

Beyond Grants: Reimagining How We Fund Research

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Overview: Public research funding has become increasingly uncertain over the past decade, shifting responsibility for absorbing shocks to the private sector. The Trump administration entrenched this trend through funding cuts to research agencies and the cancellation of grants that did not align with administration priorities [1, 2]. Many researchers have scrambled to salvage years of work, retooling or pausing projects, while others have abandoned academia altogether [3]. This proposal introduces a research funding model that allows individuals and corporations alike to participate in the funding process: By establishing investment portfolios for funding research, this system secures funding streams for researchers and circulates scientific results beyond academic circles.

1 Introduction

Research funding in the United States is undergoing a structural shift: Public sector support has waned, becoming increasingly constrained and volatile amid sweeping federal funding cuts [4]. In the past year, the Trump administration has cancelled federal grants amounting to billions of dollars, heavily affecting major agencies including the National Institutes of Health (NIH) and the National Science Foundation (NSF) [1, 2].

This pressure intensifies as federal funding priorities become entangled with political agendas. Executive Order 14151, for example, regulates the language used in grant applications, including terms related to LGBTQ+ topics, affecting even loosely related studies [5, 6]. These measures narrow the scope of ongoing research, privileging politically compatible research over exploratory or critical work. By shifting the focus away from these communities, we risk jeopardizing those who already exist on the margins [7].

Alongside these developments, Republicans and Democrats are more ideologically divided than at any point in the last two decades [8]. The recent election cycle has exposed the extent of polarisation in the country, with Americans increasingly trapped in media ecosystems designed for interaction rather than for information [9]. Media conglomerates have created a landscape where information bubbles don't just exist; they are actively constructed and monetized [10].

The fragmented information environment has coincided with a shift in U.S. politics: Education level has become a fundamental “fault line” in politics, profoundly shaping political identity [11]. The result is that political dialogue takes place almost entirely within separate bubbles. Each group speaks mostly among themselves, circulating evidence and arguments that rarely cross over to the other side [12].

Years of research become collateral damage in a world where findings are accepted as credible by one side and dismissed as biased and therefore irrelevant by the other [13].

Problematically, partisan divisions have fostered a tribal dynamic characterized by mutual distrust. Years of research become collateral damage when findings are embraced as credible by one side while dismissed as biased, and therefore irrelevant, by the other [13]. When people encounter research outside their information universe, they respond with skepticism rather than curiosity. This system creates a self-reinforcing cycle: Polarization drives people into separate information ecosystems, fueling institutional distrust, which deepens polarization and erodes the foundation of shared understanding that underpins democracy [14].

Taken together, these two crises—an unreliable funding environment and extreme polarisation—have had three major consequences:

1. The loss of significant amounts of ongoing and potential research

Research funding in the U.S. comes from two sources: the public sector funds basic research, which has a long-term focus. In contrast, the private sector provides funding for applied research that could be used commercially in the future [15]. These sources are complementary, not interchangeable. Without this balance, research risks becoming too speculative or too rigid [16].

Research in the agricultural sector clearly shows this. The government takes on both roles, supporting competitive and formula grants [17]. Competitive grants encourage innovation, rewarding novel ideas and high-risk, high-reward projects, while formula grants set clear eligibility criteria. The balance enables breakthrough discoveries without undermining the basic knowledge needed to implement these findings. Research has concluded that these sources are complementary and not interchangeable: Sacrificing one compromises the other.

Under the Trump administration, the public sector's role in research funding has significantly weakened, and the private sector has been unable to compensate for this loss fully [4]. Crucially, the private sector is not a monolith; it comprises companies with widely varying capacities and incentives to support research. There has been persistent underinvestment by private firms in basic research because they generate broad social benefits that cannot be fully captured as private profit. Research that aligns with market incentives faces intense competition for limited dollars, particularly in medical contexts. Unable to secure funding, researchers retreat and are forced to shelve years' worth of work. Major research institutions, like the University of Chicago, have begun dismantling entire PhD programs in the humanities, partly due to funding shortfalls caused by this crisis [18].

2. Surviving research is limited by political agendas

The availability of funding shapes research priorities, with scientists seeking areas where funding is more readily attainable [19]. Under the Trump administration, this was reinforced by the release of an alleged “banned words” list that discouraged research on stigmatized topics. By placing political constraints on research agendas, research bends to the dollar rather than the questions demanded by public interest.

Problemsatically, this is not a temporary situation that can be easily resolved under a new administration. This impact is an ever-compounding effect across generations of researchers. Young academics, in particular, are vulnerable because their careers depend on securing grants to support their work and, eventually, earn tenure [20]. If grants are no longer forthcoming in the area of interest, they are forced to choose between abandoning that interest in favour of a more grant-worthy topic or risking their academic career altogether.

This produces two consequences:

- Researchers leave academia entirely, stalling long-term scientific projects that require decades of sustained effort to yield meaningful results. We can look to mRNA technology as an example.
- Researchers pivot toward questions that are more politically aligned or fundable. When hundreds of early-career researchers abandon particular questions, the cumulative effect is a reshaping of what academia investigates and, by extension, what knowledge society has. This is especially concerning because the areas most likely to be deprioritized in funding are often those experiencing the most immediate social impacts.

3. Published research does not escape academic realms

Research articles have been reduced to political pawns—wielded in policy debates and distilled into sensationalized headlines. Trapped behind costly paywalls and dense with technical jargon, research rarely reaches audiences beyond academia [21]. Only a small fraction of published research is ever cited or used by policymakers, corporations, or the public [22]. While tempting to dismiss this as merely a communication problem—blaming scientists for opaque writing or the public for scientific illiteracy—the issue runs deeper. Exclusion from the research process itself breeds distrust, undermining the shared understanding that underpins informed debate.

In today's climate, research articles have been reduced to political pawns, thrown around in policy debates and cherry-picked to legitimize sensationalized headlines. Trapped behind expensive paywalls and drowning in technical jargon, research rarely reaches audiences beyond academia [21]. Only a small fraction of published research is ever cited, and even fewer are actively used by policymakers, corporations, or the general public [22].

It's convenient to frame this as merely a communication problem, blaming scientists for their dense writing or the public for the literacy crisis. In reality, however, the issue runs deeper. The general public is excluded from the research process, fueling the distrust that undermines research's impact in society. The system operates behind a curtain that requires advanced degrees, publications, and institutional affiliations to gain a glimpse, and is produced and evaluated within insular professional networks. This breeds distrust and collapses opportunities for the research to be applied in the real world.

The traditional way academic research operates and reaches the public must evolve. This proposal outlines a new funding stream for research aimed at correcting structural flaws. Rather than replacing the existing model, it is designed to create a layer that stabilizes incentives and broadens participation in academic circles.

2 Proposal

This proposal adapts a funding model that Americans already understand, whether they spend hours of their day browsing advice on the Motley Fool or make quarterly deposits into their Roth IRA in ETFs and Mutual Funds: the stock market [23]. The goal of the stock market is to channel capital from idle savings toward productive uses. In a similar vein, this model treats scientific research as an asset class that yields long-term benefits.

At a high level, the platform would connect the average individual with research projects at academic institutions. After carefully crafting a portfolio, the individual will allocate funds to it on a bi-monthly basis. This sum can range from \$25 to \$2,000+. In return, they effectively serve as shareholders in the research project, receiving updates on any major milestones achieved. The same model would exist for businesses interested in investing.

Given that the capital is going towards a qualified research organization, it would be tax-deductible—an added incentive.

More broadly, this builds on a concept Americans are already habituated to: abstract, delayed, and probabilistic returns—think of retirement accounts or ESG investing that do not have an immediate payoff. This proposal leverages that same behavioral framework, substituting purely financial returns with informational and social returns that have historically been generated through scientific progress, trickling down through the economy and political institutions.

2.1 The Model, Explained

At the individual level, participation would begin with an intake form where users specify their research interests and key demographic information. This is crucial to crafting a portfolio that reflects their preferences. After completing the form, they would be recommended curated portfolios to select from. Each portfolio includes several projects at varying stages, grouped by topic (e.g., healthcare, agriculture, energy), institutional affiliation (universities), or theme of interest (e.g., climate change, educational equality). A Duke alum, for example, may be interested in investing exclusively in their alma mater's outputs.

Regardless of the portfolio they select, they would be exposed to a range of perspectives and studies. This is because the platform is organized around investing in combinations of research projects, rather than individual studies. This resembles diversification in the stock market facilitated by ETFs or mutual funds, and helps in two ways:

1. In the scenario where a project is terminated, an issue that arises in early-stage research, diversification ensures that investors continue to receive updates on related projects that fuel the public interest.
2. This avoids ideological capture. As described previously, Americans overwhelmingly exist in information bubbles, surrounded by media that reinforces their political alignments. By creating tailored, multi-study portfolios, participants can allocate capital to a broad set of projects rather than silo themselves within a narrow set of studies that reinforce their ideology.

In contrast to a stock portfolio, investors would not be granted oversight privileges or decision-making rights. This is critical to maintaining the integrity of scientific research and avoiding the conflicts of interest that are commonly tied to private-sector funding (e.g., Oil conglomerate Shell funding climate change research, tobacco giants heading cancer research).

While individuals are not in control of the research, they receive regular research updates in plain language. This is coupled with gamified elements, including milestone tracking and impact projections, which allows them access to the research process itself. This is where the communications infrastructure plays a large role, facilitated by AI:

1. Estimating Impacts

The main challenge on this platform is effectively communicating the potential impact of research to investors. Because the return is less targeted, it has to be clear how their contributions can translate into scientific and societal outcomes. AI would be leveraged to analyze portfolios at the project level to make broad projections of possible outcomes, including their relevance to policy and potential implementation paths. It can assign uncertainties to these predictions by referencing past studies and leveraging the platform itself to determine market interest.

2. Updates

It is common practice in the stock market to provide shareholders with quarterly reports. Financial firms devote significant time and capital towards analyzing these reports to inform decision-making. Updates under this model would parallel the stock market: When researchers hit a milestone or share an update on the study, the AI would translate complex research results into a summary format that highlights the entire research process, from the methods to the results. This promotes understanding of how the research is being conducted beyond just describing the results, spurring informed conversations among investors.

There are two primary stakeholder groups in this model, each of which benefits from the model:

- **Researchers:** For researchers, this platform offers a funding stream that is markedly less volatile and less politically constrained than traditional public funding. In contrast to private-sector funding, the platform maintains scientific independence by ensuring investors do not influence research design or outcomes. Because funding is pooled, no single investor can shape the direction of a project. This insulates researchers from conflicts of interest.
- **Investors:** Investors benefit from this model in ways that differ depending on their goals, but share a common advantage: access to scientific knowledge that would otherwise be costly, opaque, or inaccessible.

For businesses, the platform lowers the barrier to entry for engaging with scientific research. Conducting in-house research requires significant financial resources. Through pooled funding, businesses gain structured access to emerging scientific developments at a fraction of the cost of independent research efforts, informing strategic planning.

Individual investors benefit mainly through access to information. Participation provides transparency into how research is funded, conducted, and evaluated. By investing in outcomes they believe will materialize in the future, they align their financial participation with long-term societal goals.

The broader the audience exposed to this research, the higher the likelihood that it will be understood, disseminated, and later applied in real-world contexts.

We can look to public health research focused on LGBTQ+ communities as a possible application for this platform. The Trump administration’s actions targeting LGBTQ+-related language caused cascading effects, including the termination of grants. Alongside this, titans of industry began reducing diversity-related work in fear of retribution.

Morale among researchers in these areas is at an all-time low, with a looming sense of powerlessness. While individual organizations may lack the resources to sustain long-term research on their own, by aggregating smaller contributions from hundreds of participants, we can create meaningful, stable support from latent public support.

3 Conclusion

In the current funding environment, opportunities for research support are increasingly limited across the public and private sectors. The current model shapes what scientific knowledge the U.S. produces and the credibility of science among the general public. While implementing this proposal in the real world would be difficult, it does not necessarily require a large-scale effort; rather, it could be piloted at one or two universities and limited to a curated set of portfolios within a single research domain. Future directions include partnering with platforms like Kalshi, a prediction market, to create monetary incentives. Participants could speculate on the statistical significance of research studies or other outcomes. Funding uncertainty, compounded by increasing distrust among partisans, underscores the need for a solution: one that secures stable funding pathways while providing incentives for the general public to engage with research in an accessible, practical way.

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