

2 Theoretical considerations

This chapter develops a theoretical model combining real-world economy, economic news and economic sentiment to a triangle of objective, media-based and social realities (2.1), connects the macro to the micro level of the social reality as well as sentiment and behavior to explain collective effects on the macro level (2.2), and traces the temporal relations between the three realities (2.3).

2.1 The triangle of objective, media-based, and social realities

This section traces the relations between the real economy on the level of objective reality, economic news on the level of media reality, and economic expectations and behavior on the level of social reality.

Following Bonfadelli (2004, 237), these relations are illustrated in a triangle of the agenda-setting process as displayed in *Figure 1*.⁶ *Figure 1* summarizes the major theoretic approaches, which help to explain the relationships between the three realities, and the data that is typically used to measure each type of reality.

⁶ Figure 1 is also partly related to Kepplinger's (2007, 17) model of reciprocal effects between media (quality and regional newspapers, TV, radio, internet) and content properties (topics, intensity, tone, frame, consonance) over awareness to reports, cognitions, and emotions of recipients to decisions and consequences. Kepplinger's model is especially relevant to explain media effects on sentiment and behavior of corporate decision makers.

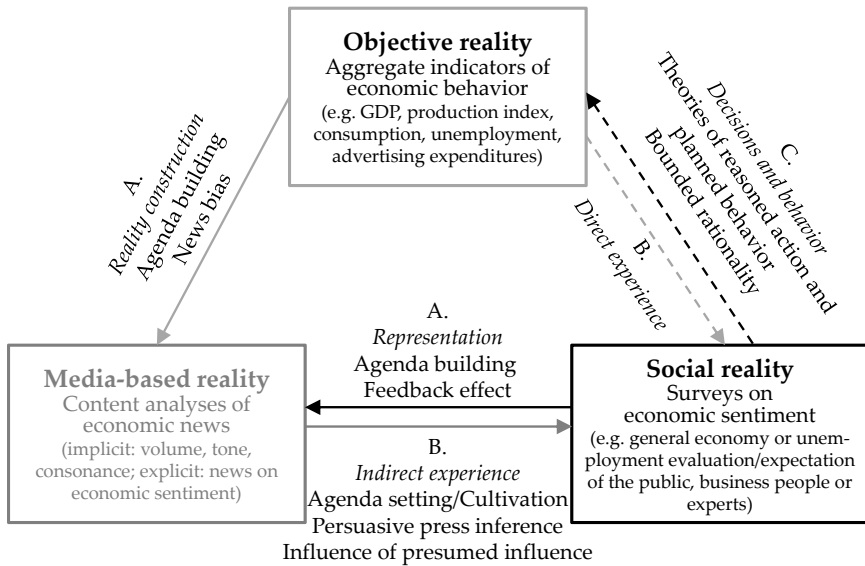


Figure 1: Triangular relations between objective, media-based, and social economic reality

Source: Compiled by the author based on Bonfadelli (2004, 237).

Notes. The media-based reality is usually measured using content analyses, the social reality with surveys, and the objective with real-world indicators. The latter represent aggregate economic behavior of economic agents on a micro level. Indicators of the real economy are categorized in a threefold manner: a) leading indicators that are affected early on, such as economic sentiment or intermediate input goods; b) coincident indicators such as the GDP, industry production or retail sales; c) lagging indicators such as the labor market including employment numbers, wages and salary history as well as inflation and consumer prices (Kater 2008). Indicators of the economic situation in the media-based reality can be implicit—e.g. economic news tone, or explicit—e.g. reports on the development of the GDP. An explicit indicator of the public's economic sentiment is e.g. news reports on the results of surveys on consumer or business sentiment. Consumer or business sentiment are considered to be leading indicators of the state of the economy (e.g., Kater 2008; Levanon 2010; Ludvigson 2004). Indicators of social reality are the evaluations or expectations of different social groups on economic issues. Based on surveys of the public, sentiment indices, such as the University of Michigan's Index of Consumer Sentiment (ICS), become subject to news reporting and are considered leading indicators for the economy (Hagen 2005). Such indices are also computed for business people and economic experts. Hence, social reality measures of economic sentiment should forecast changes in coincident and lagging real-world economic indicators.

For each set of reality dimensions, the relations are theoretically traced in the following.

- A. The question whether news can reflect reality has been an issue in news bias studies for decades (see e.g., D'Alessio and Allen 2000; Hackett 1984; Klein and Maccoby 1954; McQuail 1992). Objective reality can *build* the agenda for news, on first or second level (*Reality construction* arrow, *Figure 1*). The concept of media-based reality suggests that the picture of reality offered by media coverage is different from objective reality. Although media reality is regarded as constructed fragment of the objective reality (Kepplinger 2011), it is tied to socially binding models of reality and its social reference mechanisms (Weischenberg 1994). Media reality depends on norms, structures, and actors that are organized on the meso level of the profession's and the media company's formal and informal rules and conventions (Altmeppen 2006, 119). Demers et al. (1989) emphasize that news coverage responds to public concerns such as the unemployment rate and therefore reflects a larger social system. Rössler (1997) acknowledges a feedback effect of the public opinion to the media agenda. This way, consumer sentiment, as one element of social reality, also becomes part of media reality (*Representation* arrow, *Figure 1*). The same is true for business sentiment surveys of the European Commission or the expert economic sentiment of the Ifo institute (Hagen 2005). In addition, such social-reality indicators are regarded to be early indicators of the real-world economic development.

Macro, meso, and micro factors influence news making (Shoemaker and Reese 1996) and the kind of information available in a society. News making (Halloran et al. 1970) is, among many other factors, influenced by news values (Lippmann 1922; Östgaard 1965; Schulz 1976), role conceptions or personal predispositions of a journalist (Weaver et al. 2007), and by commercial motives, ownership, resources or the degree of competition (Beam 2003; Nguyen Vu 2010; Picard 2004; Prat and Strömberg 2012; Russi 2013).⁷ The concepts that journalists have of their role range from disseminating information to mobilizing the public, and mainly to interpret reality (Weaver et al. 2007, 146). The

⁷ The latter influences on meso and macro level also determine the amount and variety of available information in a society.

degree to which journalists' interpretation substitutes objective reality describes Strömbäck (2008, 240) as phase four of mediatization: "In important respects, the mediated realities replace the notion of a belief in objective realities." Yet interpretation and selection processes can result in biases in news topics, frames, volume, or tone. Hagen (2005) assumes that economic journalists draw conclusions hastily or over-interpret trends. Therefore, economic news is often characterized as negative (see Brettschneider 2003, and Wörsdorfer 2005 for Germany; Lowry 2008 for the USA) and fails to reveal the complexity of the economy (Hagen 2005; Schiffrin 2011a). Depending on the strategic focus and programming mandate, news content differentiates among media (Beam 2003; Nguyen Vu 2010).⁸

The many influences on journalistic reporting suggest shortcomings in how far "the media provide a useful picture of what is 'really' going on" (Funkhouser 1973, 62), especially concerning the economy.

- B. An individual's opinion on a certain topic is a result of direct experiences, the experiences of reference groups, interpersonal communication, one's own as well as other people's opinion, and information gathered from the media (see e.g., Ball-Rokeach and DeFleur 1976; Gerbner 1969; McCombs and Shaw 1972; Schenk 1997; Scherer 1990). The model of media dependency (Ball-Rokeach and DeFleur 1976) states that the more important the news is as source of information for the public, the stronger the resulting media effects (*Indirect experience arrow, Figure 1*). Conversely, the more direct one's personal experiences on a given topic, the weaker the news influence (*Direct experience arrow, Figure 1*).

News media play an important role in the public's agenda (Iyengar and Kinder 1987; McCombs and Shaw 1972; Shaw and

⁸ This paragraph was part of the author's submission, "How Real is Economic Mass Media Reality? Comparing the Real Economy and Economic News in German News Outlets," to the 2013 Conference of the International Communication Association.

McCombs 1977; Trenaman and McQuail 1961).⁹ By paying closer attention to certain topics than to others, news can change the salience¹⁰ of these topics among the public and therefore set the public agenda. In general, the intensity of agenda-setting effects depends on communicator, message, recipient, and environmental or situational variables. The “degree to which the media constitute the most important or dominant source of information” (Shehata and Strömbäck 2011, 234), the need for orientation or familiarity with the topic (Matthes 2006; Wu and Coleman 2009) or the credibility of a news outlet (Wanta and Hu 1994a) affect agenda setting. In addition, when focusing on a certain topic, news defines issues and problems (Noelle-Neumann and Mathes 1987). On a second level of public agenda setting, the attributes of a topic or an object of the media agenda become part of the public agenda. Emphasized attributes are more accessible to the audience than those that are not emphasized. Therefore, news sets *how* the public thinks about certain topics (Ghanem 1997).¹¹ Providing a macro-level perspective, cultivation theory emphasizes “how the media’s institutional practices shaped meanings in the mass production of messages that were then widely disseminated and thereby shaped public knowledge and beliefs over the long term” (Potter 2014, 1017).¹²

9 The media reality potentially *sets* the public agenda serving as an indirect experience. This relation is of major interest for mass communication scholars and many theories and hypotheses were proposed. That media influences what or how people think about certain issues can be explained by first- and second-level agenda setting or the cultivation theory. Mass media effects on recipients can occur on the cognitive, attitudinal, and behavioral level in general. The early “strong effects” paradigm on media effects expected a causal relation between mass media content and mass behavior. Although this paradigm is outdated, a long-term cumulative path from the media agenda to behavior can be drawn employing agenda setting or cultivation. Cultivation theorists as Gerbner 1969 have argued that media coverage is means to reality construction of the public. Further, the public develops beliefs about the beliefs of the public according to Fields and Schuman 1976.

10 As stated by Schenk (1997), public awareness is a result of media use but salience is a result of involvement, interpersonal communication, and individual importance of an issue.

11 This effect is also described with second-order cultivation. According to Hetsroni and Lowenstein(2012, 322), a second-level agenda-setting effect refers to the opinion towards an issue whereas a second-order cultivation effect incorporates resulting sentiment and expectations.

12 According to Potter (2014), agenda-setting theory has shown to have stronger predictive power than cultivation theory in meta analyses.

Comparing effects on the first and second level of agenda setting, Wu and Coleman (2009) show evidence that second-level effects are stronger than first-level effects. For the second level, news objects (e.g. the state of the economy) can be divided into attributes with a substantive dimension, e.g. unemployment, and an affective dimension, e.g. positive, negative or neutral evaluation (Maher 2001; McCombs and Ghanem 2001). The affective dimension incorporates the *tone* of news and ascribes a valence to an attribute that might affect how people think about it. According to Noelle-Neumann and Mathes (1987, 409), the *evaluation* in news reports creates a certain *climate* or *sentiment* of public opinion (see categorization in *Figure 2*). This evaluation can occur through implicit judgments, including frames, or metaphors and explicit judgments of cited actors or journalists in news stories. Hence, news tone and its consonance are related to the second-level of agenda setting, or, creating a climate of opinion through evaluation.

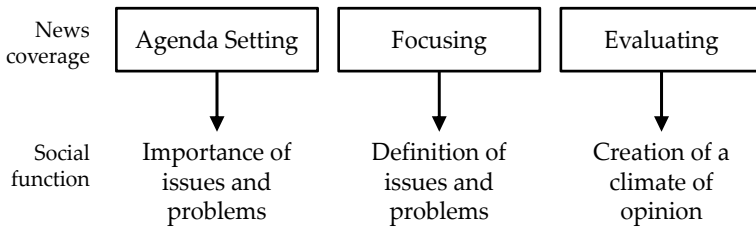


Figure 2: Aspects of reporting and their social function

Source: Noelle-Neumann and Mathes 1987, 409.

Whereas the first- and second-level agenda-setting function states *that* the media agenda and its attributes transfer to the public agenda, this model does not offer a micro-level explanation of *how* and *why* this process occurs. Economic sentiment can develop from experiences people make at their workplaces, hear from friends and family and perceive in their environment, from their attitude towards economic policy decisions, and from economic news. Gunther assumes that

People may estimate public opinion based on the expressed opinions of friends and acquaintances, or from the speeches of politicians, the actions of prominent people, or published interviews with opinion leaders. They may extrapolate from news of

demonstrations, strikes or riots, 'man in the street' interviews, or even from letters to the editor. (Gunther 1998, 487)

Therefore, the *slant* of news even only broadly related to a given topic may set a personal opinion and a perceived public opinion whereas both may differentiate from each other (Gunther 1998). Zerback, Koch, and Kramer (2015) demonstrate that explicit cues such as reports on poll results have a strong effect on the perceived climate of opinion but that implicit cues such as arguments guide climate perceptions when explicit cues are absent. They conclude that the slant of an article is used as additional information by recipients to evaluate the climate of opinions when explicit cues are not available, which relates to Noelle-Neumann and Mathes' (1987) evaluation aspect of news (*Figure 2*).

Adoni and Cohen (1978, 62) describe the role of mass media as information source for *economic* sentiment as follows, "In exposing many individuals to simultaneously shared information, mass media might constitute a central tool in fulfilling informational needs and a subjective feeling of understanding, both essential to constructing social reality." Hagen (2005, 294–309) argues that the public opinion on the economy depends on heuristics and the mental organization of economic knowledge. The gratification of orientation through information motivates news reception. News serves as routine environment monitoring, as a basis for economic decision making, and as a cause for interpersonal follow-up communication. Still, for the majority of the public, bounded rationality leads to superficial cognitive processing and deficient representation of economic information (Hagen 2005, 294–309). Because of subjective perception or bounded rationality, the public may use inference heuristics such as the persuasive press inference (Gunther 1998) to form economic expectations based on implicit news cues, "People infer public opinion from their perceptions of the content of media coverage and their assumptions of the persuasive impact of that coverage on others" (Gunther 1998, 486). That is, people also *presume* to know public opinion based on news coverage (Gunther 1998). This may be the case for business people who rely on economic behavior of the public. An observation by Soley and Craig (1992, 7) shows that entrepreneurs assume a connection between economic news and consumer behavior, as an editor reported more than 20 years ago, "...the car dealers (...) want all stories involving auto sales to have a rosy outlook, and they whine about negative

economic stories, even if they're on a national level from AP." This example shows that not only the public but also entrepreneurs may "assume that what mass media are saying today must be what the public will be thinking tomorrow" (Gunther 1998, 487) and presume that the public acts according to economic news. This "social construction (...) of audience distortions of reality" (Diefenbach and West 2012, 332) can also be integrated into cultivation theory as the third-person projections affect the beliefs about the behavioral outcomes of others. According to the third-person effect, people overestimate the effect of news on others when they have a manifest or an expert opinion on a certain topic (Perloff 1989) as well as a high self-perceived knowledge on a topic (Rapoport 1982) or perceive a great social distance to a large, heterogeneous group of others (Davison 1983; Perloff 1993; Tewksbury 2002). Therefore, third-person effects, such as the persuasive press influence and the influence of presumed influence, can explain why evaluations or expectations of the behavior of others are biased towards news sentiment (Jensen and Hurley 2005), why own behavior can be affected in turn (Tewksbury, Moy, and Weis 2004), and, overall, why cultivation evolves (Diefenbach and West 2012).

News can be an additional information source that predominantly influences *sociotropic* perceptions (Hagen May 27, 2004; Mutz 1992), i.e., the perception of unemployment or the economy as a social instead of a personal problem. Hence, even when individuals experience unemployment themselves or among family and friends, this issue may be regarded as an important public issue only when it is reported in the news. Only then can the extent of the problem be recognized and expectations for the development of unemployment in a country be developed. As a result, one could argue that economic sentiment depends on the individual media usage. Therefore, scholars referring to a *tight* definition of media effects assume different ways of reporting per media outlet, and analyze effects on an *individual* level using content analysis and panel surveys. Yet news "bring[s] different people and groups together, including people of different levels of formal education and even, to some degree, people with very different annual incomes" (McCombs 1992, 822). Following a *universal* or *broad* approach of media effects, news may lead to an increase in the perceived importance of an issue, which instigates follow-up conversations. Follow-up conversation spreads media content also to non-users of the

media and constitutes a *universal* or *collective media effect*. This assumption neglects effects of different media usage of people and allows for the conducting of analyses on an *aggregate* level.

The collective media effect supposes that the *dominating* media message reaches people directly or indirectly, e.g., through opinion leaders according to the two-step flow of communication (Lazarsfeld, Berelson, and Gaudet 1944; Katz 1957), and people will adapt their opinion and expectations according to it (Maurer 2004, 410). Thus, news consumption as well as personal interactions can cause agenda-setting effects. Indeed, research reveals identical news effects on the agenda of heavy and light media users applying time series analyses (Haller and Norpoth 1997; Krause and Fretwurst 2007; Krause and Gehrau 2007). Haller and Norpoth (1997, 561) report that people not receiving economic news “were by no means making wild guesses about the state of the economy,” but were just not as sure as recipients of economic news. Another difference between heavy and light media users is a lower speed of the news effects for light news users (Krause and Fretwurst 2007). This result is in line with the sticky information approach, indicating that the spreading of news is delayed across the public and an updating process on economic issues occurs only every six months or even less often (Easaw and Ghoshray 2010, see also Section 2.3). Thus, changes in the economic expectations of the public occur with a delay.

A powerful influence of collective media effects is the news *consonance* across outlets (Noelle-Neumann 1973; Noelle-Neumann and Mathes 1987). The more consonant media coverage and tone is, the stronger are the media effects on the public (Hagen 2005, 30; Maurer 2004, 410; Peter 2003; 2004). Wanta (1997) argues that similar news agendas across news outlets lead to similar effects on an aggregate level, which is affirmed in Strömbäck and Kiousis’ (2010) study. In contrast, if the media coverage is *not* consonant across outlets and people change their opinions according to their media use, *individual-level* analyses show a more accurate picture of media effects than aggregate analyses. Unless media outlets can be differentiated from each other with regard to economic contents or editorial slant (Mast 2012; Spachmann 2005), this study assumes a rather consonant economic news coverage across major news outlets in Germany based on previous research (Degenhard 2011; Eilders 2002; Jarren and Vogel 2009; Noelle-

Neumann and Mathes 1987) and therefore explores news effects on the public as a *collective* effect on an *aggregate* level. Yet differences in economic news per news outlet are investigated. Hence, this study also takes up the question raised by Scheufele (2008) how news effects on a macro level can be theoretically explained and empirically tested.

- C. Economic sentiments in turn may guide economic decision making and behavior such as whether to purchase goods, make investments or to save money (*Decisions and behavior* arrow, *Figure 1*).

Attitudes and beliefs affect behavioral intentions and actual behavior according to the theory of reasoned action (Ajzen and Fishbein 1977; 1980; Fazio 1986) and the theory of planned behavior (Ajzen 1991; Ajzen and Fishbein 2005). That is, people act in accordance to their intentions and causal links can be traced from beliefs, attitudes, and intentions to actual performed behavior. According to social psychology, most human behavior is goal-directed and follows more or less elaborate plans as well as behavioral intentions (Ajzen 1985). Behavioral intention, in turn, is guided by attitudes, which can change as a response to novel information. Source, message and recipient factors affect whether information can cause attitudinal change, in a way that “communicator and message variables may influence heuristics (e.g., overheard messages are trustworthy) and message-relevant thoughts (e.g., decisions that the arguments are novel) *within* the recipient” (Johnson, Maio, and Smith-McLallen 2005, 631, *italic in original*). Thus, message and sources, such as news and news outlets, can determine beliefs, behavioral intentions, and eventually behavior and decisions of recipients.

Rational choice theory claims that decisions are made based on individual preferences in order to maximize benefits. Instead, Herbert A. Simon (1956) argued that agents do not maximize but satisfice needs due to bounded rationality. Internal cognitive constraints, e.g., context dependency of perception and information processing, and environmental constraints, such as the costs of searching for information, lead to biased judgments and decisions. Decision makers may “focus on future experience and (...) ask ‘What will I feel then?’ rather than ‘What do I want now?’” (Tversky and Kahneman 1981, 458). Overly optimistic and overly cautious individuals result at different risk perceptions and decisions (Kahneman and Lovallo 1993). Thus, it has

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