

Individuals or Issues? Explaining Mass Support for International Cooperation*

Work in Progress.
Feedback (very) welcome!

Liam F. Beiser-McGrath[†] Thomas Bernauer[‡]

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Abstract

While most international politics scholars will agree that international cooperation is needed to capitalize on opportunities and resolve problems facing humanity, they offer differing accounts of the driving forces of support for international efforts. At perhaps the most fundamental level, is the distinction between individuals' underlying preferences for cooperation generally, compared to the nature of the issues at stake. Using original survey experiments in Germany and the United States, we are able to identify the relative importance of these two explanations for international cooperation. We also examine whether the relevance of individuals' reciprocity preferences varies by issue area. Our results find that the variation in support for reciprocity across issue areas is typically larger than the variation between high and low reciprocity individuals. Furthermore, we find that individuals' reciprocity preferences matter far more in some areas, such as the environment, torture, and weapon proliferation, than in areas of economic cooperation, such as FDI and trade.

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[†]ETH Zürich. Contact e-mail: liam.mcgrath@ir.gess.ethz.ch

[‡]ETH Zürich. Contact e-mail: thbe0520@ethz.ch

1 *Introduction*

Humanity faces a plethora of opportunities and risks that require cooperation among countries. These pertain, for instance, to international trade and investment, financial stability, environmental protection, migration, and security. Research on these issues relies on differing theoretical perspectives and emphasizes different driving forces and obstacles to effective international cooperation. At perhaps the most fundamental level, is the distinction between individuals' underlying preferences for cooperation generally, compared to the nature of the issues at stake. As scholarly research has become ever more nuanced, studies based on one or the other perspective have focused on particular policy areas in isolation.

In this paper, we take a step back and examine the relevance of these two forms of explanation in a comparative perspective. Existing research has tended to either focus on specific policy areas in isolation (e.g. Tingley and Tomz, 2014; Chilton, Milner, and Tingley, 2017; McGrath and Bernauer, 2017) or instead study abstract general notions of cooperation not connected to any policy area (e.g. Fehr and Gächter, 2000). In contrast, we study a variety of issues within the same empirical design, in combination with using state of the art measurements of underlying reciprocal preferences using survey items (Falk et al., 2016).

Our empirical analysis is based on survey embedded experiments in the United States ($n = 1851$) and Germany ($n = 1850$). We measure individual's support for responses to a hypothetical cooperative situation with another country. We use a factorial experiment in which we randomly vary the policy area and whether

the other country defects. The policy areas covered include trade, FDI, environment, torture, political repression, nuclear weapons, biological weapons, and refugees. This is coupled with measures of an individuals' general negative and positive reciprocity, based off of survey items partly replicating canonical cooperation games (Falk et al., 2016).

We find significant evidence that individuals' support for reciprocity is dependent upon both the issue area and their individual (general) preferences.

Understanding support for international cooperation traditionally assigns an important role to the issue at stake. In this case, the issue area defines the relevance of reciprocity. In nuclear arms control, for instance, which epitomizes the security dilemma (equivalent to the prisoner's dilemma, see Axelrod (1984)), states are watching each other's behavior very carefully and are making decreases or increases in nuclear arsenals strongly contingent on what other nuclear powers do. In international trade policy, to give another example, the main cooperation mechanism consists of "trading concessions". That is, when negotiating trade agreements, each country usually offers to reduce market access restrictions in/to certain forms and degrees and those offers are then assembled into an agreement, based on an (reciprocal) exchange of such offers (concessions). In contrast, states are unlikely to engage in or further the use of torture if other states fail to sign or comply with the United Nations Convention against Torture.

Recent research has however begun to emphasise the relevance of individuals' general preferences for cooperation. Rather than the issue area determining the relevance and support of reciprocity, this literature instead argues that individ-

uals' have more fundamental social preferences, which they apply case by case to support for international cooperation (Hurwitz and Peffley, 1987; Liberman, 2007; Bechtel and Scheve, 2013; Prather, 2014). More broadly this research adds to the growing use of psychological (Kertzer and Tingley, 2018) and behavioural (Hafner-Burton et al., 2017) approaches to international relations.

By combining and adjudicating between these two explanations of mass support for international reciprocity, we make two key contributions to the literature.

First, we provide a broad comparative look at support for reciprocity in two major countries across eight issue areas. Considerable research on mass support for reciprocity has been conducted for many of these issue areas before (e.g. Tingley and Tomz, 2014; Chilton, 2015; Chilton, Milner, and Tingley, 2017; Beiser-McGrath and Bernauer, Forthcoming). However, by focusing on one issue area at a time, comparing accurately across issues is rendered difficult as studies were conducted at different times, in different countries, with different treatments, and with different outcomes. Our study overcomes these limitations by keeping these confounders constant and through random assignment of the issue area at stake, allowing the identification of the causal effect of the issue area upon support for reciprocity.

Second, we provide evidence that the importance of social preferences varies across issue areas. While previous research has identified the effect of reciprocal preferences when considering the environment (Bechtel and Scheve, 2013), it is not obvious the extent to which this generalises to other issues that states cooperate over. Our results suggest that the relevance of reciprocal preferences

varies considerably across issue areas. Support for reciprocity in issues such as the environment, torture, and weapon proliferation are strongly influenced by an individuals' general reciprocal preferences. In contrast, support for reciprocity when cooperating over economic issues, such as FDI and trade, does not significantly vary according to an individuals' reciprocity preferences.

2 *Research Design*

To examine our theoretical arguments, we use a factorial experiment design similar to the one used by Chilton, Milner, and Tingley (2017). With this design we are primarily interested in how citizens' support for government responses to non-cooperation (defection) by another country varies by policy area. While a traditional vignette experiment could measure variation in responses to defection by policy area, respondents may also hold certain beliefs about the type of countries that are more likely to defect in a given policy area (see Dafoe, Zhang, and Caughey (Forthcoming)). For example, citizens may think that countries defecting on issues such as biological and nuclear weapons are antagonistic, non-allied countries, or that countries defecting on issues such as torture and political rights are non-democratic countries. By including country characteristics within a factorial design we are able to control for other country characteristics, that would otherwise bias traditional vignette design estimates.

Table 1 outlines the attributes included the factorial experiment, reflecting the issue area, characteristics of other countries of concern, and whether others defect (and in what form) or not. The abstract form of this vignette text for the

Table 1: Attributes included in the experimental design.

| Attribute | Values |
|---------------------------|---|
| 1. Issue Area | <ul style="list-style-type: none"> • Torture • Political Repression • Trade • FDI • Environment • Nuclear Weapons • Biological Weapons • Refugees |
| 2. Political System | <ul style="list-style-type: none"> • Democratic • Non-Democratic |
| 3. Development | <ul style="list-style-type: none"> • Developed • Developing |
| 4. Geopolitical Situation | <ul style="list-style-type: none"> • Supportive of <COUNTRY> • Opposed to <COUNTRY> • Indifferent to <COUNTRY> |
| 5. Agreement | <ul style="list-style-type: none"> • Signed a Formal Agreement • Agreed to Cooperate |
| 6. Defection | <ul style="list-style-type: none"> • Defection • No Defection |

United States is:

5 years ago, the country <AGREEMENT TYPE> with the United States on < ISSUE AREA ATTRIBUTE>. The country is a <DEVELOPMENT TYPE> country. It has a <POLITICAL SYSTEM> government. The country has, in recent years, been <GEOPOLITICAL RELATIONSHIP> <HOME COUNTRY> in a wide range of international negotiations and organizations. <IF DEFECTION==TRUE> However, this country has recently failed to comply with the agreement and has <ISSUE AREA OUTCOME >.

To better illustrate this the following text is the treatment condition for the issue area of trade, where the other country defected:

5 years ago, the country *signed a formal agreement with the United States on trade*. The country is a *developing* country. It has a *democratic* government. The country has, in recent years, been *opposed to the United States in a wide range of international negotiations and organizations*. However, this country has recently failed to comply with the agreement and has *restricted international trade by increasing tariffs on goods imported from the United States*.

The specific forms of non-cooperation in each of the issue areas examined are listed in Table 2.

Table 2: Definitions of Non-Cooperation by Issue Area

| Issue Area | Defection Description |
|----------------------|---|
| Torture | tortured prisoners to extract information for national security purposes. |
| Political Repression | imprisoned people because of their political views and activities. |
| Trade | restricted international trade by increasing tariffs on goods imported from <HOME COUNTRY> |
| FDI | restricted <HOME COUNTRY> businesses from investing in firms and other assets in the country. |
| Environment | increased its emissions of carbon dioxide by burning more fossil fuels that contribute to global warming. |
| Nuclear Weapons | engaged in activities to develop nuclear weapons. |
| Biological Weapons | engaged in activities to develop biological and chemical weapons. |
| Refugees | did not accept refugees it had previously agreed to host. |

The surveys in which this experiment was embedded were designed by the authors and were fielded in the United States (n = 1851) and Germany (n = 1850) in February 2018 by Ipsos, using online panels. To make the samples broadly representative of the general population, we used quota sampling. We

used hard quotas on age, region, and sex and soft quotas for education, income, and occupation.

2.1 Outcome Variables

Our outcome variables measure individual support for international reciprocity. These outcome variables are generated through a combination of the experiment, and two questions asked after receiving this vignette listed in table 3 .

Table 3: Question wording for the response variables.

| Response | Description |
|------------------------|--|
| 1. End Cooperation | <COUNTRY> should end cooperation with this country <and dissolve the formal agreement [IF FORMAL AGREEMENT EXISTS] > |
| 2. Intrinsic Defection | <COUNTRY> should <ISSUE AREA DEFECTION> |

The experimental text randomly assigns whether the other country engaged in cooperation defected or cooperated. Respondents then choose whether to end or continue cooperation with the country, and whether to engage in the behavior that constitutes defecting. Combing these provides a measure of reciprocity, illustrated in table 4.

Table 4: Generation of the reciprocity outcome variables.

| Response: | Other Country Defects | \neg Other Country Defects |
|------------------------|-----------------------|------------------------------|
| End Cooperation | Negative Reciprocity | Non-Reciprocal |
| \neg End Cooperation | Non-Reciprocal | Positive Reciprocity |

2.2 *Measuring Individuals' Reciprocal Attitudes*

We utilise items on general negative and positive reciprocal preferences from (Falk et al., 2016), outlined in table 5. As we have multiple measures for each form of reciprocity, we create one measure each for the statistical analysis by extracting the first principal component.

| Concept: | Table 5: Reciprocity Measures Measures |
|----------------------|---|
| Negative Reciprocity | <ul style="list-style-type: none">• Minimum acceptable offer in an ultimatum game.• Punish unfair behavior even if this is costly. |
| Positive Reciprocity | <ul style="list-style-type: none">• Average amount sent back in investment game.• Wine chosen as a thank-you gift. |

2.3 *Estimation*

As our outcome variable consists of three unordered categories, we use a multinomial logit. For predicted values with measures of uncertainty we re-estimate the models on 100 bootstrap samples.

3 *Results*

We first present the results in terms of the parameters estimated, to provide a broad overview of the results. In general we see that both individuals' reciprocal attitudes and the issue area predict individuals' support for reciprocity, relative to non-reciprocal governmental actions.

Table 6: Support for Negative and Positive Reciprocity

| | Continue/End Cooperation | | Intrinsic Reciprocity | |
|----------------------|--------------------------|--------------------|-----------------------|--------------------|
| | Neg. Recip. | Pos. Recip. | Neg. Recip. | Pos. Recip. |
| Negative Reciprocity | -0.04 (0.02) | -0.13*** (0.02) | 0.05 (0.03) | -0.17*** (0.03) |
| Positive Reciprocity | 0.05* (0.02) | 0.09*** (0.02) | 0.02 (0.03) | 0.17*** (0.03) |
| Political Rights | 0.23** (0.09) | 0.21* (0.10) | 0.03 (0.15) | 0.11 (0.12) |
| Trade | 0.12 (0.09) | 0.41*** (0.10) | 0.50*** (0.12) | -1.92*** (0.11) |
| FDI | -0.05 (0.09) | 0.34*** (0.09) | 0.34** (0.12) | -2.01*** (0.11) |
| Environment | -0.00 (0.09) | 0.58*** (0.09) | -0.04 (0.15) | 0.02 (0.12) |
| Nuclear Weapons | 0.16 (0.09) | 0.13 (0.10) | 0.27* (0.14) | -0.51*** (0.11) |
| Bio and Chem Weapons | 0.10 (0.09) | -0.11 (0.10) | 0.07 (0.14) | -0.39*** (0.11) |
| Refugees | 0.05 (0.09) | 0.38*** (0.10) | 0.01 (0.13) | -1.20*** (0.10) |
| Num. obs. | 12480 | 12480 | 11669 | 11669 |

Other country characteristics included in estimation, but omitted here.

Baseline category is no reciprocity. *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

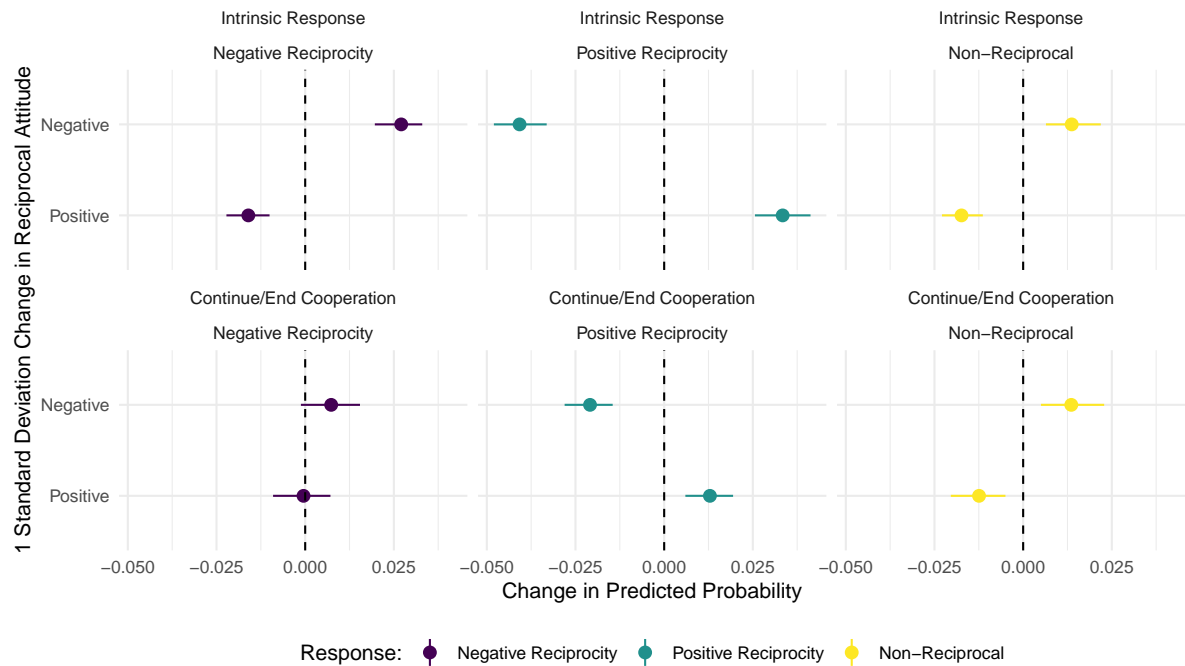


Figure 1: Support for reciprocity is associated with their general reciprocal preferences. Each point is the bootstrapped aggregated (bagged) change in probability increasing the reciprocity attitude by one standard deviation from the mean. The lines display the 95% bootstrap intervals. Each row corresponds to a different outcome variable, while columns refer to the categories of the outcome.

Figure 1 displays the effect of individual reciprocal attitudes in terms of predicted probabilities. Specifically, we display how a standard deviation increase from the mean of reciprocal attitudes changes the probability an individual supports governmental actions. The results show that an individuals' general preferences for reciprocity has a significant effect upon their support for reciprocity in international relations. Across both forms of outcome, higher levels of positive reciprocity are associated with higher support for the government to cooperate engage in positive reciprocity. This also leads to less support for the government to engage in negative reciprocity, at least in terms of intrinsic re-

sponses. An individuals' level of negative reciprocity has a similar effect but in reverse, with higher levels indicating more support for negative reciprocity and less support for positive reciprocity.

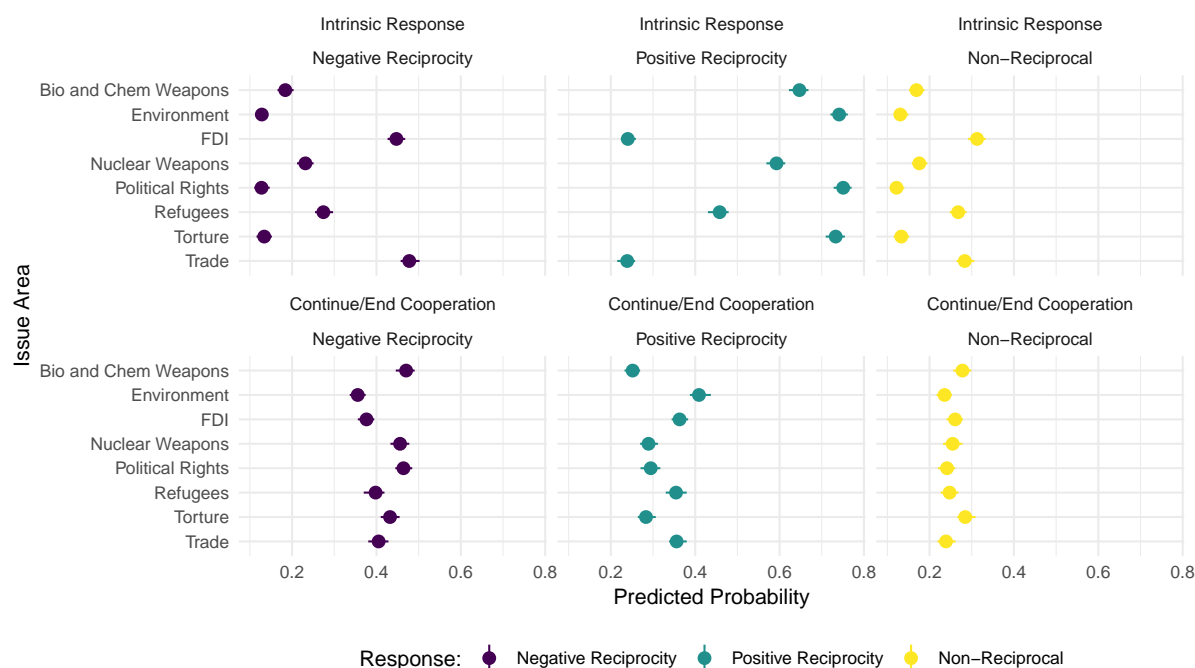


Figure 2: The effect of the issue area upon support for reciprocity. Each point is the bootstrapped aggregated (bagged) change in probability increasing the reciprocity attitude by one standard deviation from the mean. The lines display the 95% bootstrap intervals. Each row corresponds to a different outcome variable, while columns refer to the categories of the outcome.

Figure 2 displays the predicted probability of support for governmental actions by issue area. Most notable is the significant differences in support for negative and positive reciprocity by issue area, when considering intrinsic responses. When the issue is FDI or trade individuals have significantly higher levels of negative reciprocal support, compared to all other issues.

3.1 Allowing the Effect of Reciprocal Attitudes to Vary by Issue Area

Table 7: Support for Negative and Positive Reciprocity - Allowing the Effect of Individual Attitudes to vary by Issue Area

| | Continue/End Cooperation | | Intrinsic Reciprocity | |
|------------------------------------|--------------------------|-------------------|-----------------------|--------------------|
| | Neg. Recip. | Pos. Recip. | Neg. Recip. | Pos. Recip. |
| Negative Reciprocity | -0.11 (0.06) | -0.15* (0.07) | 0.07 (0.11) | -0.43*** (0.08) |
| Positive Reciprocity | 0.02 (0.06) | 0.10 (0.07) | 0.13 (0.11) | 0.32*** (0.09) |
| Political Rights | 0.22* (0.09) | 0.20* (0.10) | -0.03 (0.16) | 0.06 (0.12) |
| Trade | 0.12 (0.09) | 0.42*** (0.10) | 0.51*** (0.13) | -1.96*** (0.11) |
| FDI | -0.05 (0.09) | 0.34*** (0.09) | 0.35** (0.13) | -2.04*** (0.11) |
| Environment | -0.02 (0.09) | 0.57*** (0.10) | -0.10 (0.16) | -0.03 (0.12) |
| Nuclear Weapons | 0.15 (0.09) | 0.12 (0.10) | 0.25 (0.14) | -0.56*** (0.11) |
| Bio and Chem Weapons | 0.09 (0.09) | -0.11 (0.10) | 0.08 (0.15) | -0.42*** (0.12) |
| Refugees | 0.05 (0.09) | 0.37*** (0.10) | 0.01 (0.13) | -1.25*** (0.11) |
| Neg. Recip. × Political Rights | 0.15 (0.09) | 0.16 (0.10) | 0.20 (0.15) | 0.27* (0.12) |
| Neg. Recip. × Trade | -0.01 (0.09) | -0.05 (0.09) | -0.11 (0.12) | 0.30** (0.11) |
| Neg. Recip. × FDI | 0.02 (0.09) | 0.02 (0.09) | -0.09 (0.12) | 0.36*** (0.11) |
| Neg. Recip. × Environment | 0.13 (0.09) | -0.04 (0.09) | -0.02 (0.15) | 0.13 (0.12) |
| Neg. Recip. × Nuclear Weapons | 0.09 (0.09) | 0.07 (0.10) | 0.09 (0.14) | 0.22 (0.11) |
| Neg. Recip. × Bio and Chem Weapons | 0.12 (0.08) | 0.04 (0.10) | 0.04 (0.14) | 0.20 (0.11) |
| Neg. Recip. × Refugees | 0.08 (0.09) | 0.05 (0.09) | -0.00 (0.13) | 0.51*** (0.10) |
| Pos. Recip. × Political Rights | 0.00 (0.09) | -0.06 (0.10) | -0.19 (0.15) | -0.04 (0.12) |
| Pos. Recip. × Trade | 0.08 (0.09) | -0.07 (0.09) | -0.06 (0.12) | -0.34** (0.11) |
| Pos. Recip. × FDI | 0.03 (0.09) | 0.03 (0.09) | -0.10 (0.12) | -0.33** (0.11) |
| Pos. Recip. × Environment | -0.03 (0.09) | 0.03 (0.10) | -0.35* (0.15) | -0.14 (0.12) |
| Pos. Recip. × Nuclear Weapons | 0.02 (0.09) | 0.07 (0.10) | -0.24 (0.14) | -0.23* (0.11) |
| Pos. Recip. × Bio and Chem Weapons | 0.10 (0.09) | -0.06 (0.10) | -0.02 (0.14) | 0.06 (0.12) |
| Pos. Recip. × Refugees | 0.02 (0.09) | -0.00 (0.10) | -0.17 (0.13) | -0.17 (0.11) |
| Num. obs. | 12480 | 12480 | 11669 | 11669 |

Other country characteristics included in estimation, but omitted here
 Baseline category is no reciprocity*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$

We now allow the effect of an individuals' reciprocal attitudes to vary by issue

area, by including multiplicative terms into our estimating equation. Table 7 displays the parameters estimated.



Figure 3: Support for reciprocity is associated with the issue area. Each point is the bootstrapped aggregated (bagged) change in probability increasing the reciprocity attitude by one standard deviation from the mean. The lines display the 95% bootstrap intervals. Each row corresponds to a different outcome variable, while columns refer to the categories of the outcome.



Figure 4: Support for reciprocity is associated with the issue area. Each point is the bootstrapped aggregated (bagged) change in probability increasing the reciprocity attitude by one standard deviation from the mean. The lines display the 95% bootstrap intervals. Each row corresponds to a different outcome variable, while columns refer to the categories of the outcome.

Figure 3 displays how the relationship between an individuals' positive reciprocal preferences and reciprocity on cooperation varies by issue area. As in the previous results, we generally see that higher levels of negative reciprocity preferences lead to declines in support for the government engaging in positive reciprocity, and increased support for negative reciprocity. However, we do see that there is variation by issue area. In the cases of FDI, refugees, and trade, individuals support for the government's actions is largely invariant to their own reciprocal attitudes. This suggests for these issue areas, support for policy is largely dictated by the issue at hand. In contrast, for issue areas such as the environment and weapon proliferation we see a greater sensitivity to an individual's general reciprocal preferences.

Figure 4 displays the same type of effects, however this time for an individuals' positive reciprocity preferences. Again similar patterns emerge. Individuals' positive reciprocity preferences do not significantly impact support for their government's policy actions in some areas, such as FDI and trade, while have large substantive effects in other areas, such as the environment and weapon proliferation.

4 Conclusion

In this paper, we answer two important questions in the study of mass preferences for international cooperation. First, is support for reciprocity is primarily driven by the issue at stake or by individuals' general reciprocal preferences? Second, does the importance of individuals' reciprocal preferences vary by is-

sue area? By using original survey experiments, in combination with new measures of individuals' social preferences, we are one of the first¹ papers to examine public support for international reciprocity across a variety of (named) issue areas in a comparative manner, while examining how individuals' characteristics affect this.

Our results find that while individuals' general reciprocal preferences matter for understanding support for reciprocal policy actions, the issue area at stake often has a stronger impact. Support for negative reciprocity in the issues of FDI and trade is significantly higher than for those such as the environment and chemical weapons. However, in those such issues individuals' general reciprocal preferences play a significant role.

This combination of experimental and observational issues contributes to our understanding of mass support for international cooperation. Previous literature has typically either focused on specific issues in isolation (e.g. Tingley and Tomz, 2014; Chilton, Milner, and Tingley, 2017; McGrath and Bernauer, 2017), and evaluated the extent to which these different logics hold or how prevalent reciprocity is. Another strand of the literature has instead focused on general abstract notions of international cooperation (e.g. Fehr and Gächter, 2000), which may not apply to every issue area.

Analysing a variety of issue areas together allows us to provide a comparative perspective and ranking of the prevalence of reciprocity by issue area. Future research may benefit from the broad picture of public support for international policy actions across a wide range of issue areas presented in this paper. Such

¹To our knowledge

information can help better inform the microfoundations of theories of international cooperation and reciprocity.

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