in terms of investing and trying to make more, my wife is more cautious in terms of making sure we've got enough" [Tobias]) and giving less importance to transitory shocks ("I'm more risk prone than my wife" [Theodore]). These ambitions do not just relate to the individual but comprise the whole household, as shown in the following statement made by a husband to his wife: "I don't think you have to work all your life either" (Isaac). Having internalized the gender-normative role of the breadwinner thus tends to result in men setting more ambitious savings goals when in a

couple since gender norms dictate that their role is to ensure the provision of financial resources for the household over the life-cycle.

Women who are mainly responsible for the day-to-day budgeting within the household instead appear to have internalized norms of being less financially inclined (“I left it to him because I’m not a numbers person anyway” [Vibha]) reflected in expressing being less confident in making financial decisions (see online *Supporting information* Section 2.3)²² and concentrating on the occurrence of adverse events (“I always felt the world ahead could be much, much harsher” [Eloise]). Interestingly, this has a twofold effect on their approach to savings and investments. On the one hand, they refrain from taking on too much risk (“for me to do something, it would have to feel like it’s stable” [Emily]) and employ products which are perceived as less risky. (“want to have some sort of peace of mind that this lump sum is kind of still there” [Claudia]). On the other hand, since they anticipate experiencing financial constraints in the future, they focus on being able to access the money (“I need some sort of security there to make sure if things, if something awful went wrong, I got money to be able to rely on” [Beatrix]).

The stress that interviewed women put on the accessibility of savings would explain the insights we gained in our quantitative analysis where we found that, in the main, women refrain from using SIPPs which, in contrast to ISAs, are investment vehicles with limited accessibility and higher risk but which are also associated with higher savings goals. A recurrent reference is made to the possibility of losing money:

“That risk of you know yes perhaps you get a return on it or possibly a return on it [...] and it’s the possibility it could go wrong as well and the risk involved in, you know, yes it could make you some money but equally you could lose everything as well [...] I wouldn’t be prepared to take that risk [...] if there would be a guarantee, it was gonna be some long term investment and there was guarantees and assurances there then I would consider it but I don’t think there’s anything that’s guaranteed so yeah.” (Claudia)

In contrast to men who have developed an optimistic view of long-term investments, women see these as problematic due to the possibility of losing the money invested: “possibility of failure outweighs the possibility of success, so I’d never do anything like that” (Imogen). As can be seen in the statements above, emphasis is placed on having the security that the money

²² Interestingly, this seems in some cases to happen as well when men have to take over day-to-day money management and long-term financial investments where they then identify themselves as being not financially inclined: “I’m not a financially investment-oriented sort of person” (Alfred).

will not be lost. This fear of adverse events thus results in preferring a target which they are certain to reach without risking too much. The question, however, remains what happens if couples do not conform to the gender-normative roles with regards to household finance management. We therefore explore as a next step the second approach to household financial planning which was detected in the interviews.

In the second instance, we find that the organization of household financial management deviates from gender-normative roles which expect the man to be responsible for the long-term financial planning. Instead, women are assigned the task of managing the investments of the household: “Edward is incredibly disorganized [...] so I am trying to get the pensions together” (Darcy). Interestingly, whilst men in these ‘non-traditional’ households have not internalized gender-normative assumptions of being the long-term financial planner, they still conform to the normative assumptions of being the breadwinner of the household in the form of being the main income earner. Even when earning substantially more than the woman in the partnership, men leave the long-term financial planning to their wives:

“He earns much more than I do. [...] In our family I am the one that knows about our finances, so you know, I produce our investment spreadsheet, I do our budgeting for our house renovation [...] sometimes we buy bonds or something like that, just if I’ve got money that I think oh we’re not doing or haven’t got a project on” (Scarlett)

What is striking here is that despite women taking over the financial management they are still responsible for the main caring duties within the household: “I reduced my workload [...] it’s not a trajectory a man would necessarily have taken up” (Scarlett). This then entails, in addition to the long-term planning, also being responsible for the day-to-day budgeting: “I sat down and I itemized everything in a spreadsheet from all the cards, just everything, just so I can see.” (Pippa).

These two dynamics might explain why women’s savings goals do not increase even when having internalized a male-normative finance role. While they realize the need to take on risk in order to accumulate financial wealth (“I think if now your aim is to gain more money, then I think, you will need to take risk” [Agnes]), they focus on reaching a comfortable lifestyle (“I’m quite comfortable” [Harriet]). By repetitively using the term comfortable and viewing an aim to grow financially as being greedy, interviewed women put emphasis on the fact that they want to have stability.

“I just want enough money to be comfortable. I think for most part of it and then, you know, have enough money to then eventually be able to have children and have – my children and let my children be comfortable. [...] I think money is just a way of keeping you – you shouldn’t be greedy for it, do you know what I mean? I don’t think it’s the be all and end all I think as long as you have enough to be comfortable, I think that’s good.” (Bethany)

According to this perspective, women would find no reason to try to make more of their savings if the latter allows them to reach their goal of living a comfortable life.

Moreover, even in the case of women making the main financial decisions, either by making investment decisions themselves (as shown in the illustrative case 3 in the online *Supporting information*) or suggesting the investment products (as shown in the illustrative case 4 in the online *Supporting information*), they concentrate on accessibility (“you have children [...] you need to have access to some money” (Rita). It appears that the focus on the day-to-day budgeting and the concomitant need to ensure financial security in the short-term influences the kind of financial products used (“I wanted to be able to access the money when I needed it” [Fleur]). Despite also employing not just cash ISAs but also stocks and shares ISAs (“I also have stocks and shares ISAs [Scarlett]) or bonds (“we invested in bonds, we knew if we were short of money, we could get them out” [Clementine]), they refrain from investing in the longer-term SIPP’s which provide less flexibility. Again, being responsible for the day-to-day seems to lead to a focus on accessibility in case of adverse events, impacting the choice of financial products.

3.3. Synthesis: Linking Qualitative with Quantitative Results

These two approaches in assigning the task of financial planning either based according to gender-normative roles or based on a non-traditional separation of roles is useful in suggesting three underlying reasons for the savings goals difference between men in couples and women. First, as shown in the two examples provided here, independent of how the long-term planning task is assigned, women still predominantly shoulder the domestic work within a household, resulting in a decrease in the time they can offer to the labour market and curtailing their career progression, but also culminating in a focus on adverse events and accessibility. Both aspects are argued to be detrimental for savings goal setting. Therefore, we have here a credible explanation of our quantitative results showing relatively low savings goal amounts chosen by all women as compared to men in a couple. Second, men outside a couple have to take on the

domestic work themselves, indicating that this role will as well counterbalance the increased savings goals through long-term financial planning, similar to women in a couple. This clearly backs our quantitative results that single men exhibit levels of savings goal amounts that are similar to those of women in general. Being in the same role with respect to short-term financial duties, they develop a similar attitudinal response. Third, individual gender norms, such as men being more financially inclined than women, appear to be intensified within couples who adopt a gender-normative task division of household finances. Hence, the view developed in the theoretical section concerning optimism and a need for achievement having a positive impact on men's savings goals only holds in the context of being in a couple. Such positive mindsets about savings goals are more affordable for them since, thanks to their wives, they are mentally freed from thinking about day-to-day budget management issues. These results further corroborate the quantitative findings, especially the one that shows that savings goals by men in a couple bypass by far those of any other categories of individuals (i.e. women in general and men out of a couple). This originates from the fact that they are the only category of persons who, due to the role separation based on gender norms, are systematically freed from day-to-day budget management tasks.

From a theoretical perspective, our qualitative results are particularly relevant within studies exploring the gender wealth gap as they highlight the importance of gender-normative roles within the household on differential savings goals. While previous studies have increasingly focused on the interrelationship between intra-household task divisions and financial decision making (e.g. Bertrand et al., 2015; D'Acunto et al., 2020; Ke, 2021), this is the first study to show how practices induced by gender-normative roles appear to contribute to the gender wealth gap originating from differential savings goals. It becomes especially clear that in the scope of savings goals, gender attitudinal differences in pessimism, risk-aversion, or aspirations with respect to achieving long-term challenging economic outcomes, are clearly not intrinsic, but dependent on the gender-normative roles adopted by men and women within the household. Overall, these insights highlight the need to challenge gender-normative roles and suggest that it is not sufficient to explore the gender wealth gap or gender attitudinal differences in investments while ignoring the impact of gender norms on investment decisions.

4. Discussion and conclusion

By testing whether men and women differ in the choice of savings amount, we fill a gap in the economics literature exploring the gender wealth gap. While financial planning has been found to be associated with positive outcomes in terms of accumulated wealth (Lusardi & Mitchell, 2008), there has been limited discussion of the specific savings goals eventually chosen by investors and the potential behavioural mechanisms behind this choice.

From this perspective, our quantitative analysis is the first to provide evidence, using the lens of gender, that attitudes play a significant role in savings goal choice beyond rational considerations related to income earnings. We have indeed provided evidence that a large part of gender differences in savings goal amount is due to attitudinal differences rather than variations in expected life-long earnings, including those entailed by the *child penalty* which are argued to be one of the greatest determinants of the gender pay gap (Kleven et al., 2019). A key additional feature of our results is that this gender attitudinal difference is only present for individuals living in a couple but non-existent for individuals who are the sole adult of their household. This seems to suggest that this gender difference in savings goals is not intrinsic but rather related to the specific marital context of individuals and the internalized gender norms that we assume affect attitudes within households. Furthermore, we found that this feature is explained by a surge of men's savings goal amount when they are in a couple as compared to when they live on their own. This has provided us with initial insights as to how traditional gender norms may occur within households.

Also, our qualitative results have allowed us to better characterize the mechanism behind the quantitative results and have confirmed the thesis of a traditional separation of financial roles based on gender norms within households. Our key finding is that day-to-day budget management, a role predominantly assigned to women within couples, but that has to be also handled by single women and men who are outside a couple, generates attitudes that negatively influence savings goals. This mainly explains why in the quantitative results, in comparison with men in couples, all other categories of men and women exhibit relatively low savings goal amounts. We further support this finding by showing that men in a couple who are assigned to long-term planning and freed from daily financial management concerns, exhibit a focus on rapid growth, more optimism, and pursue aspirational living standards during retirement resulting in choosing challenging savings goals.

Our paper thus provides key elements for a better understanding of attitudinal factors influencing wealth accumulation, and hence the so-called gender wealth gap. A crucial contribution of our results is to not only rule out the view that gender attitudinal differences

in savings goal choices are intrinsic but also to reveal the importance of gender norms on different savings goals. Internalized gender norms, consciously or subconsciously adopted, appear to produce gendered effects on wealth accumulation. If a couple adopts gender-normative roles, individual gender-normative assumptions of women being less financially inclined are intensified and a focus on daily budget management by women exacerbates their anticipation of adverse events, both having a detrimental impact on savings goals even when planning for the long-term. This could arguably be the case regardless of the studied country. However, the impact of savings goals on actual wealth might be less dramatic in countries where the state pension system is more developed and hence requires less investment by individuals, and thus gendered attitudes would play less of a role.

Since savings goals have been shown in the literature to reflect subsequent saving behaviours (Choi et al., 2017; Hsiaw, 2013; Karlan & Zinman, 2018; Ülkümen & Cheema, 2011) and the use of savings goals as a key element in the savings process - with 1 in 2 individuals within OECD countries, setting long-term financial goals (45% in the UK) (OECD, 2016) - these results have implications for future policy solutions and research on the gender wealth gap. It is not sufficient to seek to increase long-term financial planning by women when wanting to reduce a gender wealth gap. Instead, policy solutions and research into the gender wealth gap need to take into consideration prevalent gender norms (individual and couple) and their influence on pension savings. This also raises the question of how such grounded and internalized prescription of gender roles could eventually be dissipated.

When it comes to thinking of practical solution to tackle gender differences in savings goals, policymakers should bear in mind that, while recommending that women plan more is certainly a good idea, they should also be aware of the limitation of this approach due to low savings goals possibly emerging from that process. An interesting aspect of our quantitative results is that they are based on data relating to advised clients. This leads us to the view that such differences in goals choice based on norms cannot be easily reversed by small improvements in financial literacy or expertise.²³ This is further backed by the finding in our qualitative analysis that women, even when they were the financially literate person of the couple, reported modest savings goals.

²³ A study by May et al. (2018) shows that men and women differ in their view, even among experts asked to report opinion about their field of expertise (i.e. economic policy). This suggests that gender differences are not necessarily linked to having acute knowledge about the topic of the decision.

Whereas changing mentalities about gender traditional roles within households seem important but a quite long-term objective, shorter term solutions could emerge from a behavioural economics viewpoint. It is for instance well documented that social comparison could serve as a reference point for people to adjust their behaviour (Allcott & Kessler, 2015; Allcott & Mullainathan, 2010). With the appropriate data, advisors could, for instance, highlight to people with unambitious goals that, *on average*, with a level of income and wealth similar to theirs, people can afford to set more ambitious goals. More generally, a recommendation would be to make financial advisors aware of the implication of such gender roles on the setting of savings goals so that they could explain this behaviour to their clients. Awareness of the issue may eventually help individuals to avoid these behaviours.

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TABLE 1.
Variables description

Note: This table provides a description of variables used in the study.

Variable name	Description
Demographic	
Woman	A dummy variable taking the value 1 if the client is a woman and 0 otherwise
Age	Age of the client
State pension age	Age at which clients will start (or have started) benefiting of their state pension.
Marital status	Dummy variables for each marital status <i>civil union, co-habiting, separated, divorced, married, single, widow(er)</i> .
Income	Yearly net labour earnings, available for 986 clients.
Assets	Amount of assets individually owned (excluding <i>Initial savings amount</i>), available for 1,089 clients.
Goal characteristics	
Goal duration	Number of years until which clients plan to withdraw money from their placement.
Savings goal	Logarithm of the amount of money that clients aim to accumulate at the goal term.
Investment characteristics	
Initial savings amount	Initial amount invested in the portfolio by clients.
Portfolio risk	An ordered categorical variable taking the value 1, 2, 3, 4 or 5 if clients respectively chose the pre-mixed portfolio types named <i>defensive, cautious, balanced, growth, or aggressive</i> .
Proj. rate of return	It is the geometric mean of forward annual projected rates of return (r) provided by Morningstar. It varies with the portfolio risk exposure chosen by the client (<i>defensive, moderate, balanced, growth, aggressive</i>) and the <i>Goal duration</i> (N) of a client i .
	$r_i = \sqrt[N_i]{\prod_{t=0}^{N_i} (1 + r_{t,i})} - 1$
GIA	Takes the value 1 if the client has a General Investment Account, and 0 otherwise.
ISA	Takes the value 1 if the client has an Individual Saving Account, and 0 otherwise
SIPP	Takes the value 1 if the client has a Self-Invested Pension Portfolio, and 0 otherwise
Time continuing withdraw	Categorical variables derived from answer to the following: "Once you begin withdrawing money from your investment, how long do you expect to continue withdrawing funds?". It takes its value between 1 and 4 where 1 is "I plan to make one off withdrawal"; 2 is "2 to 5 years"; 3 is "6 to 10 years"; and 4 is "more than 11 years".
Investment ownership percentage	The proportion (in %) of <i>Initial savings amount</i> that clients invest on their own

TABLE 2.
Summary statistics

Note: The table shows summary statistics of variables used in the study. *Type* describes the nature or the unit of the variable. *N*, *Freq./Mean* and *Std.Dev.* are respectively the number of observations, the mean and the standard deviation for the concerned variable. We present statistics for the whole sample (*All sample*), the women sub-sample (*Woman*) and the men sub-sample (*Men*).

	Type	All sample			Woman			Man		
		N	Freq./mean	Std. dev.	N	Freq./mean	Std. dev.	N	Freq./mean	Std. dev.
Demographic										
Woman	dummy	1,760	44.1%	49.7%						
Man	dummy	1,760	53.8%	49.9%						
Gender not recorded	dummy	1,760	2.1%	14.4%						
Age	year	1,760	58.61	14.76	777	59.85	15.32	946	57.48	15.31
State pension age		1,723*	64.69	2.21	777	63.56	2.87	946	65.62	0.48
<i>Marital status</i>										
Civil Partner	dummy	1,760	0.2%	4.1%	777	0.3%	5.1%	946	0.1%	3.3%
Co-habiting	dummy	1,760	6.8%	25.1%	777	6.6%	24.8%	946	6.8%	25.1%
Divorced	dummy	1,760	6.8%	25.2%	777	8.8%	28.3%	946	5.1%	22.0%
Married	dummy	1,760	59.8%	49.0%	777	48.5%	50.0%	946	69.0%	46.3%
Separated	dummy	1,760	0.2%	4.1%	777	0.1%	3.6%	946	0.2%	4.6%
Single	dummy	1,760	15.1%	35.8%	777	15.4%	36.2%	946	15.2%	35.9%
Widow	dummy	1,760	11.1%	31.5%	777	20.3%	40.3%	946	3.6%	18.6%
Couple	dummy	1,760	66.8%	47.1%	777	55.3%	49.7%	946	75.9%	42.8%
Income	£	986	30,840	54,951	373	22,221	21,988	594	35,578	66,165
Income (logarithm)	Log (£)	977	10.0	0.7	372	9.8	0.7	586	10.2	0.7
Assets ²⁴	£	1,089	296,261	422,023	455	299,682	410,539	599	280,302	381,616
Goal characteristic										
Savings goals	£	1,760	129,974	262,252	777	99,533	196,197	946	149,655	241,157
Savings goals (logarithm)	Log (£)	1,760	11.0	1.2	777	10.8	1.1	946	11.2	1.3
Investment characteristic										
Initial savings amount	£	1,760	43,884	68,796	946	39,432	58,819	946	47,036	75,599
Log savings initial amount	Log (£)	1,597	10.1	1.2	714	10.1	1.1	851	10.2	1.3
Portfolio risk	5 categ.	1,760	3.11	0.93	777	2.98	0.93	946	3.21	0.92
<i>Investment projection variables</i>										
Proj. rate of return	rate	1,760	6.1%	0.8%	777	6.0%	0.8%	946	6.2%	0.8%
Goal duration	year	1,760	10.6	6.6	777	10.2	6.3	946	10.9	6.7
<i>Investment vehicle</i>										
GIA	dummy	1,760	23.6%	42.5%	777	26.9%	44.4%	946	21.0%	40.8%
ISA	dummy	1,760	69.0%	46.2%	777	75.2%	43.2%	946	64.1%	48.0%
SIPP	dummy	1,760	25.1%	43.4%	777	17.9%	38.4%	946	30.9%	46.2%
Time continuing withdraw	4 categ.	1,760	3.1	1.1	777	3.0	1.1	946	3.1	1.1
Investment ownership percentage	%	1,760	94,1	17,5	777	95,0	16,8	946	93,3	18,1

* *State pension age* is not available for clients whose gender is *not recorded*.

²⁴ The level of *Assets* for women in our sample is superior to that of men questioning whether there is a selection issue. We discuss this question in the online *Supporting information* section (subsection 1.2) concluding that there might be a selection issue in our data. We however show that it is not as important as the variable *Assets* seems to suggest. We also argue that the selection issue in our sample does not apply to financial wealth for which we clearly observe the traditional gender gap. We finally explain that, in economic terms, if there is a selection bias, then our empirical estimates might be downward biased rather than upward biased.

TABLE 3.
Gender effect in Savings goal

Note: This table shows estimations of the model presented in equation 1 and 2 (i.e. regression 6). The dependent variable is *Savings goals* (expressed in logarithm). The method of estimation is OLS. Robust standard errors are reported in parentheses. Regression 1 shows the baseline model. Regression 2 is an estimation of the model for clients above 50 years old. Regression 3 includes variables related to other investment parameters than goal amounts (i.e. those in vector X) as regressors. Regressions 4 and 5 are estimations of the model respectively for clients in a couple and clients who are not in a couple. Regression 6 estimates the model that includes the interaction term between the gender variable (*Woman*) and the couple status variable (*Couple*), as described in Equation 2. The dummy variable *Married* is omitted in the first three regressions to avoid perfect multicollinearity. *Marital status* dummies are not included in Regression 4, 5 and 6. The lower part of the table reports the number of observations (*Observations*) and the pseudo R-squared (R^2). δ is the degree of selection on unobservables relative to observables (Oster, 2019). It is only reported when the coefficient on *Woman* is significant. The *, **, and *** marks denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	(1) Baseline	(2) Above 50	(3) all control variables	(4) In a couple	(5) Out of a couple	(6) Gender x Couple
Woman	-0.270*** (0.075)	-0.229** (0.090)	-0.183*** (0.068)	-0.401*** (0.088)	0.170 (0.136)	0.200 (0.136)
Age	-0.0287*** (0.004)	-0.0392*** (0.009)	-0.0174*** (0.004)	-0.0342*** (0.005)	-0.0116* (0.006)	-0.0271*** (0.004)
State pension age	-0.0140 (0.030)	-0.0512 (0.032)	-0.0396 (0.028)	-0.0266 (0.039)	0.0193 (0.052)	-0.0177 (0.030)
Civil Partner	-0.688*** (0.063)	-0.743*** (0.086)	-0.385*** (0.075)			
Co-habiting	0.0559 (0.125)	0.0599 (0.180)	0.0211 (0.118)			
Divorced	-0.0463 (0.109)	-0.224** (0.100)	-0.0823 (0.095)			
Separated	0.227** (0.091)	0.341** (0.133)	0.778*** (0.093)			
Single	-0.455*** (0.101)	-0.372*** (0.099)	-0.223** (0.091)			
Widow(er)	0.215 (0.182)	0.169 (0.195)	0.234 (0.156)			
Portfolio risk	0.224*** (0.037)	0.211*** (0.037)	0.182*** (0.033)	0.190*** (0.039)	0.320*** (0.075)	0.225*** (0.036)
Income (log)	0.0798 (0.068)	0.111* (0.060)	0.0872 (0.061)	0.0907 (0.069)	-0.0386 (0.151)	0.0746 (0.066)
Initial savings amount (log)	0.544*** (0.064)	0.719*** (0.069)	0.441*** (0.072)	0.559*** (0.070)	0.499*** (0.137)	0.552*** (0.063)
Inv. ownership percentage	-0.00185 (0.001)	0.00134 (0.002)	-0.000717 (0.001)	-0.000974 (0.002)	-0.00539 (0.003)	
Goal duration			0.0270*** (0.007)			
Time continue withdraw			0.0691** (0.033)			
SIPP			0.862*** (0.173)			
ISA			0.0984 (0.134)			
GIA			0.429*** (0.098)			
Couple						0.535*** (0.096)
Woman x Couple						-0.593*** (0.162)
Constant	6.937*** (2.121)	7.640*** (2.549)	7.977*** (1.966)	7.873*** (2.769)	5.075 (3.185)	6.570*** (2.127)
Observations	811	493	811	607	204	811
R^2	0.41	0.56	0.53	0.44	0.34	0.41
δ (Oster test)	3.02	2.22	1.67	3.51		

TABLE 4.
Descriptive Statistics for the Interview Participants

Number of interviewees	Individuals	60
	Households	55
Distribution of income (classification based on averages before retirement)	High income (IX-X income deciles) (20 households)	Individuals £63,424 Households £119,527
	Medium income (III-VIII income deciles) (35 households)	Individuals £26,143 Households £42,075
Average distribution of household net wealth (gross wealth)	Net wealth above £500,000 (19 households)	£1,379,887 (Gross wealth: £1,633,493)
	Net wealth between £100,000 and £500,000 (25 households)	£301,113 (Gross wealth: £344,623)
	Net wealth below £100,000 (11 households)	£31,468 (Gross wealth: £96,568)
Geographical location of households	South East	52.6%
	Other than South East	47.4%
Area of origin of participants	South East	32.7%
	Other than South East	67.3%
Age profile of participants	Minimum age	24
	Maximum age	88
Age dispersion of participants	25-34	23.3%
	35-44	15%
	45-54	20%
	55-64	23.3%
	≥ 65	18.3%
Employment status of participants	Employed	51.4%
	Self-employed	13.3%
	Student	8.3%
	Unemployed	3.3%
	Retired	23.7%
Occupational categories of participants	Acupuncturist, army officer, CEO, consultant, engineer, graphic designer, lawyer, lecturer, pharmacist, procurement officer, project manager, promotional or sales worker, researcher, secretary, security guard, solicitor, teacher, treasurer, warehouse worker	