

ARBEIDSNOTAT WORKING PAPER

Investigative Journalism

Ole-Andreas Elvik Næss



Samfunns- og næringslivsforskning AS Centre for Applied Research at NHH



SNF SAMFUNNS- OG NÆRINGSLIVSFORSKNING AS

- er et selskap i NHH-miljøet med oppgave å initiere, organisere og utføre eksternfinansiert forskning. Norges Handelshøyskole og Stiftelsen SNF er aksjonærer. Virksomheten drives med basis i egen stab og fagmiljøene ved NHH.

SNF er ett av Norges ledende forskningsmiljø innen anvendt økonomisk-administrativ forskning, og har gode samarbeidsrelasjoner til andre forskningsmiljøer i Norge og utlandet. SNF utfører forskning og forskningsbaserte utredninger for sentrale beslutningstakere i privat og offentlig sektor. Forskningen organiseres i programmer og prosjekter av langsiktig og mer kortsiktig karakter. Alle publikasjoner er offentlig tilgjengelig.

SNF

CENTRE FOR APPLIED RESEARCH AT NHH

- is a company within the NHH group. Its objective is to initiate, organize and conduct externally financed research. The company shareholders are the Norwegian School of Economics (NHH) and the SNF Foundation. Research is carried out by SNF's own staff as well as faculty members at NHH.

SNF is one of Norway's leading research environment within applied economic administrative research. It has excellent working relations with other research environments in Norway as well as abroad. SNF conducts research and prepares research-based reports for major decision-makers both in the private and the public sector. Research is organized in programmes and projects on a long-term as well as a short-term basis. All our publications are publicly available.

Investigative Journalism

Ole-Andreas Elvik Næss

SNF Project No. 10052: Media competition and media policy

The project is financed by the Research Council of Norway

CENTRE FOR APPLIED RESEARCH AT NHH BERGEN, JUNE 2024 ISSN 2704-0380 (Online)

© This copy has been drawn up by agreement with Kopinor (www.kopinor.no). The production of further copies without agreement and in contravention of the Copyright Act is a punishable offence and may result in liability to compensation.

Investigative Journalism*

Ole-Andreas Elvik Næss

Abstract

Investigative journalism is crucial for democratic accountability and transparency. This paper surveys nearly 6,000 participants from the US, UK, and Norway to show that investigative journalism is a public good likely to be underprovided. I analyze solutions to this market failure. A majority is willing to pay higher taxes for more journalism via public broadcasters. However, in countries with established public broadcasters, subsidies to private media are preferred due to perceived political biases. Public broadcasters can attract broader support by restricting journalism to non-political contexts. A Coasian solution is ineffective, as willingness to pay increases with wider output sharing.

Keywords: Investigative journalism, Public goods, Public broadcaster.

^{*}Næss: Centre for Applied Research (SNF) at the NHH Norwegian School of Economics (e-mail: Ole-Andreas.Naess@snf.no). IRB approval was obtained from the NHH. Declarations of interest: none. Funding by the Norwegian Research Council (KULMEDIA) is greatly acknowledged.

1 Introduction

A well-functioning media business is crucial for the health of democratic societies, supported by extensive evidence demonstrating the importance of a free and critical press in ensuring political accountability (Banerjee et al., 2011; Eisensee and Strömberg, 2007; Enikolopov et al., 2011; Finan and Ferraz, 2008; Gentzkow et al., 2011; Knight and Tribin, 2022; Snyder and Strömberg, 2010). Furthermore, investigative journalism can uncover accounting and corporate fraud, holding private businesses, bureaucracies, and powerful societal forces accountable (Dyck et al., 2010; Dyck and Zingales, 2002; Miller, 2006).

In recent decades, global newspaper advertising revenues have significantly declined, potentially reducing investment in journalist-intensive content (Angelucci and Cagé, 2019; Cagé, 2016). From 2008 to 2020, the US newsroom industry lost over 30,000 jobs (Walker, 2021), compromising local newspapers' ability to serve as government watchdogs (Casey, 2019). Furthermore, investigative journalism is often not profitable (Hamilton, 2016), which has led global actors to call for more public support to media to solve this potential market failure (OECD, 2023; UNESCO, 2022). Stiglitz (2021) claims that "creating an effective media is one of the most important challenges of the time".

This paper explores strategies to enhance media effectiveness by addressing market failures in investigative journalism. Using surveys conducted in Norway, the United States, and the United Kingdom, I first measure individual willingness to pay (WTP) for investigative journalism. I find that the societal value of increased investigative journalism—measured as the sum of all individuals' WTP—far exceeds the value of payments that private media firms can collect, indicating that markets will underprovide investigative journalism.

The primary contribution of this paper is to investigate, using a combination of survey evidence and a theoretical framework, how this market failure can be addressed through government-sponsored public broadcasting or through market-based (Coasian) solutions that involve changing property rights.

This paper finds support for government intervention through public broadcasters among certain groups. However, concerns about political bias reduce this support among individuals familiar with large public broadcasters. I find that restricting investigative journalism to nonpolitical areas increases support, but this creates a dilemma between achieving broad support (arguably necessary to classify investigative journalism as a public good) and maintaining political journalism.

54% of Norwegian survey respondents expressed a willingness to pay an additional \$15 in taxes to fund more investigative journalism from the public broadcaster.¹ 55% of US respondents, but only 35% of UK respondents were willing to increase their taxes for more investigative journalism from the public broadcaster. Respondents with left-wing political preferences are significantly more likely to prefer investigative journalism from the public broadcaster in all three countries. When given the choice between the government supporting a public broadcaster or providing subsidies to private media firms, 70% of US respondents preferred public broadcasters, contrasted by only 35% in the UK and 40% in Norway.

Some random respondents, referred to as the *Neutrality* treatment group, received information indicating that we aimed to ensure that the public broadcaster's journalism would be politically neutral by focusing investigations on the business sector and bureaucracy, rather than political parties. Receiving this information increased the likelihood of respondents' willingness to pay additional taxes in Norway by 6 percentage points (p = 0.033), corresponding to an 11% increase relative to the control group. Furthermore, receiving this information increased the probability of preferring support to the public broadcaster over equally large subsidies to private media firms by 5 percentage points (p = 0.075). The total demand for investigative journalism from the public broadcaster (measured as the sum of the two demand questions) is hence higher after receiving this information (p = 0.018). Receiving the *Neutrality* treatment makes the UK respondents 7 percentage points more willing to pay more in taxes (p = 0.069), 7 percentage points more likely to prefer public over private subsidies (p = 0.057) and hence also leads to a higher total demand for investigative journalism (p = 0.016). This treatment had no significant impact on the willingness of U.S. respondents to support more publicly funded investigative journalism.

¹To enhance realism and invoke consequentiality (Carson and Groves, 2007; Vossler et al., 2012), I informed respondents that their answers would help inform public broadcasters and politicians about the preferences of the population.

To further explore the relationship between experiences with large public broadcasters and perceptions of bias, I conducted a second survey among 1,000 Norwegians. An initial question focused on potential biases of the Norwegian public broadcaster, followed by a question about general support for more public investigative journalism. Beliefs that the public broadcaster is biased do not correlate strongly with preferences for more public investigative journalism, but this masks interesting heterogeneous effects. Among those who perceive the public broadcaster as biased and hold divergent political views, opposition to more public investigative journalism is greater than in other groups. However, among those who see the broadcaster as biased but share its political views, there are actually fewer that oppose increased investigative journalism than in the rest of the population.

Overall, these findings suggest that while governments may be able to implement investigative journalism that increases welfare for the majority, concerns about the political neutrality of the public broadcaster make it difficult to gain broad support, particularly from those with opposing political views. Restricting the journalism to politically neutral settings increases support and hence may implement investigative journalism as a public good.

Finally, this paper suggests that a market-based, or Coasian, solution to the underprovision of investigative journalism is unlikely to be effective. This conclusion is supported by a treatment in the survey where some participants were given exclusive, temporary access to investigative journalism outputs, which did not significantly increase their WTP compared to a control group. Another group were given the information that we would disseminate the output from investigative journalism as widely as possible. This group displayed a WTP \$0.8 dollar *higher* than the control group (p = 0.048). This suggests that strengthening property rights to investigative journalism findings does not adequately address the market failure.

This paper advances the public goods literature by examining the classification of investigative journalism as a public good. A public good, defined as non-rival and non-excludable, can be used by others at no additional cost, making it impossible to exclude anyone once produced (Samuelson, 1954). While journalism, in general, might not qualify as a public good due to paywalls, investigative journalism's case is more complex, since the product is not only accessing the news, but also creating the information (Pino, 2023; Walters, 2023). The experimental methodology in this paper constructs a scenario where information from investigative journalism becomes temporarily excludable. This setup enables testing whether access to investigative journalism is a rival or non-rival good. I demonstrate that access to investigative journalism is non-rivalrous, suggesting it qualifies as a public good due to the difficulty of excluding individuals from its information over time. Additionally, this paper contributes to the literature on network effects within media consumption. Bursztyn et al. (2023b) show that there are negative spillover effects from social media, where users of Instagram and TikTok are worse off than they would have been if the platforms did not exist.² I provide some evidence of a contrary effect in the context of investigative journalism.

I also contribute to a literature analyzing public broadcasting more specifically (Armstrong, 2005; Armstrong and Weeds, 2007; Coase, 1950; Hargreaves Heap, 2005). While much of this literature analyzes how the government can solve the market failures analyzed above (the public interest theory), Djankov et al. (2003) and Gehlbach and Sonin (2014) argue that government ownership also undermines political freedom by distorting information (public choice theory), which is supported by Durante and Knight (2012) finding a change in the bias of the Italian public broadcaster when Berlusconi was elected. My contribution to this literature is to provide some support to both theories. Despite support for public investigative journalism, a majority in both the UK and Norway prefers that the government subsidizes private firms rather than conducting the journalism through the public broadcaster. Interestingly, the opposition to the public broadcaster in Norway seems to be more related to concerns that the public broadcaster itself is non-neutral than to concerns about political involvement. Informing some participants that increased support for public broadcasters would be contingent upon political independence failed to elevate WTP. The difference between these findings and the insights from Durante and Knight (2012) may reflect Norwegian politicians taking media independence seriously.

I also contribute to a literature within journalism and communication studies analyzing public financing of media firms (Allern and Pollack, 2019; Latos et al., 2023; Murschetz, 2020; Neff and Pickard, 2021; Sehl et al., 2020), where Pickard (2019) argues for more

²Acemoglu et al. (2022) and Choi et al. (2019) analyze information externalities related to sharing of data.

government money to support journalism.

Furthermore, this paper enriches the broader literature that investigates media demand (Bursztyn et al., 2023a,b; Faia et al., 2022; Ganguly and Tasoff, 2017; Gentzkow and Shapiro, 2006; Mullainathan and Shleifer, 2005). Chopra et al. (2022) document an overall muted demand for fact-checking, while Chopra et al. (2023) show that the demand for news depend on both accuracy concerns and belief confirmation. This paper measures demand for investigative journalism and shows how demand varies across different demographic groups, finding a positive correlation between demand and left-wing political preferences.

2 Theoretical framework

This section introduces a theoretical framework, while Section 6 will integrate the empirical results into this framework. I first examine the basic model of potential market failures in Section 2.1, then explore a government intervention model in Section 2.2, and finally analyze a Coasian solution in Section 2.3.

2.1 Basic model: Under-provision of investigative journalism

This model explores the incentives for expanding journalism, assuming a baseline level of investigative journalism denoted by h (measured in working hours). This includes the scenario where h = 0.

Media firm A profit-maximizing media firm offers each individual Δh hours of journalism at a price $p(\Delta h)$. The cost of producing journalism is c(h).

Individual payoff functions There are *N* individuals in the population, and each individual *i* gets a payoff $b_w(h)$ when the level of journalism is given by *h*.

Timing of the game

- 1. The media firm sets a price $p(\Delta h)$ offered to each individual *i* to finance Δh hours of journalism.
- 2. Each individual accepts or rejects the offer.

The analysis uses a (subgame-perfect) Nash equilibrium. I assume the media firm is small, implying that its choices of Δh do not influence marginal utilities or prices.

Proposition 2.1 identifies the conditions under which an equilibrium with increased journalism occurs.

Proposition 2.1. There is an equilibrium where $\Delta h^* > 0$ if and only if $b'_w(h) > c'(h)$.

The marginal cost of an increase in journalism is c'(h), while the marginal value of each individual's contribution is $b'_w(h)$, so if and only if $b'_w(h) > c'(h)$ there is an equilibrium where $\Delta h^* > 0$. Individuals overlook the collective benefits of marginally increased funding for investigative journalism. Assumption 1 captures the case where N individuals *sharing* the cost of journalism leads to marginal benefits exceeding marginal costs.

Assumption 1.

$$\frac{c'(h)}{N} < b'_{w}(h) < c'(h)$$
(1)

Hence we have the following result.

Proposition 2.2. If Assumption 1 is satisfied, there is a $\Delta h' > 0$ such that the equilibrium outcome $\Delta h^* = 0$ is Pareto-dominated by $\Delta h'$. The outcome $\Delta h'$ is reached if everyone pays $p_{h'} = \frac{c'(h)\Delta h'}{N}$ for journalism, but this is not an equilibrium when $b'_w(h) < c'(h)$.

The underlying intuition is that everyone has incentives to freeride on others, and this intuition also applies when *N* is so large that $p_{h'} \rightarrow 0$. When individuals share the cost of journalism, this also implies that each individual only contributes a share $\frac{1}{N}$. Since the marginal contribution of each individual is proportional to the payment, the effect of one individual not paying is negligible. Hence, all individuals have an incentive not to pay and rather freeride on the payments of others.

A key insight is the pervasive incentive to freeride, especially when N is large. Each individual contributes only a fraction $\frac{1}{N}$, minimizing the impact of any single non-payment.

2.2 Government solution: Public funding of journalism

This section analyzes whether there is electoral support for the government to solve the market failure via a public broadcaster by introducing two modifications to the existing model. Firstly, the model considers how journalism from the government may have a direct effect on individuals' payoffs, for example if it is perceived to affect political outcomes. Specifically, it posits that any marginal increase in investigative journalism from the public broadcaster yields an additional payoff for individual *i*, denoted as $b'_{p,i}(h)$. Secondly, the variable $d \in [0, 1]$ is introduced to capture both the inefficiencies within the public broadcasting system and the economic losses associated with tax collection, commonly referred to as deadweight losses. This implies that the model in the previous section is a special case where d = 0 and $b'_{p,i}(h) = 0 \forall i$.

Timing of the game

- 1. Voters are presented with a binary option $v \in \{0, 1\}$, where v = 1 indicates a decision to raise taxes by $p_{h''} = \frac{c'(h)\Delta h''}{N}$ per voter, earmarking this increase for financing an additional $\Delta h''$ hours of investigative journalism.
- 2. The outcome of the election is determined through majority voting.

Proposition 2.3. *There is a* $\Delta h'' > 0$ *where voter i votes for* v = 1 *if*

$$b'_{w}(h) + b'_{p,i}(h) > \frac{c'(h)}{(1-d)N}.$$
 (2)

The outcome $\Delta h''$ is implemented by majority voting if Equation (2) holds for a majority of voters, and v = 0 is Pareto-dominated by v = 1 if Equation (2) is satisfied for all voters.

Following the intuition from Proposition 2.2, there is an equilibrium where everyone votes in favor of public investigative journalism if we restrict the parameter values to those

analyzed in Section 2.1 (d = 0 and $b'_{p,i}(h) = 0 \forall i$). This implies that a democratic government responding to preferences of voters can solve the market failure through a public broadcaster in the basic version of the model. Interestingly, the two added features of this section have different effects in large populations. Proposition 2.3 demonstrates that the implementation of additional investigative journalism can receive support from all voters also for high values of d, as the per-voter cost diminishes towards zero in large populations.

However, not all voters may favor increased public investigative journalism $(b'_{p,i}(h) < 0)$. If this term relates to a (perceived) political bias, we would expect different groups to have different preferences. Given an equal number of voters with positive and negative values of $b'_{p,i}(h)$, a mere subset of voters for which $b'_{p,i}(h) = 0$ suffices to garner majority support for public journalism, provided $b'_w(h) > 0$. Equation (2) will then be satisfied for a majority of voters. This introduces a subtle distinction between the differences in difficulty between achieving majority support and unanimous support for investigative journalism from the public broadcaster.

Focusing investigative journalism in politically neutral areas $(b'_{p,i}(h) = 0 \forall i)$ may garner support from larger voter groups. However, much investigative journalism is political and may be supported by the majority but opposed by others. This model presents a trade-off between maximizing support for journalism and maximizing benefits for its supporters.

2.3 Coasian solution: Exclusive output rights

I now consider a scenario where society strengthens property rights for the output of the media, allowing a media firm to conduct more investigative journalism and provide exclusive access to its findings for a limited period. This model modifies the basic setup described in Section 2.1, introducing an exclusive payoff $b_e(h)$ as long as $n \le N$ of individuals get access to the output.

Proposition 2.4. With exclusive output rights, there is an equilibrium where $\Delta h^* > 0$ if $b'_w(h) + b'_e(h)n > c'(h)$.

A Coasian solution (Coase, 1960) to the market failure in investigative journalism can be

effectively implemented if allowed by institutional conditions and if the people values the exclusivity. If $b'_e(h) > 0$, individuals derive greater benefits from investigative journalism when it includes an element of exclusivity, and in this case the cost of financing exclusive output can be shared between *n* individuals.

3 Experimental design

3.1 Institutional details

NRK, Norway's largest media organization, offers a wide range of content across TV, radio, and digital platforms, functioning as the country's public broadcasting company. BBC holds a similar role in the UK, but also has a significant international presence through services like BBC World News. Both aim to provide educational, informative, and entertainment content, emphasizing unbiased reporting and cultural programming. Neff and Pickard (2021) compare the public broadcasters in 33 countries, showing that both NRK and BBC are distinguished by a high level of public funding, given by respectively \$111 and \$81 per capita annually.

The US broadcasters (PBS, NPR and CPB) collectively receive public funding of \$3 per capita annually, and PBS operates as a non-profit network funded by government appropriations, donations, and corporate sponsorships, focusing primarily on educational and cultural programming for American audiences.

3.2 Norway experiment

3.2.1 Sample

This survey was conducted in January 2024 in collaboration with YouGov, and the sample was constructed to be representative of the Norwegian population. Detailed pre-registration information is available on AsPredicted as #155952, and the full set of instructions are available in Online Appendix B. Based on recommendations from current literature on 700 observations per arm of treatment (Haaland et al., 2023), the total sample size was set to

2800.

3.2.2 Survey introduction

Before starting the survey, I asked respondents to indicate what amount of personal compensation they considered equal in value to a NOK 1000 (\$100) donation to UNICEF.³ Subsequently, respondents are presented with an open-ended question regarding their preferred topics for journalistic investigation. I truthfully tell them that one random response is given to a journalist, who then will spend three days investigating this topic.

3.2.3 Part 1: Willingness to pay for 3 days of investigative journalism

I give the respondents the choice between hiring a journalist to try to reveal hidden political scandals and donating money to UNICEF. I truthfully tell them that one of the answers will be implemented.

Treatments This part of the study aims to understand if offering exclusive early access to findings increases individuals' willingness to pay for investigative journalism. On the other hand, I also want to understand if the findings are perceived as more valuable if they are shared with others. Consequently, respondents are randomly distributed among three distinct information treatments, detailed as follows:

- 1. If the journalist uncovers a scandal, we will grant you first access to the findings. In that case, the findings will be available to you on the website investorsurvey.no in a few weeks. You will, therefore, have exclusive access to the findings for a while before they are made available to others as well (*Exclusive* treatment).
- 2. If the journalist uncovers a scandal, we will make the findings available to as many people as possible as soon as possible (*Widespread* treatment).
- 3. (no more info) (Control treatment)

 $^{^{3}}$ In early January 2024, the exchange was approximately given by 1 = NOK 10.

Measuring willingness to pay Respondents face two binary decisions: whether to donate \$50 (followed by \$100) to UNICEF or to fund three days of investigative journalism. Respondents are assigned a value of \$100 if they choose to hire the journalist in both cases, a value of \$50 if they prefer donations to UNICEF in the second case, and a value of 0 otherwise. I then adjust this value downwards by their stated relative valuation of UNICEF donations. For example, if respondents indicate a willingness to forego \$100 in favor of UNICEF for journalism, and have equated this amount to for example \$24 for their own use, I then adopt \$24 as the estimate for their willingness to pay for journalism. This method yields an accurate measure of willingness to pay under the assumption that the respondents' initial relative valuations for UNICEF are truthful. Nevertheless, this method otherwise also shows how much of another good respondents are willing to give up to get more investigative journalism.

3.2.4 Part 2: Willingness to pay for investigative journalism from a public broadcaster

Respondents are informed that the next section aims to gauge the Norwegian population's willingness to support increased public funding for NRK's investigative journalism.

Treatments Respondents are divided into four groups before assessing their willingness to fund additional investigative journalism by the public broadcaster, with each group receiving one of the following text treatments randomly:

- 1. If NRK is to conduct more investigative journalism, we will ask them to do so in a politically neutral manner, for example, by investigating matters in the business sector and bureaucracy instead of focusing on specific political parties (*Neutral* treatment).
- 2. If NRK is to carry out more investigative journalism, we would like them to focus on the local level in areas lacking good news coverage (*Local* treatment).
- 3. If NRK is to conduct more investigative journalism, we will ask them to allocate a fixed annual amount in their budget over a 10-year period to ensure independence from political interference (*Independence* treatment).

4. (no more info) (Control treatment).

Ensuring incentive-compatibility Participants are assured that their feedback will be shared with the media to inform policy decisions, emphasizing the importance of consequentiality in eliciting truthful willingness to pay responses (Vossler et al., 2012). Willingness to pay is assessed via a single binary question. Policymakers have the capacity to implement the policy, and the likelihood of implementation increases with the number of respondents expressing a readiness to bear these costs. In this context, Carson and Groves (2007) demonstrate that answering truthfully is an incentive-compatible strategy.

Outcome questions Demand for investigative journalism from the public broadcaster is assessed through two specific questions. First, I estimate the willingness to pay \$15 (NOK 150) more in taxes to increase the number of investigative journalists working for the public broadcaster by 300 through the following question:⁴

- 1. Would you like to increase NRK's budget for investigative journalism to the equivalent of 300 journalists spread across the country, even if this means you would have to pay about NOK 150 more in taxes per year?
 - (a) Yes
 - (b) No

Second, I construct an alternative to public broadcasting where I ask if they rather prefer the government providing the same amount of support in subsidies for private media firms. I tell the respondents that a governmental committee from 2017 proposed that private newspapers could be exempt from payroll tax.⁵ This would also have a cost of \$15 per capita in higher taxes.⁶ The respondents then answer the following question:

⁴There are around 3.2 million tax payers (excluding retired people) in Norway, so if all pay NOK 150 this leads to an increase in tax revenues of 500 million NOK. Including indirect costs I estimate the cost per journalist around NOK 1,5 million per year.

⁵For more information (in Norwegian), see https://www.regjeringen.no/contentassets/ 6fb8633cc3574089b5362158718b0d89/utvalsleder_knut_olav_aamaas_presentasjon_ nou2017-7_07.03.2017.pdf

⁶These numbers match because I deliberately set the number of journalists to 300.

- 2. Which of the following options do you prefer?
 - (a) Increase the number of journalists at NRK by 300 people.
 - (b) Exempt news-based media from payroll tax.

These two questions provide different ways of measuring demand for more public journalism. The first question asks about how much they are willing to give up in money to get more public journalism, while the second question asks how much they are willing to give up in more support for private investigative journalism to get more public investigative journalism.

The total demand for investigative journalism from the public broadcaster is measured by the sum of these two questions.

3.2.5 Part 3: Allocation of the public broadcaster's resources

I tell the respondents that the public broadcaster operates under guidelines set by the Norwegian Parliament, and that there per now are no explicit requirements about how much of the public broadcaster's resources that should be allocated to to investigative journalism. I then ask if they want the Parliament to require that the public broadcaster uses more of its resources on investgative journalism. I tell them that more resources to journalism potentially may imply less resources to either i) entertainment, ii) sport, iii) children TV or iv) culture.

3.3 US and UK experiment

3.3.1 Sample

A subsequent survey was administered through Prolific, a platform known for yielding highquality responses (Eyal et al., 2021). Detailed pre-registration information is available on AsPredicted as #166196. This survey took place in March 2024, after the collection of the Norwegian data, and aimed to test the main parts of the Norwegian survey (Part 1 and Part 2) using 2,100 respondents from the UK and the US. I collect the same demographic variables as used in the Norwegian sample in addition to political preferences. The sample included an equal number of responses from both countries, and the sample was set to be balanced on gender. Table 3 in the Online Appendix shows that the samples do not differ much from the populations with respect to age and income, but also that the respondents have higher education than the population averages. The full set of instructions is given in Online Appendix C.

3.3.2 Part 1: Willingness to pay for 3 days of investigative journalism

This segment of the survey aims to examine US and UK respondents' willingness to fund investigative journalism.

Treatments Respondents received the same three treatments outlined in Section 3.2.3 (*Exclusive*, *Widespread*, and *Control*), albeit with minor language adjustments.

Measuring willingness to pay The Prolific platform allows for personal bonus disbursements, enabling the direct measurement of WTP for investigative journalism. Respondents face three binary choices between receiving personal bonuses (\$5, \$10, and \$20) and paying for three days of investigative journalism.⁷ The respondents are informed that one of the answers will be implemented.

3.3.3 Part 2: WTP for investigative journalism from a public broadcaster

This survey segment aims to explore US and UK respondents' demand for investigative journalism funded through public broadcasting.

Treatments Respondents were randomly distributed among three treatment groups—*Neutral*, *Local*, and *Control*—mirroring the Norwegian survey outlined in Section 3.2.4.⁸ The only difference between the US and UK versions of the survey is that UK respondents are shown "BBC" as their public broadcaster while US respondents are shown "PBS".

⁷When answering the first binary question, the respondents do not know that there are two more valuation questions.

⁸The *Independence* treatment was dropped to ensure statistical power with fewer respondents.

Outcome questions I assess demand for investigative journalism funded by public broadcasters using two questions similar to those in the Norwegian survey.

- 1. Would you support a budget increase for PBS (BBC) to fund investigative journalism if it resulted in an annual tax increase of approximately \$15 for you?
 - (a) Yes
 - (b) No
- 2. Considering alternatives for supporting investigative journalism, which of the following options would you prefer?
 - (a) Increase public support for PBS (BBC).
 - (b) Increase public support for commercial media outlets engaged in investigative journalism, through subsidies or tax incentives.

4 Results

4.1 Part 1: Willingness to pay for 3 days of journalism

4.1.1 Descriptive results

On average, Norwegian respondents indicated a willingness to give up \$61 for charity in favor of funding 3 days of investigative journalism, equating to giving up \$21 based on the assumptions outlined in Section 3.2.3. In the UK and US versions of the survey, where respondents considered forgoing potential personal bonuses, the average WTP for journalism stands at \$4. This masks significant differences between the countries, where the average control group WTP is \$3.1 in US and \$4.5 among the UK respondents. Left-wing respondents have an average WTP that is almost 60% higher than others (p < 0.001). Figure 1 in the Online Appendix shows how the WTP varies with other demographic factors in all three countries.

Norwegian respondents were categorized into two groups based on their preferred investigative topics—those with specific preferences (*Pref*) and those without (*NoPref*), as derived from their responses to an open-ended question. The purpose of this classification is to separate those that do not have strong preferences about journalism (*NoPref* = 1) from the others. 35% of respondents exhibit no specific preferences regarding investigative topics, and this tendency correlates with being young, female, and having a lower level of education. Norwegian respondents without such specific preferences have a WTP that is around \$7, or 30%, lower than others.

4.1.2 Treatment effects

Exclusive treatment The *Exclusivity* treatment, as shown in Table 1, had no significant impact on WTP in any of the three countries, indicating that exclusive early access to a journalist's findings did not meaningfully affect the estimated willingness to pay.

Widespread treatment The Widespread treatment did not significantly affect WTP in Norway, as shown by Table 1. However, exposure to this treatment elevated WTP by \$0.8 among US and UK respondents (p = 0.048), marking an increase of over 20 percent relative to the control group.

4.2 Part 2: Demand for public broadcasting

4.2.1 Descriptive evidence

In Norway, 54% of control group respondents were willing to pay an additional \$15 in taxes for more investigative journalism through the public broadcaster. 40% preferred to support journalism from the public broadcaster, while the other 60% preferred more public support for private journalism. Not surprisingly, responses to these two questions showed a strong positive correlation (p < 0.001). Among respondents with a preference for private journalism, 38% are willing to incur higher taxes for public journalism. In contrast, 78% of those favoring public journalism indicate a willingness to pay more taxes. This is consistent

with much of the opposition to pay more in taxes for more investigative journalism from the public broadcaster being related to specific issues with the public broadcaster. There is a strong negative correlation between the willingness to pay for public broadcaster investigative journalism and the *NoPref* variable (p < 0.001).

55% of US respondents were willing to pay \$15 more in taxes to fund more investigative journalism from the public broadcaster, while only 35% of UK respondents were willing to do the same. The willigness to pay for public broadcasting correlates strongly with political preferences. Among US respondents, 70% of left-wing respondents want to pay, while only 40% of others want to pay for public broadcasting. In the UK, 50% of left-wing respondents and 26% of others want to pay more in taxes for public broadcasting. While 70% of US respondents prefer public support for journalism from the public broadcaster over public support to private media firms, only 35% of UK respondents agree. Figure 2 in the Online Appendix shows how preferences for public broadcasting correlate with demographic factors.

4.2.2 Treatment effects

Table 2 shows that Norwegian respondents receiving the *Neutral* treatment were 6 percentage points more likely to support increased public broadcasting through taxes (p = 0.033), and 5 percentage points more willing to support more public journalism over private media subsidies (p = 0.075). Consequently, those assigned to this treatment exhibited a higher total demand for public investigative journalism (p = 0.018). Notably, treatment effects were observed solely among participants who initially expressed specific journalism preferences (*NoPref* = 0). Table 4 in the Online Appendix shows that getting the *Neutral* treatment increases the willingness to pay for the public broadcaster for this group by 11 percentage points (p = 0.001) and increases the share preferring public over private subsidies by 7 percentage points (p = 0.025). The *Local* and *Independence* treatments yield no significant or substantive effects on these outcomes.⁹

Table 2 shows that UK respondents assigned to the Neutral treatment are 7 percentage

⁹Table 5 in the Online Appendix also shows that there are no interaction effects between these treatments and earlier revealed preferences for journalism.

points more willing to pay more in taxes for more public broadcasting (p = 0.069), which implies an increase in support of 18 percent relative to the control group. Respondents assigned to this treatment are also 7 percentage points more likely to prefer more public over private subsidies (p = 0.057). The total demand for public journalism for UK respondents is then higher after receiving the *Neutral* treatment (p = 0.016). The estimated effect of the *Local* treatment is close to zero. Interestingly, the treatment effects for the two countries with a large public broadcaster are relatively similar. For the US respondents, there are no significant or meaningful treatment effects from any of the treatments on the demand for public investigative journalism.

4.3 Part 3

Approximately 60% of Norwegian respondents want Parliament to require that the public broadcaster dedicates more resources to investigative journalism, with consistent support irrespective of how resources are reallocated. This support correlates positively with education (p = 0.01) and negatively with the NoPref variable (p < 0.001).

5 Norwegian public broadcaster bias survey

In May 2024, I conducted a survey to explore the relationship between perceived biases in public broadcasters and support for their involvement in more investigative journalism. This study was pre-registered (AsPredicted #173023) and involved a sample of 1,000 representative Norwegians, collected in collaboration with YouGov Norway.

Respondents were first presented with a list of potential biases in public broadcasting, after which they were asked about their support for the broadcaster engaging in more investigative journalism. This question is hence somewhat similar to the public broadcasting question in the main survey, but this version does not involve paying more in taxes. The response options provided were 'yes,' 'no,' or 'I do not know.' Survey instructions are available in Online Appendix D.

Results The survey results indicated that a majority of respondents are in favor of increasing investigative journalism undertaken by public broadcasters. 62% of respondents expressed a desire for more investigative journalism from the public broadcaster, while only 18% were against it and the remaining respondents were undecided. Among those identifying with left-wing political preferences, 81% supported more investigative journalism from the public broadcaster.

Interestingly, the data did not show a strong overall correlation between perceptions of broadcaster bias and support for more public investigative journalism. However, distinctions emerged when political agreement with perceived biases was considered. 22% of those who perceived bias and disagreed politically with the broadcaster's slant opposed more investigative journalism. Conversely, only 13% of those who perceived bias but agreed with the broadcaster's political orientation were against increased investigative journalism .

23% of respondents who believed that individual journalists significantly influence outcomes opposed more public investigative journalism. 22% of those who thought the broadcaster was biased in favor of parties that support its funding were also against more investigative journalism. Detailed correlations are provided in Table 6 in the Online Appendix.

6 Integrating empirical results into the theoretical framework

This section integrates the empirical results into the theoretical framework from Section 2 to examine the under-provision of investigative journalism and identify potential solutions to this market failure.

6.1 Basic model: Under-provision of investigative journalism

Employing a journalist incurs significant costs, with the marginal cost for 3 days of journalism estimated at c'(h) = \$2,000.¹⁰ Using the estimated WTP of \\$4 per increase in 3 days of journalism ($b'_w(h) = 4$), Proposition 2.1 indicates there is no Nash equilibrium where individuals would pay the full price for an increase in journalism independently, implying a market failure in provision. However, across all three countries, the data shows that $b'_w(h) > \frac{c'(h)}{N}$. For Norway, I estimate $\frac{c'(h)}{N} = \frac{\$2000}{3*10^6} \approx \$0,0007$. This cost is even lower in countries with larger populations. According to Proposition 2.2 these parameter values indicate underprovision of investigative journalism.

6.2 Government solution: Public funding of journalism

Even with inefficiencies where 90 percent of resources are potentially wasted, the adjusted cost per capita in Norway for financing three additional days of journalism is only $\frac{c'(h)}{(1-d)N} \approx$ \$0,007. Thus, it is probable that $b'_w(h) > \frac{c'(h)}{(1-d)N}$. However, for public journalism to be supported by voter *i*, Equation (2) requires that

$$b'_{w}(h) + b'_{p,i}(h) > \frac{c'(h)}{(1-d)N}$$

Respondents who indicated they do not wish to pay additional taxes for public investigative journalism suggest $b'_w(h) + b'_{p,i}(h) < \frac{c'(h)}{(1-d)N}$. For a given perceived cost, a low value of $b'_w(h) + b'_{p,i}(h)$ may reflect a general disinterest in investigative journalism ($b'_w(h) \le 0$) or a specific reluctance to support public investigative journalism ($b'_{p,i}(h) < 0$). As I first elicit their WTP to pay for 3 days of journalism, I can infer that respondents with a positive WTP in the first section have $b'_w(h) > 0$. If respondents are willing to give up money to finance 3 days of journalism, but not willing to give up money to finance 70,000 days of journalism from the public broadcaster, this can be interpreted as having $b'_{p,i}(h) < 0$.¹¹

¹⁰Assuming the annual salary of a journalist is around \$150,000 in each of the three countries, the cost for three days approximates to \$2,000.

¹¹According to Statistics Norway, a typical employee works 230 days a year, equating 300 journalists to 69,000 journalist-days. Considering population ratios, this number increases significantly for the U.S.

11 percent of Norwegian respondents in the control group have $b'_w(h) > 0$ and still have a disinterest for investigative journalism from the public broadcaster, while 14 percent of UK respondents and 4 percent of US respondents display such preferences.

Treatment effect The *Neutral* treatment can be interpreted as aiming to neutralize political payoffs, which implies $b'_{p,i}(h) = 0 \forall i$ if this term relates to concerns for political non-neutrality. Table 2 indicates that respondents in the *Neutral* treatment are 3 percentage points less likely to display low public-specific WTP (p = 0.034), a 27% decrease compared to the control group.¹² Table 4 in the Online Appendix reveals that the *Neutral* treatment primarily influences those who initially expressed a preference for journalism (*NoPref* = 0), reducing the likelihood of low public-specific WTP by 6 percentage points (p < 0.01) for this group, nearly a 45% decrease relative to the control group.

The Neutral treatment resulted in a 4 percentage point reduction in low public-specific WTP in the UK sample (p = 0.09), translating to a 28% decrease. Table 2 does not show a significant treatment effect in the US sample.

These findings suggest that dampening the political payoff will increase electoral support. Additionally, the findings from the Norwegian follow-up experiment described in Section 5 aligns with theoretical expectations that the sign of $b'_{p,i}(h)$ affects preferences for public investigative journalism.

6.3 Coasian solution: Exclusive output rights

The analysis suggests $b'_e(h)$ is approximately zero or negative, implying that the conditions set forth in Proposition 2.4 for a Coasian solution—providing exclusive output rights—are unlikely to be met.

¹²This part of the analysis was pre-specified only for the UK and US survey components, so interpretations for the Norwegian data should be approached with caution.

7 Conclusion

Investigative journalism plays a pivotal role in upholding political accountability, yet it remains largely provided by private media firms. This paper demonstrates that people value investigative journalism. However, capturing this value presents challenges for private media firms, potentially leading to its under-provision.

This paper offers insights into potential solutions for this market failure. I suggest that a Coasian approach—temporarily assigning property rights to the output of investigative journalism—is unlikely to resolve the issue, as exclusive access does not elevate individuals' willingness to pay for investigative journalism. In the US and UK versions of the survey, the average WTP is actually higher when the output is shared widely. Conversely, this paper argues for government intervention as a partial solution to this market failure. While a small majority of respondents in Norway and the US are willing to pay more in taxes for investigative journalism from the public broadcaster, the support is dampened in both Norway and the UK because of concerns for the neutrality of the public broadcaster.

Both the Norwegian public broadcaster and the BBC are considered independent broadcasters (Prat, 2015), which leads to a subtle take-away message of this paper for policy-makers considering increasing funding for public investigative journalism: Guaranteeing political neutrality involves not just maintaining independence from political involvement, but also ensuring the public broadcaster itself is perceived as neutral.

8 Main tables and figures

		V	VTP					
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Exclusive	0.508 (1.708)		-0.332 (0.379)		-0.269 (0.580)		-0.413 (0.492)	
Widespread		-0.343 (1.704)		0.790** (0.399)		1.231** (0.623)		0.430 (0.507)
Observations Control Mean NO	1820 20.58	1809 20.58	1398	1414	685	674	713	740
Control Mean US/UK Control Mean UK Control Mean US			3.74	3.74	4.46	4.46	3.06	3.06

Table 1: Demand for 3 days of investigative journalism

Standard errors in parentheses

* p<0.1, ** p<0.05, *** p<0.01

Note: The outcome variable WTP shows how much people are willing to pay to finance 3 days of investigative journalism. Column (1) and (2) show the treatment effects in US dollars for the *Exclusive* and *Widespread* treatments for the Norwegian respondents using OLS with robust standard errors and demographic control variables. Column (3) and (4) show the corresponding effects for the US/UK respondents. Column (5) and (6) separate the effect only for UK respondents, while Column (7) and (8) separate the effect for US respondents.

		WTP fo	r public br	oadcaster			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Local	0.0363				0.00970		0.0231
	(0.0267)				(0.0357)		(0.0346)
Independence		0.0243					
		(0.0266)					
Neutral			0.0564**	0.0653*		0.00340	
			(0.0264)	(0.0359)		(0.0351)	
Control Mean	0.54	0.54	0.54	0.35	0.35	0.55	0.55
Observations	1363	1364	1363	688	682	717	740
I	Preferences	for public	broadcaste	er over priv	ate subsid	lies	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Local	-0.00413				0.0535		-0.00297
	(0.0261)				(0.0364)		(0.0334)
Independence		0.00824					
-		(0.0261)					
Neutral			0.0470*	0.0691*		-0.0489	
			(0.0264)	(0.0363)		(0.0338)	
Control Mean	0.40	0.40	0.40	0.35	0.35	0.70	0.70
Observations	1363	1364	1363	688	682	717	740
		Low pu	blic-specific	c demand			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Local	-0.0313**	:			-0.009	9	-0.0133
	(0.0154)				(0.026	6)	(0.0136)
Independence		-0.0196					
-		(0.0159)					
Neutral			-0.0328*	* -0.0426	*	0.000	5
			(0.0154)	(0.0251)	(0.015	1)
Control Mean	0.11	0.11	0.11	0.14	0.14	0.04	0.04
Observations	1363	1364	1363	688	682	717	740

Table 2: Demand for public broadcaster

Note: Column (1) to (3) show the treatment effect on demand for public broadcasting for Norwegian respondents using OLS with robust standard errors and demographic control variables for the 3 treatments *Local*, *Independence* and *Neutral*. Column (4) and (5) show the corresponding treatment effects for UK respondents, while Column (6) and (7) show the US treatment effects. *WTP for public broadcaster* is a binary (0/1) variable taking the value 1 if respondents want to pay \$15 dollar in taxes for more public investigative journalism. *Preferences for public broadcaster over private subsidies* is a binary (0/1) variable taking the value 1 for respondents preferring support to the public broadcaster over private subsidies. *Low public-specific demand* is a binary (0/1) variable taking the value 1 for respondents willing to pay for investigative journalism, but not willing to pay taxes for more public investigative journalism. *Standard errors in parentheses*. * p<0.1, ** p<0.05, *** p<0.01

References

- Acemoglu, Daron, Ali Makhdoumi, Azarakhsh Malekian, and Asu Ozdaglar, "Too much data: Prices and inefficiencies in data markets," *American Economic Journal: Microeconomics*, 2022, *14* (4), 218–256.
- Allern, Sigurd and Ester Pollack, "Journalism as a public good: A Scandinavian perspective," *Journalism*, 2019, 20 (11), 1423–1439.
- Angelucci, Charles and Julia Cagé, "Newspapers in times of low advertising revenues," *American Economic Journal: Microeconomics*, 2019, *11* (3), 319–364.
- Armstrong, Mark, "Public service broadcasting," Fiscal Studies, 2005, 26 (3), 281–299.
- _ and Helen Weeds, "Public service broadcasting in the digital world," 2007.
- Banerjee, Abhijit, Selvan Kumar, Rohini Pande, and Felix Su, "Do informed voters make better choices? Experimental evidence from urban India," *Unpublished manuscript*, 2011.
- Bursztyn, Leonardo, Aakaash Rao, Christopher Roth, and David Yanagizawa-Drott, "Opinions as facts," *The Review of Economic Studies*, 2023, 90 (4), 1832–1864.
- __, Benjamin R Handel, Rafael Jimenez, and Christopher Roth, "When product markets become collective traps: The case of social media," Technical Report, National Bureau of Economic Research 2023.
- Cagé, Julia, Saving the media: Capitalism, crowdfunding, and democracy, Harvard University Press, 2016.
- Carson, Richard T and Theodore Groves, "Incentive and informational properties of preference questions," *Environmental and resource economics*, 2007, *37*, 181–210.
- Casey, Michael, "Loss of local news hinders ability to watchdog government," Associated Press, 2019. https://apnews.com/article/ 816b31f8571d4b759227e58c6252e99d.
- Choi, Jay Pil, Doh-Shin Jeon, and Byung-Cheol Kim, "Privacy and personal data collection with information externalities," *Journal of Public Economics*, 2019, *173*, 113–124.
- Chopra, Felix, Ingar Haaland, and Christopher Roth, "Do people demand fact-checked news? Evidence from US Democrats," *Journal of Public Economics*, 2022, 205, 104549.
- _, _, and _, "The demand for news: Accuracy concerns versus belief confirmation motives," *NHH Dept. of Economics Discussion Paper*, 2023, (01).
- Coase, Ronald Harry, British broadcasting: A study in monopoly, Routledge, 1950.
- _, "The problem of social cost," The journal of Law and Economics, 1960, 56 (4), 837-877.
- **Djankov, Simeon, Caralee McLiesh, Tatiana Nenova, and Andrei Shleifer**, "Who owns the media?," *The Journal of Law and Economics*, 2003, *46* (2), 341–382.

- **Durante, Ruben and Brian Knight**, "Partisan control, media bias, and viewer responses: Evidence from Berlusconi's Italy," *Journal of the European Economic Association*, 2012, *10* (3), 451–481.
- **Dyck, Alexander, Adair Morse, and Luigi Zingales**, "Who blows the whistle on corporate fraud?," *The journal of finance*, 2010, 65 (6), 2213–2253.
- _ and Luigi Zingales, "The corporate governance role of the media," 2002.
- Eisensee, Thomas and David Strömberg, "News droughts, news floods, and US disaster relief," *The Quarterly Journal of Economics*, 2007, *122* (2), 693–728.
- Enikolopov, Ruben, Maria Petrova, and Ekaterina Zhuravskaya, "Media and political persuasion: Evidence from Russia," *American economic review*, 2011, *101* (7), 3253–3285.
- **Eyal, Peer, Rothschild David, Gordon Andrew, Evernden Zak, and Damer Ekaterina**, "Data quality of platforms and panels for online behavioral research," *Behavior research methods*, 2021, pp. 1–20.
- Faia, Ester, Andreas Fuster, Vincenzo Pezone, and Basit Zafar, "Biases in information selection and processing: Survey evidence from the pandemic," *Review of Economics and Statistics*, 2022, pp. 1–46.
- Finan, Frederico and Claudio Ferraz, "Exposing Corrupt Politicians: The Effect of Brazil's Publicly Released Audits on Electoral Outcomes," 2008.
- Ganguly, Ananda and Joshua Tasoff, "Fantasy and dread: The demand for information and the consumption utility of the future," *Management Science*, 2017, *63* (12), 4037–4060.
- Gehlbach, Scott and Konstantin Sonin, "Government control of the media," *Journal of public Economics*, 2014, *118*, 163–171.
- Gentzkow, Matthew and Jesse M Shapiro, "Media bias and reputation," *Journal of political Economy*, 2006, *114* (2), 280–316.
- _, _, and Michael Sinkinson, "The Effect of Newspaper Entry and Exit on Electoral Politics," *The American Economics Review*, 2011.
- Haaland, Ingar, Christopher Roth, and Johannes Wohlfart, "Designing Information Provision Experiments," *Journal of Economic Literature*, 3 2023, *61* (1), 3–40.
- Hamilton, James T, Democracy's detectives: The economics of investigative journalism, Harvard University Press, 2016.
- Heap, Shaun P Hargreaves, "Television in a digital age: What role for public service broadcasting?," *Economic Policy*, 2005, 20 (41), 112–157.
- Knight, Brian and Ana Tribin, "Opposition media, state censorship, and political accountability: Evidence from Chavez's Venezuela," *The World Bank Economic Review*, 2022, *36* (2), 455–487.
- Latos, Maria, Frank Lobigs, and Holger Wormer, "Peer-based research funding as a model for journalism funding," *Journalism*, 2023, p. 14648849231215662.

- **Miller, Gregory S**, "The press as a watchdog for accounting fraud," *Journal of accounting research*, 2006, 44 (5), 1001–1033.
- Mullainathan, Sendhil and Andrei Shleifer, "The Market for News," American Economic Review, 2005, 95 (4), 1031–1053.
- **Murschetz, Paul Clemens**, "State aid for independent news journalism in the public interest? A critical debate of government funding models and principles, the market failure paradigm, and policy efficacy," *Digital Journalism*, 2020, 8 (6), 720–739.
- **Neff, Timothy and Victor Pickard**, "Funding democracy: Public media and democratic health in 33 countries," *The International Journal of Press/Politics*, 2021, p. 19401612211060255.
- **OECD**, "Investigative Journalism and Fiscal Transparency: Catalysts for Addressing Corruption in Oil-Producing Developing Countries," OECD Report, Organisation for Economic Co-operation and Development (OECD), Paris, France 2023. Available online: https://www.oecd.org/dac/invetigative-journalism-fiscal-transparency-iff.pdf.
- **Pickard, Victor**, *Democracy without journalism?: Confronting the misinformation society*, Oxford University Press, 2019.
- **Pino, Dominic**, "Journalism Is Not a Public Good," *National Review*, 2023. https://www.nationalreview.com/corner/journalism-is-not-a-public-good/.
- **Prat, Andrea**, "Media capture and media power," in "Handbook of media economics," Vol. 1, Elsevier, 2015, pp. 669–686.
- Samuelson, Paul A, "The pure theory of public expenditure," *The review of economics and statistics*, 1954, *36* (4), 387–389.
- Sehl, Annika, Richard Fletcher, and Robert G Picard, "Crowding out: Is there evidence that public service media harm markets? A cross-national comparative analysis of commercial television and online news providers," *European Journal of Communication*, 2020, 35 (4), 389–409.
- Snyder, James M and David Strömberg, "Press coverage and political accountability," *Journal of political Economy*, 2010, *118* (2), 355–408.
- Stiglitz, Joseph E., "The Media: Information as a Public Good," 2021.
- **UNESCO**, "Journalism is a public good: World trends in freedom of expression and media development, global report 2021/2022," 2022.
- **Vossler, Christian A, Maurice Doyon, and Daniel Rondeau**, "Truth in consequentiality: theory and field evidence on discrete choice experiments," *American Economic Journal: Microeconomics*, 2012, *4* (4), 145–171.
- Walker, Mason, "U.S. newsroom employment has fallen 26% since 2008," Pew Research Center 7 2021. URL: https://www.pewresearch.org/short-reads/2021/07/13/u-s-newsroom-employment-has-fallen-26-since-2008/.
- Walters, Patrick, "Journalism Is a Public Good and Should Be Publicly Funded," Scientific American, 2023. https://www.scientificamerican.com/article/ journalism-is-a-public-good-and-should-be-publicly-funded/.

Summary of the Online Appendix

Section A provides additional tables and figures. Section B provide the translated Norwegian instructions. Section C provides the instructions for the data collection in the US and UK, while Section D provides instructions for the second Norwegian survey.

A Additional tables and figures

	Populatio	n vs sample		
	Sample US	Sample UK	Population US	Population UK
Age	38 years	41 years	39 years	40 years
Share with higher education	64%	66%	34%	23%
Income	\$78,000	\$64,000	\$75,000	\$41,000
Male share	51%	50%	50%	49%

Table 3: Demography table

Note: US population data is given by US Census Bureau. The UK population data is given by Office for National Statistics and OECD. For the population income variables, the household is chosen as unit of measurement. The sample variables for age and income are constructed by giving each observation the mean value within its category.

			WTP	
	(1)	(2)	(3)	(4)
Neutral	0.107***	0.0733**	0.180***	-0.0589***
	(0.0321)	(0.0326)	(0.0533)	(0.0195)
NoPref	-0.0970**	-0.0112	-0.108	-0.0517**
	(0.0409)	(0.0394)	(0.0668)	(0.0232)
Neutral*NoPref	-0.149***	-0.0770	-0.226**	0.0764**
	(0.0561)	(0.0557)	(0.0931)	(0.0315)
Observations	1363	1363	1363	1363

 Table 4: Interaction effects

Standard errors in parentheses * p<0.1, ** p<0.05, *** p<0.01

Note: This table shows interaction effects of the *Neutral* treatment and preferences for journalism (*NoPref*). The first row is the treatment effect for being exposed to the *Neutral* treatment for respondents with NoPref=0. Column (1) shows effects on WTP for public broadcaster, Column (2) shows effects on Preferences for public support over private subsidies, Column (3) shows effects on Total demand for public broadcaster, while Column (4) shows effect on Low public-specific demand.

WTP						
	(1)	(2)	(3)	(4)	(5)	(6)
Local	0.0336 (0.0327)	-0.00440 (0.0320)	0.0292 (0.0538)			
NoPref	-0.0947** (0.0410)	-0.0109 (0.0394)	-0.106 (0.0669)	-0.0945** (0.0410)	-0.00924 (0.0395)	-0.104 (0.0671)
Local*NoPref	0.00830 (0.0569)	0.000793 (0.0552)	0.00909 (0.0939)			
Independence				0.0344 (0.0325)	0.00161 (0.0321)	0.0361 (0.0541)
Independence*NoPref				-0.0296 (0.0564)	0.0193 (0.0553)	-0.0103 (0.0928)
Observations	1363	1363	1363	1364	1364	1364

Table 5: Interaction effects

Standard errors in parentheses

* p<0.1, ** p<0.05, *** p<0.01

Note: Column (1) to Column (3) show the interaction effects between the Local treatment and and preferences for journalism (NoPref). The first row is the treatment effect for being exposed to the Local treatment for respondents with NoPref=0. Column (1) shows effects on WTP for public broadcaster, Column (2) shows effects on Preferences for public support over private subsidies while Column (3) shows effects on Total demand for public broadcaster. Column (4) to Column (6) show interaction effects between the Independence treatment and NoPref variable, where the fourth row shows the effect of this treatment on respondents with NoPref=0.

• PP • • • • • • • • • • • • • • • • • •		•••••• J° ••••		
	(1)	(2)	(3)	(4)
Funding influences outcome	0.0460			
	(0.0283)			
Journalists influence outcome		0.0604*		
		(0.0315)		
Bias and Agree			-0.0638**	
C			(0.0284)	
Bias and Disagree				0.0540*
				(0.0286)
Observations	1015	1015	1015	1015
Control Mean	0.17			
Control Mean		0.17		
Control Mean			0.19	

Opposition to investigative journalism

Table 6: Opposition to more public investigative journalism

Standard errors in parentheses

Control Mean

* p<0.1, ** p<0.05, *** p<0.01

Note: The outcome variable is the share of respondents saying they do not want more investigative journalism the public broadcaster. Column (1) shows how this variable correlates with respondents believing that the public broadcaster is more supportive of parties wanting to give more favoriable funding. Column (2) shows the correlation with respondents believing the public broadcaster lets journalists' own political opinions affect the journalism. Column (3) shows the correlation with respondents stating they believe the public broadcaster is biased, but in the political direction they prefer. Column (4) shows the correlation with respondents stating they believe the public broadcaster is biased in the opposite political direction.

0.17



Figure 1: Correlation between demographic factors and WTP

Note: This figure shows OLS estimates using multiple regression where the dependent variable is WTP (in US dollars) for 3 days of journalism for the three different countries. 95% confidence intervals are indicated in the figure.



Figure 2: Correlation between demographic factors and WTP for public broadcaster

Note: This figure shows OLS estimates using multiple regression where the dependent variable is WTP (in US dollars) for investigative journalism from the public broadcaster for the three different countries. 95% confidence intervals are indicated in the figure.

B Translation of Norwegian experimental instructions

This section provides the translation of the experimental instructions. I have chosen a literal translation approach prioritizing exact correspondence in meaning over style and tone. The Norwegian currency is referred to as "kroner" in Norwegian, and I keep "x kroner" as the expression for x units of currency rather than the more formal "NOK x". This also means that the language will be somewhat different from the instructions given to the US and UK respondents.

B.1 Introduction

	What amount would you need to receive for yourself for it to feel as valuable as giving 1000 kroner to UNICEF? If, for example, you're not interested in giving to UNICEF at all, enter 0 Kroner. If you value money to UNICEF as highly as money to yourself, enter 1000 kroner.
	Valuation of UNICEF donation
lı iı	n the next part of the survey, we want to hear your opinion on nvestigative journalism.
V V	We will select one person who will have the opportunity to decide what a journalist should work on.
, r c	After the survey, we will actually draw one person's response at andom and send this answer to a journalist, who will spend three days investigating the suggested topic.
T	This is a chance to initiate investigative journalism on topics you eel are not getting enough attention today.
	-
	Introduction to open-ended question

What do you want the journalist to investigate? Please provide a rationale in 2-3 sentences for your choice.



B.2 Part 1

B.2.1 Treatments

Lately, there has been much talk about scandals among Norwegian politicians, such as stock purchases, commuter housing, and issues of propriety. These cases have been uncovered thanks to investigative journalism, where journalists and newspapers have spent time and resources checking if politicians comply with the regulations.

Now, we will give you some choices, and we will randomly select a person whose choice will be implemented in reality. If you are chosen, your choice will determine what happens after this survey, so it is important to answer honestly.

You have to choose between two options: Either a journalist spends three days trying to uncover political scandals, or we make a donation to UNICEF.

If you choose investigative journalism, the journalist will spend three days attempting to discover if there are more unknown scandals related to Norwegian politicians from all parties.

If the journalist uncovers a scandal, we will grant you first access to the findings. In that case, the findings will be available to you on the website investorsurvey.no in a few weeks. You will, therefore, have exclusive access to the findings for a while before they are made available to others as well.

Exclusive treatment

Lately, there has been much talk about scandals among Norwegian politicians, such as stock purchases, commuter housing, and issues of propriety. These cases have been uncovered thanks to investigative journalism, where journalists and newspapers have spent time and resources checking if politicians comply with the regulations.

Now, we will give you some choices, and we will randomly select a person whose choice will be implemented in reality. If you are chosen, your choice will determine what happens after this survey, so it is important to answer honestly.

You have to choose between two options: Either a journalist spends three days trying to uncover political scandals, or we make a donation to UNICEF.

If you choose investigative journalism, the journalist will spend three days attempting to discover if there are more unknown scandals related to Norwegian politicians from all parties.

If the journalist uncovers a scandal, we will make the findings available to as many people as possible as soon as possible after the journalist has determined what happened.

Widespread treatment

Lately, there has been much talk about scandals among Norwegian politicians, such as stock purchases, commuter housing, and issues of propriety. These cases have been uncovered thanks to investigative journalism, where journalists and newspapers have spent time and resources checking if politicians comply with the regulations.

Now, we will give you some choices, and we will randomly select a person whose choice will be implemented in reality. If you are chosen, your choice will determine what happens after this survey, so it is important to answer honestly.

You have to choose between two options: Either a journalist spends three days trying to uncover political scandals, or we make a donation to UNICEF.

If you choose investigative journalism, the journalist will spend three days attempting to discover if there are more unknown scandals related to Norwegian politicians from all parties.

Control treatment

B.2.2 Willingness to pay

What would you prefer: a donation of 500 kroner to UNICEF or to fund three days of investigative journalism?
O I prefer a donation of 500 kroner to UNICEF
O I prefer to fund three days of investigative journalism
-

Willingness to pay (NOK 500)

What would you prefer: a donation of 1000 kroner to UNICEF or to fund three days of investigative journalism?

O I prefer a donation of 1000 kroner to UNICEF

 \bigcirc I prefer to fund three days of investigative journalism

Willingness to pay (NOK 1000)

B.3 Part 2

B.3.1 Treatments

We will now explore your opinions on investigative journalism and NRK.

Your responses are important. This survey is conducted to understand Norwegians' willingness to pay for more investigative journalism at NRK. The results will be shared through a summary in national newspapers and will be communicated to NRK and Norwegian politicians.

If NRK is to conduct more investigative journalism, we will ask them to do so in a politically neutral manner, for example, by investigating matters in the business sector and bureaucracy instead of focusing on specific political parties.

Neutral treatment

We will now explore your opinions on investigative journalism and NRK.

Your responses are important. This survey is conducted to understand Norwegians' willingness to pay for more investigative journalism at NRK. The results will be shared through a summary in national newspapers and will be communicated to NRK and Norwegian politicians.

If NRK is to carry out more investigative journalism, we would like them to focus on the local level in areas lacking good news coverage.

Local treatment

We will now explore your opinions on investigative journalism and NRK.

Your responses are important. This survey is conducted to understand Norwegians' willingness to pay for more investigative journalism at NRK. The results will be shared through a summary in national newspapers and will be communicated to NRK and Norwegian politicians.

If NRK is to conduct more investigative journalism, we will ask them to allocate a fixed annual amount in their budget over a 10-year period to ensure independence from political interference.

Independence treatment

We will now explore your opinions on investigative journalism and NRK.

Your responses are important. This survey is conducted to understand Norwegians' willingness to pay for more investigative journalism at NRK. The results will be shared through a summary in national newspapers and will be communicated to NRK and Norwegian politicians.

Control treatment

B.3.2 Demand for public investigative journalism

Would you like to increase NRK's budget for investigative journalism to the equivalent of 300 journalists spread across the country, even if this means you would have to pay about 150 kroner more in taxes per year?

O Yes

WTP for NRK

An alternative to public support for NRK is to increase public support for other media outlets engaged in investigative journalism. The Media Diversity Committee has proposed exempting news-based media from payroll tax, which would reduce the costs of hiring more journalists. This proposal would also entail an additional cost of about 150 kroner annually per person in increased taxes.

Introduction to public (NRK) vs private subsidies

Which of the following options do you prefer?

O Increase the number of journalists at NRK by 300 people

O Exempt news-based media from payroll tax

Demand for NRK vs private subsidies

B.4 Part 3

An alternative to increasing NRK's budget is to make changes in how NRK prioritizes its resources. NRK operates under guidelines set by the Norwegian parliament, but currently, there are no requirements in these guidelines that specifically dictate how much resources NRK should allocate to investigative journalism. Increasing the focus on investigative journalism could potentially lead to fewer resources for entertainment programs.

Re-allocate NRK's existing resources to more investigative journalism: less entertainment

An alternative to increasing NRK's budget is to make changes in how NRK prioritizes its resources. NRK operates under guidelines set by the Norwegian parliament, but currently, there are no requirements in these guidelines that specifically dictate how much resources NRK should allocate to investigative journalism. Increasing the focus on investigative journalism could potentially lead to fewer resources for sports coverage.

Re-allocate NRK's existing resources to more investigative journalism: less sport

An alternative to increasing NRK's budget is to make changes in how NRK prioritizes its resources. NRK operates under guidelines set by the Norwegian parliament, but currently, there are no requirements in these guidelines that specifically dictate how much resources NRK should allocate to investigative journalism. Increasing the focus on investigative journalism could potentially lead to fewer resources for TV programs aimed at children and youth.

Re-allocate NRK's existing resources to more investigative journalism: less children TV

An alternative to increasing NRK's budget is to make changes in how NRK prioritizes its resources. NRK operates under guidelines set by the Norwegian parliament, but currently, there are no requirements in these guidelines that specifically dictate how much resources NRK should allocate to investigative journalism. Increasing the focus on investigative journalism could potentially lead to fewer resources for cultural programs.

Re-allocate NRK's existing resources to more investigative journalism: less culture

Do you want the Norwegian parliament to impose requirements
on NRK to increase the proportion of resources allocated to
investigative journalism?
() Yes
O No

Re-allocate NRK's existing resources to more investigative journalism

We will now explore how you wish NRK to organize its investigative journalism.

Your responses will be used to provide NRK and politicians with better insight into Norwegians' preferences for how NRK should organize its investigative journalism.

Introduction to open-ended question about NRK's allocations

How do you want NRK to organize its investigative journalism? Please provide a rationale in 2–3 sentences for your choice.

Open-ended question about NRK's allocations

C US and UK experimental instructions

C.1 Part 1

C.1.1 Treatments

We are conducting an exercise where your choices may have real consequences. One participant will be randomly selected, and their chosen option will be enacted following this survey.

You will be asked to choose between the following two options:

Investigative Journalism: A journalist will dedicate three days to investigating potential political scandals. You will be granted early access to the investigation's findings. These will be posted on the website investorsurvey.online, where you will have the privilege of exclusive access for a period before the information is released to the broader public.

Personal Bonus: You receive a personal financial bonus.

Exclusive treatment

We are conducting an exercise where your choices may have real consequences. One participant will be randomly selected, and their chosen option will be enacted following this survey.

You will be asked to choose between the following two options:

Investigative Journalism: A journalist will dedicate three days to investigating potential political scandals. Should any scandals be uncovered, we commit to disseminating the information widely and promptly, ensuring the public is informed of the journalist's findings.

Personal Bonus: You receive a personal financial bonus.

Widespread treatment

We are conducting an exercise where your choices may have real consequences. One participant will be randomly selected, and their chosen option will be enacted following this survey. You will be asked to choose between the following two options:

Investigative Journalism: A journalist will dedicate three days to investigating potential political scandals.

Personal Bonus: You receive a personal financial bonus.

Control treatment

C.1.2 Willingness to pay

which option would you preter?
O A \$5 personal bonus.
$\ensuremath{O}\xspace$ Funding three days of investigative journalism to uncover potential political scandals.

Willingness to pay (\$5)

Which option would you prefer?
○ A \$10 personal bonus.
\ensuremath{O} Funding three days of investigative journalism to uncover potential political scandals.

Willingness to pay (\$10)

Wh	ich option would you prefer?
0	A \$20 personal bonus.
0	Funding three days of investigative journalism to uncover potential political scandals.

Willingness to pay (\$20)

C.2 Part 2

C.2.1 Treatments (UK respondents are shown "BBC" rather than "PBS")

We're interested in gathering your insights on the role of investigative journalism, specifically within the context of PBS (Public Broadcasting Service).

Your input is important as we seek to understand Americans' interest in funding investigative journalism efforts at PBS. The findings from this survey will be compiled into a research report and shared with the public.

Should PBS expand its investigative journalism efforts, we aim to ensure such initiatives are approached with political neutrality. This might include investigating topics related to the business sector and bureaucracy, thereby avoiding focus on any single political party.

Neutral treatment

We're interested in gathering your insights on the role of investigative journalism, specifically within the context of PBS (Public Broadcasting Service).

Your input is important as we seek to understand Americans' interest in funding investigative journalism efforts at PBS. The findings from this survey will be compiled into a research report and shared with the public.

Should PBS expand its investigative journalism efforts, we aim to direct these initiatives towards the local level, especially targeting areas suffering from a lack of news coverage.

Local treatment

We're interested in gathering your insights on the role of investigative journalism, specifically within the context of PBS (Public Broadcasting Service).

Your input is important as we seek to understand Americans' interest in funding investigative journalism efforts at PBS. The findings from this survey will be compiled into a research report and shared with the public.

Control treatment

C.2.2 Demand for public investigative journalism (UK respondents are shown "BBC" rather than "PBS")

Would you support a budget increase for PBS to fund investigative journalism if it resulted in an annual tax increase of approximately \$15 for you?

O Yes
O No

WTP for public broadcaster

Considering alternatives for supporting investigative journalism, which of the following options would you prefer?

O Increase public support for PBS.

 ${\rm O}$ increase public support for commercial media outlets engaged in investigative journalism, through subsidies or tax incentives.

Demand for public vs private subsidies

D Second Norwegian experimental instructions

We would like to hear what you think about NRK's political position. Which of the following statements do you agree with? Select all that apply.
O NRK has political opinions, and I more often agree with NRK than disagree
O NRK has political opinions, and I more often disagree with NRK than agree
Because NRK is funded by the government, NRK will be more positive towards O political parties that want NRK to continue receiving a lot of support from the government
\ensuremath{O} Journalists working at NRK conduct journalism based on their own political opinions
O NRK generally favors the left
O NRK generally favors the right
O Don't know
O Prefer not to say

Bias question (translated version)

Do you want NRK to increase its focus on investigative journalism?	
O Yes	
O No	
O Don't know	

Preferences for more investigative journalism from the public broadcaster (translated version)

A Proofs for Section 2 (Theoretical framework)

Proof. The equilibrium of the game is found by backward induction. Let Δh_{-i} be the hours financed by all other individuals than *i*.

For a price $\hat{p}(\Delta h)$ for Δh hours, an individual *i* gets a payoff of $b_w(h + \Delta h_{-i} + \Delta h) - \hat{p}(\Delta h)$ by accepting the offer and a payoff of $b_w(h + \Delta h_{-i})$ by rejecting. Each individual hence accepts the offer as long as $p(\hat{\Delta h}) \leq b_w(h + \Delta h_{-i} + \Delta h) - b_w(h + \Delta h_{-i})$.

The optimal price for the media firm is then given by $p^* = b_w(h + \Delta h_{-i} + \Delta h) - b_w(h + \Delta h_{-i})$, which can be written as $p^* = b'_w(h)\Delta h$ given that the media firm, and hence $\Delta h_{-i} + \Delta h$, is small.

The cost of a small increase in journalism is $c(h + \Delta h_{-i} + \Delta h) - c(h + \Delta h_{-i}) \approx c'(h)\Delta h$ given that Δh is so small that wages of journalists are unaffected.

Hence, the media firm finds it profitable to charge each individual $p^* = b'_w(h)\Delta h$ to finance a small increase in journalism if $b'_w(h)\Delta h - c'(h)\Delta h > 0$, which is satisfied if and only if $b'_w(h) > c'(h)$.

Proof. If Assumption 1 is satisfied, the equilibrium outcome is $h^* = 0$, such that each individual gets a payoff of $b_w(h)$. Let the outcome $\Delta h'$ be the case where each individual pays $p_{h'} = \frac{c'(h)\Delta h'}{N}$ to get $\Delta h'$ more hours of investigative journalism. Under the outcome $\Delta h'$, each individual gets a payoff of $b_w(h + \Delta h') - p_{h'} = b_w(h + \Delta h') - \frac{c'(h)\Delta h}{N}$. Outcome $\Delta h'$ is a Pareto improvement if

$$b_w(h+\Delta h')-rac{c'(h)\Delta h}{N}>b_w(h)$$

Since $\Delta h'$ is small, we can rewrite this inequality as $b'_w(h)\Delta h' - \frac{c'(h)\Delta h'}{N} > 0$. If Assumption 1 is satisfied, then this inequality always holds, which implies that h' is a Pareto improvement.

If $\Delta h'$ were a Nash equilibrium, we would need the following inequality to be satisfied: $b_w(h + \Delta h') - p_{h'} > b_w(h + \Delta h' - \frac{\Delta h'}{N})$ Since $\Delta h'$ is small, I re-write this inequality as

$$b_w(h+\Delta h')-b_w(h+\Delta h'-rac{\Delta h'}{N})=b_w'(h)rac{\Delta h'}{N}>p_{h'}$$

For this inequality to be satisfied, we need

$$b'_w(h)rac{\Delta h'}{N} > rac{c'(h)\Delta h'}{N}.$$

Under the assumption that $\Delta h'$ is small, the above inequality will never hold when Assumption 1 is satisfied.

Proof. In majority voting with two outcomes, each voter will vote for the most preferred alternative.

The payoff for *i* is $b_w(h) + b_{p,i}(h)$ without more investigative journalism, while it is $b_w(h + \Delta h'') + b_{p,i}(h + \Delta h'') - \frac{c'(h)\Delta h''}{(1-d)N}$ with more journalism.

Again we use that $\Delta h''$ is small, which implies $b_w(h + \Delta h'') - b_w(h) = b'_w(h)\Delta h''$ and $b_{p,i}(h + \Delta h'') - b_{p,i}(h) = b'_{p,i}(h)\Delta h''$ to write the condition for *i* preferring more investigative journalism as

$$b'_{w}(h)\Delta h'' + b'_{p,i}(h)\Delta h'' - \frac{c'(h)\Delta h''}{(1-d)N} > 0$$

Proof. The media firm offers *n* individuals to pay $p_e(\Delta h)$ for Δh hours each.

Accepting the offer leads to payoff

$$b_w(h+n\Delta h)+b_e(h+n\Delta h)-p_e(\Delta h)$$

Not accepting the offer leads to payoff

$$b_w(h+(n-1)\Delta h)+b_e(h)$$

Each individual accepts as long as

$$p_e(\Delta h) \le b_e(h + n\Delta h) - b_e(h) + b_w(h + n\Delta h) - b_w(h + n\Delta h - \Delta h)$$

Since Δh is small we can write the optimal price as

$$p_e^{\star}(\Delta h) = b_e'(h)n\Delta h + b_w'(h)\Delta h$$

The cost of this small increase in journalism is $nc'(h)\Delta h$, implying that this is profitable if

$$n[b'_{e}(h)n\Delta h + b'_{w}(h)\Delta h] > nc'(h)\Delta h$$

This can be rewritten as

$$b'_e(h)n + b'_w(h) > c'(h)$$

	_	_	
- 1			
- 1			
_ L	_	_	

Investigative journalism is crucial for democratic accountability and transparency. This paper surveys nearly 6,000 participants from the US, UK, and Norway to show that investigative journalism is a public good likely to be underprovided. I analyze solutions to this market failure. A majority is willing to pay higher taxes for more journalism via public broadcasters. However, in countries with established public broadcasters, subsidies to private media are preferred due to perceived political biases. Public broadcasters can attract broader support by restricting journalism to non-political contexts. A Coasian solution is ineffective, as willingness to pay increases with wider output sharing.

SNF



Samfunns- og næringslivsforskning AS Centre for Applied Research at NHH

Helleveien 30 NO-5045 Bergen Norway

P +47 55 95 95 00 E snf@snf.no W snf.no

Trykk: MAKE!Graphics - avd. Bergen