Research Paper

Default contribution rates in retirement plans:

an international perspective

TE ARA AHUNGA ORA
Retirement Commission

Te Kāwanatanga o Aotearoa
New Zealand Government

Executive summary

"In outer space, an object that has been nudged will keep going in that direction until it is nudged again. Retirement savers appear to resemble such objects"[1]

This paper reviews international evidence on default contribution rates in retirement savings plans, with a focus on behavioural influences. It draws on more than 80 pieces of literature spanning behavioural economics, choice architecture and retirement saving policy design. The analysis supports the 2025 Review of Retirement Income Policies (RRIP) by Te Ara Ahunga Ora Retirement Commission (the Commission), which has been asked by the government to assess KiwiSaver contribution settings.

Key findings include:

- The complexity of retirement planning often leads individuals to rely on passive decision-making or simple heuristics to reduce cognitive effort.
- People with higher financial literacy are more likely to make active decisions regarding their contribution rate, whereas those with lower financial literacy may experience suboptimal outcomes when forced to choose a contribution rate.
- Procrastination, driven by present bias and loss aversion, can delay engagement with retirement planning – but also reinforces the status quo for those already saving.
- International evidence shows that small increases in default rates can improve retirement savings outcomes without causing high opt-out rates.
- The endorsement effect – where individuals interpret default settings as recommendations by experts – makes it critical that default contribution rates are set with care to avoid over or under saving, especially in Aotearoa New Zealand, where the government sets the default contribution rate for KiwiSaver.
- Default contribution rates are particularly influential for young people, those on lower-incomes and those who have lower levels of financial literacy.

In May 2025, the New Zealand Government announced changes in the 2025 Budget to the default contribution rate for employees and employers and its government contributions. Effective from 1 July, the government contribution is halved for those earning under $180,000 and removed entirely for those earning more than $180,000. From 1 April 2026, the default contribution rate will increase to 3.5%, then from 1 April 2028, it will increase to 4%. KiwiSaver members will have the ability to apply to drop their contribution rate to 3% for up to 12 months.[2]

Modelling suggests that despite the reduction in government contributions, this increase could help more people achieve adequate retirement income, assuming ongoing entitlements to NZ Super, which plays a critical role in retirement income.[3] The contribution rate changes provide an opportunity to monitor the ongoing behavioural responses of KiwiSaver members.

---

1 Henrik Cronqvist et al., "When nudges are forever: Inertia in the Swedish premium pension plan." *AEA Papers and Proceedings* 108 (2018): https://dx.doi.org/10.2139/ssrn.3099886

2 "KiwiSaver", Budget at a Glance, The Treasury, 2025, https://budget.govt.nz/budget/2025/at-a-glance/kiwisaver.htm

3 "Analysis of KiwiSaver changes: Budget 2025", Policy Note, Te Ara Ahunga Ora Retirement Commission, 2025, https://assets.retirement.govt.nz/public/Uploads/Retirement-Income-Policy-Review/2025-RRIP/Analysis-of-KiwiSaver-Changes-Budget-2025.pdf

Contents

Introduction

The use of defaults in retirement savings plans is a powerful choice-architecture tool utilised in modern retirement systems. Default contribution rates are often used alongside automatic enrolment into retirement savings schemes, which serve as behavioural nudges that influence how people save for retirement without required active decision-making. As a result, default contribution rates can play a critical role in long-term retirement outcomes.

This paper has been prepared to support the 2025 RRIP led by the Commission. It contributes to the Commission's review of KiwiSaver contribution settings by examining the role and impact of default contribution rates, drawing on more than two decades of extensive international literature and behavioural economics.

The paper seeks to answer two central questions:

- What factors help explain the power of default contribution rates?
- What impact has changing or introducing a default contribution rate had on employee retirement savings?

The findings suggest taking care when setting the default contribution rate as it is a major influence on retirement saving decisions and ongoing behaviour. The default contribution rate is often considered an implicit recommendation by the policy maker, but this is complicated by the various circumstances and needs of individuals. In New Zealand, where the government sets the default contribution rate for KiwiSaver, it's important to have a default contribution rate that satisfies the needs of the majority – otherwise it may run the risk of undermining trust in the system. Those in the minority need the opportunity to move away from the default contribution rate to satisfy their needs. Modelling suggests that increasing the default contribution rate to 4% (with a 4% employer match) would result in median income earners being able to maintain their standard of living in retirement for 20-30% longer. [4]

4 "KiwiSaver: Opportunities for Improvement" Te Ara Ahunga Ora Retirement Commission, 2024, https://assets.retirement.govt.nz/public/Uploads/Research/2024/KiwiSaver-Opportunities-for-Improvement.pdf

Choice architecture and default settings

Choice architecture refers to the way in which options are presented to decision-makers, and it plays a crucial role in influencing their decisions. Default options are pre-set courses of action that take effect if the decision-maker specifies nothing.[5] Defaults can be considered a nudge where the default allows people an element of freedom and choice to deviate from the default if they wish, rather than having a mandate or ban.

Defaults and nudges have been used across private and public organisations and have been shown to achieve their goals with less cost.[6] In New Zealand, the KiwiSaver scheme incorporates various defaults and nudges to encourage retirement savings, such as automatic enrolment for employees, default KiwiSaver providers, default investment funds and default contribution rates. This section briefly explains choice architecture and how defaults can work. The following sections explore what factors influence default behaviours in the context of default contribution rates, and the research findings on default contribution rates.

Tools available to choice architects can be categorised into two main groups: those used in structuring the choice task and those used in describing the choice options.[7] There is no neutral architecture; any way a choice is presented will influence the decision-maker. All choice presentations have an implicit default, even if the default is that no choice is made, thus preserving the status quo.

When designing choice architecture, it's important to balance two criteria: offering more options to match consumer preferences and minimising the cognitive burden on consumers. Choice architects have three main ways to try to achieve the desired behaviour change:[8]

1. Impersonal defaults: Useful when people would prefer not to learn or decide, especially in unfamiliar or complex areas such as finance.
2. Forcing active decision making: Good for people who prefer to choose and are willing to learn. However, people may still make bad decisions.
3. Personalised defaults: By understanding individuals' circumstances and situations, a default option could be tailored to suit different groups of people.

Defaults are used every day and everywhere, from email marketing consents,[9] printer settings, mobile phone ringtones and computer screen savers[10] to organ donation[11]. Defaults are powerful drivers of behaviour. For example, when a particular choice is presented as the default option, people are on average 23% more likely to continue with that option rather than choose a different one, as seen in scenarios like organ donation and investment plans.[12]

---

5 Richard Thaler and Cass Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (Yale University Press, 2008)

6 Cass Sunstein, "Nudging: A very short guide," *Journal of Consumer Policy* 37, no. 4 (2014): 583-588, https://dash.harvard.edu/server/api/core/bitstreams/7312037d-b123-6bd4-e053-0100007fdf3b/content.

7 Eric Johnson et al., "Beyond nudges: Tools of a choice architecture." *Marketing Letters 23*, (2012): 487-504, https://doi.org/10.1007/s11002-012-9186-1.

8 Cass Sunstein, "Deciding by default." *University of Pennsylvania Law Review* 162, no. 1 (2013): https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1000&context=penn_law_review/.

9 Eric Johnson et al., "Defaults, framing and privacy: why opting in - opting out." *Marketing Letters 13*, (2002): 5-15, https://doi.org/10.1023/A:10150442073l5

10 "Harnessing the power of defaults." Behavioural Economics Team of the Australian Government, https://behaviouraleconomics.pmc.gov.au/sites/default/files/resources/harnessing-power-defaults.pdf.

11 Eric Johnson and Daniel Goldstein, "Do defaults save lives?" *Science* 302, (2003): 1338-1339, https://ssrn.com/abstract=1324774

12 "A behavioural approach to managing money: ideas and results from the Financial Capability lab." The Behavioural Insights Team, https://www.bi.team/wp-content/uploads/2018/05/Financial-Capability-Lab-Report-May18.pdf

However, defaults don't always work. For instance, a study in the US focused on tax returns found that nudging people to save via defaults didn't work as intended, as people opted out because they already had plans to spend the money.[13] Additionally, a meta-analysis investigated the effectiveness of defaults as a tool and identified that defaults are more effective in certain consumer settings compared to environmental ones, indicating that the influence of defaults varies across different settings and aren't always as effective as desired.[14]

In the context of retirement savings, there are two incorrect assumptions often made about people: that they have the cognitive ability to optimise and plan their savings and retirement withdrawals, and that they have the willpower to execute the plan.[15] Rational choice theory predicts that automatic enrolment should not influence saving decisions, as it does not alter the basic economic factors (like income, expenses, future financial goals) that influence how people plan their savings. However, automatic enrolment dramatically increases participation.[16] People often exhibit behaviours that are relatively passive, are slow to join schemes, don't make any changes, and adopt naive diversification strategies. Good plan design can help less sophisticated investors while maintaining flexibility for more sophisticated investors.[17]

There are different instances in which defaults can be incorporated into the design of retirement savings plans, including automatic enrolment, default retirement plan providers, default contribution rates, default funds, what happens when reaching retirement eligibility, and default decumulation. However, the focus of this paper is on default contribution rate settings and its influence on behaviour.

13 Erin Bronchetti et al., "When a nudge isn't enough: defaults and saving among low-income tax filers." *National Bureau of Economic Research,* (2011): http://nber.org/papers/w16887

14 Jon Jachimowicz et al., "When and why defaults influence decisions: a meta-analysis of default effects." *Behavioural Public Policy* 3, no. 2 (2019): 159-186. https://doi.org/10/1017/bpp.2018.43

15 Shlomo Benartzi and Richard Thaler, "Heuristics and biases in retirement savings behavior." *Journal of Economic Perspectives* 21, no. 3 (2007): 81-104, https://doi.org/10.1257/jep.21.3.81

16 James Choi et al., "For better or for worse: Default effects and 401(k) savings behavior." in *Perspectives on the Economics of Aging,* ed. David Wise (University of Chicago Press, 2004). http://www.nber.org/chapters/c10341

17 Benartzi and Thaler, "Heuristics and biases"

Psychological factors influencing default behaviours

Key points:

- Engaging with a retirement savings plan can require people to make complex and important decisions.
- Faced with cognitive load, people use decision-making shortcuts, such as passive decision-making, rules of thumb and heuristics, which can have both positive and negative effects on retirement savings outcomes.
- People often view default contribution rates as implying endorsement or recommendation; therefore, care is required when setting the default contribution rate, as various savings needs may result in people under or over saving for retirement.
- Present bias and loss aversion are key factors that explain inertia and why people stick with the default contribution rate over time.

Cognitive load

Passive decision-making

Passive decision-making is a common shortcut whereby individuals opt for the path of least resistance by accepting the default options provided by their retirement savings plans. The concept is that it's often easiest to do nothing, which explains why defaults and anchoring are so influential.[18] Supporting the default doesn't require any effort, whereas changing it does.[19] This passive approach can lead to suboptimal contribution rates that may not align with individual retirement needs.

Another reason for passive decision-making is the perception that the decision-making task requires expert information. Individuals may feel overwhelmed and choose to defer the decision to someone they consider an expert or simply stick with the default option provided.[20] Additionally, inattentiveness can result in adherence to the default when people don't actively engage with the decision-making process.[21] Time constraints and the presence of multiple decisions can also make the default option particularly appealing, as people may resort to a 'Yeah, whatever' heuristic to quickly resolve the decision.[22] Furthermore, if the default contribution rate is close to the optimal saving rate, people are more likely to procrastinate on making an active choice, finding it easier to accept the default.[23]

---

18 James Choi et al., "Defined contribution pensions: plans rules, participant choices, and the path of least resistance." in *Tax policy and the economy,* ed. James Poterba (MIT Press, 2002). http://www.nber.org/chapters/c10863

19 Craig McKenzie et al., "Recommendations implicit in policy defaults." *Psychology Science* 17, no.5 (2006): 414-420. https://doi.org/10.111/j.1467-9280.2006.01721.x

20 Sheena Iyengar et al., "How much choice is too much?: Contributions to 401(k) retirement plans." *Pension Research Council Working Paper,* (2003). https://pensionresearchcouncil.wharton.upenn.edu/publications/papers-2018/how-much-choice-is-too-much-contributions-to-401k-retirement-plans/

21 B. Douglas Bernheim et al., "The welfare economics of default options in 401(k) plans." *National Bureau of Economic Research* (2011). https://www.nber.org/papers/w17587

22 Sunstein, "Deciding by default"

23 Gopi Goda et al., "Who is a passive saver under opt-in and auto-enrollment?" *Journal of Economic Behavior and Organization* 173, (2020): 301-321. https://doi.org/10.1016/j.jebo.2019.08.026

Defaults are highly effective in retirement savings plans because people tend to stick with the default once they're enrolled, supporting the argument that passive choice within policy design is more effective than active choice.[24] Defaults that bypass active choice are among the most effective policy nudges.[25] Once people are moved to the default, they may persist with it longer due to cognitive dissonance, which sees them rationalising the outcome by convincing themselves that they prefer the default.[26] Additionally, people may be ignorant of their ability to change from the default, exemplified in a US study that found that approximately 20% of employees who were automatically enrolled in default retirement savings plans were unaware they could choose another plan.[27]

Active decision-making

In contrast, active decision-making involves making deliberate choices about contribution rates. Active decisions are advantageous when people have a strong propensity to procrastinate and when savings preferences are highly heterogeneous.[28] However, requiring individuals who may lack financial knowledge and skills to make active decisions can result in uninformed or suboptimal choices. As a result, the effort involved in making an active decision may lead people to stick with the pre-selected default option.[29]

Since predicting the optimal life-cycle savings needed to maximise present and future trade-offs given unknown asset returns, future income and longevity is hard for most people, many workers fail to make an active retirement savings rate choice in the absence of a default.[30] Additionally, although many people do not make active choices with their retirement savings, those with higher financial literacy report less cognitive overload and are more likely to make an active decision.[31] A study in the UK found that two out of five people were unaware they could choose a different contribution rate, and two out of three simply remained at the default contribution rate.[32]

Although default settings initially influence employee contributions, many employees eventually make an active decision about their retirement savings. Within four years, around 50% of employees either change their investment fund or adjust their contribution rate.[33]

Rules of thumb and heuristics

Rules of thumb and heuristics are other common shortcuts people use to simplify their decision-making processes. Typical rules of thumbs for selecting a contribution rate include choosing the minimum or maximum contribution rate,[34] contributing enough to get the maximum employer match, and using multiples of 5% and 10%.[35] Such rules of thumb also occur when selecting an investment fund (especially if there are many funds available), where people decide to invest equally in all available funds.[36]

---

24 David Blanchettet al., "The impact of employer defaults and match rates on retirement saving." *SSRN,* (2022). https://dx.doi.org/10.2139/ssrn.3992899

25 John Beshears and Harry Kosowsky, "Nudging: Progress to date and future directions." *Organizational behavior and human decision processes* 161, (2020): 3-19. https://doi.org/10.1016/j.obhdp.2020.09.001

26 James Choi, "Contributions to defined contribution pension plans." *National Bureau of Economic Research,* (2015). http://www.nber.org/papers/w21467

27 Choi, "Contributions to defined contribution pension plans"

28 Gabriel Carroll et al., "Optimal defaults and active decisions." *National Bureau of Economic Research,* (2005). https://www.nber.org/system/files/working_papers/w11074/w11074.pdf

29 Jachimowicz et al., "When and why defaults influence decisions"

30 Blanchett et al., "The impact of employer defaults"

31 Gordon Clark et al., "A review of retirement savings investment behaviours: theory and evidence." *CSIRO-Monash Superannuation Research Cluster*, (2013). https://www.monash.edu/__data/assets/pdf_file/0018/2052135/WP2013-01.pdf

32 "Beyond the Defaults" Nest Insight, 2020, https://www.nestinsight.org.uk/wp-content/uploads/2020/11/Beyond-the-defaults.pdf

33 Jeremy Burke et al., "Opting out of retirement plan default settings." *RAND Labor & Population,* (2017). https://www.rand.org/content/dam/rand/pubs/working_papers/WR1100/WR1162/RAND_WR1162.pdf

34 James Choi et al., "Small cues change savings choices." *Journal of Economic Behavior & Organization* 142, (2017): 378-395. http://dx.doi.org/10.1016/j.jebo.2017.08.010

35 Benartzi and Thaler, "Heuristics and biases"

36 Shlomo Benartzi et al., "Choice architecture and retirement saving plans." (2007). https://www.anderson.ucla.edu/documents/areas/fac/accounting/Benartzi_ChoiceArchitecture.pdf

Although these heuristics can simplify decision-making, they may not always result in optimal contribution rates. For example, people may choose a rate that's too low or too high for their specific retirement goals.

Experience can serve as a naïve reinforcement learning heuristic for people when deciding whether to follow the default contribution rate in pension plans.[37] Past experiences can influence whether we stick with default options or opt for changes.[38] People with less financial experience are more likely to adhere to default contribution rates and investment allocations.[39] Similarly, experience with the default position can lead savers to develop a strong preference for the default option.[40] Workers who have experienced higher returns with low variance tend to increase their contribution rates more significantly than those who have encountered less favourable returns. [41]

If the goal is to increase awareness and help people make better decisions, it's important to simplify the decision-making process and educate the public.[42] However, even with education, the cognitive load associated with retirement savings decisions can lead to procrastination and reliance on defaults or heuristics.

Inertia

The inertia or procrastination seen when people postpone decisions if they consider them to be difficult or technical[43] has been referred to as an "effort tax". People demonstrate inertia with their decisions regarding contribution rates and their investment choices.[44] Those with low financial literacy may want to acquire the knowledge to make an informed decision before moving away from the default contribution rate.[45] The following sections explore how present bias and loss aversion contribute to inertia in managing contribution rates to retirement savings plans.

Present bias

Present bias is a cognitive bias that impacts saving as it causes people to prioritise immediate rewards over future benefits,[46] often leading to procrastination and suboptimal decision-making. This bias significantly impacts retirement savings behaviours, as people struggle to make timely and optimal choices regarding their contributions.

Present bias is a key factor that helps explains why employees remain in default settings within retirement savings plans.[47] People who are more present biased than others are less likely to save for retirement.[48] Higher levels of present bias are associated with a higher likelihood of sticking to the default contribution rate within an automatic enrolment regime, however, present bias does not predict the tendency to follow the default in an opt-in regime.[49]

---

37 James Choi et al., "Reinforcement learning and savings behavior." *The Journal of Finance* 64, no. 6 (2009):2515-2534. https://doi.org/10.1111/j.1540-6261.2009.01509.x

38 Yefim Roth et al., "The impact of experience on the tendency to accept recommended defaults." *Judgement and Decision Making* 19, (2024): 1-11. https://doi.org/10.1017/jdm.2023.49

39 Kellen Mrkva et al., "Do nudges reduce disparities? Choice architecture compensates for low consumer knowledge." *Journal of Marketing* 84, no. 4 (2021). https://doi.org/10.1177/0022242921993186

40 Behavioural Economics Team of the Australian Government, "Harnessing the power of defaults"

41 Choi, "Contributions to defined contribution pension plans"

42 Maarten van Rooij and Frederica Teppa, "Choice or no choice: what explains the attractiveness of default options." *Network for Studies on Pensions, Aging and Retirement,* (2008). https://www.netspar.nl/en/knowledge-hub/choice-or-no-choice-what-explains-the-attractiveness-of-default-options/

43 Sunstein, "Deciding by default"

44 Hugh Kim et al., "Time is money: Rational life cycle inertia and the delegation of investment management." *Journal of Financial Economics* 121, no. 2 (2016): 427-447. https://doi.org/10.1016/j.jfineco.2016.03.008

45 Gopi Goda et al., "Mechanisms behind retirement saving behavior: Evidence from administrative and survey data." *Research Dialogue* 140, (2018). https://www.tiaa.org/content/dam/tiaa/institute/pdf/research-report/2018-02/mechanisms-behind-retirement-saving-behavior-goda-rd140-feb-2018.pdf

46 Shane Frederick et al., "Time discounting and time preference: a critical review." *Journal of Economic Literature* 40, (2002): 351-401. http://dx.doi.org/10.1257/002205102320161311

47 van Rooij and Teppa, "Choice or no choice"

48 Jeffrey Brown and Alessandro Previtero, "Procrastination, present-biased preferences, and financial behaviors." *Landscape Research Japan Online* 65, (2014): 543-546. https://www.nber.org/sites/default/files/2020-08/orrc14-04.pdf

49 Goda et al., "Who is a passive saver"

One of the primary negative effects of present bias is the tendency to procrastinate. People often delay the decision to opt into retirement savings plans, and when automatically enrolled, they procrastinate with opting out. A study in the US found that after automatic enrolment, 61% of employees contributed at the default contribution rate, but when employees had to opt in, only 1% contributed at the default settings.[50] This procrastination is driven by present-biased preferences, as people tend to prefer immediate gratification (income available for spending now) over future benefits (saving for the future).[51]

Adherence to default contribution rates can also reflect procrastination that arises from time-inconsistency,[52] when people believe that future tasks will be addressed in the future, leading to inertia and status-quo bias in the short term.[53] Research on an automatic contribution escalation programme found that 78% of employees didn't want to increase their contribution rate immediately but were happy to when they were given a future pay rise.[54] People often anticipate making changes to their savings contribution rates but continuously put off making the necessary phone call.[55] In America, it has been found that present bias is also a factor contributing to people withdrawing some or all retirement savings when switching jobs.[56]

More positively, present bias and procrastination can work in favour of retirement savings when people follow the default contribution rate. Since they delay making changes, they continue to save by default.

Present bias effects are more influential in retirement savings behaviours than incentives like employer matching or tax breaks.[57] Present bias plays an important role in the likelihood of passively enrolling at the default contribution rate, especially when the default rate is sufficiently high to maximise employer contributions and take full advantage of tax-preferred saving opportunities.[58]

Loss aversion

Loss aversion plays a crucial role in maintaining inertia and adhering to default contribution rates.[59] People tend to fear potential losses more than they value the equivalent gains, making them reluctant to deviate from default settings.[60] This aversion to loss can cause people to perceive the default contribution rate as a safe option, thereby avoiding any changes that might result in perceived losses[61] such as a higher contribution rate.[62]

50 Brigitte Madrian and Dennis Shea, "The power of suggestion: inertia in 401(k) participation and savings behavior." *National Bureau of Economic Research,* (2000). https://www.nber.org/system/files/working_papers/w7682/w7682.pdf

51 John Beshears et al., "The importance of default options for retirement savings outcomes: Evidence from the United States." *National Bureau of Economic Research,* (2006). https://www.nber.org/papers/w12009

52 Bernheim et al., "The welfare economics"

53 van Rooij and Teppa, "Choice or no choice"

54 Benartzi et al., "Choice architecture and retirement saving plans"

55 Bronchetti et al., "When a nudge isn't enough"

56 John Beshears et al., "Present bias causes and then dissipates auto-enrollment savings effects." *AEA Papers and Proceedings* 112, (2022): 136-141. https://doi.org/10.125/pandp.20221020

57 Brigitte Madrian, "Matching contributions and savings outcomes: a behavioral economics perspective." *National Bureau of Economic Research,* (2012). http://www.nber.org/papers/w18220

58 Goda et al., "Mechanisms behind retirement saving"

59 Goda et al., "Who is a passive saver"

60 McKenzie et al., "Recommendations implicit in policy defaults"

61 James Choi et al., "Optimal defaults." *American Economic Review* 93, no. 2 (2003): 180-185. https://doi.org/10.1257/000282803321947010

62 W. Fred van Raaij, *Understanding Consumer Financial Behaviour: Money Management in an Age of Financial Illiteracy* (Palgrave Macmillan, 2016)

The default contribution rate and investment fund can act as anchors,[63] serving as reference points for future decisions, and can change people's perceptions of gains and losses.[64] This includes when moving away from the default contribution rate,[65] as people will use the initial value as a key factor when adjusting and not taking the time to consider what their optimal saving rate is.[66] Any cue making a particular savings behaviour salient is likely to cause that behaviour to become an anchor.[67]

Loss aversion can also help explain why people are happy to maintain the status quo and not make changes.[68] Most pension savings commence because automatic enrolment nudges employees to overcome inertia and start saving, and is maintained because of a bias for the status quo.[69] The status quo bias further reinforces inertia by making people more comfortable with existing contribution rates.[70]

When faced with the complexity of deciding on a suitable contribution rate, people may find it easier to stick with the default rather than make an active choice. Being enrolled at a default rate rather than choosing a contribution level themselves can make implementing changes more difficult in the future.[71] Once people have made their initial retirement plan decisions, they typically maintain the status quo going forward, until they get frustrated with returns or fees.[72]

The endowment effect, which sees people value what they already have more than what they could gain, also contributes to inertia and maintaining the status quo.[73] It makes people less likely to amend their retirement savings plans, as they perceive the default settings as more valuable simply because they're already in place.[74]

Fear of making the wrong decision, known as omission bias, can also give defaults traction due to regret aversion.[75] Additionally, employees may feel that actively opting out of a retirement plan could cause more regret than simply staying enrolled.[76]

Endorsement

Endorsement is a key factor in why people often follow the default contribution rate in retirement savings plans.[77] The perception of the default as an endorsement for certain saving outcomes is significant. People may incorrectly perceive that the default option in an employer-sponsored savings plan is in their best interest, as the plan is supposed to benefit employees.[78] This perception is further reinforced by the belief that experts or sensible people consider defaults to be the right course of action,[79] and that following the default can help employees minimise their personal liability in making the wrong decision.[80]

---

63 Madrian and Shea, "The power of suggestion"

64 Daniel Kahneman and Amos Tversky, "Prospect theory: an analysis of decision under risk." *Econometrica* 47, no. 2 (1979): 263-292. https://www.jstor.org/stable/1914185

65 Bernheim et al., "The welfare economics"

66 Priscilla Arling et al., "Persistent anchoring to default rates when electing 401(k) contributions." *Review of Behavioral Finance* 10, no. 1 (2018): 88-104. https://doi.org/10.1108/RBF-07-2016-0043

67 Choi et al., "Small cues change savings choices"

68 William Samuelson and Richard Zeckhauser, "Status quo bias in decision making." *Journal of Risk and Uncertainty* 1, (1988): 7-59. https://doi.org/10.1007/BF00055564

69 Thaler and Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness*

70 John Beshears et al., "The limitations of defaults." *12th Annual Joint Conference of the Retirement Research Consortium,* (2010): 1-23. https://www.nber.org/sites/default/files/2020-08/orrc10-02.pdf

71 Ron van Schie et al., "Savings adequacy uncertainty: driver or obstacle to increase pension contributions." *Journal of Economic Psychology* 33, no. 4 (2012): 882-896. https://doi.org/10.1016/j.joep.2012.04.004

72 Clark et al., "A review of retirement savings investment behaviors"

73 Daniel Kahneman and Amos Tversky, "The psychology of preference." *Scientific American* 246, (1982): 160-173. https://doi.org/10.1038/scientificamerican0182-160

74 Madrian and Shea, "The power of suggestion"

75 Lauren Willis, "When nudges fail: slippery defaults." *The University of Chicago Law Review* 80, no. 3 (2013). https://chicagounbound.uchicago.edu/uclrev/vol80/iss3/4/

76 Bronchetti et al., "When a nudge isn't enough"

77 Havva Serim and Fahriye Ozturk, "How do defaults affect behavior of individual retirement: evidence from Ankara." *Cumhuriyet University Journal of Economics and Administrative Sciences* 22, no. 2 (2021): 480-503. https://doi.org/10.37880/cumuiibf.1009235

78 Beshears et al., "The importance of default options"

79 Sunstein, "Deciding by default"

80 Roth et al., "The impact of experience"

The primary welfare effect of the default savings rate is to protect people from inaction caused by procrastination, status quo bias or inattention.[81] When they trust those who create the default settings, they're more likely to follow the default.[82]

Auto-enrolment in retirement savings plans may also benefit from an endorsement effect, with workers interpreting the employer's guidance as an expert recommendation.[83] This effect is evident in Australia and the Netherlands, where participants changed their retirement drawdowns to match the default drawdown guidelines due to implied endorsement.[84] A meta-analysis discovered that defaults are more effective when they reflect the status quo or imply an endorsement by the choice architect.[85]

Given endorsement has a significant influence on why people follow default contribution rates,[86] policy makers must take extra care when setting them. It's challenging to set a default rate that caters to everyone and they can be problematic if designed generically for heterogeneous investment needs.[87] Having said this, a 'bad' default is more likely to motivate opting out than a 'good' but imperfect default, potentially overcoming procrastination and improving welfare,[88] while higher default savings rates may lead employees to 'over-save', although there's a growing body of evidence that workers overwhelmingly perceive themselves as saving too little.[89]

Research suggests that:

- When there's little variation in optimal savings rates, it's best to design a default that's in the middle of the range of optimal savings rates. This way, delays in opting out of the default will not be very costly.
- When there's a large amount of variation in individual preferences and needs, an optimal default for all may be impossible to find,[90] even if it encourages more people to save for retirement.[91] It may be better to design a default that's close to optimal for a certain group of people. Then, the default rate will be close to optimal for those people and potentially bad enough for others that it forces the latter group to make an active decision.[92]

A simple rule of thumb for setting an optimal default contribution rate could be to minimise the number of retirement savers who opt out of the default.[93]

81 Mingli Zhong, "Optimal default retirement saving policies: Theory and evidence from OregonSaves." *Wharton Pension Research Council Working Paper,* (2021). https://dx.doi.org/10.2139/ssrn.3535881

82 Sunstein, "Deciding by default"

83 Bronchetti et al., "When a nudge isn't enough"

84 Jennifer Alonso-Garcia et al., "Retirement drawdown defaults: the role of implied endorsement." *ARC Centre of Excellence in Population Ageing Research,* (2017). https://www.cepar.edu.au/publications/working-papers/retirement-drawdown-defaults-role-implied-endorsement.

85 Jachimowicz et al., "When and why defaults influence decisions"

86 Goda et al., "Mechanisms behind retirement saving"

87 Nathan Wang-Ly et al., "Defaults, disclosures, advice and calculators: One size does not fit all." *Journal of Behavioral and Experimental Finance* 35, (2022). https://doi.org/10.1016/j.jbef.2022.100690

88 Choi et al., "Optimal defaults"

89 Choi et al., "For better or for worse"

90 Raaij, *Understanding Consumer Financial Behaviour.*

91 Thomas Crossley et al., *Raising household saving,* (Institute for Fiscal Studies, 2012). https://www.thebritishacademy.ac.uk/documents/256/Raising-household-saving.pdf

92 Choi et al., "Optimal defaults"

93 B. Douglas Bernheim and Jonas Gastel, "Optimal default options: The case for opt-out minimization." *National Bureau of Economic Research,* (2020). http://www.nber.org/papers/w28254

Demographic factors influencing default behaviours

Key points:

- Young people are more likely to accept default contribution rates because retirement isn't as salient an issue for them.
- Although low-income employees are more likely to accept default contribution rates, care is required not to result in over-saving by those who may be better off using the money to pay down debt or improve their living standards.
- Those who have low financial literacy are more likely to accept default contribution rates and are often better served by defaults than having to make an active decision.

Age

Young individuals tend to stick with default contribution rates for longer[94], which may be because they underestimate how long they will live and as a result save less for retirement.[95] Additionally, when people are automatically enrolled, they may disengage and give little attention to their retirement savings until they're older and the issue of retirement feels more important.[96] Data from more than 100 US retirement savings plans showed that when the default contribution rate is 3%, employees in their 20s are more likely to stay at the default compared to employees in their 50s to early 60s.[97]

Income

Employees on lower income have been found to have the largest increase in participation within retirement savings schemes[98] and to be more likely to accept and stick with an initial default contribution rate.[99] The tendency for low-income employees to stay at the default contribution rate could be because they face greater cognitive load and barriers to make an active decision.[100]

94 John Beshears et al., "Who is easier to nudge?" *Harvard University,* (2016). https://scholar.harvard.edu/sites/scholar.harvard.edu/files/laibson/files/who_is_easier_to_nudge_2016.05.27.pdf.

95 Olivia Mitchell and Nikolai Roussanov, "Lessons from behavioral research for retirement saving, investment, and spending: An overview." *Wharton Pension Research Council,* (2024). https://dx.doi.org/10.2139/ssrn.4975094

96 Crossley et al., *Raising household saving*

97 "Default options and retirement saving dynamics" Taha Choukhmane, https://tahachoukhmane.com/wp-content/uploads/2025/01/Choukhmane-2024-Default-Options-and-Retirement-Saving-Dynamics.pdf

98 Choi et al., "Defined contribution pensions"

99 Choi et al., "For better or for worse"

100 Beshears et al., "Limitations of defaults"

Employer contribution matches can help lower-income employees increase their contributions[101] and is recognised by the OECD as an effective incentive,[102] but some research suggests care with low-income employees and the default contribution rate as they may be better off reducing debt[103] or increasing living standards, especially as such people are less likely to obtain financial guidance.[104] It's argued that because lower-income and young employees are more likely to follow default contribution rates, the rates should be designed with these employees in mind.[105]

Those on higher incomes have been found to be quicker to move away from the default contribution rate,[106] especially if the employer contribution match rate is higher, which over time causes a larger savings gap between lower- and higher-income employees.[107] Low employer contribution matches can decrease contributions for higher-income employees because these employees will limit their contributions to the employer contribution match.[108]

Financial literacy

Employees with lower financial literacy,[109] education levels and knowledge of retirement plan settings are more likely to follow default settings.[110] Lower levels of financial literacy may result in underestimating the amount of retirement savings they will require, and what a good savings rate for them is; they are more influenced by the default especially if it's perceived as an endorsement.[111] Those with lower financial literacy are better assisted by default settings than by being forced to make an active decision.[112] Higher financial literacy may help people make active decisions with their retirement plan settings as they typically face less cognitive load.[113]

101 Gur Huberman et al., "Defined contribution pension plans: Determinants of participation and contribution rates." *Journal of Financial Services Research* 31, (2007): 1-32. https://doi.org/10.1007/s10693-007-0003-6

102 "Recommendation of the Council for the Good Design of Defined Contribution Pension Plans" OECD, https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0467%20#dates

103 Crossley et al., *Raising household saving*

104 "Automatic enrolment into a workplace pension – key facts" Department for Work & Pensions, https://assets.publishing.service.gov.uk/media/5a82bfa7e5274a2e87dc2c88/auto-key-facts-enrolment-booklet.pdf

105 Beshears et al., "Who is easier to nudge?"

106 Goda et al., "Who is a passive saver"

107 Blanchett et al., "The impact of employer defaults"

108 Huberman et al., "Defined contribution pension plans"

109 van Rooij and Teppa, "Choice or no choice"

110 Jeffrey Brown et al., "Decision-making approaches and the propensity to default: evidence and implications." *Journal of Financial Economics* 121, (2016): 477-495. http://dx.doi.org/10.1016/j.jfineco.2016.05.010

111 Goda et al., "Who is a passive saver"

112 Carroll, "Optimal defaults and active decisions"

113 Choi, "Contributions to defined contribution pension plans"

Default contribution settings: key research findings

Key points:

- The literature shows the default contribution rate to be a considerable influence on employees.
- Most default contribution rate studies are from the US, where the default contribution rate is set by employers, not the government.
- There's limited research demonstrating the effects of changing a default contribution rate from one to another.
- The only countries that have implemented automatic enrolment at a national level are New Zealand (2007), Italy (2007), the UK (2012), Türkiye (2017) Lithuania (2019) and Poland (2019).[114]
- Having a higher default contribution rate has a larger impact on employee saving rate than a low default contribution rate paired with a higher employer matching rate.

Automatic enrolment is a recent feature in retirement plan design, and as a result, there isn't any longitudinal data that shows its effect across an entire working lifespan.[115] It's through the introduction of automatic enrolment that retirement plans required a default contribution rate and default investment fund, though – hence studies on default contribution rates started with the introduction of automatic enrolment.

When automatic enrolment began, it was common for retirement savings plans to have a default contribution rate of 2–3%, as there were concerns that employees would opt out if the default contribution rate was higher.[116] Data from Vanguard-administered retirement plans showed that in 2005, approximately 73% of plans had a default contribution rate of 3%, and 27% had a default contribution rate of 4% or higher. Over time, there was a shift, and the latest data in 2023 found that 60% of plans have a default contribution rate of 4% or more, and 40% have a default contribution rate of 3%.[117]

Changing the default contribution rate from one to another

The first study of default settings within retirement savings plans was conducted in 2000[118], and there have been several since; however, there are limited studies that specifically show the behavioural effects of changing a default contribution rate from one to another. The US study discussed below was the first to assess contribution changes when a default contribution rate is altered.

---

114 OECD, *Pensions at a Glance 2023: OECD and G20 Indicators* (OECD Publishing, 2023). https://doi.org/10.1787/678055dd-en

115 Taha Choukhmane, "Default options and retirement saving dynamics"

116 Beshears et al., "The importance of default options"

117 "How America Saves 2024" Vanguard, https://institutional.vanguard.com/content/dam/inst/iig-transformation/insights/pdf/2024/has/how_america_saves_report_2024.pdf

118 Madrian and Shea, "The power of suggestion"

Table 1. The first study assessing contribution changes post default contribution rate change

Year of study	Policy changes	Control	Contribution changes[119]
2006[120]	Automatic enrolment with a default contribution rate changed from 3% to 6% for new hires, with employer matching contributions up to 6%.	New employees were compared with existing employees who opted in prior to automatic enrolment.	15–24 months post change: • Employees contributing 3% dropped from 28% to 4%. • Employees contributing 6% increased from 24% to 49%. • Employees contributing more than 6% decreased from 41% to 30%.
	Automatic enrolment with a default contribution rate of 3% for existing employees not participating. Employer matched up to 6%.	The existing employees who were not participating and automatically enrolled were compared with participating employees who were not automatically enrolled.	25–48 months post change: • 60% of automatically enrolled employees were contributing 3%, compared to 3% of existing participants. • 25% of automatically enrolled employees were contributing 6% or more, compared to 89% of existing participants.

Research conducted in 2024 reviewed data across a 12-month period from 107 US retirement plans in which the default contribution rate increased, using a sample size of approximately 764,000 employees.[121] Out of the 107 plans, 88 plans increased the default contribution rate once and 19 plans increased the default contribution rate twice. Two-hundred and forty-five retirement plans that had automatic enrolment but no change to the default contribution were used as a control group. The analysis uncovered the following:

Table 2. Average contribution rate change per increase of the automatic enrolment default contribution rate.

Automatic enrolment default contribution rate increase	Employee average contribution rate increase
+1%	0.74%
+2%	1.75%
+3%	1.56%
+4%	1.73%

119 John Beshears et al., "Automatic enrollment with a 12% default contribution rate." *National Bureau of Economic R*esearch, (2023). http://www.nber.org/papers/w31601

120 Beshears et al., "The importance of default options"

121 Taha Choukhmane, "Default options and retirement saving dynamics"

These findings demonstrated that increasing the default contribution rate didn't correspond to a one-to-one increase in the average contribution rate. There are two other findings that helped explain the lack of corresponding average contribution increases: a decrease in participation rate and employees responding by contributing less than the initial default contribution rate.

Table 3. Change in employee participation rate and those contributing less than the initial default contribution

Automatic enrolment default contribution rate increase	Employee participation rate decrease	Employees contributing less than the initial contribution rate
+1%	-0.2%	+2.5%
+2%	-1.0%	+2.4%
+3%	-1.5%	+3.1%
+4%	-3.1%	+4.3%

The decrease in participation rates and employees contributing less than the initial default showed that increasing the default contribution rate by 1% or 2% had less of a negative outcome compared to larger increases. Suggesting that smaller increases in the default contribution rate are preferrable to larger increases.

A study conducted in 2021 aimed to nudge freelance professionals in Italy to increase their retirement savings contributions.[122] The primary goal was to help freelancers save more for their retirement, especially since they often have irregular and fluctuating incomes. The freelancers filed their income, taxes and retirement contributions through an online portal, so the intervention involved changing the default contribution rate from 10% to 20%, while still allowing participants the freedom to choose their contribution level, although 10% was the minimum contribution rate both pre- and post-intervention.

When the freelancers chose to reduce their contribution away from the 20% default, they were reminded that doing so would result in a lower pension at retirement. Additionally, they were informed about the tax savings associated with their contributions.

The average contribution rate 12 months prior to the intervention was 10.2% and increased to 11.7% immediately after the intervention. The percentage of those contributing 10% decreased from 97% to 78% (a seven-fold increase in people contributing more than 10%), and the percentage of those contributing 20% increased from 1% to 14%. Although the change in the default rate was effective, it was not the only component within the intervention that contributed to the increase in contributions. The extra information regarding tax savings and a lower pension being provided at the time may have had an influence. A limitation of the study was that it was unable to identify which component of the intervention had the greatest effect, as there were no groups tested with isolated conditions.

122 Enrico Rubaltelli and Lorella Lotto, "Nudging freelance professionals to increase their retirement pension fund contributions." *Judgement and Decision Making* 16, no. 1 (2021): 551-565. https://doi.org/10.1017/S1930297500008664

The impact of introducing a default contribution rate

Seven studies were identified that analysed the impact of introducing automatic enrolment with a default contribution rate for new employees, compared with existing participating employees who opted in to the retirement savings scheme prior to automatic enrolment. The main findings across the studies were:

- The number of employees contributing at the default contribution rate increased and persisted approximately 12–42 months after the policy change.
- The default contribution rate seemed to be a stronger anchor than the employer matching rate, as a greater number of employees contributed less than required to get the full employer match.
- Another potential explanation for employees contributing less than required to get the full employer match is that automatic enrolment resulted in lower engagement.
- Employees who opted in to the retirement saving scheme typically contributed more than those automatically enrolled at the default contribution rate.

Further information on these studies can be found in appendix 1.

The following study, conducted in Afghanistan, didn't compare new employees with existing employees but rather made a policy change across a group of existing employees.

Table 4. Afghanistan study

Year of study	Policy changes	Contribution changes[123]
2018[124]	Existing employees were randomly assigned to either an automatic enrolment policy with a 5% default contribution rate, or a control policy with a 0% default contribution rate. Both groups were randomly assigned employer matching rates of 0%, 25% or 50%.	Accounting for an average across the various employer matching rates, the average contribution for employees automatically enrolled with a 5% default contribution rate was 4.5%, compared to the control group's average contribution rate of 2.7%.

In the UK, when automatic enrolment was introduced, it was implemented through a phased approach from 2012 through to 2018. The largest employers were the first to implement the policy from 2012, medium-sized employers began in 2014 and smaller employers followed. The mandatory minimum contribution rate was also increased in phases, with an initial total minimum contribution rate of 2% and a 1% employer contribution minimum. In 2018, this increased to a total minimum contribution rate of 5% and a 2% employer contribution minimum, then it increased again in 2019 to a total minimum contribution of 8% (4% from the employee, 3% from the employer and 1% as tax relief).[125]

The following UK studies assessed the contribution-rate changes of employees who had been phased through the automatic enrolment compared to employees before automatic enrolment.

123 Beshears et al., "Automatic enrollment with a 12% default"

124 Joshua Blumenstock et al., "Why do defaults affect behavior? Experimental evidence from Afghanistan." *American Economic Review* 108, no. 10 (2018): 2868-2901. https://doi.org/10.1257/aer.20171676

125 Department for Work & Pensions, "Automatic enrolment into a workplace pension"

Table 5. UK studies assessing introduction of automatic enrolment

Year of study	Policy changes	Contribution changes[126]
2020[127]	Automatic enrolment for employees, and employers can choose the default contribution and match rates; however, the employer must contribute a minimum of 1% and the total contribution for the employee must be at least 2%.	After one to 30 months, the mean employee contribution rate rose by 0.5% to 2.6%.
2021[128]	Automatic enrolment for employees, and employers can choose the default contribution and match rates; however, the employer must contribute a minimum of 1% and the total contribution for the employee must be at least 2%.	After two to 10 months, the average employee plus employer contribution rate was 3.8%, compared to 2% from companies that had not adopted the policy.

Noteworthy research involving contribution rates

A high default contribution rate[129]

Most of the studies analysed default contribution rates that ranged between 3% and 6% – or 3% and 20%, in the case of the Italian freelance psychologists. However, a study conducted in 2010 analysed a sample of 671 employees within a company in the UK that had a default contribution rate of 12% and matching employer contributions above 12% up to 18%. After 12 months, approximately 25% of employees maintained the 12% default contribution, 55% changed their contribution rate to less than 12%, 18% changed their contribution rate to more than 12%, and 2% opted out but then returned to the 12% default contribution rate. Those who remained at the 12% default contribution rate had lower salaries on average than all other employees.

Assessing behaviours with different default contribution rates[130]

A 2017 study conducted a trial experiment involving 10,000 employees, who were provided a random default contribution rate of 6–11% via a website for retirement savings enrolment. When their contributions were observed after 60 days (a period encompassing two to four pay cheque cycles), the group that was randomly assigned a 6% default contribution rate had the highest fraction of employees who remained at the default, followed by the group assigned a 10% default contribution rate. The default rates of 7–11% saw average contribution rates increase by approximately 20–50 basis points, while the 11% default contribution rate resulted in a 3.7% increase in the number of employees who opted out.

126 Beshears et al., "Automatic enrollment with a 12% default"

127 Jonathan Cribb and Carl Emmerson, "What happens to workplace pension saving when employers are obliged to enrol employees automatically?" *International Tax and Public* Finance 27, (2020): 664-693. https://doi.org/10.1007/s10797-019-09565-6

128 Jonathan Cribb and Carl Emmerson, "What can we learn about automatic enrollment into pensions from small employers?" *The National Tax Association* 74, no. 2 (2021). https://doi.org/10.1086/714113

129 Beshears et al., "Limitations of defaults"

130 John Beshears et al."How do consumers respond when default options push the envelope?" *SSRN,* (2017). https://dx.doi.org/10.2139/ssrn.3050562

Those who move away from a default contribution rate[131]

Vanguard provided administrative data from 2010–2014 of approximately 100,000 employees across 200 retirement plans with automatic enrolment, which was analysed in 2017 to understand if the default settings were followed or if employees chose differently. Eighty percent of the retirement plans had default automatic escalation of the default contribution rate, 15% had voluntary auto-escalation and the remaining 5% had no auto-escalation.

Across the different types of plans, 57% of employees changed their contributions from the default rate at some time during the four-year data-collection period, while only 17% changed their investment fund from the default. Out of the employees who opted out of the default contribution rate, roughly two-thirds increased their contribution rate above the default while the remaining third lowered it. Higher income increased the probability of increasing the contribution rate above the default, and women were more likely to change their contribution rate from the default but were also 13% more likely to decrease their contributions than men.

Forcing an active choice[132]

Employee data analysed from a large US company from 1997–2001 investigated a change in the enrolment process of its retirement savings scheme, which had no default contribution rate. Prior to the change in 1997, new hires had to complete a form within the first 30 days of employment to state if they wanted to enrol into the retirement savings scheme or not, ie they were forced to make an active decision. After the change, new hires who wanted to enrol in the retirement savings scheme were provided with a phone number to call and start the process, ie they had to voluntarily opt in.

The study analysed two groups that were subject to both methods of enrolment. Forcing employees to make an active decision resulted in higher enrolment rates than voluntary opt-in by 28 percentage points. Additionally, the forced choice employees had an average contribution rate of 4.8% after nine months of employment, which increased to 5.5% by the fourth year. The voluntary opt-in group had an average contribution rate of 3.3% at nine months of employment and took at least 33 months to raise their average contribution rate to 4.8%.

Default contribution rates vs employer matching rates[133]

Research conducted in 2021 within the US investigated the dynamic between employee contribution rates and employer matching rates, using a data set of approximately 150,000 employees across 1,000 plans. The default contribution rates across the retirement plans ranged from 1% to 10%, with approximately 37% of plans having a 3% contribution rate, 34% a 4% contribution rate, 25% having a default contribution rate of 5% or more, and 5% having a default contribution rate of 2% or less.

The maximum employer matching rates across the retirement plans also ranged from 1% to 10% and had various matching rules, eg matching 50% of contributions of employer contribution up to 6%. The most common employer maximum matching rates are 4%, which in this case applied to 24% of plans, and 6%, which applied to 33% of plans. The most common employer matching rules are 100% or 50%.

131 Burke et al., "Opting out of retirement plan default settings"Burke et al., "Opting out of retirement plan default settings"

132 Carroll, "Optimal defaults and active decisions"

133 Blanchett et al., "The impact of employer defaults"

Table 6. Variation of default contributions and maximum employer matching rates resulted in four common combinations

Employee default rate	Maximum employer matching rate
Low default of 3% or 4%	Low match rate of 3% or 4%
Low default of 3% or 4%	High match rate of 5% to 8%
High default of 5% or 6%	Low match rate of 3% or 4%
High default of 5% or 6%	High match rate of 5% to 8%

Choosing a higher default contribution rate had a greater effect on employee savings rates than higher match rates. When default contribution rates were set higher, fewer employees changed from them, leading to increased and more uniform savings rates. Higher default contribution rates also boosted the use of default investments.

Conversely, plans with low default rates but high match percentages encouraged higher-income participants to actively opt out of the low default rate, creating a larger savings gap between high and low-income employees. A default rate that exceeded the match rate resulted in a savings rate that was 0.64 percentage points higher, whereas a low default rate with a higher match rate led to a predicted savings rate that was 0.19 percentage points lower.

Employer contribution rates or subsidies[134][135]

A study in Denmark wanted to analyse wealth accumulation in retirement and non-retirement savings schemes by comparing two policies: tax incentives or increased employer contributions. The data suggests that each $1 of tax subsidies provided by the government increased total savings by only 1 cent, thus this policy was mainly beneficial for wealthy, financially literate employees who made active decisions, and resulted in asset shifting but not a substantial increase in savings.

Conversely, for the policy that saw employers increase their contribution rates, there was an increase in total savings for people and only 15% of people reduced their own savings. This suggests that approximately 85% of people are passive with their saving and only adjust how much they spend when there's a change in their income, rather than responding to take advantage of tax subsidies.

Automatic escalation of contribution rates

In the US, default automatic escalation is an inbuilt feature in most retirement plans for new employees hired after the year 2022. The concept was introduced by the Save More Tomorrow programme, in which employee contribution rates increased automatically each year.[136] The first trial in 1988 was conducted with 315 employees at a manufacturing company. Seventy-eight percent of employees who were offered the programme joined, of which 80% maintained automatic increases through to their fourth pay rise, which increased the average contribution rate from 3.5% up to 13.6% within four years.

134 Raj Chetty et al., "Active vs passive decisions and crowdout in retirement savings accounts: Evidence from Denmark." *National Bureau of Economic Research,* (2012). http://www.nber.org/papers/w18565

135 Raj Chetty et al., "Subsidies vs Nudges: which policies increase saving the most?" *Center for Retirement Research at Boston College* 13, no. 3 (2013). https://crr.bc.edu/wp-content/uploads/2013/03/IB_13-3-508.pdf

136 Richard Thaler and Shlomo Benartzi, "Save more tomorrow TM: using behavioral economics to increase employee saving." *Journal of Political Economy* 112, no. 1 (2004). https://doi.org/10.1086/380085

A new policy was introduced across 13 companies using a Vanguard retirement savings plan that meant new employees would be automatically enrolled at a 3% default contribution rate and with a 1% automatic annual increase to this contribution rate. Employees hired under this policy were compared with employees hired before this policy when the automatic contribution increase needed to be opted into. When the contribution escalation programme was set as an opt-in programme, about 15% of people signed up. In contrast, when employees were automatically enrolled in the escalator programme, only 16.5% opted out and the remainder stayed.[137]

A New Zealand study in 2021 found that 29% of people surveyed said they would choose to have automatic escalation of their KiwiSaver contributions[138], but there have been some criticisms of the effectiveness of the automatic escalation settings in recent years. One concern is that job changes can add complications because employees may not continue with their escalated savings at their new jobs and may instead be influenced by the default contribution rate.[139]

A 2024 study in the US that analysed 21 firms found that many employees opt out of automatic escalation. Only 43% in this study accepted the automatic escalation on the first escalation date, and this dropped down to 36% for the second escalation date and to 29% for the third escalation date.[140]

137 Benartzi et al., "Choice architecture and retirement saving plans"

138 Brodie Hobbs and Jan Feld, "What would happen if people could choose automatically increasing KiwiSaver contributions? (2021). https://janfeld.weebly.com/uploads/1/1/8/9/118933153/hobbs.feld_nzep_2021.pdf

139 David Blanchett, "Save more today: improving retirement savings rates with carrots, advice, and nudges." *The Journal of Retirement* 5, no. 1 (2017): 69-95. https://doi.org/10.3905/jor.2017.5.1.069

140 James Choi et al., "Smaller than we thought? The effect of automatic savings policies." *National Bureau of Economic Research,* (2024). https://www.nber.org/system/files/working_papers/w32828/w32828.pdf

Discussion

Default contribution rates in retirement plans are powerful and effective tools that are particularly impactful for people with low incomes, with low financial literacy and who are young. It's suggested that groups who aren't as influenced by the default contribution rate should be taken into consideration less when decisions are made about what a default contribution rate should be[141], but finding an optimal default contribution rate is challenging due to people's diverse needs, such as different retirement income needs and debt prioritisation.

Between 2012 and 2018, when the UK increased its employee minimum contribution rate from 2% to 8% there was an initial impact of reduced precautionary savings. Every £1 reduction in net wages because of increased contributions lowered employees' consumption by 34 pence, with the rest of the contribution being funded by their reduced savings or debt.[142] This finding is supported by a 2024 UK study that found approximately 20% of pension saving resulting from automatic enrolment is offset by increases in personal debt.[143]

There's also a fear that if a default contribution rate is too high, it may entice people to opt out of retirement savings entirely.[144] Therefore, defaults must be carefully considered. One perspective is that the focus should be on welfare rather than effectiveness, as an ineffective nudge may still have positive welfare effects, whereas an effective nudge might reduce this.[145] Another perspective is that a default contribution rate that is 1% too low is worse than one that is 1% too high,[146] as too low a rate can reduce the welfare of employees if they don't adjust their contributions to suit their needs.[147]

The OECD notes the following recommendations for good design of defined contribution retirement savings plans:[148]

- Be as inclusive as possible and use default contribution rates, and offer a limited number of contribution rate options, to simplify the decision-making process.
- Ensure employee and employer contributions are sufficient to achieve retirement income objectives.
- Other incentives, such as tax treatments and employer matching, have the potential to maximise the impact of contributions.

There are different approaches to setting default contribution rates:

1. **Finding the 'right' default:** This involves helping the most people or those most prone to sticking with defaults. Retirement plan design should choose defaults that foster successful

141 Beshears et al., "Who is easier to nudge?"

142 Molly Broome et al., *Precautionary tales: Tackling the problem of low saving among UK households* (Resolution Foundation, 2024), https://www.resolutionfoundation.org/app/uploads/2024/02/Precautionary-tales.pdf

143 John Beshears et al., "Does pension automatic enrollment increase debt? Evidence from a large-scale natural experiment." *National Bureau of Economic Research,* (2024). http://www.nber.org/papers/w32100

144 Beshears et al., "How do consumers respond"

145 Cass Sunstein, "Nudges that fail." *SSRN,* (2016). https://dx.doi.org/10.2139/ssrn.2809658

146 Choi et al., "Optimal defaults"

147 Jeffrey Brown et al., "The downside of defaults." *National Bureau of Economic Research,* (2012). https://www.nber.org/sites/default/files/2020-08/orrc12-05.pdf

148 OECD "Recommendation of the Council for the Good Design of Defined Contribution Pension Plans"

retirement saving when passively accepted in its entirety.[149] A method could be setting the default contribution rate at the employer matching rate cap.[150]

2. **Inducing active decision-making:** Setting a default that encourages active decision-making can account for various needs, though it may lead to poor decisions when people are faced with cognitive load. A 'bad' default can be more likely to motivate opting out, potentially overcoming procrastination and improving welfare.[151] A 0% default rate has been found to motivate procrastinators to make a change, while a 3% default rate with automatic enrolment highlights present bias.[152]

3. **Creating 'reason' defaults:** Providing people with reasons why they should accept the default and why they should consider opting out improves decision-making and understanding, addressing diverse retirement savings needs.[153] However, providing reasons that appropriately address the various needs of people would be difficult and border on being financial advice that can't necessarily be generalised.

4. **Ensuring employees don't need to choose:** Taking the decision away from employees can be achieved by setting minimum mandatory contribution rates or making employers responsible for total contributions. People don't need to make the right decision if a decision is made for them,[154] but there is a risk of forcing people to over-save if they're unable to reduce their contributions.[155]

Implications for Aotearoa New Zealand

Aotearoa New Zealand's Budget 2025 announcement that the default employer and employee KiwiSaver contribution rate is set to be increased to 3.5% from April 2026 and 4% from April 2028 is a significant change. It aligns with earlier modelling suggesting higher default rates can improve retirement outcomes for many New Zealanders, yet allows flexibility for those whose needs may warrant a lower contribution rate.

With the change, the focus turns to understanding how KiwiSaver members, including the self-employed, respond to the new settings and what this reveals about the behavioural dynamics of retirement savings in Aotearoa New Zealand. Prior modelling indicated that increasing the employee default contribution rate to 4%, alongside a 4% employer match, could extend the duration that median income earners maintain their standard of living in retirement by 20–30%.[156] However, these projections rest on the continued availability of NZ Super, which remains a cornerstone of retirement income adequacy, especially for those on low incomes.

The policy change presents a valuable opportunity to contribute to the international literature on default settings, with the KiwiSaver scheme offering a unique context to observe how a government-set default contribution rate influences savings behaviour. Ongoing monitoring, evaluation and research will be essential to ensure the new default continues to support adequate, equitable and sustainable retirement outcomes for all.

149 Choi et al., "Defined contribution pensions"

150 B. Douglas Bernheim et al., "Poverty and Self-Control." *Econometrica* 83, no. 5 (2015): 1877-1911. https://doi.org/10.3982/ECTA11374

151 Choi et al., "Optimal defaults"

152 Goda et al., "Who is a passive saver"

153 Shewta Desiraju and Berkeley Dietvorst, "Reason defaults: presenting defaults with reasons for choosing each optino helps decision makers with minority interests." *SSRN,* (2023). https://dx.doi.org/10.2139/ssrn.4521908

154 Nick Chater and George Loewenstein, "The i-frame and the s-frame: How focusing on individual-level solutions has led behavioral public policy astray." *Behavioral and Brain Sciences* 46, (2023). https://doi.org/10.1017/S0140525X22002023

155 Choi et al., "For better or for worse"

156 Te Ara Ahunga Ora Retirement Commission, "KiwiSaver: Opportunities for Improvement"

Future research directions

This literature review raises questions about KiwiSaver in New Zealand and interactions with the new default employee and employer contribution rates.

- Will there be changes in the number of saving suspensions or people opting out?
- How many people will apply for the temporary savings reduction that allows employees to reduce their contribution rate to 3% for a period of up to 12 months?
- For those that apply for the temporary savings reduction, how many employers will either maintain or reduce their contribution rate?
- How many employees and employers will pre-emptively move to the 4% contribution rate prior to 2028?
- Will the new default contribution rates influence the number of people who contribute at a higher rate?
- Will self-employed workers contribute 4% to their KiwiSaver?
- Will employers offer a higher contribution rate as part of their incentive structure to differentiate themselves from other employers?
- Will there be a change in the amount of total-remuneration-structured contracts for employees?
- Does the ability for people to use their KiwiSaver to purchase their first home influence their contribution rate more than preparing for retirement?
- If people are intending to use or do use their KiwiSaver for a first home purchase, do they make higher KiwiSaver contributions on average?
- When people deviate from default contribution rates, what are the reasons why (eg cost of living, increasing house deposit, rule of thumb, higher income, planning for retirement)?
- If someone has used their KiwiSaver to purchase their first home, how do they behave afterwards? Do they contribute the minimum, the default or more so they 'catch up', or are they more focused on their mortgage repayments?
- Would people like not having to make a choice and instead have the employer be mandated to make contributions?
- If having automatic deductions from wages helps people save, would they benefit from other forms of automated savings, such as those that set aside money in an emergency fund?

Appendix 1: Introducing a default contribution rate

What follows is a list of studies conducted in the US that investigated the retirement savings contribution behaviours of employees after the introduction of automatic enrolment and default contribution rates. The new employees were compared with existing participating employees who opted in prior to automatic enrolment.

Table 7. Assessing contribution changes post introduction of automatic enrolment and default contribution rates

Year of study	Policy changes	Contribution changes[157]
2000[158]	Automatic enrolment for new hires with a 3% contribution rate. All employees had 50% employer matching contributions on the first 6% after 12 months of employment.	At 3–15 months of tenure, the average contribution rate increased from 2.7% to 3.8%. The percentage of employees contributing 3% increased from 4% to 65%, and the percentage of those contributing at 6% to get the full employer match dropped from 11% to 7%.
2002[159]	(1) Automatic enrolment for new hires with a 2% contribution rate. A 67% employer match rate on the first 6% of contributions for all employees.	After 24–35 months, the number of employees contributing 2% increased to 64% from 20%. The number of employees contributing 6% or more dropped to 27% from 63%.
	(2) Automatic enrolment for new hires with a 3% contribution rate. A 50% employer match rate on the first 6% of contributions for all employees after 12 months employment.	After 0–23 months, the number of employees contributing 3% increased to 71% from 11%. The number of employees contributing 6% or over dropped to 26% from 74%.
	(3) Automatic enrolment for new hires with a 3% contribution rate. A 50% employer match rate on the first 6% of contributions for all employees.	After 12–35 months, the number of employees contributing 3% increased to 42% from 12%. The number of employees contributing 6% or over dropped from 79% to 49%.

157 Beshears et al., "Automatic enrollment with a 12% default"

158 Madrian and Shea, "The power of suggestion"

159 Choi et al., "Defined contribution pensions"

Year of study	Policy changes	Contribution changes[157]
2004[160] (Revisited the data of the following policy changes from Choi et al., 2002)	(1) Automatic enrolment for new hires, with a 2% contribution rate. A 67% employer match rate on the first 6% of contributions for all employees.	The percentage of employees contributing 2% increased from 12% to 53% at 24–29 months and from 11% to 46% at 42–47 months. The percentage contributing more than 2% dropped from 39% to 36% at 24–29 months and from 53% to 44% at 42–47 months.
	(2) Automatic enrolment for new hires, with a 3% contribution rate. A 50% employer match rate on first 6% of contributions for all employees after 12 months employment.	Percent of employees at 3% increased from 4% to 72% at 3-5 months, from 3% to 55% at 12-17 months, from 5% to 41% at 24-26 months. Percent above 3% dropped from 25% to 14% at 3-5 months, increased from 30% to 31% at 12-17 months and from 44% to 45% at 24-26 months.
2020[161]	Automatic enrolment for new hires, with a 3% contribution rate. All employees had 100% employer matching contributions on the first 3% of employee contributions, then 50% employer matching on the next 2% of employee contributions.	Seven years after the policy change, the mean annual contribution decreased in total dollar terms from approximately $8,700 to $5,160.
2022[162]	Automatic enrolment, with a default contribution rate of 3% for new hires. Both new hires and existing participating employees had a 3% employer match, but an additional 50% match rate on the next 2% of employee contributions.	After 7–12 months, the number of employees contributing 3% increased from 5% to 41%. After 43–48 months, the number of employees contributing 3% increased from 5% to 27%.
2022[163] *	Automatic enrolment for new hires with an average default contribution rate of 1%.	The median contribution rate of employees decreased from 2% and 3.8% to 0.9% and 1%.
2023[164]	Automatic enrolment for new hires with a 3% contribution rate. All employees had 100% employer matching contributions on the first 3% of employee contributions, then 50% employer matching on the next 2% of employee contributions.	The average contribution rate across employees rose from 2.9% to 4.4% at 0–4 months, from 4.5% to 5.1% at 5–16 months, and from 5.8% to 6.1% at 41–52 months. The percentage of employees contributing 3% increased from 8% to 40% at 0–4 months, from 7% to 33% at 5–16 months, and from 6% to 22% at 41–52 months.

* The study also compared contributions between agencies that had implemented the automatic enrolment policy with a 1% default contribution rate, and agencies that had no automatic enrolment. The median contribution rate of employees who were automatically enrolled was between 0.9% and 1%, whereas the median contribution rates of employees of agencies with no automatic enrolment was between 0.6% and 1.5%.

160 Choi et al., "For better or for worse"

161 Goda et al., "Who is a passive saver"

162 John Beshears et al., "Borrowing to save? The impact of automatic enrollment on debt." *The Journal of Finance* 77, no. 1 (2022): 403-447. https://doi.org/10.1111/jofi.13069

163 Robert Clark and Denis Pelletier, "Impact of defaults on participation in state supplemental retirement savings plans." Journal of Pension Economics *and Finance* 21, no. 1 (2022): 22-37. https://doi.org/10.1017/S1474747220000347

164 Justin Falk and Nadia Karamcheva, "The impact of an employer match and automatic enrollment on the savings behavior of public-sector workers." *Journal of Pension Economics and Finance* 22, (2023): 38-68. https://doi.org/10.1017/S1474747221000366

References

Alonso-Garcia, Jennifer, Hazel Bateman, Johan Bonekamp, and Ralph Stevens. "Retirement drawdown defaults: the role of implied endorsement." *ARC Centre of Excellence in Population Ageing Research*, (2017). https://www.cepar.edu.au/publications/working-papers/retirement-drawdown-defaults-role-implied-endorsement

Arling, Priscilla, Jill Kirby, and Kegan Saajasto. "Persistent anchoring to default rates when electing 401(k) contributions." *Review of Behavioral Finance* 10, no. 1 (2018): 88-104. https://doi.org/10.1108/RBF-07-2016-0043

Behavioural Economics Team of the Australian Government. "Harnessing the power of defaults." https://behaviouraleconomics.pmc.gov.au/sites/default/files/resources/harnessing-power-defaults.pdf

Benartzi, Shlomo, and Richard Thaler. 2007. "Heuristics and biases in retirement savings behavior." *Journal of Economic Perspectives* 21, no. 3 (2007): 81-104. https://doi.org/10.1257/jep.21.3.81

Benartzi, Shlomo, Ehud Peleg, and Richard Thaler. "Choice architecture and retirement saving plans." (2007). https://www.anderson.ucla.edu/documents/areas/fac/accounting/Benartzi_ChoiceArchitecture.pdf

Bernheim, B. Douglas, and Jonas Gastel. "Optimal default options: The case for opt-out minimization." *National Bureau of Economic Research,* (2020). http://www.nber.org/papers/w28254

Bernheim, B. Douglas, Andrey Fradkin, and Igor Popov. "The welfare economics of default options in 401(k) plans." *National Bureau of Economic Research,* (2011). https://www.nber.org/papers/w17587

Bernheim, B. Douglas, Debraj Ray, and Sevin Yeltekin. "Poverty and Self-Control." *Econometrica* 83, no. 5 (2015): 1877-1911. https://doi.org/10.3982/ECTA11374

Beshears, J., J. Choi, D. Laibson, and B Madrian. "The importance of default options for retirement savings outcomes: Evidence from the United States." *National Bureau of Economic Research,* (2006). https://www.nber.org/papers/w12009

Beshears, John, and Harry Kosowsky. "Nudging: Progress to date and future directions." *Organizational behaior and human decision processes* 161, (2020): 3-19. https://doi.org/10.1016/j.obhdp.2020.09.001

Beshears, John, James Choi, David Laibson, and Brigitte Madrian. "The importance of default options for retirement savings outcomes: Evidence from the United States." *National Bureau of Economic Research,* (2006). https://www.nber.org/papers/w12009

—."The limitations of defaults." *12th Annual Joint Conference of the Retirement Research Consortium,* (2010):1-23. https://www.nber.org/sites/default/files/2020-08/orrc10-02.pdf

Beshears, John, James Choi, David Laibson, and Peter Maxted. "Present bias causes and then dissipates auto-enrollment savings effects." *AEA Papers and Proceedings* 112, (2022): 136-141. https://doi.org/10.125/pandp.20221020

Beshears, John, James Choi, David Laibson, Brigitte Madrian, and Sean Wans. "Who is easier to nudge?" *Harvard University*, (2016). https://scholar.harvard.edu/sites/scholar.harvard.edu/files/laibson/files/who_is_easier_to_nudge_2016.05.27.pdf

Beshears, John, James Choi, David Laibson, Brigitte Madrian, and William Skimmyhorn. "Borrowing to save? The impact of automatic enrollment on debt." *The Journal of Finance* 77, no. 1 (2022): 403-447. https://doi.org/10.1111/jofi.13069

Beshears, John, Matthew Blakstad, James Choi, et al. "Does pension automatic enrollment increase debt? evidence from a large-scale natural experiment." *National Bureau of Economic Research,* (2024). http://www.nber.org/papers/w32100

Beshears, John, Ruofei Guo, David Laibson, Brigitte Madrian, and James Choi. "Automatic enrollment with a 12% default contribution rate." *National Bureau of Economic Research,* (2023). http://www.nber.org/papers/w31601

Beshears, John, Shlomo Benartzi, Richard Mason, and Katherine Milkman. "How do consumers respond when default options push the envelope?" *SSRN,* (2017). https://dx.doi.org/10.2139/ssrn.3050562.

Blanchett, David. "Save more today: improving retirement savings rates with carrots, advice, and nudges." *The Journal of Retirement* 5, no. 1 (2017): 69-95. https://doi.org/10.3905/jor.2017.5.1.069

Blanchett, David, Michael Finke, and Zhikun Liu. "The impact of employer defaults and match rates on retirement saving." *SSRN,* (2022). https://dx.doi.org/10.2139/ssrn.3992899

Blumenstock, Joshua, Michael Callen, and Tarek Ghani. "Why do defaults affect behavior? Experimental evidence from Afghanistan." *American Economic Review* 108, no. 10 (2018): 2868-2901. https://doi.org/10.1257/aer.20171676

Bronchetti, Erin, Thomas Dee, David Huffman, and Ellen Magenheim. "When a nudge isn't enough: defaults and saving among low-income tax filers." *National Bureau of Economic Research,* (2011). http://www.nber.org/papers/w16887

Broome, Molly, Ian Mulheirn, and Simon Pittaway. *Precautionary tales: Tackling the problem of low saving among UK households.* Resolution Foundation, 2024. https://www.resolutionfoundation.org/app/uploads/2024/02/Precautionary-tales.pdf

Brown, Jeffrey, and Alessandro Previtero. "Procrastination, present-biased preferences, and financial behaviors." *Landscape Research Japan Online* 65, (2014): 543-546. https://www.nber.org/sites/default/files/2020-08/orrc14-04.pdf

Brown, Jeffrey, Anne Farrell, and Scott Weisbenner. "Decision-making approaches and the propensity to default: evidence and implications." *Journal of Financial Economics* 121, (2016): 477-495. http://dx.doi.org/10.1016/j.jfineco.2016.05.010

Brown, Jeffrey, Anne Farrell, and Scott Weisbenner. "The downside of defaults." *National Bureau of Economic Research,* (2012). https://www.nber.org/sites/default/files/2020-08/orrc12-05.pdf

Burke, Jeremy, Angela Hung, and Jill Luoto. *Opting out of retirement plan default settings.* RAND Labor & Population, 2017. https://www.rand.org/content/dam/rand/pubs/working_papers/WR1100/WR1162/RAND_WR1162.pdf

Carroll, Gabriel, James Choi, David Laibson, Brigitte Madrian, and Andrew Metrick. "Optimal defaults and active decisions." *National Bureau of Economic Research,* (2005). https://www.nber.org/system/files/working_papers/w11074/w11074.pdf

Chater, Nick, and George Loewenstein. "The I-Frame and the s-Frame: How focusing on individual-level solutions has led behavioral public policy astray." *Behavioral and Brain Sciences* 46, (2023). https://doi.org/10.1017/S0140525X22002023

Chetty, Raj, John Friedman, Soren Leth-Petersen, Torben Nielsen, and Tore Olsen. "Active vs passive decisions and crowdout in retirement savings accounts: Evidence from Denmark." *National Bureau of Economic Research,* (2012). http://www.nber.org/papers/w18565

Chetty, Raj, John Friedman, Soren Leth-Petersen, Torben Nielsen, and Tore Olsen. "Subsidies vs Nudges: which policies increase saving the most?" *Center for Retirement Research at Boston College* 13, no. 3 (2013). https://crr.bc.edu/wp-content/uploads/2013/03/IB_13-3-508.pdf

Choi, James. "Contributions to defined contribution pension plans." *National Bureau of Economic Research,* (2015). http://www.nber.org/papers/w21467

Choi, James, David Laibson, Brigitte Madrian, and Andrew Metrick. *Defined contribution pensions: plans rules, participant choices, and the path of least resistance.* Vol. 16, in *Tax policy and the economy*, by James Poterba. MIT Press, 2002. http://www.nber.org/chapters/c10863

Choi, James, David Laibson, Brigitte Madrian, and Andrew Metrick. "For better or for worse: Default effects and 401(k) savings behavior." In *Perspectives on the Economics of Aging*, by David Wise (Univeristy of Chicago Press, 2004). http://www.nber.org/chapters/c10341

Choi, James, David Laibson, Brigitte Madrian, and Andrew Metrick. "Optimal defaults." *American Economic Review* 93, no. 2 (2003): 180-185. https://doi.org/10.1257/000282803321947010

Choi, James, David Laibson, Brigitte Madrian, and Andrew Metrick. "Reinforcement learning and savings behavior." *The Journal of Finance* 64, no. 6 (2009): 2515-2534. https://doi.org/10.1111/j.1540-6261.2009.01509.x

Choi, James, David Laibson, Jordan Cammarota, Richard Lombardo, and John Beshears. "Smaller than we thought? The effect of automatic savings policies." *National Bureau of Economic Research,* (2024). https://www.nber.org/system/files/working_papers/w32828/w32828.pdf

Choi, James, Emily Haisley, Jennifer Kurkoski, and Cade Massey. "Small cues change savings choices." *Journal of Economic Behavior & Organization* 142, (2017): 378-395. http://dx.doi.org/10.1016/j.jebo.2017.08.010

Clark, Gordon, Huu Duong, Paul Gerrans, et al. *A review of retirement savings investment behaviours: theory and evidence.* CSIRO-Monash Superannuation Research Cluster, (2013). https://www.monash.edu/__data/assets/pdf_file/0018/2052135/WP2013-01.pdf

Clark, Robert, and Denis Pelletier. "Impact of defaults on participation in state supplemental retirement savings plans." *Journal of Pension Economics and Finance* 21, no. 1 (2022): 22-37. https://doi.org/10.1017/S1474747220000347

Cribb, Jonathan, and Carl Emmerson. "What can we learn about automatic enrollment into pensions from small employers?" *The National Tax Association* 74, no. 2 (2021). https://doi.org/10.1086/714113

Cribb, Jonathan, and Carl Emmerson. "What happens to workplace pension saving when employers are obliged to enrol employees automatically?" *International Tax and Public Finance* 27, (2020): 664-693. https://doi.org/10.1007/s10797-019-09565-6.

Cronqvist, Henrik, Richard Thaler, and Frank Yu. "When nudges are forever: Inertia in the Swedish premium pension plan." *AEA Papers and Proceedings* 108, (2018). https://dx.doi.org/10.2139/ssrn.3099886

Crossley, Thomas, Carl Emmerson, and Andrew Leicester. *Raising household saving.* Institute for Fiscal Studies, 2012. https://www.thebritishacademy.ac.uk/documents/256/Raising-household-saving.pdf

Department for Work & Pensions. "Automatic enrolment into a workplace pension - key facts." (2013). https://assets.publishing.service.gov.uk/media/5a82bfa7e5274a2e87dc2c88/auto-key-facts-enrolment-booklet.pdf

Desiraju, Shewta, and Berkeley Dietvorst. "Reason defaults: presenting defaults with reasons for choosing each option helps decision makers with minority interests." *SSRN,* (2023). https://dx.doi.org/10.2139/ssrn.4521908

Falk, Justin, and Nadia Karamcheva. "The impact of an employer match and automatic enrollment on the savings behavior of public-sector workers." *Journal of Pension Economics and Finance* 22, (2023): 38-68. https://doi.org/10.1017/S1474747221000366

Frederick, Shane, George Loewenstein, and Ted O'Donoghue. "Time discounting and time preference: a critical review." *Journal of Economic Review* 40, (2002): 351-401. http://dx.doi.org/10.1257/002205102320161311

Goda, Gopi, Matthew Levy, Colleen Manchester, Aaron Sojourner, and Joshua Tasoff. "Mechanisms behind retirement saving behavior: Evidence from administrative and survey data." *Research Dialogue* 140, (2018). https://www.tiaa.org/content/dam/tiaa/institute/pdf/research-report/2018-02/mechanisms-behind-retirement-saving-behavior-goda-rd140-feb-2018.pdf

Goda, Gopi, Matthew Levy, Colleen Manchester, Aaron Sojourner, and Joshua Tasoff. "Who is a passive saver under opt-in and auto-enrollment?" *Journal of Economic Behavior and Organization* 173, (2020): 301-321. https://doi.org/10.1016/j.jebo.2019.08.026

Hobbs, Brodie, and Jan Feld. *What would happen if people could choose automatically increasing KiwiSaver contributions?* (2021). https://janfeld.weebly.com/uploads/1/1/8/9/118933153/hobbs.feld_nzep_2021.pdf

Huberman, Gur, Sheena Iyengar, and Wei Jiang. "Defined contribution pension plans: Determinants of participation and contribution rates." *Journal of Financial Services Research* 31, (2007): 1-32. https://doi.org/10.1007/s10693-007-0003-6

Iyengar, Sheena, Wei Jiang, and Gur Huberman. "How much choice is too much?: Contributions to 401(k) retirement plans." *Pension Research Council Working Paper,* (2003). https://pensionresearchcouncil.wharton.upenn.edu/publications/papers-2018/how-much-choice-is-too-much-contributions-to-401k-retirement-plans/

Jachimowicz, Jon, Shannon Duncan, Elke Weber, and Eric Johnson. "When and why defaults influence decisions: a meta-analysis of default effects." *Behavioural Public Policy* 3, no. 2 (2019): 159-186. https://doi.org/10.1017/bpp.2018.43

Johnson, Eric, and Daniel Goldstein. "Do defaults save lives?" *Science* 302, (2003): 1338-1339. https://ssrn.com/abstract=1324774

Johnson, Eric, Steven Bellman, and Gerald Lohse. "Defaults, framing and privacy: why opting in - opting out." *Marketing letters* 13, (2002): 5-15. https://doi.org/10.1023/A:1015044207315

Johnson, Eric, Suzanne Shu, Benedict Dellaert, et al. "Beyond nudges: Tools of a choice architecture." *Marketing Letters* 23, (2012): 487-504. https://doi.org/10.1007/s11002-012-9186-1

Kahneman, Daniel, and Amos Tversky. "Prospect theory: an analysis of decision under risk." *Econometrica* 47, no. 2 (1979). https://www.jstor.org/stable/1914185

Kahneman, Daniel, and Amos Tversky. "The psychology of preference." *Scientific American* 246, (1982): 160-173. https://doi.org/10.1038/scientificamerican0182-160

Kim, Hugh, Raimond Maurer, and Olivia Mitchell. "Time is money: Rational life cycle inertia and the delegation of investment management." *Journal of Financial Economics* 121, no. 2 (2016): 427-447. https://doi.org/10.1016/j.jfineco.2016.03.008

Madrian, Brigitte. "Matching contributions and savings outcomes: a behavioral economics perspective." *National Bureau of Economic Research,* (2012). http://www.nber.org/papers/w18220

Madrian, Brigitte, and Dennis Shea. "The power of suggestion: inertia in 401(k) participation and savings behavior." *National Bureau of Economic Research*, (2000). https://www.nber.org/system/files/working_papers/w7682/w7682.pdf

McKenzie, Craig, Michael Liersch, and Stacey Finkelstein. "Recommendations implicit in policy defaults." *Psychological Science* 17, no. 5 (2006): 414-420. https://doi.org/10.1111/j.1467-9280.2006.01721.x

Mitchell, Olivia, and Nikolai Roussanov. "Lessons from behavioral research for retirement saving, investment, and spending: An overview." *Wharton Pension Research Council,* (2024). https://dx.doi.org/10.2139/ssrn.4975094

Mrkva, Kellen, Nathanial Posner, Crystal Reeck, and Eric Johnson. "Do nudges reduce disparities? Choice architecture compensates forlow consumer knowledge." *Journal of Marketing* 85, no. 4 (2021). https://doi.org/10.1177/0022242921993186

Nest Insight. "*Beyond the defaults".* (2020). https://www.nestinsight.org.uk/wp-content/uploads/2020/11/Beyond-the-defaults.pdf

OECD. *Pensions at a Glance 2023: OECD and G20 Indicators.*OECD Publishing, 2023. https://doi.org/10.1787/678055dd-en

OECD. "*Recommendation of the Council for the Good Design of Defined Contribution Pension Plans".* (2022). https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0467%20#dates

Raaij, W. Fred van. *Understanding Consumer Financial Behaviour: Money Management in an Age of Financial Illiteracy.* Palgrave Macmillan, 2016.

Robertson-Rose, Lynne. "Understanding default behaviour in workplace pensions: automatic enrolment in the UK." *Journal of Social Policy* 50, no. 1 (2021): 21-39. https://doi.org/10.1017/S0047279419000813

Roth, Yefim, Greta Waldman, and Ido Erev. "The impact of experience on the tendency to accept recommended defaults." *Judgement and Decision Making* 19, (2024): 1-11. https://doi.org/10.1017/jdm.2023.49

Rubaltelli, Enrico, and Lorella Lotto. "Nudging freelance professionals to increase their retirement pension fund contributions." *Judgement and Decision Making* 16, no. 1 (2021): 551-565. https://doi.org/10.1017/S1930297500008664

Samuelson, William, and Richard Zeckhauser. "Status quo bias in decision making." *Journal of Risk and Uncertainty* 1, (1988): 7-59. https://doi.org/10.1007/BF00055564

Serim, Havva, and Fahriye Ozturk. "How do defaults affect behavior of individual retirement: evidence from Ankara." *Cumhuriyet University Journal of Economics and Administrative Sciences* 22, no. 2 (2021): 480-503. https://doi.org/10.37880/cumuiibf.1009235

Sunstein, Cass. "Deciding by default." *University of Pennsylvania Law Review* 162, no. 1 (2013). https://scholarship.law.upenn.edu/cgi/viewcontent.cgi?article=1000&context=penn_law_review/

Sunstein, Cass. "Nudging: A very short guide." *Journal of Consumer Policy* 37, no. 4 (2014): 583-588. https://dash.harvard.edu/server/api/core/bitstreams/7312037d-b123-6bd4-e053-0100007fdf3b/content

Sunstein, Cass. "Nudges that fail." *SSRN,* (2016). https://dx.doi.org/10.2139/ssrn.2809658

Taha Choukhmane. "Default options and retirement saving dynamics". https://tahachoukhmane.com/wp-content/uploads/2025/01/Choukhmane-2024-Default-Options-and-Retirement-Saving-Dynamics.pdf

Te Ara Ahunga Ora Retirement Commission. "Analysis of KiwiSaver changes: Budget 2025" (2025). https://assets.retirement.govt.nz/public/Uploads/Retirement-Income-Policy-Review/2025-RRIP/Analysis-of-KiwiSaver-Changes-Budget-2025.pdf

Te Ara Ahunga Ora Retirement Commission. "KiwiSaver: Opportunities for Improvement." (2024). https://assets.retirement.govt.nz/public/Uploads/Research/2024/KiwiSaver-Opportunities-for-Improvement.pdf

Thaler, Richard, and Cass Sunstein. *Nudge: Improving Decisions about Health, Wealth, and Happiness.* Yale University Press, 2008.

Thaler, Richard, and Shlomo Benartzi. "Save more tomorrow TM: using behavioral economics to increase employee saving." *Journal of Political Economy* 112, no. 1 (2004). https://doi.org/10.1086/380085

The Behavioural Insights Team. "A behavioural approach to managing money: ideas and results from the Financial Capability lab." (2018). https://www.bi.team/wp-content/uploads/2018/05/Financial-Capability-Lab-Report-May18.pdf

The Treasury. "KiwiSaver – Budget at a Glance", 2025. https://budget.govt.nz/budget/2025/at-a-glance/kiwisaver.htm

van Rooij, Maarten, and Frederica Teppa. *Choice or no choice: what explains the attractiveness of default options.* Network for Studies on Pensions, Aging and Retirement, 2008. https://www.netspar.nl/en/knowledge-hub/choice-or-no-choice-what-explains-the-attractiveness-of-default-options/

van Schie, Ron, Bas Donkers, and Benedict Dellaert. "Savings adequacy uncertainty: driver or obstacle to increase pension contributions." *Journal of Economic Psychology* 33, no. 4 (2012): 882-896. https://doi.org/10.1016/j.joep.2012.04.004

Vanguard. *How America Saves 2024.* https://institutional.vanguard.com/content/dam/inst/iig-transformation/insights/pdf/2024/has/how_america_saves_report_2024.pdf

Wang-Ly, Nathan, Hazel Bateman, Isabella Dobrescu, Ben Newell, and Susan Thorp. "Defaults, disclosures, advice and calculators: One size does not fit all." *Journal of Behavioral and Experimental Finance* 35, (2022). https://doi.org/10.1016/j.jbef.2022.100690

Willis, Lauren. "When nudges fail: slippery defaults." *The University of Chicago Law Review* 80, no. 3 (2013). https://chicagounbound.uchicago.edu/uclrev/vol80/iss3/4/.

Zhong, Mingli. "Optimal default retirement saving policices: Theory and evidence from OregonSaves." *Wharton Pension Research Council,* (2021). https://dx.doi.org/10.2139/ssrn.3535881

Te Ara Ahunga Ora Retirement Commission

Level 15, 19 Victoria Street West, Auckland and
Level 2 Solnet House, 70 The Terrace, Wellington.
PO Box 106-056, Auckland 1143. Phone +64 9 356 0052.

retirement.govt.nz sorted.org.nz sortedinschools.org.nz