Investigating the limits of framing effects: source credibility as a moderator

In recent years the concept of framing has been established as a central approach in political communication to investigate the influence of media on individuals such as voters. Strategies of framing are used to develop a conceptualization of a specific issue by promoting a particular interpretation of it. The effects of framing are limited by several individual and contextual factors. In our investigation we pick up these limits of framing and focus on the latter, the credibility of the frame’s source.

We present findings from an online experiment conducted in the surroundings of the German Federal Election 2013: The study will answer the question how the credibility of a source influences a framing effect. First we describe what is meant by a frame and a framing effect. Thereupon we adopt the credibility of a source as a moderator to the specified model and formulate our theoretical assumptions. We continue with a description of the research design and the data. Afterwards we present the empirical findings and conclude with a summary.

Framing and framing effects

In political communication research framing was described as a process in which a source – e.g. a newspaper – defines a fundamental problem based on a political issue and highlights a set of relevant considerations on this issue (Nelson et al. 1997: 222). The major premise for framing is that an issue can be viewed from a variety of perspectives. This has finally implications to several considerations on this issue. Considerations on a political issue are composed of beliefs relative to an object and the evaluation of such a belief. Framing offers a framework for interpretation which enables people to classify political issues easier (Chong and Druckman 2007c: 104). "To frame is to select some aspects of a perceived reality and make them more salient in a communication text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described"(Entman 1993: 52).

Through so-called framing strategies political elites try to change assessment dimensions and its weighting. However, the public has either no attitudes towards many political issues or
attitudes are sketchy and incomplete (Chong and Druckman 2007c: 104). Frames in this case represent specific patterns of interpretation that people should help to process absorbed information efficiently and to classify it useful (Scheufele 2003: 46). Accordingly "framing refers to the process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue" (Chong and Druckman 2007c: 104).

Conceptual framing studies distinguish between two types of framing. We focus on issue framing – following Slothuus and de Vreese (2010: 631) we understand issue framing, "as a process in which a communicator defines and constructs a political issue or public controversy by emphasizing a subset of potentially relevant considerations and thereby pointing the receiver to the essence of the issue". A framing effect exists if a person is suggested by the highlighting of certain considerations how to classify and evaluate a political issue (Entman et al. 2009: 181).

In framing research further distinction is made between one-sided framing and dual-framing. At one-sided framing individuals are confronted only with one pattern of arguments of an issue. Considerations within such frames are thus not competing with each other, but rather, these frames only provide arguments in favor or alternatively against a certain political issue. In contrast, dual frames contain competing considerations in the same quantity which are available for individuals at a particular time (Chong and Druckman 2007b: 638).

For general effects of frames Chong and Druckman postulate (2007a, b, and c) a psychological impact model. On the basis of models from social psychology for information processing, in particular for knowledge activation (Higgins 1996) and judgment formation (Chen and Chaiken 1999), they point out three dimensions, on which individuals base their attitude formation: availability, accessibility and applicability.

In order to use a consideration for attitude formation, it must be stored in memory and thus be available. This does not mean that a frame-given argument must be available. Only the terms and concepts contained in the argument must comply with the criterion of availability. Chong and Druckman (2007c: 110) give an example: if the concept of freedom of expression cannot be understood by a recipient, a frame that highlights this concept cannot be effective. In the next step, this consideration must be made salient and thus be accessible. This means that the consideration must be triggered from long-term memory. Accessibility is caused by constant or recent dealing with a frame which emphasizes this consideration and is an unconscious

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1 Look for another type - equivalency framing: Druckman 2001a: 228.
process (Chong and Druckman 2007c: 110). Third, this consideration must be applicable in the context of the stimulus. This prerequisite is considered to be fulfilled if a recipient has the sufficient motivation to weigh competing or conflicting considerations displayed by the frame against each other (Chong and Druckman 2007c: 110). With Chong and Druckman (2007c:111) we assume that "framing can work on all three levels, by making new beliefs available about an issue, making certain available beliefs accessible, or making beliefs applicable or "strong" in people’s evaluations".

**Source credibility as a moderator**

On the basis of the specified model theoretical assumptions can be made to moderator effects. In the context of previous studies, the effects of different moderator variables have been theoretically justified and tested empirically (Druckman 2001b, Chong and Druckman 2007b). Moderator variables are factors that can either strengthen or weaken the effect of a frame. For this study the credibility of a source is used as a contextual moderator variable. This factor is attributed to the frame itself and not to the recipient. We examine the moderating influence of source credibility on the framing effect. In the following we will define the credibility of a source and formulate testable hypotheses.

Most people do not develop their attitudes towards political issues by personal experience, but rather by what other people say, write or do. Most political issues are complex. Attitudes towards these issues also depend on those who inform about issues and thus determine which aspects are proposed on an issue (Slothuus 2008: 3). On the one hand the source of information is relevant for the selection of certain considerations about an issue. On the other hand the source is important to the use of heuristics. Heuristics are used if people want to come to a decision without high cognitive performance (Matthes 2007b: 170). Joslyn and Haider-Markel (2006: 86) assert that "scholars of public opinion have long recognized that citizens use heuristics to compensate for their lack of substantive knowledge about politics".

Peripheral characteristics of a source are decisive in this process, so called source cues, which are observed by the recipient of a message (Matthes 2007b: 170). Thus, people are lazy and have little incentive to question the arguments of a message if they have to make a decision which is of negligible importance for them. Rather, one looks at peripheral characteristics of a source that allow coming to a decision without dealing with the arguments (McGuire 1969: 198). The notice of certain source cues does not automatically mean that people learn more about an issue from these sources. However, the recipients of a source with positive valence
are more willingly to accept the arguments of the source (Zaller 1992: 45). Therefore, source cues are components of a message which go beyond the actual message content because the recipient is offered additional information with the peripheral characteristics of a source. The interaction between the message content and source cues can either enhance or weaken the effect of a message (Joslyn and Haider-Markel 2006: 87). The perceived applicability of issue frames and therefore the probability to influence the attitudes towards an issue by a framing effect depends on the perceived strength and relevance of frames (Chong and Druckman 2007c: 110-111). Both strong and relevant frames are often based on source cues, such as the quantity of arguments, the attractiveness of the communicator or the credibility of the source (Matthes 2007b: 170).

Following McGuire (1969: 179) the credibility of a source is defined as "the extent to which the source is perceived as knowing the right answer and as motivated to communicate it – in short, his expertise and trustworthiness". The expertise of a source indicates the extent to which the recipient of the source attributes that it is able to produce correct considerations about an issue. Whereas the trustworthiness of a source based on whether the recipient believes that the considerations mentioned from a source will be perceived by the source itself as correct (Sternthal et al 1978: 286-287). A credible source is distinguished by the fact that the recipient ascribes correct knowledge to the source with respect to a particular issue and that the source also has the incentive to communicate this correct knowledge without bias (McGuire 1969: 182). Mostly people get information on political issues from other people but knowing relatively little about them. A person who informs himself in a daily newspaper on current political issues usually does not know the author of an article personally. Therefore, expertise and trustworthiness is not attributed to the author but rather to the newspaper itself (Lupia and McCubbins 1998: 63).

As already mentioned availability, accessibility and applicability are crucial factors for successful framing. The source credibility is crucial especially for the applicability of frames, since only frames from credible sources are applicable (Chong and Druckman 2007b: 640). In this study we assume that the credibility of the source affects the framing effect as a moderator. People seeking for support at credible sources in order to assess political issues, "they only believe frames that come from sources they perceive to be credible"(Druckman 2001a: 1045). Therefore, we first expect that persons receiving credible frames with different patterns of argumentation differ in the assessment of an issue, because the credibility of the source

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Trustworthiness and expertise are two dimensions of credibility, which were considered as relevant in several factor analytical studies (Sternthal et al. 1978: 287).
leads to the acceptance of the frame content. Thus, it is assumed that individuals who receive a credible frame with arguments which are in favor of a listed issue will rate this issue more positive than persons receiving a credible frame with arguments that speak against an issue. In contrast, we expect no significant differences in the evaluation of an issue between people receiving the arguments of non-credible one-sided frames.

**H1a:** Individuals receiving a frame with a credible source evaluate the issue of this frame according to the mentioned argument.

**H1b:** Individuals receiving frames with a non-credible source and contrary patterns of argumentation do not differ in the assessment of a mentioned issue.

Furthermore, we expect that the evaluation of a framed issue varies even within a pattern of argumentation if different sources are specified. Joslyn and Haider-Markel (2006: 88) note that the conventional method for the investigation of source credibility is "to expose respondents to the same message, but with different subsets of respondents given different sources to which the message is attributed". Therefore, we assume that the source of the frame generates a difference in the evaluation of an issue when people receive the same frame content, but from different sources: "any difference in opinion between groups would be a consequence of source factors, since all other features of the study are the same" (Joslyn and Haider-Markel 2006: 88). Thus, within a pattern of argumentation that argues in favor of a mentioned issue, those individuals receiving a credible frame should assess the issue more positive, compared to recipients of a non-credible frame. On the contrary, within a pattern of argumentation that argues against a mentioned issue, those individuals receiving a credible frame should assess the issue more negative, compared to recipients of a non-credible frame.

**H2a:** If individuals get a frame with arguments in favor of an issue, those individuals receiving a credible source assess this issue more positive than individuals receiving a non-credible source.

**H2b:** If individuals get a frame with arguments against an issue, those individuals receiving a credible source assess this issue more negative than individuals receiving a non-credible source.

Furthermore, we assume that the moderating influence of source credibility on the framing effect also occurs in dual-framing. We assume that framing effects additionally depend on the context presenting the frame which influences the information processing of recipients. Due
to the competitive context that is generated by dual-frames, recipients are made to weigh arguments against each other. They notice credible sources as applicable, as opposed to non-credible sources and therefore they include arguments of the credible source into the assessment of an issue (Chong and Druckman 2007b: 640).

In this study we assume that in competitive context people often follow the arguments of a credible source because it seems more applicable, compared to arguments of a non-credible source. Accordingly in competitive context of dual-framing non-credible sources were dominated by credible sources, so that recipients follow the arguments of the credible source within a dual-frame. Thus, people should evaluate a framed issue more positive if they receive a dual-frame with arguments in favor of an issue which come from a credible source (and at once receiving arguments that speak against an issue which come from a non-credible source), as recipients of a dual-frame with arguments that speak against an issue which come from a credible source (and at once receiving arguments in favor of an issue which come from a non-credible source).

**H3: If individuals receiving arguments in a dual-frame which are in favor of an issue and come from a credible source, they evaluate this issue more positive than recipients receiving arguments in a dual-frame, which speak against this issue and come from a credible source.**

**Data, Research Design and Methodology**

In continuity with plenty of other studies we conducted an online experiment to test the hypotheses. According to the aim of this paper we try to detect the mode of action of the moderator source credibility. Thus we investigate the causal relationship between the variables frame and one’s attitude towards an issue. The experimental method is therefore suited best, as it enables the researcher to manipulate the independent variable in order to test its potency (Faas/Huber 2010: 725). Provided that randomization was successful, which is a necessity for internal validity (McDermott 2002a), it is possible to compare framing effects of different experimental groups: "Opinions expressed in the neutral condition provide the baseline preference against which to judge the impact of framed conditions" (Chong/Druckman 2007a: 106). Trying to detect causal mechanisms, no representative sample is required for external validity (McDermott 2002b).

During the period from July 15 to July 31, 2013, 560 people fully participated in our survey experiment (www.wahlumfrage-2013.de). The survey was advertised as a public opinion sur-
vey in the surroundings of the German Federal Election. Within the survey participants were randomly assigned to one of nine experimental groups or to control group. The groups differed with regard to the questionnaire. For the purpose of this paper we only look at groups with a credible source in comparison to groups with a non-credible source. A newspaper article about the property tax was presented in either a positive, negative or ambivalent way. The control condition contained an article about the search for a disposal site for nuclear waste.

The different versions of the issue-frame property tax served as one independent variable. Several studies have shown that the success of a frame clearly depends on the framed issue (Faas/Schön 2010: 127). Sniderman and Theriault (2004: 142) state that one "should concentrate on issues with three characteristics. They are (1) of major importance; (2) longstanding; (3) competitively contested". Besides that we took into account to design the frames as realistic as possible: "The typical political strategy is to connect a proposal to a positive idea or value that is widely available in the population" (Chong/Druckman 2007c: 16). According to that claim the pro- and contra-frame contained a value-based argumentation. To ensure as much compatibility as possible, every article was structured the same way and had the same length and thus differed from each other in as less characteristics as possible (Slothuus 2008). Following the procedure in prior research (Shen 2004b) all articles contained an identical introduction with neutral background information, two paragraphs with arguments in favor or against the introduction of a property tax and one common concluding paragraph. The dual-frame was constructed ambivalent with one argument in favor and one against. The frames were designed like real newspaper articles to increase the authenticity. In addition we used the font, the font size and the coloring of two German newspapers. The article of the control condition dealt with a totally different topic, which was expected not to be in connection with the framed topic. We show one of the dual-frames to give an impression of the design.

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3 Randomization was successful. F-tests are available at demand by the author.
4 Within the pro-frame it is argued that the introduction of a property tax would fight the social inequality and force the causers of the crisis to contribute to the cost of dealing with the crisis, whereas the contra-frame highlighted the negative consequences of an introduction such as capital flight and the declining competitiveness of Germany. The direction of the arguments was further highlighted by the headings of the articles.
Just after being exposed to the newspaper article the dependent variable, the attitude towards the introduction of a property tax, was measured by a 7-point scale ranging from 1 "strongly disagree" to 7 "strongly agree". Missing values such as "don’t know" or "no answer" given were excluded from the analysis.

As already argued, two attitude dimensions are fundamental to the operationalization of source credibility: trustworthiness and expertise. There are different ways to measure these two attitude dimensions. The participants of the online experiment of this study were asked at the end of the online survey about the attitude dimensions of trustworthiness and expertise towards daily newspapers. The selected variant for measuring the source credibility seems to make sense, since it is assumed that the participants can express their attitudes to the daily newspapers, uninfluenced by the reception of the frame, most likely at the end of the online survey. The participants had the opportunity to evaluate various German daily newspapers on

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5 The measuring of source credibility could have taken place even before the experimental stimulus. Druckman (2001a: 1047-1048) does not recommend this variant, since it could have influence to the stimulus perception of
a seven-point scale in terms of received trustworthiness and assigned expertise whereas higher values on the scale expressed a higher level of trustworthiness respectively expertise. In addition there was the possibility to respond "do not know" and "not specified". These responses were coded as missing values and hence excluded from the analysis. More newspapers were listed as not to draw attention to one of the newspapers that have been previously presented in connection with a frame.

The two sources mentioned in the frames were the German daily newspapers "BILD" and "DIE WELT". These sources have been selected with the intention to incorporate a credible and a non-credible source in the online experiment. These two daily newspapers belong to the publisher Axel Springer AG. The assumption was that "DIE WELT" as a well-known quality newspaper will be rated as credible while "BILD" as a tabloid is rated as non-credible.

As expected these sources were rated differently according to the attitude dimensions. To illustrate the mean values of the items are shown in Figure 1. Across all participants in the online survey "BILD" received at the expertise-item a mean of 1.93 (n = 481), at the trustworthiness-item a mean of 1.75 (n = 511). "DIE WELT" was rated significantly higher and received at the expertise-item a mean of 4.82 (n = 396), at the trustworthiness-item a mean of 4.36 (n = 403). The mean difference of 2.89 scale points (t-value = 30.43) in the expertise-item is highly significant just like the mean difference of 2.61 scale points (t-value = 28.49) in the trustworthiness-item. "DIE WELT" was rated significantly higher in both attitude dimensions than "BILD" and is therefore defined as a credible source in the following analysis. The low values of "BILD" allow considering this source as non-credible.

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6 The wording of the item which was used to measure trustworthiness in German daily newspapers, was: "Please specify now how much you trust the following daily newspapers. Please use the scale of "I trust not at all" to "I trust completely". With the values in between, you can grade your opinion". The wording of the item which was used to measure the assigned expertise of daily newspapers, was: "Please specify now the sound knowledge of political contents in the following daily newspapers. Please use the scale of "not a bit sound" to "very sound". The original language of the items was German.

7 The items contained German daily newspapers in the following order: Frankfurter Rundschau, DIE WELT, Süddeutsche Zeitung, Frankfurter Allgemeine Zeitung, BILD, die tageszeitung (taz).

8 The control group shows similar values. Control group-participants received no source labels in the frame, so that the stimulus could have no effect on the attitudes towards the daily newspapers.
Results
To get an idea of the framing effects, we compare four groups with each other in the next step: pro-group, contra-group, dual-group and control-group. The experimental groups have a neutral source as a base. In order to compare them with each other, the approval of the introduction of a property tax was regressed on group assignment. The group assignment is operationalized by dummy variables (1 if the frame was received; 0 if the frame was not received). The contra-group forms the reference category. The results of these regressions for the individual reading time restrictions are given in table 2.

Table 2: approval to the implementation of a wealth tax

<table>
<thead>
<tr>
<th>minimum reading time</th>
<th>control-frame</th>
<th>pro-frame</th>
<th>dual-frame</th>
<th>constant</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no restriction</td>
<td>30 seconds</td>
<td>45 seconds</td>
<td>60 seconds</td>
</tr>
<tr>
<td>control-frame</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>-0.02</td>
<td>0.16</td>
<td>0.31</td>
<td>0.55</td>
</tr>
<tr>
<td></td>
<td>(0.366)</td>
<td>(0.397)</td>
<td>(0.410)</td>
<td>(0.456)</td>
</tr>
<tr>
<td>pro-frame</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.14</td>
<td>0.25</td>
<td>0.57</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>(0.379)</td>
<td>(0.411)</td>
<td>(0.442)</td>
<td>(0.514)</td>
</tr>
<tr>
<td>dual-frame</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0.53</td>
<td>0.75#</td>
<td>0.94*</td>
<td>1.17*</td>
</tr>
<tr>
<td></td>
<td>(0.385)</td>
<td>(0.422)</td>
<td>(0.432)</td>
<td>(0.471)</td>
</tr>
<tr>
<td>constant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4.39***</td>
<td>4.40***</td>
<td>4.30***</td>
<td>4.11***</td>
</tr>
<tr>
<td></td>
<td>(0.266)</td>
<td>(0.286)</td>
<td>(0.296)</td>
<td>(0.333)</td>
</tr>
</tbody>
</table>

| N        | 223      | 186      | 167      | 139      |
| R²       | 0.01     | 0.02     | 0.03     | 0.04     |

Unstandardized regression coefficients. Standard error in parenthesis.
Reference category: contra-frame (neutral source).

*** 0.1%, ** 1%, * 5%, # 10%
First we note that the subjects of the contra-group consistently exhibit the lowest approval of the introduction of a property tax. This is apparent from the positive coefficients of the other groups. Furthermore it is striking that the greatest approval of the introduction of a property tax is found in the dual-frame-group. Up from a reading time restriction of 30 seconds there are significant differences to the contra-group. We have found significant differences with the specified reading time restrictions neither in control-group nor in pro-group. We take these results as a basis and examine in the next step, how the moderator variable source credibility affects these framing effects.

For the analysis of moderator effects of source credibility, comparison groups are formed in order to determine mean differences in attitudes towards an introduction of a property tax between respective groups. In the analysis no levels of credibility will be included. The aim of this study is to examine the moderating influence of source credibility on the framing effect and not what degree of source credibility is needed to achieve framing effects. This approach is consistent with previous studies of framing effects in relation of source credibility (Druckman 2001a: 1048).

We have calculated t-tests to examine the moderating effect of source credibility on framing effects. In the following group comparisons, mean values of the dependent variable, the approval of the introduction of a property tax are compared with each other. In addition, the reading time of the participants is noted which serves as a filter variable in the analysis. The results of the t-tests are displayed in the respective figures. The average values of the compared groups as well as their differences according to certain reading time limits are shown.

First, the rating of the dependent variable is compared between those who receive a one-sided credible frame (hypothesis 1a). Thus, the comparison groups consist of recipients of the "DIE WELT"-article with pro-reasoning and recipients of the "DIE WELT"-article with contra-reasoning. The results are shown in table 3. As theoretically expected, wealth tax is rated lower in the credible contra-group than in the credible pro-group, thus the differences in all four comparisons have a negative sign. At a minimum reading time of 45 seconds the average of the contra-group is 3.79 (n = 43), however the average of the pro-group is 4.63 (n = 35). There is a difference in the attitude towards the introduction of a property tax of -0.84 scale

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9 With the exception of one group all comparison groups exceed the limit of n = 30, and thus are qualified for inferential statements (Kohler and Kreuter 2012: 228).
10 The following mean comparisons are one-sided t-tests in terms of the hypotheses. Since the theoretical assumptions are already directed, all t-values and p-values come from one-sided tests (Gehring and Weins 2009: 235). This approach is consistent with other framing studies (Nelson and Oxley 1999; Druckman 2001a).
points ($t = -1.72, p = 0.04$) between the two groups. From a minimum reading time of 30 seconds the difference is weakly significant, from 45 seconds reading time even at a significance level of 5%.

**Table 3: mean comparison: credible sources (pro-frame vs. contra-frame)**

<table>
<thead>
<tr>
<th></th>
<th>no restriction</th>
<th>minimum reading time</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>30 seconds</td>
<td>45 seconds</td>
<td>60 seconds</td>
<td></td>
</tr>
<tr>
<td>contra-frame</td>
<td>4.11 (n = 62)</td>
<td>3.92 (n = 48)</td>
<td>3.79 (n = 43)</td>
<td>3.97 (n = 35)</td>
<td></td>
</tr>
<tr>
<td>pro-frame</td>
<td>4.3 (n = 54)</td>
<td>4.54 (n = 37)</td>
<td>4.63 (n = 35)</td>
<td>4.84 (n = 31)</td>
<td></td>
</tr>
<tr>
<td>difference</td>
<td>-0.19</td>
<td>-0.62#</td>
<td>-0.84*</td>
<td>-0.87*</td>
<td></td>
</tr>
</tbody>
</table>

*** 0.1%, ** 1%, * 5%, # 10%

The next comparison groups consist of recipients of one-sided non-credible frames, thus of those, who received the "BILD"-pro-article and the "BILD"-contra-article in the experiment (hypothesis 1b). The results of the comparison are displayed in table 4. As expected, there are no significant differences in this comparison. The differences in the attitude towards an introduction of a property tax are even in the opposite direction of the frame argumentation at a minimum reading time of 30 seconds and without reading time restriction and always insignificant.

**Table 4: mean comparison: non-credible sources (pro-frame vs. contra-frame)**

<table>
<thead>
<tr>
<th></th>
<th>no restriction</th>
<th>minimum reading time</th>
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</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>30 seconds</td>
<td>45 seconds</td>
<td>60 seconds</td>
<td></td>
</tr>
<tr>
<td>contra-frame</td>
<td>4.58 (n = 50)</td>
<td>4.48 (n = 44)</td>
<td>4.29 (n = 41)</td>
<td>4.15 (n = 34)</td>
<td></td>
</tr>
<tr>
<td>pro-frame</td>
<td>4.54 (n = 57)</td>
<td>4.39 (n = 49)</td>
<td>4.55 (n = 44)</td>
<td>4.6 (n = 35)</td>
<td></td>
</tr>
<tr>
<td>difference</td>
<td>0.04</td>
<td>0.09</td>
<td>-0.26</td>
<td>-0.45</td>
<td></td>
</tr>
</tbody>
</table>

*** 0.1%, ** 1%, * 5%, # 10%

The results of the first two mean comparisons support hypotheses 1a and 1b. They show that the credibility of the source has a moderating influence on the framing effect and thus enhances the effect. As predicted, the recipients followed the patterns of argumentation within a frame with a credible source. The source credibility stimulates the acceptance of frame contents. Consistent with our assumption there are no significant differences in the attitude towards an introduction of a property tax if the arguments came from a non-credible source.
The following comparison groups were composed with participants within the respective patterns of argumentation. In each case the frame content is the same. The only differences are the labels of the source and the respective design in the style of the sources. We therefore compare the participants, who received the "BILD"-pro-article and the "DIE WELT"-pro-article (hypotheses 2a). Table 5 shows the results of this comparison. With the exception of the mean comparison without reading time restriction, the wealth tax is always rated more positively in the group with the credible source than in the group with the non-credible source. However, in this comparisons the mean value remain insignificant, so the results have to be interpreted merely as a tendency for the assumption.

Table 5: mean comparison: pro-frames (credible source vs. non-credible source)

<table>
<thead>
<tr>
<th></th>
<th>no restriction</th>
<th>30 seconds</th>
<th>45 seconds</th>
<th>60 seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>pro-frame (credible)</td>
<td>4.3 (n = 54)</td>
<td>4.54 (n = 37)</td>
<td>4.63 (n = 35)</td>
<td>4.84 (n = 31)</td>
</tr>
<tr>
<td>pro-frame (non-credible)</td>
<td>4.54 (n = 57)</td>
<td>4.39 (n = 49)</td>
<td>4.55 (n = 44)</td>
<td>4.6 (n = 35)</td>
</tr>
<tr>
<td>difference</td>
<td>-0.24</td>
<td>0.15</td>
<td>0.08</td>
<td>0.24</td>
</tr>
</tbody>
</table>

*** 0.1%, ** 1%, * 5%, # 10%

The next group comparison is consistent with the logic of the previous. However, this time the means of the contra-group with the credible source are compared with the contra-group with the non-credible source (hypothesis 2b). The results are displayed in table 6. Participants, who received a credible frame, have consistently lower values of the attitude towards an introduction of a property tax as recipients of the non-credible frames. The clearest mean difference is at a reading time of at least 30 seconds. At this point the recipients of the "DIE WELT"-article have a mean of 3.92 (n = 48), while the recipients of the "BILD"-article have a mean of 4.48 (n = 44). The difference between these means is -0.56 scale points and is weakly significant (t = 1.32, p = 0.10).

Table 6: mean comparison: contra-frames (credible source vs. non-credible source)

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<tr>
<th></th>
<th>no restriction</th>
<th>30 seconds</th>
<th>45 seconds</th>
<th>60 seconds</th>
</tr>
</thead>
<tbody>
<tr>
<td>contra-frame (credible)</td>
<td>4.11 (n = 62)</td>
<td>3.92 (n = 48)</td>
<td>3.79 (n = 43)</td>
<td>3.97 (n = 35)</td>
</tr>
<tr>
<td>contra-frame (non-credible)</td>
<td>4.58 (n = 50)</td>
<td>4.48 (n = 44)</td>
<td>4.29 (n = 41)</td>
<td>4.15 (n = 34)</td>
</tr>
<tr>
<td>difference</td>
<td>-0.47</td>
<td>-0.56#</td>
<td>-0.5</td>
<td>-0.18</td>
</tr>
</tbody>
</table>

*** 0.1%, ** 1%, * 5%, # 10%
Obviously, the findings point to a moderating influence of source credibility. The comparison groups did not differ with respect to the frame content, but only by specifying a source. The differences in the attitude towards an introduction of a property tax are thus due solely to the specification of a source. Almost all mean differences show up in the expected direction. The results of these group comparisons are consistent with the hypotheses 2a and 2b. Due to the lack of statistical significance of the mean differences, however, the results could be random.

The final comparison is between the recipients of dual-frames (hypothesis 3). Each participant has therefore received pro- and contra-arguments which however differ in the source specification. The result of this comparison is shown in table 7. Participants who received the dual-frame with credible pro-arguments rate the introduction of a property tax on average more positively than recipients of the dual-frame with credible contra-arguments across all reading time restrictions. The clearest mean difference is at a reading time of at least 45 seconds. Recipients of the dual-frame with credible pro-arguments have a mean of 4.79 (n = 43) while recipients of the dual-frame with credible contra-arguments have a mean of 4 (n = 32). The difference between these means is 0.79 scale points and is significant (t = 1.73, p = 0.04). All other mean differences are significant at a 10 % level.

Table 7: mean comparison: dual-frames (pro, credible source vs. contra, credible source)

<table>
<thead>
<tr>
<th></th>
<th>minimum reading time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>no restriction</td>
</tr>
<tr>
<td>dual-pro-credible</td>
<td>4.66 (n = 53)</td>
</tr>
<tr>
<td>dual-con-credible</td>
<td>4.15 (n = 48)</td>
</tr>
<tr>
<td>difference</td>
<td>0.51#</td>
</tr>
</tbody>
</table>

*** 0.1%, ** 1%, * 5%, # 10%

The results of this comparison show that in the competitive context of dual-framing non-credible sources were dominated by credible sources. Consistent with hypothesis 3, there are significant differences with respect to the attitude towards an introduction of a property tax between groups of dual-framing. We conclude that the source credibility has a moderating influence on the framing effect. The tests show that the framing effect is enhanced if credibility is attributed to the source of the frames.
Summary
The aim of this work was to study the influence of source credibility as a moderator variable on framing effects relating to wealth tax. For this, we first formulated basic terms, concepts and a general impact model with recourse to established research literature on framing. Thereupon hypothesis were derived based on theoretical assumptions. To test these hypotheses, an online experiment was performed. We find that a more credible media source strengthens the framing effect while a less credible source has no influence on the framing effect, indicating that the source credibility serves as a moderator. Thus, the source credibility in our investigation presents itself as a basic prerequisite for effective framing. In terms of theoretical assumptions, frames by credible sources turned out to be applicable, so that arguments from a credible source were more readily accepted.

The external validity of the study is to be considered critical. The participants were interviewed alone in front of their computer what probably does not reflect the realistic perception of political contents. This often takes place in communication and interaction with others. For further research, opportunities should be found to increase the external validity for online experiments. For example, the influence of deliberation on frame content could become the object of research. Furthermore, the combination of several moderator variables, such as political interest and individual predispositions, is of particular interest.

References


