Do Defaults have Spillover Effects? The Effect of the Default Asset on Retirement Plan Contributions*

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Abstract

The 2006 Pension Protection Act allowed defined contribution plans to establish lifecycle funds as the default asset allocation, leading to a marked increase in their use. In this study we examine how a change in the default asset to a lifecycle fund affects employees' decisions about how much to save. We exploit a change in the Thrift Savings Plan (TSP) for new hires at the U.S. Office of Personnel Management that altered the default asset from a low-risk, low-return government securities fund to a lifecycle fund. We investigate whether the change in the default asset spills over into a difference in the likelihood of remaining passive in the contribution rate decision. We also examine how other contribution decisions, including the tendency to maximize the employer match, differ based on the default fund.

Keywords: choice architecture, asset allocation, employer-provided retirement savings plans, defaults.

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1 Introduction

There is widespread evidence from the retirement savings literature showing that the default choice — the decision that is enacted if no active choice is made — has a substantial effect on savings outcomes of workers including participation, contribution, and asset allocation in employer-provided retirement plans (Madrian and Shea, 2001; Choi et al., 2004; Beshears et al., 2009). While the default governing a particular decision has a powerful effect on that outcome, less is known about how the features of a default in one domain may affect outcomes in separate but related domains. Understanding spillover effects of defaults is of particular interest in the retirement saving realm due to the multiple decisions required (i.e., contribution rate, asset allocation, and distribution decisions). This is of particular relevance to policymakers since federal policy provides guidelines for defaults in retirement savings. The Pension Protection Act of 2006 gave employers the statutory authority to enroll employees automatically in defined contribution plans and established Qualified Default Investment Alternatives (QDIAs), which are safe-harbor funds that employers can use as the default fund in which assets are invested. This policy dramatically affected the default terms of employer-provided retirement plans, yet there is little evidence as to how these default provisions spill over across different domains.

In this study, we examine the effect of a change in the default asset fund on contribution rates for new employees in the Thrift Savings Plan (TSP), the defined contribution plan of the Federal government. The change was from a low-risk, low-return pure government securities fund to a blended-asset lifecycle fund in which the allocation balances changes with employee age. The lifecycle fund may be considered a more appropriate default in that the allocation is likely preferable to a higher percentage of employees as compared to the conservative fund which may not be well-suited for long-term wealth accumulation.

How might a change in the asset default affect contributions? On the one hand, if the lifecycle fund represents an allocation close to the one the employee would choose, then changing to a lifecycle default fund may simplify the employee's decision-making process, eliminating the need to make an active choice and freeing up more time for the employee to think carefully about her contribution decision. On the other hand, a more appropriate default may make passive choice more attractive by reducing the value of active choice, which could lead to more employees making

passive choices on contribution rates as well. Because the default contribution rate in TSP is lower than that required to obtain the full employer match, changing to a default fund that is preferred by more employees may lead people to be less well-prepared for retirement. These two scenarios differ in whether the costs of making the contribution and asset decisions as separable or joint.

We find that the change to the lifecycle default has a negative spillover effect on contribution decisions. In particular, employees have a greater tendency to passively accept the default contribution rate under the lifecycle fund default compared to under the government securities fund default by 24 months after they are hired. In addition, by 24 months of tenure, employees subject to the lifecycle fund default are less likely to locate at the contribution rate that maximizes the employer match. These two findings together suggest that, on average, employees who would have made an active choice if the default were the government securities default are contributing less by remaining passive. The findings also suggest that employees approach asset and contribution decisions jointly, rather than separately. This joint decision-making combined with a better-suited default fund may partly explain why employees fail to maximize their employer matching contributions.

This paper contributes to the growing literature on the unintended consequences of defaults. The landmark study by Madrian and Shea (2001) evoked an optimistic outlook regarding the potential of defaults to boost retirement savings. More recent work presents a more nuanced view, highlighting the potential weaknesses of automatic enrollment. Choi et al. (2004) show that, while automatic enrollment greatly increases participation in DC plans, it comes at the cost of higher persistence by employees at the default contribution rate, which are often set at a rate too low to maximize the match from the employer or maintain an adequate level of consumption into retirement. In the asset allocation space, Mitchell et al. (2009) find that the introduction of a lifecycle fund as the default has led some employees to hold portfolios that mix the lifecycle fund with other assets. This is somewhat surprising as lifecycle funds were intended to be standalone portfolios. They find that this group of mixed adopters is prevalent and is comprised of middle-income individuals, who are not typically characterized as having low financial literacy or engagement in retirement savings decisions. The current paper contributes to this literature by examining the effects of the default fund on contribution rates.

The remainder of this paper is organized as follows. In Section 2 we provide a framework for assessing the decision to make an active contribution choice under regimes that differ in the default

asset fund. In Section 3, we describe the context and our sources of data while Section 4 presents the empirical approach. Section 5 discusses the results and Section 6 concludes the paper.

2 Conceptual Framework

We present a simple structure to think about spillovers from a changed asset-allocation default on contribution behavior. An employee must decide first whether to make an active choice both regarding their contribution level and regarding their asset allocation. Let $(A_x, A_y) \in \{0,1\}^2$ represent the decision to make an active choice in the two domains. If the employee makes an active choice in a given domain, they may then choose a level of contributions $x \in \mathcal{X}$ and an asset allocation $y \in \mathcal{Y}$, respectively. We assume $\mathcal{X}$ is an interval and $\mathcal{Y} = [0,1]^{K-1}$ representing contribution allocation weights across a finite set of K alternative assets. If the employee remains passive in a given domain, the choice for that domain remains at the default level which we denote as $\bar{x}$ and $\bar{y}$.

The employee's payoff depends on their contributions, allocation, and whether they made an active choice. Let θ denote a vector for the individual's exogenous attributes. We assume the long-run benefits are independent of the default, and are given by $b(x, y|\theta)$. We assume b is upper semi-continuous in the contribution level. Suppressing θ for simplicity, each employee therefore has an optimal contribution choice given an asset allocation, $x^*(y)$, and an optimal asset allocation given a contribution level, $y^*(x)$. Moreover, b is maximized when the agent makes an active choice over both domains, and the maximizing choices are given by the fixed point $(x^*(y^*), y^*(x^*))$.

The costs associated with making an active choice are $c(A_x, A_y)$ with normalization $c(0,0) = 0$. These costs can include both transactional costs of filling out forms and cognitive costs associated with optimizing one's retirement savings plan, and we assume c is increasing in both arguments. Utility is therefore given by $U(A_x, A_y, x, y|\theta) = b(x, y|\theta) - c(A_x, A_y|\theta)$. Given the second-stage optimization of contribution levels and allocation, the employee's problem simplifies into choosing among the four possible (A_x, A_y) combinations. Table 1 lists these four values given an initial default $(\bar{x}, \bar{y})$. Employees will distribute themselves across the four options in proportions: $P(A_x, A_y|\bar{x}, \bar{y})$.

What happens when the default asset allocation fund $\bar{y}$ improves to $\bar{y}'$, for instance, from a government-securities only fund to a lifecycle fund? We assume that the benefit of a given

Table 1: Payoffs By Default Regime

(A_x, A_y)	Initial Default: $\bar{y}$	Relation	Improved Default: $\bar{y}'$
$(0,0)$	$b(\bar{x}, \bar{y})$	$<$	$b(\bar{x}, \bar{y}')$
$(0,1)$	$b(\bar{x}, y^*(\bar{x})) - c(0,1)$	$=$	$b(\bar{x}, y^*(\bar{x})) - c(0,1)$
$(1,0)$	$b(x^*(\bar{y}), \bar{y}) - c(1,0)$	$<$	$b(x^*(\bar{y}'), \bar{y}') - c(1,0)$
$(1,1)$	$b(x^*(y^*), y^*(x^*)) - c(1,1)$	$=$	$b(x^*(y^*), y^*(x^*)) - c(1,1)$

contribution level is always better under the superior default fund for any x and any θ:

$$A1 : b(x, \bar{y}|\theta) < b(x, \bar{y}'|\theta)$$

Values for each option under the superior allocation default, $\bar{y}'$, are listed in the "Improved Default" column. The value of options involving active change in allocation, $A_y = 1$, do not change. An employee who keeps the contribution level fixed at the passive, stable default $\bar{x}$ and actively chooses an optimal allocation will choose the same optimal allocation, $y^*(\bar{x})$ and bear the same $c(0,1)$ cost regardless of the allocation default. Similar logic applies if the employee actively chooses both the contribution level and allocation, $(1,1)$. However, improvement in the asset-allocation default makes passively accepting the default allocation, $A_y = 0$, more appealing. The value of the $(0,0)$ and $(1,0)$ options both go up. In the $(0,0)$ case, it follows immediately from $A1$. In the $(1,0)$ case, it follows from $A1$ and the definition of $x^*(\bar{y}')$. Because the new default yields a higher payoff point point-by-point, it must also yield a higher maximum: $b(x^*(\bar{y}), \bar{y}) < b(x^*(\bar{y}), \bar{y}') \leq b(x^*(\bar{y}'), \bar{y}')$.

The model predicts that, under a better allocation default, employees will distribute themselves across the four options with higher shares in $(0,0)$ and $(1,0)$ and shares weakly lower in $(0,1)$ and $(1,1)$. We observe data on default regimes and contribution choices, but not asset allocation choices. We see A_x and x but not A_y or y. The model's prediction about the effects of a better allocation default on A_x and x are ambiguous.

If an improved allocation default $\bar{y}'$ increases $b(\bar{x}, \bar{y}') - b(\bar{x}, \bar{y})$ by a lot then passivity in contributions is likely to increase. If instead $b(x^*(\bar{y}'), \bar{y}') - b(x^*(\bar{y}), \bar{y})$ increases by a lot, passivity in contributions is likely to decrease. If active choice in contributions is a substitute for allocation, the first expression may increase more than the latter. Better allocations reduce the benefit of picking the optimal contribution thereby reducing active choice. The two choices may be substitutes if the employee feels that she does not need to save as much from the improved default,

for example if she has a low elasticity of intertemporal substitution (i.e. a preference for highly smoothed consumption), and the new default asset is perceived as having a high future return. On the other hand, if the quality of fund and active choice in contributions are complements, then the second expression may increase relatively more. For example, if the employee has a high elasticity of intertemporal substitution, a default asset with a higher perceived return increases the returns from saving, causing the person to want to save more. Then improving the default fund may lead to more active choice. The aggregate effect is not just the average effect in the population but the average effect on the people who only marginally prefer their top-ranked action to the next best alternative. Thus the outcome does not inform us about average substitutability or complementarity in the population.

However, if we find that the improved default fund led to more passivity, we can conclude that at least some people in the population view fund quality and active choice in contributions as substitutes. Moreover, if those who make an active choice in contributions choose to increase their contributions, we can more specifically conclude that some people in the population view fund quality and contributions as substitutes.

The above analysis assumes rational choice. There may be psychological forces at play. For example, with imperfect memory or attention, people may simply forget to make an active choice. Making an active choice in one domain may serve as a reminder to make an active choice in the other domain. Hence any reduction in incentives to make an active choice in asset allocation leads to less active choice in that domain and this could spillover as fewer people making an active choice in contributions.

3 Setting and Data

3.1 Retirement Plan Setting

We evaluate the effect of the change in the default asset fund on contribution behavior for new hires in the U.S. Office of Personnel Management (OPM), the agency serving the human-resources function for the federal government. Federal employees participate in the Thrift Savings Plan

(TSP), a defined contribution plan, in addition to a defined benefit plan.[1] Employees receive a base TSP contribution of 1 percent. In addition, the agency matches each dollar of an employee's first 3 percent of pay and $0.50 on the dollar for next two percent.Employees can contribute up to the IRS maximum each year, which was $17,500 for 2014, $18,000 for 2015-2017, and $18,500 in 2018. Employees can elect to invest their contributions in five different funds or a lifecycle option (L Fund), which is a mix of the other funds based on the employee's age. The five indexed core funds include: Government Securities Investment Fund (G Fund), Fixed Income Index Investment Fund (F Fund), Common Stock Index Investment Fund (C Fund), Small Cap Stock Index Investment Fund (S Fund), and International Stock Index Investment Fund (I Fund). Since August 2010, the federal government has used automatic enrollment for new hires at a 3 percent contribution rate for employees, which is below the contribution rate required for maximizing the agency match (5 percent). Our sample selection eliminates any employees hired prior to automatic enrollment at the 3 percent contribution level.

For employees hired before September 5, 2015, contributions are allocated to the G Fund if the employee fails to make an active investment election. A recent report on TSP use indicated that about 41 percent of employees had all of their contributions allocated to the G Fund under this policy (OPM, 2015). For those hired on or after September 5, 2015, the default investment choice is the L Fund.

Our sample consists of employees employed at OPM both before and after the change in the default asset allocation. Our data combine personnel records with TSP contribution elections. Asset allocation elections are made through a distinct TSP system. This poses two important points when interpreting our results. First, we cannot directly evaluate the effect of the asset default change on asset allocation decisions. However, given the proportion invested in the G Fund under the prior default, we assume that at least some employees are passively investing assets in the L fund after the default fund changes. Second, the scope for transaction cost efficiencies are low given a separate system needs to be accessed for contribution and asset elections. This is useful as it makes an active choice more likely if individuals view asset and contribution decisions separately.

[1]Federal employees hired before 1984 were covered under the Civil Service Retirement System and not by Social Security, and are excluded from our study. Federal employees hired in 1984 or later are in the Federal Employees Retirement System (FERS) and are covered by Social Security. The defined benefit plan in FERS is known as the Basic Benefit Plan and provides an annuity payment based on salary and years of service for eligible employees.

3.2 Measures and Variables

The length of time it takes to make a decision is key for retirement savings outcomes (Choi et al., 2004), and making an active choice is an absorbing state; in other words, once one switches from passive to active, they do not switch back to passive. Therefore, we analyze our outcomes for people with similar tenure lengths across regime. Our data collection began in September 2014 and continued through March 2018, spanning the change to the asset default that affected employees hired after September 5, 2015. In order to maximize tenure lengths with common support, we limit our sample to those with less than 24 months of tenure.[2]

We construct each employee's per pay period TSP contribution rate using data on contribution elections while taking into account the maximum allowable annual contribution.[3] We construct additional measures of saving choices per pay period including binary indicators of whether the employee is passively enrolled, whether the employee contributes an amount that maximizes their match from the Federal government, whether the employee contributes the annual maximum, and whether the employee makes no contribution to TSP (i.e., does not participate). The key indicator of interest from our conceptual framework in Section 2 is whether the employee made a passive choice.

Table 2: Summary Statistics by Default Asset - Outcome Variables

	Gov't Securities Asset Default		Lifecycle Asset Default		Difference	
	mean	sd	mean	sd	b	p
Passive	0.16	0.37	0.17	0.37	-0.00	(0.86)
At 0%	0.06	0.23	0.07	0.26	-0.02	(0.38)
At Max Match	0.53	0.50	0.53	0.50	0.00	(0.98)
At Cap	0.03	0.17	0.04	0.20	-0.01	(0.37)
TSP Rate	5.78	4.54	6.10	4.56	-0.32	(0.33)
TSP Amount ($/year)	4358.35	4432.32	4955.79	4952.28	-597.44	(0.09)
Observations	759		256		1015	

Notes: TSP Amount reflects annual Roth and Traditional TSP contributions subject to annual maximum, including catch-up contributions if eligible. See text for more details.

Table 2 presents summary statistics for our measures of TSP contribution behavior separately for employees who were hired before and after the change in the default asset. The data is at the

[2]We include those hired before the start of our data with less than 24 months of tenure in addition to those hired after our data collection began.

[3]Employees can elect contributions as a percent of pay, or as a dollar amount per pay period.

person level and represent the values of our outcomes at 24 months of tenure. We focus here on the 24-month slice to maximize balance across hire dates However, we use all available panel data in the regressions. Approximately one sixth of the sample is passively enrolled at 24 months, and approximately 6 percent of the sample is not contributing. One third of the sample contributes the amount that obtains the maximum employer match and a small share (2-3 percent) contribute the annual maximum. On average, employees contribute approximately 6 percent of their earnings into TSP. Table 3 shows summary statistics for the control variables used in the analysis for the two groups of employees, and the data again are at the person level and represent the value of the controls at 24 months of tenure.

Table 3: Summary Statistics by Default Fund Regime - Control Variables

	Gov't Securities Asset Default		Lifecycle Asset Default		Difference	
	mean	sd	mean	sd	b	p
Total Pay	69941.03	32065.93	76029.17	32542.52	-6088.14**	(0.01)
Female	0.57	0.50	0.49	0.50	0.08*	(0.03)
Male	0.43	0.50	0.51	0.50	-0.08*	(0.03)
Age RecordDate	39.18	9.72	41.27	9.47	-2.10**	(0.00)
High School	0.19	0.40	0.04	0.18	0.16***	(0.00)
College or Associate	0.07	0.26	0.20	0.40	-0.13***	(0.00)
Bachelor	0.42	0.49	0.35	0.48	0.07*	(0.05)
Post-Bachelor	0.31	0.46	0.41	0.49	-0.10**	(0.00)
Other	0.05	0.23	0.06	0.24	-0.01	(0.62)
White	0.65	0.48	0.61	0.49	0.04	(0.21)
Hispanic	0.07	0.25	0.05	0.21	0.02	(0.21)
Black	0.23	0.42	0.28	0.45	-0.06	(0.08)
Other	0.23	0.42	0.31	0.46	-0.08*	(0.02)
DC	0.31	0.46	0.25	0.43	0.06*	(0.05)
MD	0.13	0.34	0.14	0.35	-0.01	(0.58)
PA	0.24	0.43	0.17	0.37	0.08**	(0.01)
VA	0.08	0.27	0.13	0.33	-0.05*	(0.05)
Non-Supervisory	0.92	0.28	0.96	0.20	-0.04*	(0.01)
Team Leader	0.02	0.12	0.01	0.09	0.01	(0.26)
Supervisor or Manager	0.07	0.25	0.04	0.18	0.03*	(0.02)
Observations	759		256		1015	

Notes:

4 Empirical Methods

We consider how the change in asset default affects contribution behavior as measured by the outcomes summarized in Table 2. We estimate the following OLS regression where outcomes are

denoted by y_{it}:

$$y_{it} = \beta_0 + \beta_1 \text{Lifecycle}_{it} + \beta_2 \text{Lifecycle}_{it} \times \text{Tenure}_{it} + \theta X_{it} + u_{it} \quad (1)$$

where $\text{Lifecycle}_{it} = 1$ for employees hired on or after September 5, 2015 and 0 otherwise and X_{it} is a vector of individual-level controls summarized in Table 3. The vector X_{it} also includes tenure month dummies, 5-year age bins, and year and month fixed effects. We use monthly observations for each person and cluster standard errors at the person level.

The coefficient β_1 indicates the effect of the lifecycle default on outcome y_{it} at the time of hire (tenure=0) after controlling for observable characteristics. The coefficient β_2 quantifies how the relationship between the lifecycle default and the outcome changes with tenure.

The regression equation above assumes that the relationship between the regime change and tenure is linear; however, this may not be the case. As a result, we also run a version of the above regression with non-parametric interactions with tenure in three-month bins.

5 Results

We report the results of estimating Equation 1 on our outcome variables in Table 4. Each column represents the results with a different dependent variable, and the mean of the dependent variable is indicated at the bottom of the table as well as the R-squared, the number of clusters and the number of observations. Coefficients for our control variables are shown in the tables but we suppress the coefficients on tenure month indicators, 5-year age indicators, year and month fixed effects.

Our results show some evidence of spillover effects from the asset default onto contribution decisions. In particular, there appears to be an interaction between the lifecycle asset default and tenure for both the outcome of being passively enrolled and being at the maximum match. For the outcome of being passively enrolled, employees in the lifecycle asset default group start off 6 percentage points less likely to be passively enrolled and this difference is marginally significant at the 10 percent level. As tenure increases, the difference diminishes, goes to zero by around 10 months, and then reverses. While the government securities default drove more initial passivity than the lifecycle default, the passivity for employees hired with the government securities default diminishes faster with tenure than for employees hired with the lifecycle fund default. By 24 months

of tenure, employees in the lifecycle asset default group are approximately 9 percentage points more likely to be passively enrolled in TSP (-0.0602 + 24×0.0063 = 0.091). Relative to the average of 22 percent of the sample, this difference is economically meaningful. These results provide evidence of higher persistence in the passive state at greater months of tenure relative to fewer months of tenure under the lifecycle asset default as compared to the government securities asset default.

For the outcome of being enrolled at the maximum match amount (i.e. 5 percent of salary), the opposite pattern emerges. Immediately after being hired, employees in the lifecycle asset default group are slightly more likely to be enrolled at the amount that maximizes the employer match, though the difference is statistically indistinguishable from zero. As one's tenure increases, employees hired with the lifecycle asset default are significantly less likely to be maximizing the employer match. By 24 months of tenure, employees in the lifecycle asset default group are approximately 8 percentage points less likely to be obtaining the full employer match (0.0504 - 24×0.0053 = -0.0768). Again, this difference is economically meaningful relative to the average proportion at the maximum match amount of 31.1 percent. Our other outcome variables appear to not respond to the lifecycle asset default. In particular, we do not see any spillovers in TSP non-participation, the proportion of individuals at the annual cap, and the overall TSP rate.

The regression results assume that the interaction between tenure and the change in asset default is linear. We investigate this assumption by running non-parametric analogues of Equation 1 where the linear tenure interaction is replaced with a series of indicator variables representing quarterly bins of tenure. The sum of the lifecycle asset default coefficient and each interaction between tenure and the lifecycle asset default indicator are displayed along with 95% confidence intervals in Figure 1 for the outcome of being passively enrolled and Figure 2 for the outcome of being at the maximum match. Each of these plots confirm the results in Table 4. Figure 1 shows that the difference in the likelihood of remaining passive between the two groups increases with tenure and is significantly higher at 24 months of tenure for those in the lifecycle asset default.

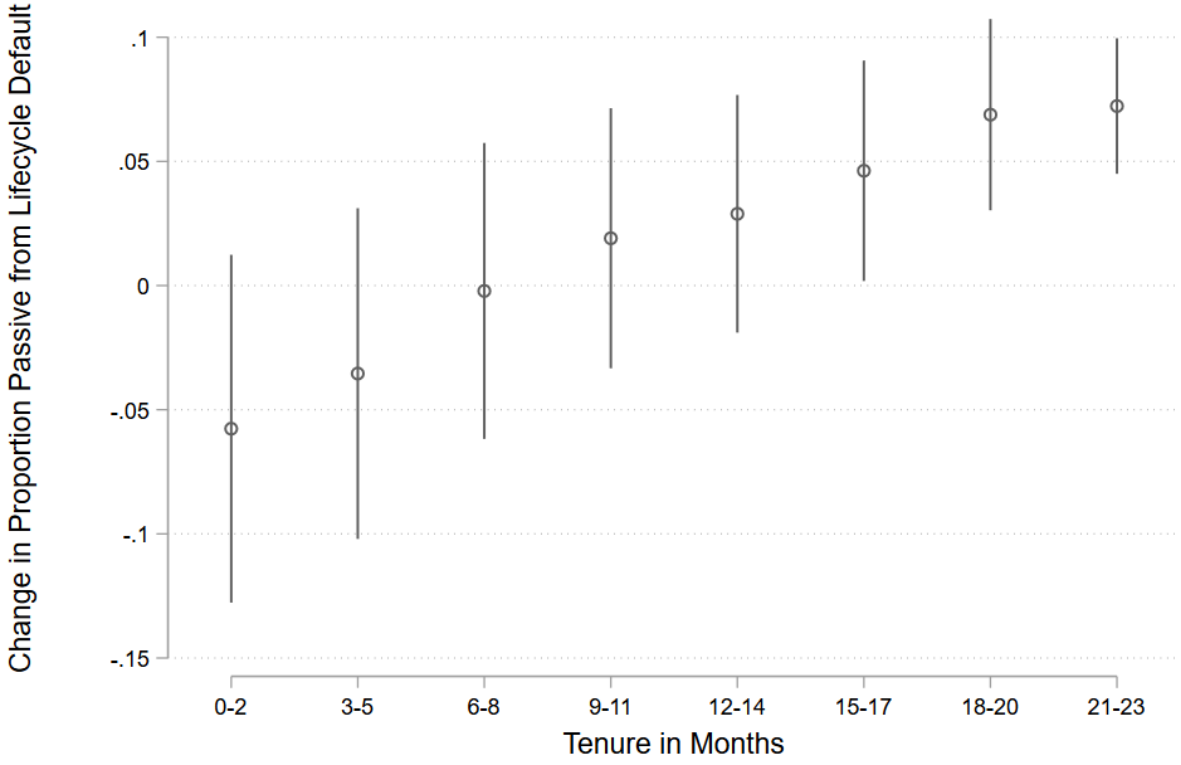
Figure 2 shows that the difference in the likelihood of maximizing the employer match between the two groups declines with tenure and is significantly lower at 24 months of tenure for those in the lifecycle asset default. However, this evidence comes with large confidence intervals and would also be consistent with a tenure-invariant, small, positive effect.

Table 4: Effect of Lifecycle Asset Default on Retirement Saving Outcomes

	(1)	(2)	(3)	(4)	(5)	(6)
	Passive	At 0%	At Max Match	At Cap	TSP Rate	TSP Amount ($/year)
Lifecycle Asset Default	-0.0602*	-0.0365	0.0897**	-0.0068	0.5002	241.4910
	(0.0361)	(0.0248)	(0.0409)	(0.0123)	(0.3455)	(289.5530)
Lifecycle Asset Default x Tenure	0.0063***	0.0014	-0.0034*	0.0005	-0.0147	-0.2995
	(0.0016)	(0.0011)	(0.0019)	(0.0006)	(0.0191)	(14.5571)
Male	-0.0081	-0.0325***	0.0379*	-0.0038	0.1644	66.3751
	(0.0170)	(0.0114)	(0.0202)	(0.0060)	(0.1890)	(144.6923)
Total Pay	-0.0000***	0.0000	0.0000***	0.0000***	0.0000***	0.0768***
	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0000)	(0.0043)
College or Associate	-0.0705*	-0.0483*	0.0434	0.0022	0.9553**	418.8207*
	(0.0381)	(0.0265)	(0.0397)	(0.0058)	(0.3882)	(229.7897)
Bachelor	-0.0516	-0.0771***	0.0874**	-0.0002	0.7629***	382.4333**
	(0.0341)	(0.0234)	(0.0347)	(0.0046)	(0.2638)	(194.1696)
Post-Bachelor	-0.0420	-0.0987***	0.0865**	0.0113*	1.1659***	826.9093***
	(0.0350)	(0.0244)	(0.0363)	(0.0059)	(0.2884)	(220.7339)
White	0.0156	0.0061	0.0079	-0.0368*	-1.2852***	-1440.6116***
	(0.0329)	(0.0246)	(0.0435)	(0.0214)	(0.4317)	(389.5911)
Hispanic	0.0962**	-0.0011	-0.0950*	-0.0459**	-1.6769***	-1462.6460***
	(0.0471)	(0.0309)	(0.0549)	(0.0228)	(0.5396)	(473.1270)
Black	0.0052	0.0556**	-0.0856*	-0.0472**	-2.5953***	-2323.3800***
	(0.0356)	(0.0280)	(0.0459)	(0.0214)	(0.4544)	(402.5454)
DC	0.1003***	-0.0180	-0.0691**	-0.0035	-0.4088	-4.8098
	(0.0258)	(0.0189)	(0.0292)	(0.0097)	(0.2534)	(217.2336)
MD	0.0594*	-0.0422**	-0.0277	0.0004	0.3040	279.6105
	(0.0308)	(0.0206)	(0.0356)	(0.0065)	(0.4001)	(239.9805)
PA	0.0518*	-0.0642***	0.0089	0.0033	-0.3121	169.1650
	(0.0266)	(0.0161)	(0.0309)	(0.0057)	(0.2607)	(173.0097)
VA	0.0997***	-0.0135	-0.0696*	-0.0070	-0.3333	-183.3840
	(0.0328)	(0.0195)	(0.0370)	(0.0092)	(0.3219)	(248.3569)
Team Leader	-0.0124	-0.0598*	0.0607	0.0126	0.2130	132.6728
	(0.0584)	(0.0310)	(0.0892)	(0.0620)	(0.8980)	(1030.7165)
Supervisor or Manager	0.0992***	-0.0465	0.0049	-0.0118	-0.4973	161.8535
	(0.0345)	(0.0322)	(0.0490)	(0.0291)	(0.4739)	(623.6039)
Constant	0.7345***	1.0572***	-0.1709***	-0.0119	0.5474	-905.7501*
	(0.0773)	(0.0363)	(0.0645)	(0.0248)	(0.6162)	(504.1285)
Mean DV	.218	.105	.488	.026	5.37	3825.77
R-squared	0.08	0.17	0.07	0.09	0.11	0.42
Cluster	2573.00	2729.00	2729.00	2729.00	2729.00	2729.00
Observations	38557.00	41021.00	41021.00	41021.00	41021.00	41021.00

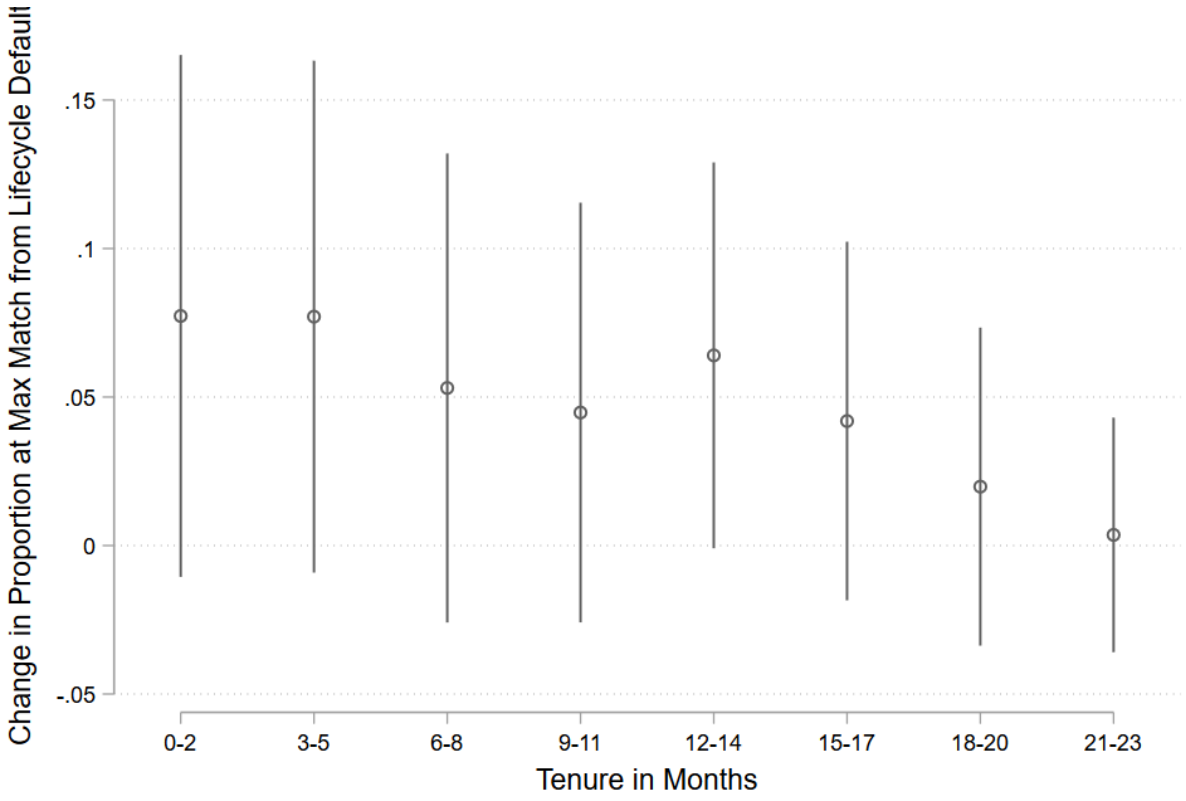
Notes: Coefficients on tenure month indicators, 5-year age indicators, year and month fixed effects are not displayed. Robust standard errors clustered on employee level in parentheses below coefficients. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Figure 1: Change in Proportion Passive from Lifecycle Asset Default



Notes: Markers represent total effect of lifecycle asset default on proportion of employees passively enrolled at tenure length indicated. Bars represent 95 percent confidence interval.

Figure 2: Change in Proportion at Maximum Match from Lifecycle Asset Default



Notes: Markers represent total effect of lifecycle asset default on proportion of employees at the maximum match at tenure length indicated. Bars represent 95 percent confidence interval.

6 Conclusion

While there are many examples in the literature showing that defaults influence both the outcomes and degree of passivity in a variety of different settings, the potential spillover effects across different domains has not been widely studied. In this paper, we show evidence that changing the default asset allocation in which retirement contributions are invested can influence contribution decisions. In particular, we find that when the default asset fund is a lifecycle fund, more employees remain passive in their contribution decisions by 24 months of tenure relative to employees subject to a government securities default asset. In addition, there is some, weaker evidence that this change in the default asset reduces the share of employees maximizing the matching contributions they are eligible to receive from their employer.

These findings are consistent with the hypothesis that employees make retirement contribution

decisions jointly rather than separately, and that there may be unintended consequences of changing defaults in one domain on related but separate domains. Our framework implies that there would be a spillover on to asset allocations from a different default contribution level as well, though such a change was not available to analyze in our data. Understanding the mechanisms behind the determinants of making active choices and interventions that can ensure individuals are making appropriate saving decisions remains an important area for future research.

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