



DATIS

Data for Inclusive Societies: Foes and Friends of Inclusiveness in contemporary Greece

D4.3 Dataset* and Report of the survey experiments findings

School of Political Sciences, Aristotle University of Thessaloniki

October 2025

* all DATIS datasets are available at: datis.gr/datasets



H.F.R.I.
Hellenic Foundation for
Research & Innovation

Greece 2.0
NATIONAL RECOVERY AND RESILIENCE PLAN



Funded by the
European Union
NextGenerationEU

1. Introduction

Web survey experiments represent a contemporary and increasingly prevalent methodology in social science research, effectively combining the scalability and accessibility of online surveys with the rigor of experimental design. This approach enables researchers to manipulate specific variables within digital questionnaires, thereby facilitating causal inferences about the relationships between stimuli and participants' attitudes, opinions, or behaviors. The ability to embed experimental manipulations within online surveys allows for the investigation of causal effects in a controlled yet flexible environment, offering a cost-effective alternative to traditional laboratory-based studies.

The advantages of web survey experiments are well-documented in the literature. For instance, Wright (2005) highlights that online surveys provide access to geographically dispersed individuals, facilitate engagement with hard-to-reach populations, and simplify data collection through automation. Similarly, Schmidt (1997) emphasizes the low costs and time efficiency of online survey administration, particularly through the elimination of data entry stages and the possibility of interactive participant feedback. Furthermore, Manfreda et al. (2002) discuss the design of web survey questionnaires, underscoring the importance of question formatting and layout in enhancing response quality and minimizing measurement errors.

Understanding how individuals form and modify their attitudes towards inclusive societies is a central concern in social psychology and communication research. This study investigates exposure to textual information on participants' perceptions and attitudes towards specific social groups, focusing on two topics: immigrants and working women. Participants were randomly assigned to read either a positively or negatively framed text concerning these groups, allowing us to examine the differential effects of message valence on both perceived credibility and attitudinal change and to assess the extent to which such exposure can shift attitudes in a controlled online experimental setting.

Framing refers to the process by which certain aspects of reality are selectively emphasized in communication in order to promote specific problem definitions, causal interpretations, and normative evaluations (Entman, 1993). In this view, the framing of information does not merely convey content, but actively shapes how individuals understand and evaluate social groups. Prior work demonstrates that framing effects are most likely when individuals' prior attitudes are ambivalent or weakly crystallized, allowing informational cues to structure interpretation (Chong & Druckman, 2007). Examining framing dynamics in online survey experiments therefore provides an appropriate means to assess whether exposure to positive or negative portrayals can meaningfully influence social attitudes.

The study addresses one primary research objective: to measure the change in participants' attitudes resulting from reading the texts. Participants' initial attitudes were assessed using a five-point Likert scale before exposure to the texts, and their attitudes were reassessed afterward. By comparing pre- and post-exposure responses, we can quantify the degree of attitudinal change and determine whether these shifts vary depending on the valence of the text (positive or negative) (Reips, 2009).

This experimental design follows established standards for web-based experiments, including randomized assignment and online survey administration, which have been shown to yield results that are both comparable to those obtained through traditional laboratory-based experiments (Kohavi et al., 2009). The online format enables rapid data collection from diverse participant pools and facilitates the examination of causal effects in a controlled environment while maintaining ecological validity.

More specifically, this study provides insights into whether exposure to positive or negative portrayals of immigrants and working women can meaningfully influence individuals' evaluations of these groups. By combining measures of perceived credibility with assessments of attitudinal change, the study contributes to a deeper understanding of the mechanisms through which online media content and information framing affect social perceptions. Furthermore, the findings have potential implications for communication strategies, policymaking, and initiatives at promoting social equality, illustrating how targeted messages can either reinforce or challenge existing stereotypes and beliefs.

1.2 Why Greece as a Case Study

Greece constitutes a theoretically and empirically significant case for examining attitudes toward inclusive societies due to the intersection of economic transformation, migration pressures, and persistently traditional gender norms. Over the past decade, Greece has occupied a central position in broader European debates on immigration and social cohesion, particularly following the 2015 refugee and migration crisis, during which the country became the primary entry point to the European Union for asylum seekers from the Middle East, Asia, and Africa (Triandafyllidou, 2018). As a result, public perceptions of immigrants in Greece are shaped not only by socio-economic considerations but also by questions of national identity and cultural continuity, rendering attitudes toward immigration especially salient and politically sensitive (Sotiropoulos & Bourikos, 2022).

At the same time, Greece continues to display some of the most traditional gender norms in the European Union, particularly concerning women's participation in the labor market and gendered family roles. Although policy developments have expanded formal protections around gender equality, Greece's female labor force participation rate remains among the lowest in the EU, and traditional gender role ideologies continue to shape expectations around women's work and caregiving responsibilities (OECD, 2023; Petmezidou & Polyzoidis, 2015). These enduring normative structures reflect deep-rooted socialization patterns that make attitudes toward working women comparatively resistant to change (Eagly & Wood, 2012).

Moreover, Greece's media environment has played a key role in reproducing narratives around both migration and gender roles. Research shows that Greek media coverage has often framed immigration through lenses of crisis, security, and cultural tension, influencing public perception and policy discourse (Kadianaki & Andreouli, 2015). Simultaneously, media representations of women continue to reinforce traditional femininity and familial roles, even amidst increasing societal debates over professional equality (Kampouri, 2022). These conditions provide fertile ground for examining how exposure to contrasting informational framings influences attitudes in domains where public opinion is actively negotiated.

Thus, Greece offers a strategically valuable case for analyzing framing effects: attitudes toward immigration are relatively fluid and responsive to perceived social and economic cues, whereas attitudes toward gender roles are more structurally ingrained. Studying both domains in the same national context enables the identification of variation in the malleability of social attitudes, offering insights relevant to public communication strategies, social cohesion policy, and comparative research on inclusive societies.

2. Sample and Methodology

This study employs a web-based survey experiment to examine how exposure to textual information influences participants' attitudes and perceptions towards two social groups: immigrants and working women. Web survey experiments have become increasingly common in social science research, because they combine the scalability, accessibility, and efficiency of online surveys with the methodological rigor of experimental design. By embedding manipulations directly within digital questionnaires, researchers can assess the causal effects of stimuli on attitudes, opinions, and behaviors in a controlled yet flexible environment that allows rapid and cost-effective data collection (Wright, 2005; Schmidt, 1997; Manfreda et al., 2002).

The central objective of this research is to understand how individuals form and modify their attitudes towards inclusive societies and to assess whether exposure to positively or negatively framed messages about specific social groups can meaningfully influence perceptions. Participants were randomly assigned to read either a positively or a negatively framed text regarding immigrants and working women. Random assignment ensures group equivalence and minimizes selection biases, thereby supporting valid causal inferences regarding the effects of message valence on perceived credibility and attitudinal change (Kohavi et al., 2009).

Participants were recruited through an online panel to ensure diversity in terms of age, gender, educational level and other sociodemographic characteristics. Eligibility criteria required participants to be adults with sufficient literacy to comprehend the stimuli and internet access in order to complete the survey. The final sample comprised 1,010 respondents, balanced across experimental conditions (Bethlehem, 2010a).

Two sets of textual stimuli were developed, one focusing on immigrants and the other on working women. Within each set, participants were randomly exposed to either a positively or a negatively framed text. The texts were carefully designed to be equivalent in length, tone, and linguistic complexity to minimize confounding factors and ensure that any observed attitudinal changes could be attributed to message valence rather than structural differences.

The primary outcomes of interest were participants' attitudes towards the target groups and the perceived credibility of the texts. Attitudes were measured using a five-point Likert scale ranging from 1 to 5 both before (pre-test) and after (post-test) exposure to the stimuli, allowing for within-subject comparisons. Additionally, the survey collected demographic variables, including age, gender, educational level, occupational status, marital status, political orientation, self-placement, religion, frequency of religious service attendance, and urban/rural residence, to control for potential confounding influences.

The study followed a structured procedure consistent with best practices in web-based experimental research. Participants accessed the survey through a secure web platform, completed the pre-test attitude measures, and were then randomly assigned to one of the experimental conditions and exposed to the corresponding textual stimuli. After reading the assigned texts, participants completed the post-test attitude and credibility measures, followed by demographic questions. All procedures adhered to ethical guidelines, including informed consent, voluntary participation, and the protection of participants' privacy (American Psychological Association, 2017).

3. Survey Instrument and Measurement Strategy

This survey experiment was designed to examine how exposure to textual information with positive or negative framing influences individuals' perceptions and attitudes towards two key social domains: gender and immigration. The study employed a randomized between-subjects design, integrated into a web-based survey platform, enabling the collection of both attitudinal and evaluative data under controlled experimental conditions.

Participants were first asked to complete a set of baseline attitudinal questions, after which they were randomly assigned to one of two framing conditions (positive or negative) for each thematic domain. Following exposure to the stimulus texts, they evaluated the content through standardized questions on credibility and stance. Finally, additional attitudinal measures and demographic information were collected. This design allows for both causal inference (by comparing responses between treatment groups) and descriptive analysis of broader attitudinal patterns in the population.

3.1 Pre-Manipulation Measures

The first part of the questionnaire consisted of items measuring baseline attitudes towards gender roles and immigration. These questions aimed to capture respondents' pre-existing orientations towards two key dimensions of inclusive societies. Participants indicated their level of agreement with statements on:

- gender norms and family roles,
- the economic and social contribution of immigrants to Greek society.

All items were measured on a five-point Likert scale ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"). This section established the attitudinal baseline prior to the experimental intervention.

3.2 Experimental Manipulations

In the second part of the instrument, respondents were randomly assigned to one of two experimental conditions for each thematic domain.

- Gender framing: Participants were shown either a positively framed newspaper excerpt (S1) emphasizing the economic benefits of gender equality or a negatively

framed excerpt (S2) focusing on challenges linked to women's participation in the labour market.

- Immigration framing: Participants were shown either a negatively framed text (IM1) highlighting potential economic risks or a positively framed text (IM2) emphasizing migrants' economic contributions.

The randomized assignment of textual stimuli ensured internal validity and allowed for systematic estimation of framing effects.

3.3 Post-Manipulation Measures

Immediately following the exposure to the experimental stimuli, respondents completed a set of post-treatment evaluation questions to assess:

- the perceived stance of the text towards the target group (response categories: "Positive," "Neutral," "Negative").

These items constitute the main dependent variables, capturing direct attitudinal and perceptual responses to the framing intervention.

3.4 Additional Attitudinal Items

To enable a broader analysis of public attitudes related to inclusive societies, the questionnaire included additional attitudinal measures addressing:

- perceptions of gender equality and its impact on the labour market,
- attitudes towards women's leadership in politics and business,
- support for workplace diversity and anti-discrimination measures,
- perceived intensity of social conflict between different social groups, and
- attitudes towards migration and its socio-economic implications.

Most of these questions employed a five-point Likert scale, while selected items used a 0–10 intensity scale (e.g., social conflict items). This section provides contextual variables that allow for richer interpretation of experimental effects.

3.5 Demographic Variables

The final part of the questionnaire collected socio-demographic information to allow for the inclusion of control variables and subgroup analyses. Variables covered:

- gender, age, and educational attainment,
- religious affiliation and frequency of religious participation,
- marital and employment status,
- political self-placement on a left–right scale (0–10),
- voting behaviour in the June 2023 national elections, and
- type of place of residence (urban, suburban, rural).

These indicators are essential for the identification of heterogeneous treatment effects across population subgroups and for ensuring analytical transparency.

3.6 Overview of the Instrument

The questionnaire was designed to combine experimental control with broader attitudinal and socio-demographic measurement, in order to capture both framing effects and the wider context of public opinion on gender and immigration. Overall, it comprised:

- 7 pre-manipulation attitudinal items (gender and immigration),
- 4 experimental stimuli (S1, S2, IM1, IM2),
- 4 post-manipulation evaluation items,
- 24 additional attitudinal items, and
- 11 demographic questions.

This structure supports both causal analysis—by assessing attitudinal and perceptual changes following exposure to experimental stimuli—and descriptive analysis of the broader attitudinal environment. The combination of pre-treatment questions, randomized exposure, and post-treatment evaluation ensures internal validity, while the inclusion of supplementary attitudinal and socio-demographic measures allows for more nuanced interpretation of results and subgroup analyses.

The full questionnaire, including the exact wording of all items, variable names, and response scales, is provided in Annex I. This annex ensures methodological clarity, facilitates replicability, and reinforces the transparency of the research design and implementation.

The conceptual design of the instrument was informed by established international survey infrastructures such as the International Social Survey Programme (ISSP) and the European Social Survey (ESS), and it was adapted to the Greek context to ensure conceptual validity, comparability, and alignment with high methodological standards in contemporary social science research.

4. Data Analysis Methodology

The data analysis for this report was conducted using the statistical programming language R, a free and open-source environment widely recognized for its capabilities in statistical computing and graphics, ensuring the reproducibility of the results. The analysis primarily relied on the tidyverse collection of packages, including dplyr for efficient data manipulation and transformation, and tidyr for reshaping and cleaning data sets. The psych package was integral for conducting the necessary psychometric evaluations. The initial dataset, saved in the proprietary SPSS format, was imported into the R environment using the read_sav() function provided by the haven package.

4.1 Experimental Design

This report employed a mixed design structure, which combined a Within-Subjects factor (Time) with two separate Between-Subjects factors (attribute_1 and attribute_2). This Pre-test/Post-test design allowed for the rigorous assessment of attitude change (within) while simultaneously testing for differential effects of the experimental manipulations (between). Participants were randomly assigned to one condition level for attribute_1 (Positive or Negative) and one for attribute_2 (Positive or Negative), ensuring the independence of observations across the experimental groups.

4.2 Experimental Procedure

A. Pre-test Measurement (Baseline)

Upon providing consent, participants were directed to the Pre-test questionnaire. This phase was crucial for establishing the baseline attitudes before any exposure to the experimental manipulation. It included the initial psychometric scales for measuring attitudes towards working women (preQ2 items) and attitudes towards immigrants (preD15 items).

B. Experimental Intervention and Manipulation

Following the baseline measurement, participants were automatically randomized into one of the experimental groups in a process invisible to them. The core of the intervention involved exposure to stimulus material designed to manipulate the attribute 1 and attribute 2 factors.

- Stimulus Material: The content and format of the stimuli were held constant across conditions (e.g., both groups read a short text). The difference lay only in the content's valence, reflecting the positive or negative framing associated with the target groups.
- Manipulation Check: Immediately after exposure, participants completed a brief manipulation check task designed to ensure they perceived and comprehended the intended valence of the experimental stimulus.

C. Post-test Measurement

The final stage involved the Post-test measurement, which was administered immediately following the manipulation check to minimize the influence of external factors on attitude change. This questionnaire contained the final versions of the attitude scales (Q2 and D15 items). The immediate post-test design was selected to capture the short-term impact of the experimental manipulation on explicit attitudes, along with demographic questions (age, gender, educational attainment, religious affiliation and frequency of religious participation, marital and employment status, political self-placement on a left-right scale (0–10), voting behaviour in the June 2023 national elections, and type of place of residence (urban, suburban, rural).

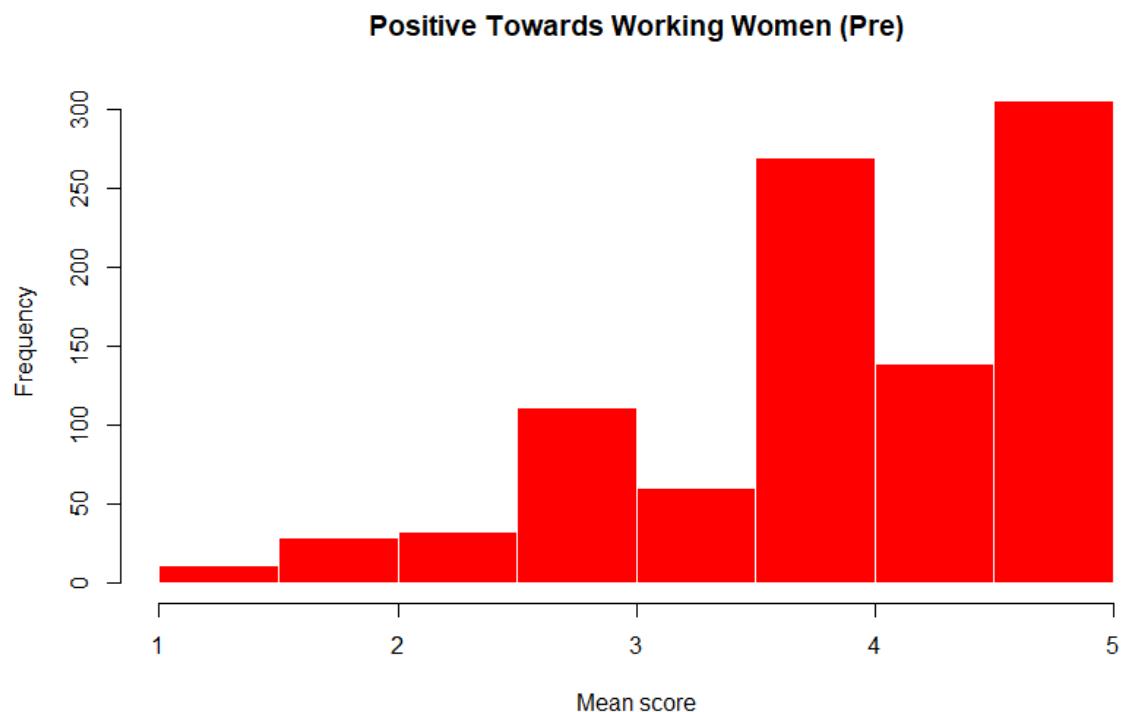
4.3 Attitude Scale Towards Working Women

Participants' attitudes towards working women were assessed using questionnaire items designed to capture beliefs about gender roles, work and family responsibilities. To obtain a

more interpretable measure, two composite indices were created representing participants' responses before and after the intervention.

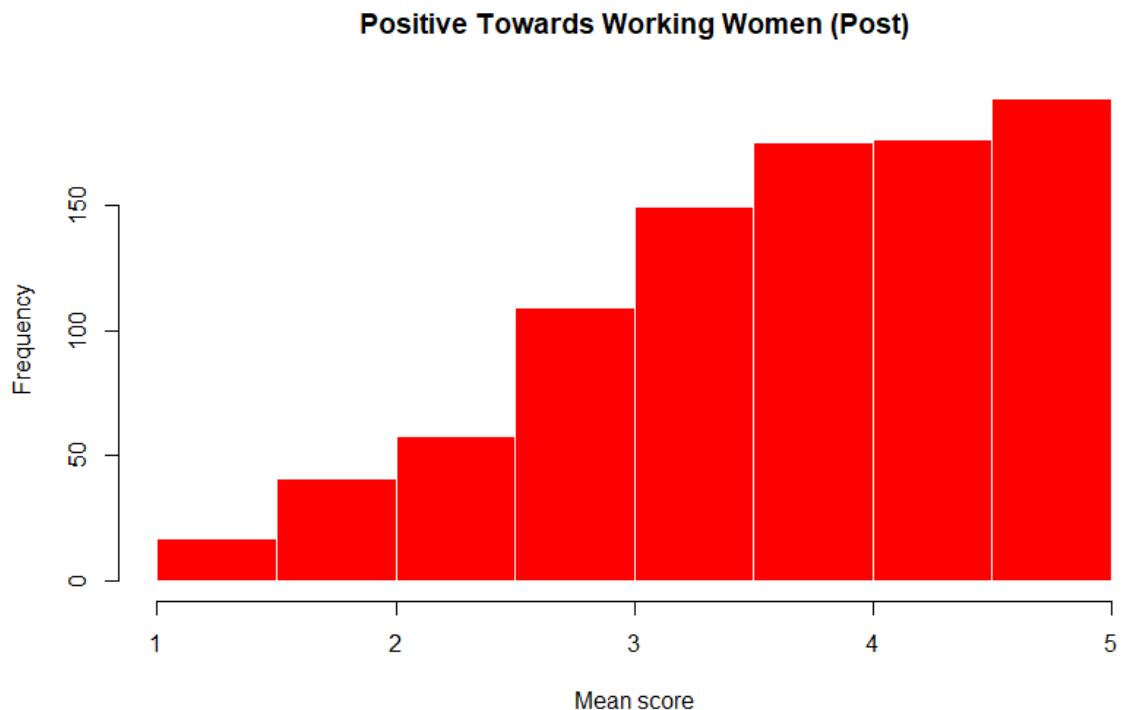
The pre-intervention index (preworking_women_index) was calculated as the mean score of the items preQ2_a, preQ2_b, and preQ2_c. These items reflected participants' initial attitudes prior to exposure to the experimental manipulation or educational content.

Figure 1. Distribution of participants' mean pre-intervention scores on the "Positive Towards Working Women" scale.



Similarly, the post-intervention index (postworking_women_index) was derived from the mean of the items Q2_a, Q2_b, Q2_c, and Q2_d, which were administered after the intervention. This second measure was intended to capture any changes in participants' perceptions or acceptance of women working outside the home as a result of the experimental conditions.

Figure 2. Distribution of participants' mean post-intervention scores on the "Positive Towards Working Women" scale.



Before computing these indices, the internal consistency of each item set was assessed using Cronbach's alpha in R. Both scales demonstrated satisfactory reliability, indicating that the items measured a coherent underlying construct related to attitudes towards working women.

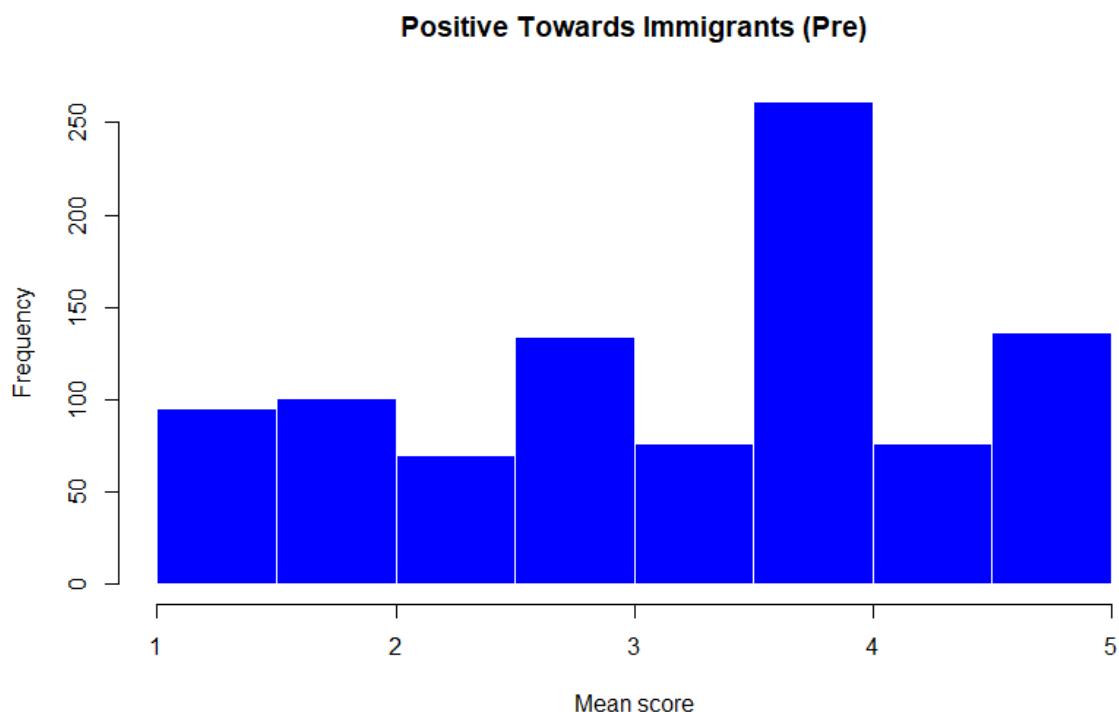
Higher scores on these indices corresponded to more positive and supportive attitudes, suggesting stronger endorsement of gender equality and reduced adherence to traditional gender role stereotypes. The use of mean scores ensured that each participant's responses were standardized across the same measurement range, allowing for direct comparison between the pre- and post-intervention measures.

4.4 Attitude Scale Towards Immigrants

In parallel, participants' attitudes towards immigrants were measured to evaluate potential changes in openness, acceptance, and tolerance following the intervention. Similar to the previous section, composite indices were constructed for the pre- and post-intervention phases to represent overall attitudinal orientations towards immigrants.

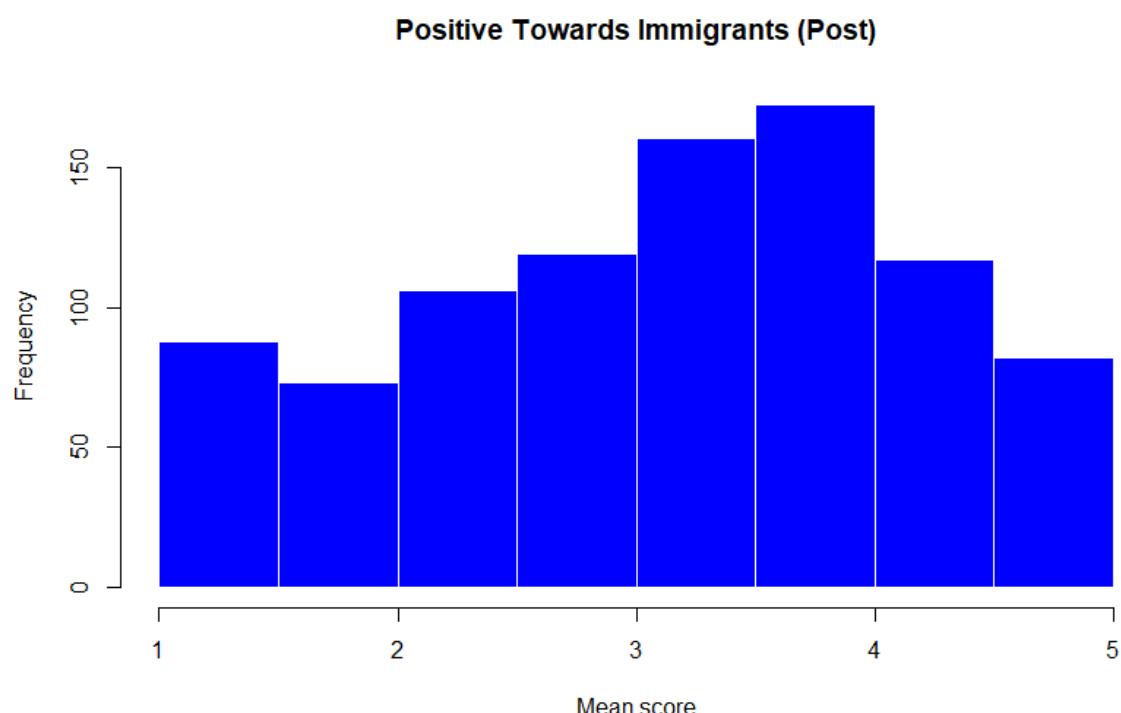
The pre-intervention index (preimmigrants_index) was computed from the items preD15_a_r, preD15_b, and preD15_c_r. Two of the original items (preD15_a and preD15_c) were reverse-coded using the transformation 6 - item so that higher scores consistently represented greater agreement with positive statements about immigrants. This reverse coding ensured that all items were oriented in the same direction conceptually, minimizing measurement bias and improving interpretability.

Figure 3. Distribution of participants' mean pre-intervention scores on the "Positive Towards Immigrants" scale.



The post-intervention index (postimmigrants_index) was derived from the items D15_a, D15_b_r, D15_c, and D15_e. The item D15_b was also reverse-coded using the same transformation as above. The inclusion of multiple post-intervention items allowed for a more comprehensive assessment of participants' attitudes after they were exposed to the intervention or stimulus condition.

Figure 4. Distribution of participants' mean post-intervention scores on the "Positive Towards Immigrants" scale.



Reliability testing using Cronbach's alpha confirmed acceptable internal consistency for both the pre- and post-intervention immigrant attitude scales, indicating that the items were interrelated and measured the same underlying construct of acceptance and openness towards immigrants.

Higher values on these indices indicated more positive attitudes, such as greater empathy, perceived fairness, and willingness to accept immigrants as equal members of society. Conversely, lower values indicated more negative or exclusionary attitudes.

Table 1: Overview of composite attitude indices and corresponding questionnaire items.

<u>Index</u>	<u>Description</u>	<u>Items</u>
preworking_women_index	Attitudes towards working women (Pre-intervention)	preQ2_a preQ2_b preQ2_c
postworking_women_index	Attitudes towards working women (Post-intervention)	Q2_a Q2_b Q2_c Q2_d
preimmigrants_index	Attitudes towards immigrants (Pre-intervention)	preD15_a_r preD15_b preD15_c_r
postimmigrants_index	Attitudes towards immigrants (Post-intervention)	D15_a D15_b_r D15_c D15_e

4.5 Calculate the Change Indices (Difference Scores)

To examine how participants' attitudes shifted over, change scores (or difference scores) were computed for each individual. These scores represent the magnitude and direction of change in attitudes from before to after the intervention. Specifically, for each participant, the difference between their post-intervention and pre-intervention scores was calculated for each attitude measure. The dependent indices used for testing the differential impact of the manipulation were the two Difference Scores, calculated as the simple arithmetic difference:

Difference Index=Post-test Index–Pre-test Index

These indices (difference_working_women and difference_immigrants) represent the net attitude shift for each participant, effectively isolating the change attributable to the intervention from the stable baseline attitude. These scores were then utilized as the outcome variables in the Independent Samples t-tests.

4.6 T-test Analysis

To examine whether the magnitude of attitude change differed between the experimental groups, a series of independent-samples t-tests were conducted for each of the two target attitude variables. These analyses aimed to determine whether participants assigned to different attribute conditions (Positive vs. Negative) exhibited distinct patterns of change in their attitudes from pre- to post-intervention.

Specifically, the change in attitudes towards working women, represented by the variable difference_working_women (calculated as post-pre scores), was compared across the two levels of attribute_1. This test assessed whether participants with a positive attribute demonstrated a greater increase in supportive views towards women's participation in the workforce compared to those with a negative attribute.

Similarly, the change in attitudes towards immigrants, represented by difference_immigrants, was examined across the two levels of attribute_2. This analysis evaluated whether the intervention or experimental condition had a differential effect on participants' openness and acceptance of immigrants depending on their initial attribute classification.

Both t-tests were conducted under the assumption of equal variances between groups (var.equal = TRUE). Significant results would indicate that the extent of attitudinal change was not uniform across conditions, thereby suggesting that the experimental manipulation or participant attribute played a meaningful role in shaping post-intervention attitudes.

5 Findings

5.1 Attitudes Towards Working Women

Separate t-tests were performed for two key outcome indices: (a) change in attitudes towards working women, based on the difference_working_women variable, and (b) change in attitudes towards immigrants, based on the difference_immigrants variable. This approach allowed for the examination of whether exposure to different attribute conditions resulted in significantly different patterns of attitude change across the two thematic domains. The assumption of equal variances between groups was met, and therefore, the analyses were conducted using the equal variances assumed model (var.equal = TRUE).

An independent-samples t-test was carried out to examine whether the magnitude of change in attitudes towards working women differed significantly between participants assigned to the positive and negative attribute conditions. The change in attitudes was operationalized as the difference between participants' post-intervention and pre-intervention scores on the "Attitudes Towards Working Women" index.

The results of the analysis indicated that there was no statistically significant difference between the two groups, $t(907) = -0.38$, $p = 0.705$. The mean change score for the positive attribute group ($M = -0.20$) was slightly lower than that of the negative attribute group ($M = -0.18$), but this difference was minimal and not statistically meaningful. The 95% confidence interval for the mean difference (-0.111 to 0.075) included zero, which further supports the conclusion that the groups did not differ in any systematic way in their change in attitudes. Table 2 presents the results of the independent samples t-test for the change in attitudes towards working women.

Table 2. Independent-samples t-test comparing the change in attitudes towards working women by attribute.

Attribute Condition	Mean (M)
Positive	-0.20
Negative	-0.18

Test statistics: $t(907) = -0.38$, $p = 0.705$, 95% CI (-0.11, 0.08).

These findings suggest that the exposure to a positive versus a negative attribute condition did not have a measurable impact on participants' attitudes towards working women. In other words, both groups showed a very small decrease in positive attitudes following the intervention, but this change was comparable in magnitude across conditions. The lack of a significant effect implies that participants' initial beliefs or social attitudes about women's participation in the workforce were relatively stable and resistant to short-term influence from the experimental manipulation.

This pattern aligns with previous research suggesting that gender role attitudes tend to be relatively enduring, shaped by long-term socialization processes and cultural norms rather than brief experimental exposures (Eagly & Wood, 2012). Empirical studies have consistently shown that attitudes towards working women are influenced by stable factors, such as gender ideology, educational level, political orientation, which change slowly over time (Bolzendahl & Myers, 2004; Davis & Greenstein, 2009) (Bolzendahl & Myers, 2004; Davis & Greenstein, 2009). Moreover, interventions aiming to alter gender-related beliefs often require prolonged exposure or intensive contact to produce measurable effects (Becker & Swim, 2011; Rudman et al., 2001). Consequently, the absence of a significant shift in this study is consistent with the broader literature highlighting the resilience of gender-related attitudes to short-term experimental manipulations.

5.2 Attitudes Towards Immigrants

An independent-samples t-test was carried out to examine whether the magnitude of change in attitudes towards immigrants differed significantly between participants assigned to the positive and negative attribute conditions. The change in attitudes was operationalized as the difference between participants' post-intervention and pre-intervention scores on the "Attitudes Towards Immigrants" index. This analysis compared the mean change scores of difference_immigrants between participants in the positive and negative groups.

The results revealed a statistically significant difference in mean change scores between the two groups, $t(908) = 2.63$, $p = 0.0086$. Participants in the positive attribute condition exhibited a higher mean change ($M=0.021$) than those in the negative condition ($M= -0.080$). The 95% confidence interval for the difference in means (0.026 to 0.176) did not include zero, further supporting the presence of a meaningful and statistically reliable difference in attitude change between groups.

Table 3. Independent-samples t-test comparing the change in attitudes towards immigrants by attribute.

Attribute Condition	Mean (M)
Positive	0.02
Negative	-0.08

Test statistics: $t(908) = 2.63$, $p = 0.0086$, 95% CI (0.03, 0.18).

These findings indicate that participants exposed to the positive attribute condition demonstrated greater increases in positive attitudes towards immigrants compared to those exposed to the negative attribute condition. While the magnitude of the observed difference is moderate, it is statistically significant and suggests that the experimental manipulation influenced participants' attitudinal shifts. The positive group's higher average change scores reflect an increase in favorable perceptions of immigrants, whereas the negative group's lower scores indicate either smaller increases or decreases in positivity.

These results are consistent with prior research in Western European countries on attribute framing and valence effects in the context of immigration, which shows that positively framed information about immigrants can improve attitudes and reduce prejudice, whereas negative framing tends to maintain or worsen negative perceptions (Anderson & Antalíková, 2014). Exposure to positive attributes of immigrants appears to facilitate more favorable attitudinal shifts, supporting theoretical perspectives on framing effects and contact with out-groups, which argue that the valence of information can act as a mechanism for attitude change (Avdagic & Savage, 2021).

6 Conclusions

This study examined the extent to which exposure to positively or negatively framed textual information can influence attitudes towards working women and immigrants within the context of contemporary Greek society. By employing a randomized web-based survey experiment, the research measured attitudinal change before and after stimulus exposure and compared these differences across treatment conditions. The methodological design allowed for controlled causal inference while maintaining ecological validity in a digital survey environment (Kohavi et al., 2009).

The findings indicate that attitudes towards working women remained largely stable across both positive and negative framing conditions. Participants in both treatment groups exhibited only minimal changes, and these differences were not statistically significant. This outcome suggests that attitudes surrounding gender roles and women's participation in the workforce are comparatively well-established and less susceptible to short-term persuasive intervention. Such stability aligns with prior research showing that gender-related attitudes are shaped by long-term socialization patterns, cultural norms, and ideological orientations (Bolzendahl & Myers, 2004; Davis & Greenstein, 2009; Eagly & Wood, 2012). Consequently, short-term informational exposure is unlikely to alter these deeply rooted belief structures without sustained reinforcement or broader cultural shifts.

Conversely, the results for attitudes towards immigrants revealed a statistically significant framing effect. Participants exposed to positively valenced information demonstrated increased levels of acceptance relative to those who received negatively framed content. Although the magnitude of change was moderate, this finding underscores the role that message valence plays in shaping attitudinal responses, particularly in domains where attitudes are less deeply anchored or more susceptible to social interpretation (Anderson & Antalíková, 2014; Avdagic & Savage, 2021). This pattern aligns with research showing that positive narratives and intergroup contact cues can reduce prejudice and improve perceptions of marginalized groups (Rudman et al., 2001).

Taken together, the study highlights that attitudes relevant to inclusive societies do not shift uniformly across issue areas. Whereas gender-related beliefs exhibit substantial resistance to short-term influence, attitudes towards immigrants appear more malleable under controlled framing conditions. These insights have meaningful implications for policymakers, educators, and civil society organizations: communication strategies that emphasize shared contributions, economic value, and social cohesion may be particularly effective for promoting more inclusive attitudes toward immigrant communities. In contrast, efforts to reshape gender norms may require long-term structural or educational interventions rather than isolated informational messaging (Becker & Swim, 2011).

Future research should examine the durability of these framing effects, explore variation across demographic and ideological subgroups, and consider experimental designs that incorporate repeated or narrative-based exposure. Such extensions would contribute to a deeper understanding of how communication environments can support more equitable and inclusive social outcomes in an increasingly digital information landscape.

This study is subject to several limitations that must be acknowledged. First, the findings capture short-term attitudinal responses measured immediately after exposure to the framing stimuli, and the durability of these effects over time remains uncertain. Second, the online survey format may introduce selection effects, as individuals with limited internet access or lower digital literacy are underrepresented, potentially affecting the broader generalizability of the results (Bethlehem, 2010b). Third, the study employed textual stimuli only, whereas real-world media environments are multi-modal, continuous, and emotionally layered. Future research should incorporate longitudinal designs, evaluate repeated exposures, and examine the influence of alternative media formats, such as audiovisual narratives, to assess the robustness and persistence of framing effects.

References

American Psychological Association. (2017). *Ethical Principles of Psychologists and Code of Conduct*. American Psychological Association.
<http://www.apa.org/ethics/code/index.aspx>

Anderson, J., & Antalíková, R. (2014). Framing (implicitly) matters: The role of religion in attitudes toward immigrants and Muslims in Denmark. *Scandinavian Journal of Psychology*, 55(6), 593–600. <https://doi.org/10.1111/sjop.12161>

Avdagic, S., & Savage, L. (2021). Negativity Bias: The Impact of Framing of Immigration on Welfare State Support in Germany, Sweden and the UK. *British Journal of Political Science*, 51(2), 624–645. <https://doi.org/10.1017/S0007123419000395>

Becker, J. C., & Swim, J. K. (2011). Seeing the Unseen: Attention to Daily Encounters With Sexism as Way to Reduce Sexist Beliefs. *Psychology of Women Quarterly*, 35(2), 227–242. <https://doi.org/10.1177/0361684310397509>

Bethlehem, J. (2010a). Selection Bias in Web Surveys. *International Statistical Review*, 78(2), 161–188. <https://doi.org/10.1111/j.1751-5823.2010.00112.x>

Bethlehem, J. (2010b). Selection Bias in Web Surveys. *International Statistical Review*, 78(2), 161–188. <https://doi.org/10.1111/j.1751-5823.2010.00112.x>

Bolzendahl, C. I., & Myers, D. J. (2004). Feminist Attitudes and Support for Gender Equality: Opinion Change in Women and Men, 1974–1998*. *Social Forces*, 83(2), 759–789. <https://doi.org/10.1353/sof.2005.0005>

Chong, D., & Druckman, J. N. (2007). Framing Theory. *Annual Review of Political Science*, 10(Volume 10, 2007), 103–126. <https://doi.org/10.1146/annurev.polisci.10.072805.103054>

Davis, S. N., & Greenstein, T. N. (2009). Gender ideology: Components, predictors, and consequences. *Annual Review of Sociology*, 35, 87–105. <https://doi.org/10.1146/annurev-soc-070308-115920>

Eagly, A. H., & Wood, W. (2012). Social role theory. In *Handbook of theories of social psychology*, Vol. 2 (pp. 458–476). Sage Publications Ltd. <https://doi.org/10.4135/9781446249222.n49>

Entman, R. M. (1993). Framing: Toward Clarification of a Fractured Paradigm. *Journal of Communication*, 43(4), 51–58. <https://doi.org/10.1111/j.1460-2466.1993.tb01304.x>

Kadianaki, I., & Andreouli, E. (2015). Essentialism in Social Representations of Citizenship: An Analysis of Greeks' and Migrants' Discourse. *Political Psychology*, 38. <https://doi.org/10.1111/pops.12271>

Kampouri, E. (2022). Gendering platform research: Theoretical and methodological considerations. *Work Organisation, Labour & Globalisation*, 16(1), 14–33.

Kohavi, R., Longbotham, R., Sommerfield, D., & Henne, R. M. (2009). Controlled experiments on the web: Survey and practical guide. *Data Mining and Knowledge Discovery*, 18(1), 140–181. <https://doi.org/10.1007/s10618-008-0114-1>

Manfreda, K. L., Batagelj, Z., & Vehovar, V. (2002). Design of Web Survey Questionnaires: Three Basic Experiments. *Journal of Computer-Mediated Communication*, 7(3). <https://doi.org/10.1111/j.1083-6101.2002.tb00149.x>

OECD. (2023). *Labour force participation rate by gender*. OECD Data. <https://www.oecd.org/en/data.html>

Petmezidou, M., & Polyzoidis, P. (2015). What policy innovation for youth in the era of prolonged austerity. The case of Greece. *ResearchGate*, 2(49), 154–171.

Reips, U.-D. (2009). *Internet experiments: Methods, guidelines, metadata* (B. E. Rogowitz & T. N. Pappas, Eds.; p. 724008). <https://doi.org/10.1117/12.823416>

Rudman, L. A., Ashmore, R. D., & Gary, M. L. (2001). "Unlearning" automatic biases: The malleability of implicit prejudice and stereotypes. *Journal of Personality and Social Psychology*, 81(5), 856–868. <https://doi.org/10.1037/0022-3514.81.5.856>

Schmidt, W. C. (1997). World-Wide Web survey research: Benefits, potential problems, and solutions. *Behavior Research Methods, Instruments, & Computers*, 29(2), 274–279. <https://doi.org/10.3758/BF03204826>

Sotiropoulos, D. A., & Bourikos, D. (2022). *Civil society and the refugee crisis in Greece*. 1(27), 1–21.

Triandafyllidou, A. (2018). A "Refugee Crisis" Unfolding: "Real" Events and Their Interpretation in Media and Political Debates | Request PDF. *ResearchGate*.

https://www.researchgate.net/publication/320090114_A_Refugee_Crisis_Unfolding_Real_Events_and_Their_Interpretation_in_Media_and_Political_Debates

Wright, K. B. (2005). Researching Internet-Based Populations: Advantages and Disadvantages of Online Survey Research, Online Questionnaire Authoring Software Packages, and Web Survey Services. *Journal of Computer-Mediated Communication*, 10(3), 00–00. <https://doi.org/10.1111/j.1083-6101.2005.tb00259.x>

Appendix

Table 4. Survey items used in the report

No	Item	Wording
1	preQ2_a	The primary role of a woman is to take care of the home and family, not to compete with men in the workplace.
2	preQ2_b	If a woman earns more money than her husband/partner, it is certain that problems will arise in their relationship.
3	preQ2_c	Society benefits more from traditional family structures in which the father works and the mother stays at home.
4	preD15_a	The integration of immigrants is vital for the long-term demographic and economic stability of Greece.
5	preD15_b	Immigrants place an excessive burden on Greece's social welfare

		systems, such as healthcare and education.
6	preD15_c	Immigrants contribute to the growth of the Greek economy, as they work and pay taxes.
7	Q2_a	When job opportunities are limited, men should have more chances to be hired for a position than women.
8	Q2_b	Women who focus on their careers often neglect their household responsibilities.
9	Q2_c	Having children is a duty toward society.
10	Q2_d	When a mother works for pay, the children suffer.
11	D15_a	Immigrants increase crime rates.
12	D15_b	Immigrants are generally good for Greek economy.
13	D15_c	Immigrants take jobs away from people who were born in Greece.
14	D15_e	People born in Greece should be given preference over immigrants when it comes to jobs, housing, or health care.