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# How Media Content Influences Economic Expectations: Evidence from a Global Expert Survey

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## How Media Content Influences Economic Expectations: Evidence from a Global Expert Survey\*

### Abstract

This article sheds light on the impact of the media on economists' expectations for future economic developments. We conducted a worldwide economic expert survey and find that the media provides most economists with valuable information that influences their expectations. This applies significantly more for economists in countries with long standing democratic systems and developing countries with somewhat flawed democratic institutions than for economists in newer democracies and countries with authoritarian regimes. Moreover, the experts estimate the influence of the media remarkably higher on others than on themselves. This is consistent with the theory of the third-person effect that says that an individual's behavior is influenced due to the belief that other people find certain issues important and act accordingly.

JEL Code: A12, C80, D84, L82, P50

Keywords: Economic expectations, media, expert survey, third-person effect

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# 1 Introduction

The role of mass media in shaping public perceptions has been a matter of debate for a long time. Communication scientists have stressed that journalists serve as gatekeepers (Lippmann (1922)), guarding the entrances to the public sphere and formulating political priorities. Not only do the media select what people pay attention to (Agenda setting; e.g. McCombs and Shaw (1972)), but also guide them on how to think about it (Second-Level Agenda Setting, e.g. McCombs (2008)). Sociologist Niklas Luhmann famously claimed that “whatever we know about our society, or indeed about the world in which we live, we know through the mass media.” In his assessment, it was the media’s primary function to “conduct the self-observation of the societal system” (Luhmann (2000)). That may sound a little overblown today, as media systems have been opened up by social media and user-generated content (e.g. Chadwick (2017), Sunstein (2017), von Nordheim et al. (2019)). But there is little doubt that newspapers, TV, radio and their digital off-spring remain vital information channels. Mass media may not be the only game in town anymore, but their presence and influence are still sizeable.

Therefore, it is hardly surprising that economists have turned their attention to media content as well. With digital archives readily available and computing power ever increasing, researchers strive to incorporate information that used to be outside the scope of quantitative economics. Yet, it remains largely a blank space how professional economists experience the media, to what extent their expectations are influenced by the media, and whether they consider them useful and trustworthy sources of information. This paper sets out to shed some light on these questions. Drawing from a global survey of economic experts from 108 countries, we provide new insights into the media’s role in shaping the expectations of economists. We acknowledge that this is self-reported behavior by the respondents of our survey.

Our results provide three main findings: First, they strengthen that media content indeed

is an important source of information and has an effect on the expectations of economists. Second, economic experts in countries with long standing democratic systems and developing countries with somewhat flawed democratic institutions consider the media significantly more reliable than economic experts in newer democracies and countries with authoritarian regimes. Third, the experts estimate the influence of the media remarkably higher on others than on themselves. This is consistent with the theory of the third-person effect that says that an individual’s behavior is influenced due to the belief that other people find certain issues important and act accordingly. The findings of this paper indicate that the media also has a significant influence on key macroeconomic indicators predicted by expert surveys, such as the Survey of Professional Forecasters (Croushore (1993)) or the ECB’s Survey of Professional Forecasters (Garcia (2003)). These findings can provide a basis for further research on these influences.

The paper is organized as follows; first recent literature will be discussed to point out the existing gaps regarding media use in economic analysis. Then, we will briefly set out our research questions before we describe the collection of data and the research methods. Subsequently, we discuss our results and answer our research questions before we conclude.

## 2 Literature

Media-based indicators have been used for forecasting inflation, investment, business cycles and financial market developments (e.g. Larsen et al. (2021); Larsen and Thorsrud (2019); Lamla et al. (2020); Conrad et al. (2021); Ter Ellen et al. (2021); Flynn and Sastry (2020); Müller et al. (2022)), as well as for the measurement of uncertainty (Baker et al. (2016)). In general, this type of analysis pursues three objectives: a) By including news, economists hope to close time-lags due to delays in data availability (nowcasting). Significant events should show up in the media as they happen and are only reflected in survey or hard economic data later. b) Exogenous political, social, or technological developments affecting the economy are

considered. Uncertainty in its different forms has drawn considerable research attention in recent years. c) If public moods and convictions drive “animal spirits”, resulting in rectified behavior of many individuals and consequently in market fluctuations (Keynes (1936); Akerlof and Shiller (2009)), media content can be used to measure economic narratives that reflect prevailing attitudes (Shiller (2017)). Dominant economic stories also may have the power to shape the political agenda.

A conceptual bridge exists in particular to the macroeconomic theory of expectation formation. Carroll (2003) investigates how private households form expectations concerning their consumption plans, where “typical people are assumed to obtain their macroeconomic views from the news media.” To examine this connection in more detail, he undertakes a frequency analysis, based upon articles from the New York Times and the Washington Post in which the word “inflation” appears, the results of which are incorporated into an econometric analysis. Since consumer expectations lag behind the reporting on inflation somewhat, he concludes that sticky expectations are the result of patchy news consumption. If people only read the newspaper from time to time, their information on macroeconomic developments tends to be updated in a prolonged fashion. Carroll’s concept ties in with The Economist’s “R-Word Index”, which measures the frequency of New York Times and Washington Post articles that contain the word “recession” and can be related to U.S. economic indicators. Doms and Morin (2004) also take this simple indicator as a starting point but extend it to 30 U.S. newspapers and a variety of search words and phrases. They find causal relationships with consumer sentiment. Kholodilin et al. (2017) take a different approach, using data from the provider Media Tenor to conduct a manually coded sentiment analysis on the forecast of German industrial production. Kholodilin et al. (2015) relate Media Tenor data to surveys of economic decision-makers.

News-based indicators have also gained significant momentum concerning financial markets. For example, Tetlock (2007) constructs a pessimism indicator based on a daily stock market column in the Wall Street Journal, which he relates to stock market activity. Am-

mann et al. (2014) use a set of search terms to examine the German “Handelsblatt”; the results are condensed using cluster analysis and used for forecasts of the DAX stock index. Alexopoulos and Cohen (2015) construct a media-based uncertainty indicator and use it to measure rising uncertainty that increases stock market volatility and shrinks stock investment returns. More recent approaches use probability-based topic models. For example, Larsen and Thorsrud (2017) cluster the entire corpus of the Norwegian business newspaper “Dagens Næringsliv” using Latent Dirichlet Allocation (LDA) and then search for predictive properties of individual topics for a set of business cycle and financial market variables. Using a similar approach, Thorsrud (2016a; 2016b) calibrates a “newsy coincidence index” for the Norwegian business cycle. Calomiris and Mamaysky (2018) apply Topic Models to stock price forecasting in 51 countries.

Possibly the most prominent use of media-based economic indicators is the measurement of political uncertainty. For example, the semi-annual reports on the state of the economy published by the International Monetary Fund and the OECD regularly include references to the Economic Policy Uncertainty Index (EPU) by Baker et al. (2016). Based on this approach, which is a frequency analysis using complex keyword combinations, a whole set of indicators has emerged. The EPU is arguably the most widely used media-based indicator. For example, Antonakakis et al. (2019) use it to examine the uncertainty emanating from the Greek sovereign debt crisis on Europe as a whole. Chen et al. (2019) apply EPU data to show how oil price shocks are transmitted to China’s economic development. Yu et al. (2018) show that global economic policy uncertainty is reflected in increased volatility of some financial market indicators. Alqahtani et al. (2020) show that there is a transmission of U.S. economic policy uncertainty to labor markets in Canada and the UK. Müller et al. (2021) construct an EPU-style Uncertainty Perception Indicator (UPI) for Germany and apply an LDA approach. Thereby, they can capture different sources of uncertainty and isolate an “uncertainty narrative”. Blagov et al. (2021), using time series derived from topic models of media coverage, find significant improvements in forecasting business investment.



The media not only informs individuals about matters important to them personally but also about what other people are preoccupied with, which in turn influences expectations and alters behavior. This third-person effect, as it has become known in communication science, is a powerful channel of influence (Davison (1983); Peiser (2009), p. 147; Bonfadelli and Friemel (2017), p.217). An individual may deem certain issues unimportant or misinterpreted but is nevertheless influenced in her or his behavior due to the belief that other people find them important and act accordingly. Typically, people underestimate the influence of news on themselves and overestimate its influence on others (Perloff (1999), p. 353). Even people with expert knowledge in some areas, like business executives, investors, or entrepreneurs, are influenced by economic news since the third-person effect typically increases with social distance (Lischka (2016), p. 63). People with high social status and little direct exposure to average citizens learn what is driving ordinary folks predominantly by reading or watching the news. By including news data in economic analyses, researchers try to take account of what moves the nation, a valuable exercise since the ups and downs of issue attention can yield real economic consequences.

A host of research has focused on the particular influence of news reporting on perceptions about the economy. Soroka (2006) emphasizes the negativity of news reports and, using time-series analyses of UK media and public opinion, finds evidence for a stronger public response to negative news reports than to positive ones. Individuals are hardwired to prioritize negative information over positive one (Soroka (2014), p. 101). Appelgren et al. (2019) focus on the interplay of economic activity and the media coverage of the economy. Damstra et al. (2021) combine an extensive analysis of news content with a panel survey and an experiment and are able to show that economic news directly affects national economic evaluations, but not personal ones. That news has an impact on consumer confidence, and therefore most likely on real economic activity, is a result put forward by Boukes et al. (2019). Damstra (2019) finds significant evidence that reported economic uncertainty directly affects consumer confidence.

The power of the media in forming perceptions and expectations is based on credibility and trust. The paradox of news as a product is that users purchase it, and devote a portion of their time budgets to it, without being able to judge its quality ex-ante. After all, the very meaning of news is that users are informed of stuff they didn't know before. Information asymmetries (between editors and readers) are a central property of news, making them the ultimate "experience good" Nelson (1970). People have to rely on the media to emphasize the most important issues and to report the most relevant facts correctly. Trust is being built over time by the frequent use of the same media brand and by observing which brands other people use and trust; that's why the established names of print and TV journalism are still major news sources on the internet (Institute (2020); Nielsen (2016)). However, trust in the media has declined in many countries over recent decades. Whether this is due to the deteriorating quality of the media, or to the emancipation of citizens in liberal democracies who may have adopted a skeptical attitude in general, is a matter of debate. Still, "it is clear that news media trust is at least fragile" (Strömbäck et al. (2020)). These considerations are relevant to economic research as well. It's reasonable to assume that effects on expectations formation are greater if the media are deemed credible and if trust has been stable over time. Eurobarometer data show that levels of trust differ greatly even between European countries: in Northern Europe, large majorities still trust the written press, TV, and radio, while the corresponding values are low for Southern and Eastern (formerly socialist) European countries (EU (2018)). These observations are in line with international comparisons of media systems (Hallin and Mancini (2004)), that come to the general conclusion that trust in the media is greatest where news organizations are free and independent, highly professionalized, and well-managed, including the practice of transparency-enhancing self-governance (Fengler and Speck (2019))

### 3 Research Questions

In this paper, we focus on a specific group of people: economic experts who wield considerable influence over decisions concerning investment, portfolio allocation, and economic policies. To our best knowledge, there is no empirical evidence of these individuals' attitudes towards the media. Filling this gap may guide future research, for instance concerning the choice of specific media to be used in economic analyses.

First, our research questions focus on how economic experts judge the quality and reliability of the media in their respective countries. The often-observed loss of trust in the media has been accompanied by, at times, harsh criticism of their reliability, along with accusations of a distinct bias and of an overall decline in media quality. If respondents judge the quality of journalism as poor, do they still consider the information that is provided by the media as valuable for their work? In particular, we are looking into country-specific differences depending on the respective media systems to analyze if this influences how the media is perceived.

Building on that, we examine if and how the media influence the personal expectations of economic experts regarding future economic developments. Given that the respondents work with data from different sources and usually also have first-hand experience from dealing with other influential people, they may not be inclined to resort to the media. Therefore, media may or may not be a dominant source of current information, on which future expectations are being built. Media can influence users' perceptions by choosing certain issues and neglecting others, by framing stories one way or another and selecting facts and figures accordingly, by falling prey to vested interests and lobbying, or propaganda and censorship. If respondents are aware of these media biases, they may dismiss the notion that media could influence their own views. However, the third-person effect could be so strong that respondents let themselves be guided by the media notwithstanding.

Future research might need information about the most used media by economists for the

choice of media to include in their analyses. Therefore, our last research question deals with the most read international media and the most important sources of information for economic experts. If there are outstanding newspapers or other media used by most economists, they might be suitable for research projects that include media content and economic variables.

## 4 Data and methods

Our approach to examining these research questions involves a combination of methods. We conducted a global survey asking economic experts on their personal media consumption, their assessment of media quality, and the media's influence on their expectations about future economic developments. Besides an analysis of all answers as a whole, we examine the results based on different media systems. Therefore, we divided the answers of the economic experts into four categories that reflect the media system in their respective countries.

### 4.1 Economic expert survey

Our survey was answered by 813 economic experts from 108 countries in the timespan of 3<sup>rd</sup> of March and 4<sup>th</sup> of April 2020. We exploit the unique infrastructure of the World Economic Survey (WES) collected by the ifo Institute for Economic Research in Munich to reach out to renowned economic experts.

In the questionnaire, the economists first indicated to what extent they agreed or disagreed with the following seven statements (strongly agree/slightly agree/neither/slightly disagree/strongly disagree):

- Newspapers, websites, TV news programs, and other journalistic media provide me with valuable information.
- The media are reliable sources of information.

- News media are the best source of information on current developments.
- The media tend to be biased and fake news prone.
- Media content influences my expectations about future economic developments.
- I pay attention to the media because it influences other people’s economic actions and expectations.
- The media lost some of its quality and accuracy over the last 10 years.

Subsequently, we asked open questions about their most important source of information on the development of the economy, and the international media the economists frequently read.

The questionnaire had been sent out to 1604 experts from 126 countries. 813 answered questionnaires equal a response rate of 50.6 percent. There were no significant differences in the response rates of different country groups. Experts from countries with authoritarian regimes responded as often as experts from democratic countries.

The ifo Institute has surveyed renowned economic experts worldwide on their assessments and expectations for economic and political topics regularly from 1981 until 2020. The panel consists of prestigious economists from different affiliations. They were chosen as experts according to their professional experience and specific knowledge of their countries. More than half of the experts work at research institutions or think tanks (56%), while other occupations range from working at banks or central banks to associations, chambers of commerce, embassies, or international organisations. 65.7% of the experts have a PhD, 55% of the experts studied economics, 16% business, and the other 29% have various other studies (see Boumans and Garnitz (2017) for further details). The survey has been proven to predict business cycles quite well (Kudymowa et al. (2013); Garnitz et al. (2019)). More studies have used the supplementary questions for further research on international economic topics (Boumans et al. (2018), Boumans et al. (2020a), Boumans et al. (2020b), Gründler

and Potrafke (2022), Boumans et al. (2022)). The anonymized microdata of our economic expert survey on the media topic and all other data sets of the World Economic Survey are accessible for researchers at the LMU-ifo Economics & Business Data Center (EBDC). For information about the EBDC and the data access see Seiler (2012).

The ifo World Economic Survey was last conducted in 2020. However, the former WES panel of economic experts is still used for the new quarterly conducted Economic Experts Survey (EES) of the ifo Institute in cooperation with the Institute for Swiss Economic Policy (Gründler et al. (2022)). This new survey captures the experts’ assessments of the current economic policy and political performance in their countries. Therefore, the research of this paper using the panel of the WES is still relevant for the EES and other economic expert surveys, such as the Survey of Professional Forecasters (Croushore (1993)).

## **4.2 Categorisation of countries by their media system**

Besides a general analysis of the data, we analysed the survey answers for differences at the country level. Beyond that, we classified the countries by their media systems to analyze if this influences how the media is perceived in the respective countries. Our four categories are closely associated with the classification by Hanusch and Hanitzsch (2019) who distinguish between four different types of media systems: The “monitorial model”, where autonomous media hold institutions to account independently, particularly prevalent in established Western Democracies. An “advocative model”, characterized by low degrees of trust in institutions, mostly in ex-transformation countries (e.g. newer EU member states and EU candidate countries). A “developmental model”, which shares many traits with the latter, found in developing countries with somewhat flawed democratic institutions (e.g. Brazil, India, South Africa), and a “collaborative model”, present in authoritarian countries with a close alignment of the media and the state (e.g. China, Russia). These models of media cultures are derived from interviews with 27.000 journalists around the world. They also overlap considerably with the findings of the Global Handbook on Media Accountability,

that maps measures of media (self-)control around the globe, based on experts’ accounts of individual media systems (Fengler (2021)). By choosing these categories we tried to roughly capture the properties of media systems that differ considerably, even among constitutionally comparable countries, e.g. France and Germany, but especially among countries with varying political systems and traditions. In the Western hemisphere, three broad varieties can be distinguished: the “polarized” Mediterranean model, the “democratic corporatist” North and Central European model, and the “liberal” North Atlantic model (Hallin and Mancini (2004)). The second model is usually seen as yielding the best results in terms of trust, independence, and professionalization of journalism organizations. Newer democracies, as well as developing countries, tend to follow the Mediterranean model, which is characterized by high degrees of partisanship of TV channels and newspapers and rather low levels of professionalization and trust. Whether media in “illiberal” democracies or authoritarian states can be considered journalistic at all, is questionable. Still, even outright propaganda contains economically relevant information, even more so if it’s assumed that most people believe it, i.e. strong third-person effects prevail. Furthermore, respondents in these countries may be in the position to use international media. Appendix B shows the categorization for each country as well as the number of participating experts in the respective country.

For nonparametric testing of differences in the distributions of the survey results between these country groups, we used Wilcoxon rank-sum tests (Mann and Whitney (1947)).

## 5 Survey results for the research questions

In our analysis of the survey data besides looking at the overall results we were mainly interested in differences at the country-level and grouped by the media system in the respective countries.

### 5.1 Quality and reliability of the media

Table 1 presents the answers to the statements about media quality and reliability. The results are shown overall and divided by media systems. Overall, the results underline that journalistic media content is seen as valuable information by economists. 40.8% of all experts strongly agree and 42% at least slightly agree that newspapers, websites, TV news programs, and other journalistic media provide them with valuable information. Less than 10% of all experts disagree (6% slightly and 3% strongly). Analyses based on the media system, however, show that in states with a collaborative media model and especially in countries with a advocative media system the share of "strongly agree" is somewhat smaller. In these countries, with a advocative media system, 17% of all experts disagreed slightly or strongly. The answers to the statement that news media are the best source of information on current developments are somewhat more ambiguous. While in countries with a monitorial model, like Western democracies, or a developmental media model (emerging democratic countries) more than 60% of the experts agree strongly or slightly, in countries with a advocative- and collaborative media system (newer democracies and authoritarian regimes) this share is only around 40%.

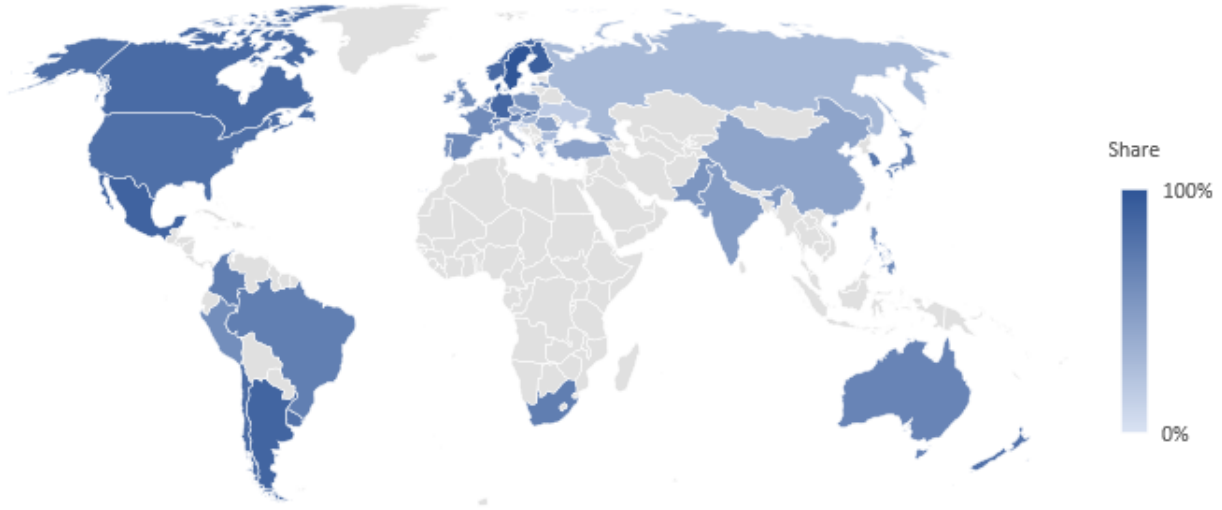


Table 1: Assessments of the quality and reliability of the media (shares in %)

<i>The media provide me with valuable information.</i>					
	++	+	+ -	-	--
Overall	40.8	42.0	8.1	6.0	3.1
Monitorial media system	46.1	39.1	6.8	6.5	1.5
Advocative media system	21.9	46.9	14.1	10.1	7.0
Developmental media system	45.3	44.4	3.4	2.6	4.3
Collaborative media system	32.3	43.5	14.4	3.2	6.6
<i>News media are the best source of information on current developments.</i>					
	++	+	+ -	-	--
Overall	18.1	39.6	21.9	14.6	5.8
Monitorial media system	22.9	38.2	21.9	13.3	3.7
Advocative media system	10.3	34.9	25.4	21.5	7.9
Developmental media system	16.4	51.7	15.5	9.5	6.9
Collaborative media system	12.9	27.4	21.0	24.2	14.5
<i>The media are reliable sources of information.</i>					
	++	+	+ -	-	--
Overall	16.4	45.5	20.6	11.9	5.6
Monitorial media system	21.4	47.1	17.0	10.0	4.6
Advocative media system	7.8	34.4	29.6	18.8	9.4
Developmental media system	15.4	56.4	15.4	6.8	6.0
Collaborative media system	9.7	30.6	32.3	21.0	6.5
<i>The media lost some of its quality and accuracy over the last ten years.</i>					
	++	+	+ -	-	--
Overall	35.2	36.4	16.9	7.8	3.7
Monitorial media system	31.0	37.8	17.7	8.7	4.8
Advocative media systems	49.2	28.9	14.9	3.9	3.1
Developmental media system	40.5	31.9	16.4	8.6	2.6
Collaborative media system	38.7	40.3	12.9	6.5	1.6
<i>The media tend to be biased and fake news prone.</i>					
	++	+	+ -	-	--
Overall	12.2	35.1	23.2	21.9	7.6
Monitorial media system	8.3	27.8	22.9	28.6	12.4
Advocative media system	16.5	45.7	23.6	13.4	0.8
Developmental media system	14.5	41.9	25.6	14.6	3.4
Collaborative media system	21.3	49.2	14.8	11.4	3.3

Notes: ++ = strongly agree, + = slightly agree, + - = neither, - = slightly disagree, -- = strongly disagree.

Figure 1: Share of experts that see the media as a reliable source of information



Note: Shares are shown only for countries with at least 5 participating experts.

Figure 1 shows the share of economic experts that either strongly or slightly agreed with the statement that the media are reliable sources of information in their respective countries. The overall share of experts that agreed with the statement was 61.8%. However, a considerable deviation in the assessments of the media’s reliability can be seen at the country-level. In particular, in Scandinavian countries, Germany, Northern America (USA, Canada, and Mexico) as well as in some Southern American countries (Argentina, Chile, Uruguay), more than 80% of all experts agree with the statement. In many Eastern European countries (Slovenia, Croatia, Hungary, Ukraine, Bulgaria) as well as in Russia less than a third of the experts see media in their country as reliable sources of information. Grouped by media systems the results for the statements show some general trends amongst the countries. Media content is perceived to be more reliable in countries with established, free media systems. On the other hand, the reliability of journalistic media is assessed particularly badly in countries with a collaborative or an advocative media systems. Thus, trust in the media is significantly higher where media systems are free and independent. A pairwise comparison using a Wilcoxon rank-sum test shows a significant difference by country group (Table 2).

Experts from countries with a monitorial or a developmental media system assess the media as significantly more reliable than experts from countries with an advocative or collaborative media system.

Table 2: Reliability of the media: Pairwise comparison by media system (p-values)

Media system	Monitorial	Advocative	Developmental
Advocative media system	< 0.001*	-	-
Developmental media system	0.77	< 0.001*	-
Collaborative media system	< 0.001*	0.93	0.003*

*Notes:* \* indicates p-value < 0.01, Wilcoxon rank-sum test used for pairwise comparison of the distribution of the assessments.

However, the general development of the media’s quality is viewed critically by economic experts all over the world. In all country groups, more than two-thirds of the experts stated that the media lost some of its quality in the past ten years. Moreover, except for the experts in a monitorial media system, more than half of the experts agreed that the media tend to be biased and fake news prone for all groups. Declining perceived quality of the media is likely to be a result of budget pressures many traditional media outlets were confronted with in recent years, a trend coinciding with the proliferation of populism and propaganda, to the effect that in many countries sizeable shares of citizens have lost faith in the media per se (Müller (2020), p. 96).

To sum up the results of our research question: journalistic media do provide valuable information to economic experts. However, experts from countries with a free media system judged the quality and reliability of the media significantly better than experts from authoritarian states or democratic ex-transformation countries. Yet, economists see a decline in media quality over the past years. The use of the media for the economists’ work depends strongly on their assessment of the media’s quality. Economic experts that judged the quality

of the media in their country as poor also more often don't consider the information provided by the media as valuable for their work.

## 5.2 The media's influence on expectation formation

Table 3 shows that 9.1% of the participating economic experts agree strongly and 48.8% agree slightly that media content influences their expectations about future economic developments. Strikingly, in all country groups, the share of respondents that pay attention to the media because it influences other people's economic actions and expectations is clearly higher (overall 27.3% strongly and 53.2% slightly).

Table 3: Assessments of the the media's influence on expectations (shares in %)

<i>Media content influences my expectations about future economic developments.</i>					
	++	+	+ -	-	--
Overall	9.1	48.8	24.5	10.8	6.8
Monitorial media system	10.7	50.6	23.6	8.8	6.3
Advocative media system	3.9	37.0	26.8	19.7	12.6
Developmental media system	12.1	54.3	22.4	6.0	5.2
Collaborative media system	4.8	56.5	22.6	9.7	6.5
<i>I pay attention to the media because it influences other people's economic actions and expectations.</i>					
	++	+	+ -	-	--
Overall	27.3	53.2	13.1	4.5	1.9
Monitorial media system	25.4	54.9	13.9	3.9	2.0
Advocative media system	35.4	45.7	12.6	3.9	2.4
Developmental media system	28.2	52.1	11.1	6.8	1.7
Collaborative media system	27.4	56.5	11.3	3.2	1.6
<i>Notes: ++ = strongly agree, + = slightly agree, + - = neither, - = slightly disagree, -- = strongly disagree.</i>					

We used a Wilcoxon rank-sum test to assess whether the answers to the statement for "Media influences other people's expectations" are significantly higher than the statement

“Media influences my expectations”. We indeed found that significantly more experts pay attention to the media because it influences other people’s expectations than because it influences their own opinion. This holds in all four media system groups (see Table 4).

Table 4: Wilcoxon test of difference between “Media influences other people’s expectations” and “Media influences my expectations”

Country group	p-value
Monitorial media system	$< 0.001^*$
Advocative media system	$< 0.001^*$
Developmental media system	$0.002^*$
Collaborative media system	$< 0.001^*$
Overall	$< 0.001^*$

*Notes:* \* indicates  $p\text{-value} < 0.01$ .

These results show that the influence on others is seen as remarkably higher than the influence on the individual respondents themselves. This is consistent with the theory of the third-person effect. The value of mass media results, in particular, from the fact that individuals consider other people to be influenced, not necessarily because they deem it to be correct or important. This discrepancy is particularly great in countries with advocative or collaborative media systems. With all due caution, even propaganda could serve as a valuable input for economic analyses. Screening media gives economists an idea of what moves other people. This can be a valuable input for their analyses since the influence on other people can entail real economic consequences.

### 5.3 Which media are used by economists?

In an open text question, we asked the experts which international media they most frequently read. They could name up to three media brands. The question was answered by 677 experts. With a text analysis we counted the number of answers for each named media brand. Table 5 shows that almost half of the surveyed economists (324) mentioned The

Economist among their three most read media. The Financial Times followed with 276 mentions. The results show the outstanding influence of these two newspapers. While there is a concentration for non-English media in their respective countries (e.g. Frankfurter Allgemeine Zeitung, Neue Zürcher Zeitung, and Handelsblatt are mainly read in German speaking countries), The Economist and FT are frequently read by economists all over the world. Even more striking, all of the most often-named media are Anglo-Saxon ones. These media are mostly characterized by liberal leanings and a particularly business-focused worldview. Hence, economic experts' choices of media contrast with regular readers' who predominantly use national media, particularly TV, tabloids and their digital derivatives. It's conceivable that these differences in the media diet contribute to divergences in the assessments of economic prospects between regular citizens and elitist groups such as decision makers and their economic advisers. If, and to what extent, these differences occur, and in how far newspaper coverage influences economic behavior of the two groups, possibly widening rifts in already polarized societies, could be a matter of future research.

Table 5: Most read media or newspapers by economic experts

Media/Newspaper	Number of Answers
The Economist	324
Financial Times	276
New York Times	118
Bloomberg	94
Wall Street Journal	88
BBC / BBC News	72
The Guardian	70
CNN	38
Reuters	37
Frankfurter Allgemeine Zeitung	33

*Note:* Total number of experts answering: 677, respondents could name up to three media brands.

## 6 Conclusion

This paper seeks to contribute to the micro foundations of news as a data source for economic analysis. While media-based time series have become more and more popular in economics, a thorough assessment of the properties of these data is often missing. Researchers tend to choose media brands opportunistically, driven by data availability and convenience rather than some rationale concerning recipients’ actual media use and how it is related to expectation formation. To shed some light on attitudes towards the media, we make use of the global panel of the World Economic Survey by the ifo Institute. 813 respondents from 108 countries answered our questionnaire. This exclusive group of people, consisting of economic experts, is likely to be crucial to the process of building economic sentiment. As opinion leaders in their respective public sphere, they are close to the starting point of information cascades, since they themselves are communicating their assessments intensively, both inside their institutions and into the broader public. Hence, our findings can be also applied to other economic expert surveys, like the Survey of Professional Forecasters, and are likely to matter beyond the narrow circle of economic experts. The results can be summarized as follows:

*Media matters.* Professional economists view news content as a valuable source of information. More than 80% broadly agree with this notion. A majority use media content as an input into their own economic assessments. These findings are particularly striking as the respondents have access to a host of other sources, ranging from official statistics and financial market data to personal encounters with business and asset managers, most of which normal citizens lack.

*Trust is essential.* In more authoritarian countries with media systems that we classified as “collaborative” and formerly socialist transformation countries, where we have classified the media system as “advocative” recipients are more critical regarding the media. While in countries with monitorial and developmental media systems more than 60% of the experts

agree strongly or slightly with the statement that news media are the best source of information on current developments, in advocative media system countries and states with a media system classified as collaborative, the share is only around 40%. The same pattern applies when respondents are asked about the reliability of media content. Trust in the media is significantly stronger where media systems are free and independent.

*The media influence experts' expectations.* An absolute majority of economic experts agree that media content influences their convictions about future economic developments. This result also holds in authoritarian countries where we have classified system of media as collaborative, the media is deemed neither independent nor particularly reliable. The reason is the “third-person effect”. Reading or watching the news provides information on what a society thinks as a whole. Even if economic experts themselves may be sceptical concerning media content, they assume that other people are not. We found statistically significant evidence for this effect in all groups of countries. Given these results, even outright propaganda in countries like China could serve as an input into economic analyses, although the content needs to be treated with due caution.

*Anglo-Saxon elite media appear to exert a vast influence.* When asked which media respondents use, the nine most-often named media brands were from the UK and the US. Among economic experts all over the world the most widely read newspapers by far are the Economist and the Financial Times, both published in London. This suggests some degree of global alignment of economic expectations. However, it remains unclear how strong these influences are compared with national media in particular countries and other sources of information. Since our findings are based on respondents' self-assessments, prudence is warranted when interpreting the results. However, they broadly confirm the strong influence of the media on views and expectations that has also been verified in experiments conducted with non-expert households (Andre et al. (2021)).

For researchers working with media data one important insight is that the choice of the media brands included in a study should correspond with the actual media use of the social



groupings on whose behaviour the focus is set. If business investment is to be explained by news content, traditional business broadsheet newspapers may be the media of choice, i.e., media that the individuals who shape corporate decision making actually read. If, on the other hand, consumption is of interest, popular media with a broad reach, such as cable news programs or tabloids with a national circulation, are likely to serve as appropriate measuring points of public discourse. In any case, the choice of media should be tailored to the media diet of the particular economic actors of interest.

Further research may build on our results and construct a set of global economic news indicators based on the media predominantly used by economic experts. The focus should be on issues involving sizeable international spill-over effects, such as economic uncertainty, inflation, trade, or financial markets. These indicators would be suitable for econometric analyses of the sort Baker et al. (2016) pursue.

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# Appendix

## Appendix A: The questionnaire of the expert survey

1. To what extent do you agree with the following statements? (1 = strongly agree, 2 = agree, 3 = neither agree nor disagree, 4 = disagree, 5 = strongly disagree)

- a) Newspapers, websites, TV news programs, and other journalistic media provide me with valuable information.
- b) The media are reliable sources of information.
- c) News media are the best source of information on current developments.
- d) The media tend to be biased and fake news prone.
- e) Media content influences my expectations about future economic developments.
- f) I pay attention to the media because it influences other people's economic actions and expectations.
- g) The media lost some of its quality and accuracy over the last 10 years.

2. My most important source of information on the development of the economy is

\_\_\_\_\_ .

3. I frequently read the following international media (please fill in up to three publications):

\_\_\_\_\_ ,

\_\_\_\_\_ ,

\_\_\_\_\_ .

## Appendix B: Country categories and observations

Country	Obs.	Media system
Argentina	9	Developmental model
Australia	9	Monitorial model
Austria	25	Monitorial model
Belgium	17	Monitorial model
Brazil	17	Developmental model
Bulgaria	7	Advocative model
Canada	14	Monitorial model
Chile	5	Developmental model
China	9	Collaborative model
Colombia	8	Developmental model
Croatia	7	Advocative model
Czech Republic	13	Advocative model
Denmark	7	Monitorial model
Finland	15	Monitorial model
France	23	Monitorial model
Georgia	9	Advocative model
Germany	32	Monitorial model
Greece	15	Monitorial model
Hungary	13	Advocative model
India	9	Developmental model
Ireland	7	Monitorial model
Italy	48	Monitorial model
Japan	19	Monitorial model
Latvia	9	Advocative model
Mexico	9	Developmental model
Netherlands	20	Monitorial model
New Zealand	5	Monitorial model
Norway	7	Monitorial model
Pakistan	9	Developmental model
Peru	6	Developmental model
Poland	14	Advocative model
Portugal	17	Monitorial model
Republic of Korea	9	Developmental model
Romania	15	Advocative model
Russian Federation	24	Collaborative model
Slovakia	14	Advocative model
Slovenia	9	Advocative model
South Africa	13	Developmental model
Spain	38	Monitorial model
Sweden	9	Monitorial model
Switzerland	19	Monitorial model
Taiwan	5	Developmental model
Turkey	12	Collaborative model
Ukraine	7	Advocative model
United Kingdom	33	Monitorial model
United States	47	Monitorial model
Uruguay	5	Developmental model

*Note:* Only countries with at least 5 participants are shown.