

# Supplementary material to *French Attitudes over Climate Change, the Carbon Tax and Other Climate Policies*

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## 1 Additional results on attitudes over climate change

### 1.1 Perceptions

The looming threat of CC already seems to impact people’s behavior. Indeed, 20% say the CC “has had or will have an influence in their decision to have a child”. Among them, 37% justify it “because each additional human aggravates climate change”, and 86% because they “don’t want [their] child to live in a devastated world”. This result echoes a survey from [ADEME \(2018\)](#) which shows that 63% of French people think that “living conditions will be extremely harsh” in France in 50 years and that 57% do not think CC “will be limited to acceptable levels by the end of the century”. Such concern is not limited to France, as [Funk & Kennedy \(2016\)](#) document that 75% of American are concerned by CC. Nor is it recent, as Eurobarometer surveys cited by [Whitmarsh & Capstick \(2018\)](#) found that more than three-quarters of respondents were already worried about climate change in 1988, rising to almost nine in ten by 1992.

Despite — or perhaps due to — widespread hopelessness, 34% almost never talk about CC (Figure [1.1](#)). 27% talk about CC several times per month, which can give a sense of the share of people who regularly engage in long-term thinking. The relatively low amount of discussion around an issue largely perceived as a serious threat may be understood as a way to flee from one’s moral duty and to protect one’s lifestyle. Indeed, as a recent literature has shown, people tend to discard information perceived as bad news and display what [Sharot et al. \(2011\)](#) call “unrealistic optimism in front of reality”. [Whitmarsh & Capstick \(2018\)](#) relate another strategy of avoidance: the general

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tendency to discount one’s own contribution to causing CC and identify causes of CC primarily with other people or countries.

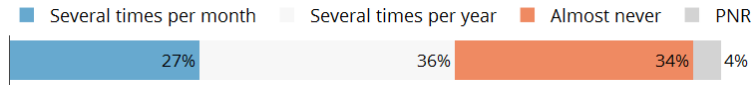


Figure 1.1: Frequency at which respondents talk about climate change.

One can wonder if this blindness to the causes is mirrored by a sentiment that oneself will not be impacted. This does not seem to be the case on a spatial dimension. Indeed, Figure 1.2 shows that although five times more people (correctly<sup>1</sup>) believe that India will face more serious climate impacts than the European Union, 65% still think that both regions will face as much damage. Yet, the evidence is mild regarding the time dimension, as 45% of American think that “global warming will pose a serious threat to [them] or [their] way of life in [their] lifetime” (Gallup, 2019) while 62% of French people think that the first generation seriously affected by CC is yet to be born (Figure 1.3).<sup>2</sup> Interestingly, a delay of one generation as the first (perceived as) affected by CC is significantly associated with a lower knowledge index by 0.1 standard deviation. This finding may indicate that learning is partly motivated by perceived personal prejudice.

## 1.2 The Reaction Needed

Kallbekken & Aasen (2010) report that “a poll of 22,000 respondents from 21 countries found that 83% say it will be necessary to make lifestyle and behavioural changes to reduce emissions of greenhouse gases (Globescan and PIPA, 2007).” Other French representative surveys find similar results for the reaction needed and indicate which efforts people are most ready to make. BVA (2011) indicates that, to save energy, 76% plan to “change their consumption habits” and 61% plan works in their accomodation. In the U.S., 52% already think they “do a good job at protecting the environment” Gallup (2019). However, ADEME (2018) shows that the efforts people are making or could easily make are also the least efficient to reduce GhG emissions: most people cite waste sorting (89%) or buying seasonal vegetables (87%), but fewer mention walking or cycling (55%) or using public transport (49%) instead of driving.

Logically, 62% thus think that “only legislative constraint is effective in making a successful transition and forcing everyone to change their consumption habits” (OpinionWay, 2019). The extent to which people support such legislation is documented by Bréchon et al. (2019): 50% favour the protection of the environment at the expense of the economy and employment. In the U.S., Gallup surveys show that this prioritization depends largely on the economic conditions, in accordance with Brulle et al. (2012) and Shum (2012): the figure is 65% in 2019 but was 38% in 2010.

<sup>1</sup>See e.g. vulnerability indexes (Climate Vulnerable Forum, 2012; Guillaumont, 2015; Closset et al., 2018).

<sup>2</sup>We assume here that both countries are comparable.

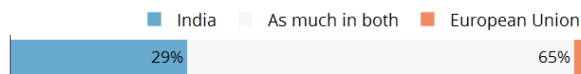


Figure 1.2: Perceived region where climate change impacts will be the most serious.

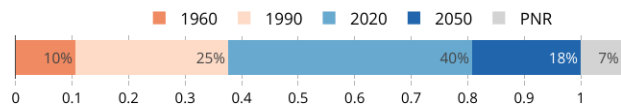


Figure 1.3: Perceived date of birth of first generation severely affected by CC.

## 2 Test different wording for winners and losers

Table 2.1: Effect of defining winners/losers in terms of purchasing power

|                     | <i>Dependent variable:</i>      |   |                                 |                                  |
|---------------------|---------------------------------|---|---------------------------------|----------------------------------|
|                     | Poors expected<br>to win<br>(1) | City dwellers expected<br>to win<br>(2) | Rich expected<br>to lose<br>(3) | Rural expected<br>to lose<br>(4) |
| Constant            | 0.058***<br>(0.007)             | 0.207***<br>(0.010)                     | 0.009***<br>(0.003)             | 0.352***<br>(0.012)              |
| In purchasing power | 0.045***<br>(0.010)             | -0.029**<br>(0.014)                     | 0.015***<br>(0.005)             | -0.014<br>(0.017)                |
| Observations        | 3,002                           | 3,002                                   | 3,002                           | 3,002                            |
| R <sup>2</sup>      | 0.007                           | 0.001                                   | 0.003                           | 0.0002                           |

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

### 3 Additional specifications for determinants of attitudes

Table 3.1: Determinants of attitudes towards diesel taxation

|                             | Acceptance increase in diesel taxation |                      |                      |                      |
|-----------------------------|--|----------------------|----------------------|----------------------|
|                             | (1)                                    | (2)                  | (3)                  | (4)                  |
| Knowledge on CC             | 0.046***<br>(0.008)                    |                      |                      |                      |
| Ecologist                   | 0.082***<br>(0.023)                    |                      |                      |                      |
| Yellow Vests: PNR           | -0.041<br>(0.030)                      |                      | -0.068**<br>(0.034)  |                      |
| Yellow Vests: understands   | -0.099***<br>(0.021)                   |                      | -0.134***<br>(0.023) |                      |
| Yellow Vests: supports      | -0.188***<br>(0.022)                   |                      | -0.289***<br>(0.024) |                      |
| Yellow Vests: is part       | -0.163***<br>(0.040)                   |                      | -0.300***<br>(0.045) |                      |
| Left-right: Extreme-left    | 0.082<br>(0.052)                       |                      |                      | 0.076<br>(0.060)     |
| Left-right: Left            | 0.033<br>(0.025)                       |                      |                      | 0.025<br>(0.024)     |
| Left-right: Center          | 0.016<br>(0.028)                       |                      |                      | 0.081***<br>(0.029)  |
| Left-right: Right           | -0.045*<br>(0.027)                     |                      |                      | -0.060**<br>(0.026)  |
| Left-right: Extreme-right   | -0.030<br>(0.031)                      |                      |                      | -0.180***<br>(0.033) |
| Size of town: -20k          | -0.001<br>(0.025)                      | 0.002<br>(0.025)     |                      |                      |
| Size of town: 20-100k       | 0.013<br>(0.027)                       | 0.016<br>(0.027)     |                      |                      |
| Size of town: +100k         | 0.068***<br>(0.025)                    | 0.106***<br>(0.022)  |                      |                      |
| Size of town: Paris         | 0.083**<br>(0.041)                     | 0.143***<br>(0.026)  |                      |                      |
| Diesel                      | -0.371***<br>(0.023)                   | -0.474***<br>(0.016) |                      |                      |
| Gasoline                    | 0.153***<br>(0.022)                    |                      |                      |                      |
| Number vehicles             | -0.022<br>(0.019)                      |                      |                      |                      |
| Frequency of public transit | 0.001<br>(0.007)                       |                      |                      |                      |
| Additional covariates       | ✓                                      |                      |                      |                      |
| Observations                | 3,002                                  | 3,002                | 3,002                | 3,002                |
| R <sup>2</sup>              | 0.357                                  | 0.271                | 0.054                | 0.018                |

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

NOTE: Standard errors are reported in parentheses. Omitted variables are *Yellow Vests: opposes*, *Age : 18 – 24* and *Left-right: Indeterminate*. Additional covariates are defined in Appendix C.

Table 3.2: Determinants of attitudes towards carbon tax revenue recycling

|                               | Non-polluting<br>transports | VAT<br>cut           | Renewable<br>energies | Renovation<br>of buildings | Transfer<br>constrained hh. | Reduction<br>soc. contri. | Transfer<br>poor hh. | Reduction<br>pub. deficit | Transfer<br>all hh.  |
|-------------------------------|-----------------------------|----------------------|-----------------------|----------------------------|-----------------------------|---------------------------|----------------------|---------------------------|----------------------|
|                               | (1)                         | (2)                  | (3)                   | (4)                        | (5)                         | (6)                       | (7)                  | (8)                       | (9)                  |
| Knowledge on CC               | 0.127***<br>(0.025)         | -0.050*<br>(0.026)   | 0.132***<br>(0.025)   | 0.099***<br>(0.025)        | 0.051*<br>(0.026)           | -0.064**<br>(0.026)       | -0.027<br>(0.029)    | -0.009<br>(0.026)         | -0.074**<br>(0.029)  |
| CC is disastrous              | 0.298***<br>(0.049)         | 0.085<br>(0.052)     | 0.275***<br>(0.050)   | 0.247***<br>(0.049)        | 0.151***<br>(0.052)         | 0.109**<br>(0.053)        | 0.102*<br>(0.057)    | 0.105**<br>(0.052)        | 0.078<br>(0.057)     |
| Interest in politics (0 to 2) | 0.031<br>(0.035)            | -0.115***<br>(0.038) | -0.003<br>(0.036)     | -0.008<br>(0.036)          | -0.006<br>(0.038)           | -0.096**<br>(0.038)       | -0.073*<br>(0.041)   | -0.079**<br>(0.038)       | -0.068*<br>(0.041)   |
| Ecologist                     | 0.310***<br>(0.068)         | -0.036<br>(0.073)    | 0.436***<br>(0.069)   | 0.262***<br>(0.068)        | 0.055<br>(0.072)            | -0.085<br>(0.073)         | 0.183**<br>(0.078)   | -0.024<br>(0.072)         | -0.012<br>(0.079)    |
| Yellow Vests: PNR             | -0.156*<br>(0.089)          | -0.041<br>(0.096)    | -0.256***<br>(0.091)  | -0.171*<br>(0.090)         | -0.140<br>(0.095)           | -0.189**<br>(0.096)       | 0.032<br>(0.104)     | -0.318***<br>(0.095)      | -0.129<br>(0.104)    |
| Yellow Vests: understands     | -0.039<br>(0.061)           | 0.262***<br>(0.066)  | -0.106*<br>(0.062)    | -0.016<br>(0.061)          | 0.091<br>(0.065)            | 0.007<br>(0.066)          | 0.127*<br>(0.071)    | -0.096<br>(0.065)         | -0.094<br>(0.071)    |
| Yellow Vests: supports        | -0.271***<br>(0.065)        | 0.141**<br>(0.070)   | -0.346***<br>(0.066)  | -0.243***<br>(0.065)       | -0.098<br>(0.069)           | -0.166**<br>(0.070)       | -0.043<br>(0.076)    | -0.321***<br>(0.069)      | -0.277***<br>(0.076) |
| Yellow Vests: is part         | -0.306***<br>(0.118)        | 0.272**<br>(0.127)   | -0.370***<br>(0.120)  | -0.211*<br>(0.119)         | 0.022<br>(0.126)            | -0.112<br>(0.127)         | -0.023<br>(0.137)    | -0.297**<br>(0.125)       | -0.345**<br>(0.137)  |
| Left-right: Extreme-left      | 0.066<br>(0.154)            | 0.162<br>(0.166)     | 0.066<br>(0.157)      | 0.223<br>(0.155)           | 0.043<br>(0.164)            | -0.195<br>(0.166)         | 0.180<br>(0.179)     | -0.216<br>(0.164)         | -0.399**<br>(0.179)  |
| Left-right: Left              | 0.085<br>(0.074)            | -0.079<br>(0.080)    | 0.145*<br>(0.076)     | 0.089<br>(0.075)           | 0.074<br>(0.079)            | -0.097<br>(0.080)         | 0.301***<br>(0.086)  | -0.099<br>(0.079)         | -0.065<br>(0.087)    |
| Left-right: Center            | 0.038<br>(0.082)            | -0.162*<br>(0.088)   | 0.021<br>(0.084)      | 0.137*<br>(0.083)          | 0.083<br>(0.087)            | -0.093<br>(0.089)         | 0.054<br>(0.095)     | 0.105<br>(0.087)          | -0.100<br>(0.096)    |
| Left-right: Right             | 0.048<br>(0.079)            | -0.013<br>(0.085)    | 0.058<br>(0.080)      | 0.084<br>(0.079)           | 0.072<br>(0.084)            | 0.090<br>(0.085)          | -0.134<br>(0.092)    | 0.160*<br>(0.084)         | 0.051<br>(0.092)     |
| Left-right: Extreme-right     | -0.212**<br>(0.093)         | -0.041<br>(0.100)    | -0.106<br>(0.095)     | -0.147<br>(0.094)          | -0.186*<br>(0.099)          | -0.013<br>(0.100)         | -0.209*<br>(0.108)   | -0.172*<br>(0.099)        | -0.095<br>(0.108)    |
| Diploma (1 to 4)              | -0.014<br>(0.025)           | -0.027<br>(0.026)    | 0.016<br>(0.025)      | 0.002<br>(0.025)           | -0.014<br>(0.026)           | -0.047*<br>(0.027)        | -0.046<br>(0.029)    | -0.021<br>(0.026)         | 0.011<br>(0.029)     |
| Age: 25 – 34                  | -0.285**<br>(0.113)         | -0.105<br>(0.121)    | -0.270**<br>(0.115)   | -0.101<br>(0.113)          | -0.096<br>(0.120)           | -0.120<br>(0.121)         | -0.308**<br>(0.131)  | -0.261**<br>(0.120)       | 0.244*<br>(0.131)    |
| Age: 35 – 49                  | -0.167<br>(0.112)           | -0.083<br>(0.120)    | -0.109<br>(0.114)     | 0.057<br>(0.112)           | -0.023<br>(0.119)           | 0.014<br>(0.120)          | -0.283**<br>(0.130)  | -0.202*<br>(0.119)        | 0.096<br>(0.130)     |
| Age: 50 – 64                  | -0.015<br>(0.121)           | 0.032<br>(0.130)     | -0.038<br>(0.124)     | 0.122<br>(0.122)           | 0.178<br>(0.129)            | 0.166<br>(0.131)          | -0.053<br>(0.141)    | -0.176<br>(0.129)         | 0.129<br>(0.141)     |
| Age: ≥ 65                     | -0.010<br>(0.143)           | -0.034<br>(0.154)    | -0.034<br>(0.146)     | 0.217<br>(0.144)           | 0.215<br>(0.152)            | 0.130<br>(0.154)          | 0.028<br>(0.166)     | -0.140<br>(0.152)         | 0.111<br>(0.166)     |
| Income (k€/month)             | 0.025<br>(0.022)            | -0.016<br>(0.023)    | 0.014<br>(0.022)      | 0.013<br>(0.022)           | -0.014<br>(0.023)           | -0.002<br>(0.023)         | -0.084***<br>(0.025) | 0.008<br>(0.023)          | 0.054**<br>(0.025)   |
| Sex: Male                     | -0.151***<br>(0.049)        | -0.183***<br>(0.053) | -0.183***<br>(0.050)  | -0.132***<br>(0.049)       | -0.190***<br>(0.052)        | -0.221***<br>(0.053)      | -0.161***<br>(0.057) | -0.132**<br>(0.052)       | -0.108*<br>(0.057)   |
| Size of town (1 to 5)         | -0.007<br>(0.021)           | 0.005<br>(0.023)     | 0.004<br>(0.022)      | 0.003<br>(0.021)           | -0.012<br>(0.023)           | 0.019<br>(0.023)          | 0.029<br>(0.025)     | 0.016<br>(0.023)          | -0.007<br>(0.025)    |
| Frequency of public transit   | 0.025<br>(0.020)            | -0.026<br>(0.022)    | -0.006<br>(0.021)     | 0.0001<br>(0.021)          | -0.012<br>(0.022)           | -0.015<br>(0.022)         | -0.019<br>(0.024)    | -0.029<br>(0.022)         | -0.014<br>(0.024)    |
| Additional covariates         | ✓                           | ✓                    | ✓                     | ✓                          | ✓                           | ✓                         | ✓                    | ✓                         | ✓                    |
| Observations                  | 3,002                       | 3,002                | 3,002                 | 3,002                      | 3,002                       | 3,002                     | 3,002                | 3,002                     | 3,002                |
| R <sup>2</sup>                | 0.125                       | 0.066                | 0.129                 | 0.095                      | 0.060                       | 0.058                     | 0.120                | 0.053                     | 0.064                |

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

NOTE: Standard errors are reported in parentheses. Omitted variables are *Yellow Vests: opposes*, *Age : 18 – 24* and *Left-right: Indeterminate*. Additional covariates are defined in Appendix C.

Table 3.3: Determinants of attitudes towards specific climate policies

|                               | Norms for<br>buildings<br>(1) | Norms for<br>new vehicles<br>(2) | Tax on<br>kerosene<br>(3) | Prohibition<br>pol. vehicles<br>(4) | Norms for<br>old vehicles<br>(5) | Contribution<br>climate fund<br>(6) | Tax on<br>red meat<br>(7) | Urban<br>tolls<br>(8) |
|-------------------------------|-------------------------------|----------------------------------|---------------------------|-------------------------------------|----------------------------------|-------------------------------------|---------------------------|-----------------------|
| Knowledge on CC               | 0.155***<br>(0.022)           | 0.186***<br>(0.022)              | 0.130***<br>(0.024)       | 0.118***<br>(0.025)                 | 0.100***<br>(0.024)              | 0.187***<br>(0.025)                 | 0.118***<br>(0.023)       | 0.027<br>(0.023)      |
| CC is disastrous              | 0.175***<br>(0.043)           | 0.360***<br>(0.043)              | 0.105**<br>(0.047)        | 0.246***<br>(0.050)                 | 0.252***<br>(0.047)              | 0.271***<br>(0.050)                 | 0.160***<br>(0.046)       | 0.092**<br>(0.046)    |
| Interest in politics (0 to 2) | 0.117***<br>(0.031)           | 0.115***<br>(0.031)              | 0.245***<br>(0.034)       | 0.022<br>(0.036)                    | 0.003<br>(0.034)                 | 0.041<br>(0.036)                    | -0.022<br>(0.033)         | 0.027<br>(0.033)      |
| Ecologist                     | 0.141**<br>(0.059)            | 0.160***<br>(0.059)              | 0.263***<br>(0.065)       | 0.317***<br>(0.069)                 | 0.233***<br>(0.066)              | 0.288***<br>(0.069)                 | 0.480***<br>(0.063)       | 0.267***<br>(0.064)   |
| Yellow Vests: PNR             | -0.151*<br>(0.078)            | -0.084<br>(0.078)                | -0.203**<br>(0.086)       | -0.104<br>(0.091)                   | -0.127<br>(0.087)                | -0.086<br>(0.091)                   | 0.012<br>(0.083)          | -0.213**<br>(0.084)   |
| Yellow Vests: understands     | -0.005<br>(0.053)             | -0.103*<br>(0.053)               | 0.041<br>(0.059)          | -0.162***<br>(0.062)                | -0.139**<br>(0.059)              | -0.113*<br>(0.062)                  | 0.069<br>(0.057)          | -0.224***<br>(0.058)  |
| Yellow Vests: supports        | -0.071<br>(0.057)             | -0.178***<br>(0.057)             | 0.201***<br>(0.062)       | -0.285***<br>(0.066)                | -0.294***<br>(0.063)             | -0.291***<br>(0.066)                | 0.059<br>(0.061)          | -0.365***<br>(0.061)  |
| Yellow Vests: is part         | -0.147<br>(0.104)             | -0.447***<br>(0.103)             | 0.171<br>(0.113)          | -0.573***<br>(0.121)                | -0.456***<br>(0.115)             | -0.536***<br>(0.120)                | -0.107<br>(0.111)         | -0.324***<br>(0.112)  |
| Left-right: Extreme-left      | -0.076<br>(0.135)             | -0.174<br>(0.135)                | 0.007<br>(0.148)          | -0.191<br>(0.157)                   | -0.051<br>(0.150)                | 0.267*<br>(0.157)                   | 0.199<br>(0.144)          | -0.017<br>(0.146)     |
| Left-right: Left              | 0.009<br>(0.065)              | -0.067<br>(0.065)                | -0.070<br>(0.071)         | -0.084<br>(0.076)                   | -0.110<br>(0.072)                | 0.226***<br>(0.076)                 | -0.007<br>(0.070)         | 0.056<br>(0.070)      |
| Left-right: Center            | 0.062<br>(0.072)              | -0.017<br>(0.072)                | 0.111<br>(0.079)          | -0.043<br>(0.084)                   | 0.029<br>(0.080)                 | -0.047<br>(0.084)                   | 0.028<br>(0.077)          | 0.110<br>(0.078)      |
| Left-right: Right             | -0.046<br>(0.069)             | -0.036<br>(0.069)                | -0.048<br>(0.076)         | -0.021<br>(0.080)                   | 0.003<br>(0.077)                 | -0.047<br>(0.080)                   | -0.114<br>(0.074)         | 0.009<br>(0.074)      |
| Left-right: Extreme-right     | -0.013<br>(0.082)             | -0.064<br>(0.082)                | 0.007<br>(0.089)          | -0.215**<br>(0.095)                 | -0.262***<br>(0.090)             | -0.329***<br>(0.095)                | -0.236***<br>(0.087)      | -0.180**<br>(0.088)   |
| Diploma (1 to 4)              | -0.030<br>(0.022)             | -0.003<br>(0.022)                | 0.017<br>(0.024)          | 0.044*<br>(0.025)                   | 0.015<br>(0.024)                 | -0.037<br>(0.025)                   | 0.011<br>(0.023)          | 0.016<br>(0.023)      |
| Age: 25 – 34                  | -0.012<br>(0.099)             | -0.066<br>(0.099)                | 0.223**<br>(0.108)        | 0.051<br>(0.115)                    | -0.015<br>(0.109)                | -0.174<br>(0.115)                   | -0.199*<br>(0.105)        | -0.016<br>(0.106)     |
| Age: 35 – 49                  | -0.014<br>(0.098)             | 0.087<br>(0.098)                 | 0.319***<br>(0.107)       | 0.130<br>(0.114)                    | -0.060<br>(0.109)                | -0.227**<br>(0.114)                 | -0.419***<br>(0.105)      | -0.155<br>(0.106)     |
| Age: 50 – 64                  | 0.096<br>(0.106)              | 0.145<br>(0.106)                 | 0.427***<br>(0.116)       | 0.173<br>(0.124)                    | 0.090<br>(0.118)                 | -0.368***<br>(0.123)                | -0.423***<br>(0.113)      | -0.199*<br>(0.114)    |
| Age: ≥ 65                     | 0.080<br>(0.125)              | 0.123<br>(0.125)                 | 0.447***<br>(0.137)       | 0.275*<br>(0.146)                   | 0.210<br>(0.139)                 | -0.483***<br>(0.145)                | -0.394***<br>(0.134)      | -0.109<br>(0.135)     |
| Income (k€/month)             | 0.029<br>(0.019)              | 0.004<br>(0.019)                 | -0.025<br>(0.021)         | 0.040*<br>(0.022)                   | 0.038*<br>(0.021)                | 0.039*<br>(0.022)                   | 0.004<br>(0.020)          | 0.046**<br>(0.020)    |
| Sex: Male                     | -0.120***<br>(0.043)          | -0.114***<br>(0.043)             | 0.057<br>(0.047)          | -0.026<br>(0.050)                   | -0.132***<br>(0.047)             | -0.216***<br>(0.050)                | -0.136***<br>(0.046)      | -0.002<br>(0.046)     |
| Size of town (1 to 5)         | 0.003<br>(0.019)              | 0.004<br>(0.019)                 | -0.041**<br>(0.020)       | 0.020<br>(0.022)                    | 0.018<br>(0.021)                 | 0.038*<br>(0.022)                   | 0.049**<br>(0.020)        | -0.029<br>(0.020)     |
| Frequency of public transit   | 0.013<br>(0.018)              | 0.002<br>(0.018)                 | -0.040**<br>(0.020)       | -0.028<br>(0.021)                   | -0.002<br>(0.020)                | -0.040*<br>(0.021)                  | -0.052***<br>(0.019)      | -0.036*<br>(0.019)    |
| Additional covariates         | ✓                             | ✓                                | ✓                         | ✓                                   | ✓                                | ✓                                   | ✓                         | ✓                     |
| Observations                  | 3,002                         | 3,002                            | 3,002                     | 3,002                               | 3,002                            | 3,002                               | 3,002                     | 3,002                 |
| R <sup>2</sup>                | 0.086                         | 0.165                            | 0.117                     | 0.164                               | 0.176                            | 0.173                               | 0.147                     | 0.118                 |

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

NOTE: Standard errors are reported in parentheses. Omitted variables are *Yellow Vests: opposes*, *Age : 18 – 24* and *Left-right: Indeterminate*. Additional covariates are defined in Appendix C.

Table 3.4: Determinants of attitudes towards climate policies, additional specifications

|                             | Share of policies<br>(1) | Tax & dividend<br>(2) (3) |                      |
|-----------------------------|--------------------------|---------------------------|----------------------|
| Knowledge on CC             | 0.057***<br>(0.005)      |                           |                      |
| CC is disastrous            | 0.090***<br>(0.010)      |                           |                      |
| Diploma (1 to 4)            | 0.006<br>(0.004)         |                           |                      |
| Age: 25 – 34                | –0.039**<br>(0.018)      |                           |                      |
| Age: 35 – 49                | –0.019<br>(0.017)        |                           |                      |
| Age: 50 – 64                | 0.005<br>(0.017)         |                           |                      |
| Age: ≥ 65                   | 0.045**<br>(0.018)       |                           |                      |
| Income (k€/month)           | 0.003<br>(0.002)         |                           |                      |
| Sex: Male                   | –0.008<br>(0.009)        |                           |                      |
| Size of town (1 to 5)       | 0.008**<br>(0.004)       |                           |                      |
| Frequency of public transit | 0.017***<br>(0.004)      |                           |                      |
| Left-right: Extreme-left    |                          | 0.072**<br>(0.033)        | –0.065<br>(0.057)    |
| Left-right: Left            |                          | 0.040***<br>(0.013)       | 0.031<br>(0.022)     |
| Left-right: Center          |                          | 0.071***<br>(0.015)       | 0.090***<br>(0.026)  |
| Left-right: Right           |                          | 0.029**<br>(0.014)        | –0.037<br>(0.024)    |
| Left-right: Extreme-right   |                          | –0.061***<br>(0.018)      | –0.155***<br>(0.031) |
| Observations                | 3,002                    | 3,002                     | 3,002                |
| R <sup>2</sup>              | 0.143                    | 0.018                     | 0.017                |

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

NOTE: Standard errors are reported in parentheses. Omitted variables are *Yellow Vests: opposes*, *Age : 18 – 24* and *Left-right: Indeterminate*. Additional covariates are defined in Appendix C.

## 4 Construction of the knowledge index

We synthesize the different dimensions of knowledge proposed by Kiel & Rost (2002) and summarized by Hoppe et al. (2018) using our questions on the existence and anthropogenic origin of CC (corresponding to the causal knowledge), on the region most affected (effects), as well as our scores on the emission target (basic), greenhouse gases (basic) and on activities responsible for CC (action-related).

From an exploratory factor analysis (fitted using the maximum likelihood method), we find the factor which explains the highest share of common variance, and report it in Table 4.1. We use the factor loadings hereby obtained to define the relative weights of the components of our index of knowledge, and we round them for readability purpose. The rounding has virtually no effect on the result, as the correlation between our index and the factor obtained is 0.999. For information, the correlations between the different components of our index, including our index itself, are reported on Figure 4.1.

Moreover, Table 4.2 shows that the determinants of Tax & Dividend are robust to the choice of the *knowledge* variable: if we replace our index by any of its component, the coefficients of the other determinants are virtually unchanged. Interestingly, this analysis indicates that it is the knowledge on the existence and the anthropogenic nature of CC that drives the effect of overall knowledge, justifying a higher weight for these two components. Finally, we could reproduce this robustness check for the other dependent variable of Table II, and also by replacing the independent variable *knowledge* in Table I, and we would again see that the other coefficients are essentially unaffected.

Table 4.1: Factor loadings and weights chosen for different dimensions of knowledge on CC

| Variable       | GhG  | Activities | Exists | Anthropogenic | Target | Region |
|----------------|------|------------|--------|---------------|--------|--------|
| <b>Loading</b> | .212 | .182       | .398   | .601          | .200   | .000   |
| <b>Weight</b>  | 1    | 1          | 2      | 3             | 1      | 0      |

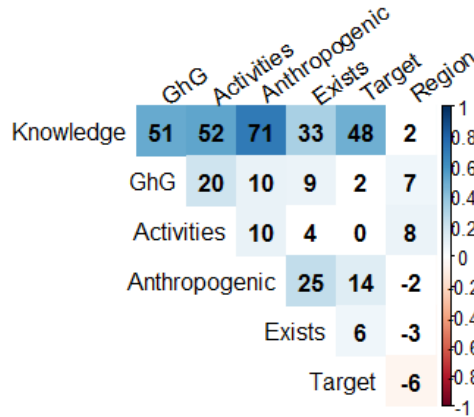


Figure 4.1: Correlations between different variables of knowledge on CC.



Table 4.2: Robustness of the determinants of Tax &amp; Dividend Acceptance To Knowledge Variables

|                           | Tax & dividend       |                      |                      |                      |                      |                      |
|---------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
|                           | (1)                  | (2)                  | (3)                  | (4)                  | (5)                  | (6)                  |
| Knowledge on CC           | 0.029***<br>(0.009)  |                      |                      |                      |                      |                      |
| CC is Anthropogenic       |                      | 0.068***<br>(0.019)  |                      |                      |                      |                      |
| CC Exists                 |                      |                      | 0.115**<br>(0.051)   |                      |                      |                      |
| Score GhG                 |                      |                      |                      | 0.002<br>(0.009)     |                      |                      |
| Score Activities          |                      |                      |                      |                      | 0.005<br>(0.009)     |                      |
| Score Target proximity    |                      |                      |                      |                      |                      | 0.015*<br>(0.008)    |
| Ecologist                 | 0.126***<br>(0.024)  | 0.130***<br>(0.024)  | 0.135***<br>(0.024)  | 0.135***<br>(0.024)  | 0.134***<br>(0.024)  | 0.132***<br>(0.024)  |
| Yellow Vests: PNR         | -0.021<br>(0.032)    | -0.019<br>(0.032)    | -0.023<br>(0.032)    | -0.023<br>(0.032)    | -0.023<br>(0.032)    | -0.024<br>(0.032)    |
| Yellow Vests: understands | -0.144***<br>(0.022) | -0.144***<br>(0.022) | -0.146***<br>(0.022) | -0.146***<br>(0.022) | -0.145***<br>(0.022) | -0.146***<br>(0.022) |
| Yellow Vests: supports    | -0.222***<br>(0.023) | -0.222***<br>(0.023) | -0.226***<br>(0.023) | -0.228***<br>(0.023) | -0.227***<br>(0.023) | -0.227***<br>(0.023) |
| Yellow Vests: is part     | -0.214***<br>(0.043) | -0.215***<br>(0.043) | -0.218***<br>(0.043) | -0.226***<br>(0.042) | -0.225***<br>(0.043) | -0.225***<br>(0.042) |
| Left-right: Extreme-left  | -0.040<br>(0.056)    | -0.038<br>(0.056)    | -0.028<br>(0.056)    | -0.033<br>(0.056)    | -0.033<br>(0.056)    | -0.037<br>(0.056)    |
| Left-right: Left          | 0.072***<br>(0.027)  | 0.072***<br>(0.027)  | 0.075***<br>(0.027)  | 0.075***<br>(0.027)  | 0.074***<br>(0.027)  | 0.075***<br>(0.027)  |
| Left-right: Center        | 0.051*<br>(0.030)    | 0.053*<br>(0.030)    | 0.052*<br>(0.030)    | 0.053*<br>(0.030)    | 0.053*<br>(0.030)    | 0.054*<br>(0.030)    |
| Left-right: Right         | -0.022<br>(0.028)    | -0.022<br>(0.028)    | -0.023<br>(0.028)    | -0.023<br>(0.028)    | -0.023<br>(0.028)    | -0.022<br>(0.028)    |
| Left-right: Extreme-right | -0.041<br>(0.034)    | -0.044<br>(0.034)    | -0.046<br>(0.034)    | -0.045<br>(0.034)    | -0.044<br>(0.034)    | -0.045<br>(0.034)    |
| Sex: Male                 | -0.053***<br>(0.018) | -0.047***<br>(0.018) | -0.046***<br>(0.018) | -0.048***<br>(0.018) | -0.049***<br>(0.018) | -0.048***<br>(0.018) |
| Additional covariates     | ✓                    |                      | ✓                    | ✓                    | ✓                    | ✓                    |
| Observations              | 3,002                | 3,002                | 3,002                | 3,002                | 3,002                | 3,002                |
| R <sup>2</sup>            | 0.150                | 0.151                | 0.149                | 0.147                | 0.147                | 0.148                |

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

NOTE: Standard errors are reported in parentheses. Omitted variables are *Yellow Vests: opposes*, *Age : 18 – 24* and *Left-right: Indeterminate*. Additional covariates are the same as in Table II.

## 5 Logit regressions for determinants

Table 5.1: Determinants of attitudes towards climate change (CC) with logit regressions.

|  | CC is anthropogenic  |                      |                     | CC is disastrous    |                      |
|--|----------------------|----------------------|---------------------|---------------------|----------------------|
|  | (1)                  | (2)                  | (3)                 | (4)                 | (5)                  |
| Interest in politics (0 to 2)              | 0.034***<br>(0.013)  |                      |                     | 0.045***<br>(0.014) |                      |
| Ecologist                                  | 0.144***<br>(0.021)  |                      |                     | 0.186***<br>(0.027) |                      |
| Yellow Vests: PNR                          | -0.097***<br>(0.036) |                      |                     | -0.069**<br>(0.034) |                      |
| Yellow Vests: understands                  | -0.034<br>(0.023)    |                      |                     | -0.040*<br>(0.024)  |                      |
| Yellow Vests: supports                     | -0.101***<br>(0.025) |                      |                     | -0.052**<br>(0.025) |                      |
| Yellow Vests: is part                      | -0.196***<br>(0.047) |                      |                     | -0.079*<br>(0.044)  |                      |
| Left-right: Extreme-left                   | 0.121**<br>(0.047)   |                      | 0.079<br>(0.071)    | 0.070<br>(0.064)    | 0.006<br>(0.088)     |
| Left-right: Left                           | 0.088***<br>(0.025)  |                      | 0.050<br>(0.045)    | 0.104***<br>(0.030) | -0.006<br>(0.053)    |
| Left-right: Center                         | 0.011<br>(0.030)     |                      | 0.009<br>(0.044)    | 0.030<br>(0.032)    | -0.072<br>(0.048)    |
| Left-right: Right                          | -0.031<br>(0.029)    |                      | -0.032<br>(0.046)   | -0.029<br>(0.031)   | -0.138***<br>(0.048) |
| Left-right: Extreme-right                  | -0.012<br>(0.034)    |                      | -0.025<br>(0.056)   | 0.023<br>(0.038)    | -0.081<br>(0.062)    |
| Diploma: <i>CAP</i> or <i>BEP</i>          | 0.042**<br>(0.020)   |                      | 0.039*<br>(0.021)   | -0.022<br>(0.025)   | -0.015<br>(0.026)    |
| Diploma: <i>Baccalauréat</i>               | 0.063***<br>(0.024)  |                      | 0.111***<br>(0.024) | 0.025<br>(0.029)    | 0.121***<br>(0.030)  |
| Diploma: Higher                            | 0.093***<br>(0.025)  |                      | 0.165***<br>(0.024) | 0.095***<br>(0.031) | 0.234***<br>(0.030)  |
| Diploma $\times$ Left-right                |                      |                      | -0.010<br>(0.008)   |                     | -0.004<br>(0.009)    |
| Diploma $\times$ Left-right: Indeterminate |                      |                      | 0.005<br>(0.015)    |                     | -0.024<br>(0.016)    |
| Age: 25 – 34                               | 0.048<br>(0.042)     | -0.040<br>(0.041)    |                     | 0.018<br>(0.047)    |                      |
| Age: 35 – 49                               | -0.008<br>(0.043)    | -0.113***<br>(0.035) |                     | 0.026<br>(0.045)    |                      |
| Age: 50 – 64                               | 0.005<br>(0.045)     | -0.116***<br>(0.034) |                     | -0.036<br>(0.047)   |                      |
| Age: $\geq 65$                             | -0.095*<br>(0.057)   | -0.228***<br>(0.035) |                     | -0.087<br>(0.056)   |                      |
| Income (k€/month)                          | -0.011<br>(0.008)    |                      |                     | -0.010<br>(0.009)   |                      |
| Sex: Male                                  | -0.024<br>(0.018)    |                      |                     | 0.003<br>(0.019)    |                      |
| Size of town (1 to 5)                      | 0.006<br>(0.008)     |                      |                     | 0.007<br>(0.008)    |                      |
| Frequency of public transit                | 0.012<br>(0.007)     |                      |                     | 0.007<br>(0.008)    |                      |
| Additional covariates                      | ✓                    |                      |                     | ✓                   |                      |
| Observations                               | 3,002                | 3,002                | 3,002               | 3,002               | 3,002                |

Note:

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

NOTE: Standard errors are reported in parentheses. Interaction term is computed using numeric variables. Omitted modalities are: *Yellow Vests: opposes*, *Left-right: Indeterminate*, *Diploma: Brevet or no diploma*, *Age: 18 – 24*.

Additional covariates are defined in Appendix C.

Table 5.2: Determinants of attitudes towards climate policies with logit regressions.

|                               | Tax & dividend       |                      | Share of policies   | Ecological lifestyle |
|-------------------------------|----------------------|----------------------|---------------------|----------------------|
|                               | (1)                  | (2)                  | (3)                 | (4)                  |
| Knowledge on CC               | 0.029***<br>(0.009)  | 0.049***<br>(0.009)  | 0.046***<br>(0.010) | 0.092***<br>(0.010)  |
| CC is disastrous              | 0.023<br>(0.017)     | 0.035*<br>(0.018)    | 0.081***<br>(0.020) | 0.137***<br>(0.018)  |
| Interest in politics (0 to 2) | -0.019<br>(0.013)    |                      | 0.032**<br>(0.014)  | 0.028**<br>(0.013)   |
| Ecologist                     | 0.107***<br>(0.025)  |                      | 0.077***<br>(0.028) | 0.173***<br>(0.023)  |
| Yellow Vests: PNR             | -0.022<br>(0.028)    |                      | -0.054<br>(0.036)   | -0.087**<br>(0.034)  |
| Yellow Vests: understands     | -0.117***<br>(0.018) |                      | -0.025<br>(0.024)   | -0.009<br>(0.022)    |
| Yellow Vests: supports        | -0.207***<br>(0.019) |                      | -0.050*<br>(0.026)  | -0.020<br>(0.024)    |
| Yellow Vests: is part         | -0.177***<br>(0.028) |                      | -0.080*<br>(0.047)  | -0.026<br>(0.042)    |
| Left-right: Extreme-left      | -0.035<br>(0.055)    |                      | 0.022<br>(0.065)    | 0.083<br>(0.055)     |
| Left-right: Left              | 0.070***<br>(0.027)  |                      | -0.003<br>(0.030)   | 0.039<br>(0.027)     |
| Left-right: Center            | 0.051*<br>(0.029)    |                      | 0.013<br>(0.033)    | 0.096***<br>(0.028)  |
| Left-right: Right             | -0.022<br>(0.027)    |                      | 0.009<br>(0.032)    | 0.010<br>(0.028)     |
| Left-right: Extreme-right     | -0.076**<br>(0.034)  |                      | -0.023<br>(0.039)   | 0.010<br>(0.033)     |
| Diploma (1 to 4)              | -0.002<br>(0.009)    | 0.004<br>(0.008)     | 0.007<br>(0.010)    | -0.007<br>(0.009)    |
| Age: 25 – 34                  | -0.039<br>(0.038)    | -0.079***<br>(0.028) | -0.024<br>(0.048)   | 0.032<br>(0.042)     |
| Age: 35 – 49                  | -0.041<br>(0.037)    | -0.067**<br>(0.026)  | -0.015<br>(0.046)   | 0.051<br>(0.040)     |
| Age: 50 – 64                  | -0.043<br>(0.040)    | -0.078***<br>(0.027) | -0.002<br>(0.049)   | 0.059<br>(0.042)     |
| Age: ≥ 65                     | -0.066<br>(0.046)    | -0.074***<br>(0.028) | 0.001<br>(0.058)    | 0.016<br>(0.051)     |
| Income (k€/month)             | 0.0002<br>(0.008)    | 0.001<br>(0.004)     | 0.010<br>(0.009)    | -0.005<br>(0.009)    |
| Sex: Male                     | -0.051***<br>(0.017) | -0.070***<br>(0.017) | -0.027<br>(0.020)   | -0.066***<br>(0.018) |
| Size of town (1 to 5)         | 0.021***<br>(0.008)  | 0.035***<br>(0.007)  | 0.001<br>(0.009)    | -0.005<br>(0.008)    |
| Frequency of public transit   | -0.006<br>(0.007)    | 0.012*<br>(0.006)    | -0.003<br>(0.008)   | 0.023***<br>(0.008)  |
| Additional covariates         | ✓                    |                      | ✓                   | ✓                    |
| Observations                  | 3,002                | 3,002                | 3,002               | 3,002                |

\*p&lt;0.1; \*\*p&lt;0.05; \*\*\*p&lt;0.01

NOTE: Average marginal effects are reported, with standard errors in parentheses. Omitted variables are *Yellow Vests: opposes*, *Age : 18 – 24* and *Left-right: Indeterminate*. Additional covariates are defined in Appendix C.

## 6 Robustness for the absence of cultural cognition effect

Table 6.1: Robustness of the absence interaction on perceived effects between political orientation and knowledge.

|                                    | CC is disastrous    |                     |                     |
|------------------------------------|---------------------|---------------------|---------------------|
|                                    | (1)                 | (2)                 | (3)                 |
| Constant                           | 0.404***<br>(0.035) | 0.510***<br>(0.056) | 0.458***<br>(0.017) |
| Yellow Vests: PNR                  | -0.049<br>(0.041)   |                     | -0.021<br>(0.033)   |
| Yellow Vests: understands          | -0.013<br>(0.034)   |                     | 0.001<br>(0.023)    |
| Yellow Vests: supports             | -0.020<br>(0.051)   |                     | 0.002<br>(0.023)    |
| Yellow Vests: is part              | -0.049<br>(0.079)   |                     | 0.024<br>(0.044)    |
| Left-right: Left                   |                     | -0.004<br>(0.059)   |                     |
| Left-right: Center                 |                     | -0.071<br>(0.060)   |                     |
| Left-right: Right                  |                     | -0.119**<br>(0.060) |                     |
| Left-right: Extreme-right          |                     | -0.054<br>(0.063)   |                     |
| Diploma: <i>CAP</i> or <i>BEP</i>  | -0.029<br>(0.024)   |                     |                     |
| Diploma: <i>Baccalauréat</i>       | 0.109***<br>(0.027) |                     |                     |
| Diploma: Higher                    | 0.203***<br>(0.024) |                     |                     |
| Knowledge CC                       |                     | 0.174***<br>(0.011) | 0.188***<br>(0.009) |
| Diploma $\times$ Yellow Vests      | -0.001<br>(0.009)   |                     |                     |
| Knowledge CC $\times$ Left-right   |                     | -0.007<br>(0.009)   |                     |
| Knowledge CC $\times$ Yellow Vests |                     |                     | 0.001<br>(0.010)    |
| Observations                       | 3,002               | 1,813               | 3,002               |
| R <sup>2</sup>                     | 0.039               | 0.138               | 0.145               |

\*p<0.1; \*\*p<0.05; \*\*\*p<0.01

NOTE: Standard errors are reported in parentheses. Interaction term is computed using numeric variables. Omitted modalities are: *Yellow Vests: opposes*, *Left-right: Extreme-left*, *Diploma: Brevet or no diploma*.

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