Budgeting Bias

BY LINNEA GANDHI AND SHAYNE KAVANAGH

Designing for the Decision-Making Environment: Who People Are, Not Who They Should Be

People are not rational, but we often assume they are. For example, classical economics is based on the assumption that people are rational maximizers of their self-interest. Recent Nobel Prize-winning scientific research, however, has shown that this is not true. Rather than thinking through decisions rationally and comprehensively, people use mental shortcuts to make decisions. Much of the time, this is harmless and even helpful, but sometimes our shortcuts backfire.

Behavioral scientists have cataloged a number of these shortcuts and when they can go wrong. When these shortcuts fail, they are called "cognitive biases." These biases can have a negative effect on all types of decisions, including budget decisions. But if we know these biases, we can plan mitigations.

The Anchoring Bias

An example of a common bias is called anchoring. This means that once we are presented with a number, we tend to stick close to that number for future decisions. This can be useful. For example, if you know the amount your neighbor recently got for selling their house, that information gives you a good anchor for negotiating the sale of your own home (and not selling for too little). But anchoring can backfire if your anchor isn't relevant to the decision at hand. (See Exhibit 1 for a demonstration of how this works.)

Let's think about how anchoring could apply to budget decisions. Perhaps the most obvious example is incremental budgeting, where last year's budget is the basis for next year's budget. If revenues are stable and the service demands from the community are consistent from year to year, incremental budgeting may be a workable short cut for doing budgeting faster and more easily. But if the government finds itself in a situation where revenues are not stable and/or there are new challenges that government needs to confront, then the "anchor" of what was spent before may not be so helpful. One way to help overcome this problem might be to break departmental spending down into programs, which would shift the focus from what was spent on that department last year to which programs are most important for addressing current challenges. This is known as priority-based budgeting.

Learn more about priority-based budgeting by reading GFOA's "Anatomy of a Priority-Driven Budget Process" whitepaper at gfoa.org/materials/priority-based-budgeting.

EXHIBIT 1 | THE PHONE NUMBER-JELLY BEAN ANCHORING BIAS

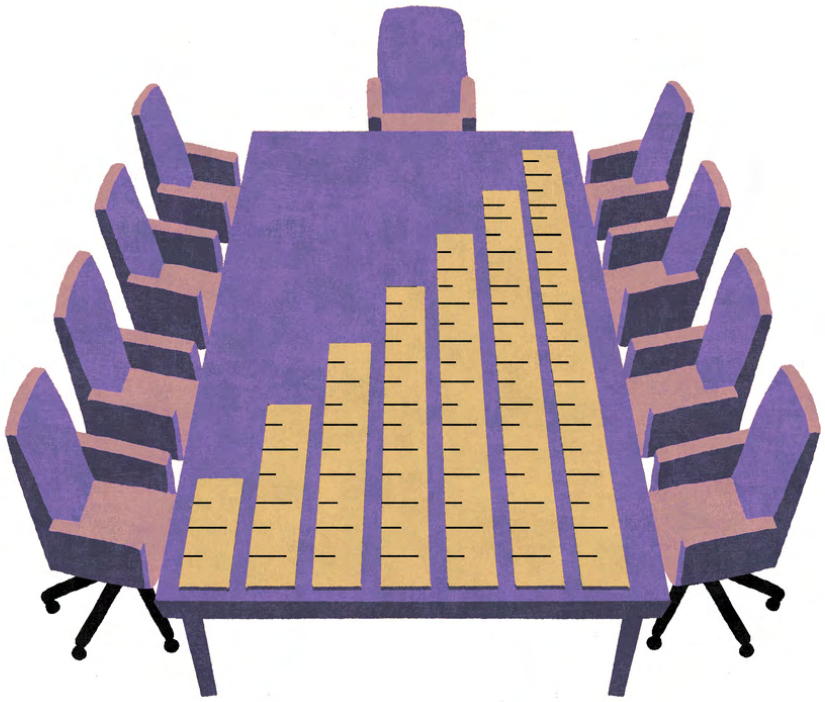
Seventy-seven GFOA members participated in a survey that randomly assigned them to two groups. Half were asked to provide the first three digits of their phone number (which averaged to 473) and the other half were asked to provide the last four digits (which averaged to 4348). All participants were then asked to estimate the number of jelly beans in the jar depicted below.

Of course, the phone numbers that the respondents provided were completely irrelevant to the number of jelly beans, but when we analyzed the average guesses, the people who provided the smaller number for their phone (the three digits instead of four) all provided a clearly lower guess on the number of beans.

LAST 3 DIGITS 744

LAST 4 DIGITS 2010

Anchoring can backfire if your anchor isn't relevant to the decision at hand.



Another example of anchoring is when benchmark statistics from comparable governments are used as a basis for making decisions about reserves, rates, and more. Though having a reference point can be helpful in some cases, benchmarks can be a hindrance if they are not sufficiently relevant to your own government's context. In a recent GFOA webinar, Natalie Morrison, manager of financial planning and analysis at WaterOne, shared a story about how this affected her firm's ability to provide affordable rates to its customers.

> *"For water affordability, it is very common to compare your rates to your neighbors and then also use a benchmark percentage for the average bill as a percentage of median household income. Everyone uses either their neighbors' rates or this generic threshold to determine affordability—which may or may not actually mean the utility is affordable based on the specific demographics of the service territory.*
>
> *As WaterOne took a closer look at how our lowest-income customers might be disproportionately burdened by their water bill, we liked to use the analogy that "when we are buying shoes, we shouldn't be measuring our neighbor's feet"—meaning that we want to make decisions based purely on what is best for our rate payers and what our publicly elected board determines to be affordable for our rate payers."*

Benchmarks can be a hindrance if they are not sufficiently relevant to your own government's context.

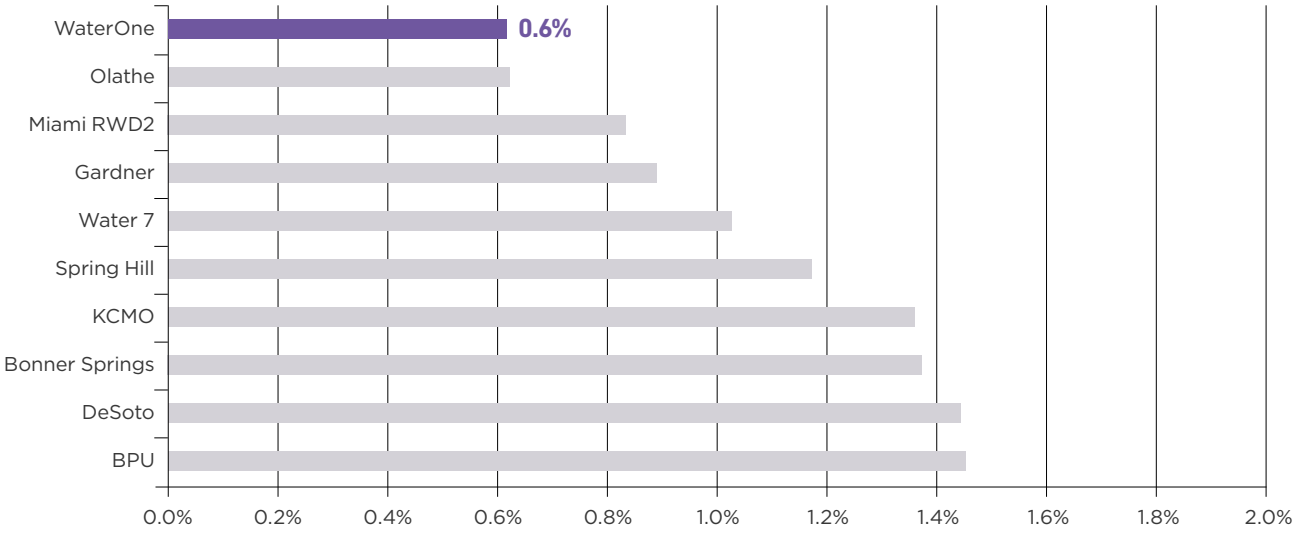
Exhibit 2 contains a presentation with benchmarking data and a new graphic that avoids peer comparisons. If the objective is to provide affordable water to low-income households, avoiding peer comparisons seems like a clear improvement. The first graphic might imply that low-income residents are paying too little! The new graphic emphasizes how little income these residents actually have, so anything WaterOne can do to help them save money could make a big difference.

The key takeaway here is, first, to think carefully about the relevance of the anchors you are providing to decision-makers. Whether serving as a comparative reference point or a standalone value, they can and will shape subsequent decisions. For example, if a budget needs to be rethought, providing historical numbers might reduce the amount of change people will engage in. Or a comparative benchmark might not be relevant to your own context.

Second, recognize the weaknesses of incremental budgeting. Sometimes a shortcut is OK. Look for parts of the budget where shortcuts work well and use them there. Avoid shortcuts for parts of the budget where a more critical examination is required to better serve the community.

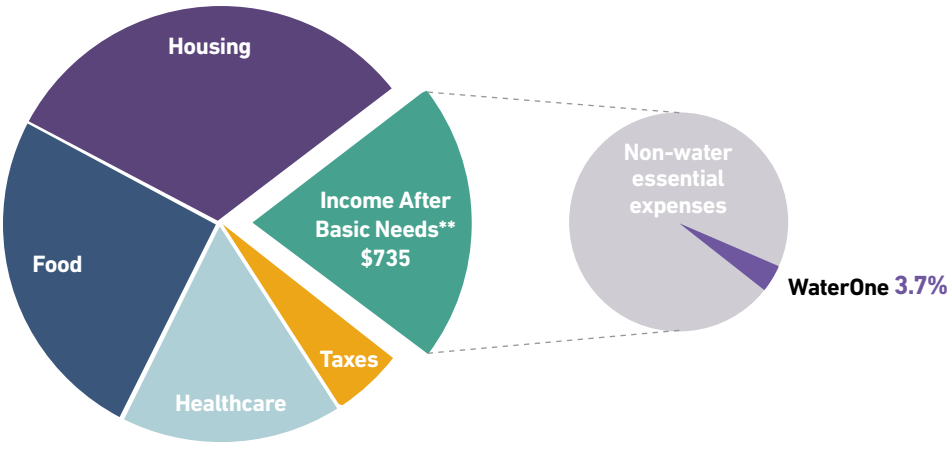
EXHIBIT 2 | WATERONE 2021 BUDGET (REVENUE & RATES)

Local Utility Comparison: Typical Monthly Bill Amount as a % of Median Household Income



In the graph above, the typical monthly amount is compared to median household income for WaterOne. This provides a measurement of community affordability. In the graph below, low usage typical monthly amount is compared to the 20th percentile income, representing a comprehensive view of household affordability for WaterOne.

Water Costs as a Percentage of Basic Needs*



** Amount was calculated based on an individual in the 20th percentile for income.*

*** Please note costs related to transportation, childcare, energy, and other household needs are not included in Basic Needs calculation.*

Recency Bias

Budgeting is also afflicted by the recency bias. This means that whatever is more recent is what comes to mind more easily, and that which comes to mind more easily tends to be thought of as more probable or likely or prevalent. For example, when formulating an annual budget, a current "hot topic" might be over-weighted versus long-term, persistent (and ultimately more important) challenges that the local government faces. One design solution might be to link strategic and long-term planning to the budgeting process, where decision-makers are reminded of all the big issues facing the local government before making budget decisions.

Another example of recency bias might be when a citizen comes to a public meeting to complain about an issue they are concerned about, but that is not representative of broader community sentiment. That issue—and the citizen's perspective on it—is then over-weighted in the discussion. The solution here might be to make a habit of taking regular surveys or to use more representative approaches to community engagement—and to document the results and keep them in front of decision-makers.

To mitigate recency bias, design a way for decision-makers to "zoom out" and see the big picture.

The commonality between the two solutions offered above is to design a way for decision-makers to "zoom out" and see the big picture, and not put too much emphasis on the most recent information they've been exposed to.

Assume people will make mistakes

Finally, designing the decision-making environment is not only about mental shortcuts gone awry. Sometimes people just make mistakes in their budgets. Of course, department managers know they might make a mistake and, understandably, are more concerned about under-budgeting than over-budgeting. Therefore, they tend to build some "slack" or "padding" into their budgets. When all departments do this, the total amount of padding can really add up. One way to address this situation is by creating an annual pooled contingency that departments can draw from if they have unplanned, unavoidable expenditures. This is a bit like an insurance program for department budgets. Local governments that have used this approach have found that having this "insurance" in place makes departments feel less need for their own budgetary padding, resulting in significant, ongoing savings. You can read more about how to set up a pooled contingency and the benefits in "Don't Go It Alone," an article in the June 2021 issue of *Government Finance Review* (available at gfoa.org/gfr-june-2021).

The finance officer can anticipate other common mistakes people make and prepare mitigating strategies.

The budget officer needs to design a decision-making environment that anticipates the effects of biases and fallibility.

Conclusion

Cognitive biases and people's natural fallibility mean that the budget officer needs to design a decision-making environment that anticipates the effects of biases and fallibility. This article has provided examples of some of the most essential biases and mistakes and suggested solutions. We encourage you to learn more about the growing field of behavioral science and how it can be applied to budgeting. Be on the lookout for additional articles from GFOA and consider checking out the webinar series on behavioral science that GFOA recently offered (see above).

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This article is based on a webinar series presented by GFOA called "Using Behavioral Science for Better Decision-Making and Budgeting."

We have provided this article to bring you some of the insights from the webinar series. A recording of the webinars is available at **gfoa.org/materials/behavioral-science-2021**.