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"AJAE appendix for 'Would you choose your preferred option? Comparing choice and recoded ranking experiments""

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November 27, 2007

"Note: The material contained herein is supplementary to the article named in the title and published in the American Journal of Agricultural Economics"

Differences between the choices and first rankings of each treatment

Table 1 shows the results of the comparison between the proportion of respondents that *chose* or *ranked first* a treatment (alternative) out of the 17 that we used in our experiment. The χ^2 -tests show that for 15 treatments we cannot reject the null hypothesis of statistically similar percentage of times a treatment is chosen/ranked first (at the 5% level) (table 1).

[Table 1]

Nested logit and random parameter logit with socioeconomic characteristics

In this section we present (i) a nested logit (NL) including socioeconomic characteristics in the election among branches and interacting with the attributes of the elemental alternatives and (ii) a random parameters logit (RPL) (Layton 2000) with socioeconomic characteristics interacting with the attributes. These models check if the results remain the same when we allow for heterogeneity. The RPL also relaxes the assumption of independence of the eight choices made by each respondent.

In the RPL we include interactions between the *ASC* and some socioeconomic variables. However, since the *ASC* captures the mean effect of the unobserved factors in the error term it is difficult to test hypothesis regarding this term (Blamey et al. 2000). As in the NL model without socioeconomic characteristics, *ASCs* for reforestation alternatives were not significant in the NL model with socioeconomic characteristics and are not included (see next section).

The socioeconomic characteristics (table 3 in the article) used in the branches in the NL and interacting with the *ASC* in the RPL are the family income (*INC*), the age

(*AGE*) of the respondent and a dummy variable (*CAD*) that takes value 1 if the respondent is from the *Cádiz* province, where the Alcornocales Natural Park (ANP) is located (value 0 otherwise). Two dummy variables interact with the attributes: (i) the variable *REA* takes value 1 if the main reason of the respondent for visiting the ANP was related with active tourism (hiking, biking, climbing) (value 0 otherwise); and (ii) the variable *SUS* takes value 1 if the respondent knows a close substitute to the ANP (value 0 otherwise). The remaining socioeconomic variables presented in table 3 of the article were not employed because of correlation problems.

We have estimated models (i) including all possible variables; (ii) including variables which were significant either in the choice or in the recoded ranking regressions; and (iii) including only the variables significant in both the choice and the recoded ranking regressions. We present in detail only the regressions for the models described in (ii) above, since they avoid unnecessary information from common non-significant variables and allow for potential socioeconomic differences. For the welfare measure analysis, we compare the models described in (iii) because they allow for a homogeneous comparison.

For comparing the parameter vectors in the RPL models we can only conduct a standard Likelihood Ratio test because the likelihood function in these models is not globally concave and quite erratic (Lusk and Schroeder 2004).

In table 2, we present the regression of the NL for the choice and the recoded ranking and the Likelihood Ratio test result. Most of the variables are significant in both models with the same sign and we cannot reject the hypothesis of equal parameter vectors. Although not shown in table 2, we also cannot reject the null hypothesis of the Likelihood Ratio test for the model with all possible variables (χ^2 (d. f. = 21) = 27.402)

and for the model only with the variables significant in both the choice and the recoded ranking (χ^2 (d. f. = 14) = 15.576).

Table 3 shows the welfare measures and the results of the comparison tests. As in the base models, most welfare measures are statistically equivalent, including the new ones derived from the interaction of the attributes and the socioeconomic variables.

[Table 2 and 3]

For the RPL model (table 4), the results of the comparison between models are fairly similar to the ones obtained in the NL. The standard Likelihood Ratio test cannot reject the null hypothesis (table 4). In table 5 we show the welfare measures and the results of the comparison tests for these models, which are similar to the obtained in the comparison of the NL models.

[Table 4 and 5]

Nested logit (NL) models with an alternative specific constant

In this section we present two additional NL models with an alternative specific constant (*ASC*) for reforestation alternatives. Table 6 shows the NL models without socioeconomic variables and table 7 the NL models with socioeconomic variables. Since the *ASCs* are not significant we did not include these models in the main text and did not perform additional comparison tests.

[Table 6 and 7]

Testing effects

In this section we present the statistical details of the models that try to detect the influence of different effects. We show the regressions, the Likelihood Ratio test and the welfare measures tests for the comparison between sub-samples that isolate respondents who could have been affected by a concrete effect. These tests are done only for the NL described in the article since the results of the comparison remains strongly similar irrespective of the specification used.

The models identifying "learning" and "fatigue" effects (called C4L and C4F respectively for the choice data and RC4L and RC4F for the recoded ranking data) show that all attributes are statistically significant at the 1% level with the expected sign (table 8). The Likelihood Ratio tests reported in table 9 do not reject the hypothesis of statistically equal parameter vectors in both comparisons. Table 9 also reports the Likelihood Ratio tests for the sub-sample models described below.

[Table 8 and 9]

The results for the welfare measures comparisons are found in table 10 for the C4_L and the RC4_L models and in table 11 for the C4_F and the RC4_F models. For the parametric measures, the t-tests that compare C4_L and RC4_L show little significant differences (only at the 10% level). For the bootstrapping results, the complete combinatorial tests show little significant differences in both cases.

[Table 10 and 11]

Using the four follow-up statements (see table 12) we created sub-samples for choice and for recoded ranking data and compare them for testing the effects referred in the article. For the first follow-up, we compared sub-samples made with respondents that scored it with 1, 2 or 3, detecting an "information" effect (models Cq1 and RCq1). For the second follow-up, we compared sub-samples made with individuals that scored it with 3, 4 or 5, checking for a "difficulty" effect (models Cq2 and RCq2). For the third

follow-up, we compared sub-samples made with those who scored it with 3, 4 or 5 checking an effect associated with the number of choice sets presented to each respondent ("choice sets" effect) (models C_{Q3} and RC_{Q3}). For the fourth follow-up, we compared sub-samples made with those that scored this statement with 3, 4 or 5 checking for a "response effort" effect (models C_{Q4} and RC_{Q4}). Table 12 shows the scores given to the follow-ups (from 1 (totally disagree) to 5 (totally agree)) and the χ^2 statistics for testing differences. In all cases we cannot reject the hypothesis of similar scores.

The results of the regressions estimated with the sub-samples made using the follow-ups are reported in table 13. The only difference with the regressions obtained using the whole samples is that the attribute *REC* in the RCq1 model is only significant at the 10% level. However, we are not able to discern whether this is caused by the "information" effect or by the reduced observations of RCq1 (732 observations), with the consequent decrease of its explanatory power. Nonetheless, this also happens in Cq1 (776 observations), where no decrease in explanatory power is observed.

[Table 12 and 13]

The Likelihood Ratio tests (see table 9; Cq1 versus RCq1, Cq2 versus RCq2, Cq3 versus RCq3 and Cq4 versus RCq4) state that in the models hypothetically affected by the "difficulty" effect (Cq2 versus RCq2) H_B is rejected. This implies that the difference resides in the scale parameter and not in the taste parameters.

Table 14 shows the parametric and bootstrapping results of the comparison between the welfare measures of Cq1 and RCq1 models. We found little differences and only in the complete combinatorial tests. Table 15 presents the same results for Cq2 and RCq2 models, finding also little differences in the complete combinatorial tests and one in the parametric t-test but only at the 10% level.

[Table 14 and 15]

Tables 16 and 17 show the parametric and bootstrapping welfare measures comparisons for Cq₃ and RCq₃ and for Cq₄ and RCq₄ models respectively. We found that only the t-test and the complete combinatorial test yield some statistically significant difference and most of them at the 10% level.

[Table 16 and 17]

Thus, as in the comparison of the whole samples, there is almost no difference between the results of a choice and a recoded ranking when we test for the four effects analyzed with the follow-up statements.

References

- Blamey, R.K., J.W. Bennet, J.J. Louviere, M.D. Morrison, and J.C. Rolfe. 2000. "A Test of Policy Labels in Environmental Choice Modelling Studies." *Ecological Economics* 32(2):269-286.
- Layton, D. F. 2000. "Random Coefficient Models for Stated Preference Surveys." Journal of Environmental Economics and Management 40(1):21-36.
- Lusk, J.L., T.C., Schroeder. 2004. "Are Choice Experiments Incentive Compatible? A Test with Quality Differentiated Beef Steaks." *American Journal of Agricultural Economics* 86(2):467-482.

TABLES

Treatment	Choice (%)	First ranking (%)	χ^2	p-value
1	28.67	26.67	0.1423	0.7060
2	44.44	42.86	0.0610	0.8050
3	52.00	46.89	2.7184^{*}	0.0992
4	44.22	45.33	0.9880	0.3202
5	79.33	74.89	2.0655	0.1507
6	66.67	64.81	0.2698	0.8695
7	24.00	30.22	2.3369	0.1263
8	54.67	57.37	1.0952	0.2953
9	21.78	23.78	0.0066	0.9354
10	50.44	49.56	0.4378	0.5082
11	35.11	30.29	0.5861	0.4440
12	63.78	61.16	6.9645***	0.0083
13	58.44	62.58	0.0416	0.8384
14	38.22	39.20	0.9793	0.3224
15	47.33	48.44	0.1690	0.6810
16	63.78	66.89	0.7050	0.4011
17	3.39	3.64	66.1960***	0.0000

Table 1.Proportion of Respondents that Chose or Ranked First each
Treatment.

Note: For the hypothesis of no significant difference between the choice and the first ranking for each treatment, the χ^2 statistic for 1 degree of freedom at the 5% level is 3.841. Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

Attribute parameters	Choice mode	el Re	ecoded ranking model
BIO	0.2617***		0.3384***
ыо	(0.0349)		(0.0341)
TEC	0.3118***		0.1648***
	(0.0431)		(0.0442)
REC	0.2680^{***}		0.2178***
ille	(0.0831)		(0.0845)
EMP	0.0108^{***}		0.0129***
	(0.0012)		(0.0012)
SUR	0.0155****		0.0147***
~	(0.0014)		(0.0014)
BID	-0.0194***		-0.0147***
	(0.0017)		(0.0017)
BIO*REA	-0.0147		-0.1168***
	(0.0442)		(0.0394)
BIO*SUS	0.1008**		0.0290
	(0.0409)		(0.0377)
TEC*REA	0.1902***		0.1395**
	(0.0579) -0.0885*		(0.0554)
TEC*SUS	-0.0885 (0.0531)		0.0463 (0.0525)
	-0.4141***		-0.2028*
REC*REA	(0.1094)		(0.1051)
	0.2269**		0.2846***
REC*SUS	(0.1015)		(0.0998)
	0.9251***		1.2407***
$IV \left(\alpha_{REF} \right)^a$	(0.1349)		(0.1408)
Branch parameters	(0.12 1))		(0.1100)
*	0.0008***		0.0005***
INC	(0.0008)		(0.0001)
	1.1123***		0.4884***
PRO	(0.2833)		(0.1835)
	-0.0230****		-0.0252***
AGE	(0.0073)		(0.0046)
Ν	3,464		3,380
LogL (β)	-2,476.867		-2.463.292
LogL (0)	-4,717.560		-4,600.418
ρ^2	,		<i>,</i>
1	0.474		0.463
Likelihood Ratio tests ^b	HA: $\beta^{C} = \beta^{RC}$	H _B : $\lambda^{C} = \lambda^{RC}$	Reject H ₁ : $\beta\lambda^{C} = \beta\lambda^{RC}$?
χ^2 (C vs RC)	23.258	0.394	No

Table 2. Choice and Recoded Ranking Nested Logit with Socioeconomic Variables

Note: C: choice model; RC: recoded ranking model; Standard errors are shown in brackets; N: number of observations; IV (α_{REF}): inclusive value parameter of the REF branch; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

^a Although IV(α_{REF})>1, the Herriges and Kling (1996) condition for local utility maximisation is fulfilled.

^b For the hypothesis Ha, the χ^2 statistic for 17 degrees of freedom at the 5% level is 27.587. For the hypothesis HB, the χ^2 statistic for 1 degree of freedom at the 5% level is 3.841.

		Parar	netric		Bootstrapping						
Attributes	С	RC	Nonoverlapping	t-test	С	RC	Nonoverlapping	t-test	Complete		
									combinatorial		
	Mean	Mean	p-value	p-value	Mean	Mean	p-value	p-value	p-value		
BIO	16.11***	21.49***	0.238	0.101	16.24***	21.78***	0.238	0.122	0.047^{**}		
TEC	[12.62 , 19.60] 13.58 ^{***}	[16.10 , 26.88] 12.88 ^{****}	0.881	0.822	[13.00 , 20.30] 13.70 ^{***}	[16.78 , 28.62] 13.05 ^{***}	0.874	0.839	0.413		
REC	[9.82, 17.34] 13.03***	[9.08 , 17.68] 15.59 ^{***}	0.810	0.728	[10.26, 17.61] 13.22***	[8.67, 18.20] 15.92***	0.768	0.720	0.356		
EMP	[4.43, 21.63] 0.55***	[3.99 , 27.19] 0.87 ^{***}	0.099*	0.021**	[4.36, 21.54] 0.56***	[4.12 , 27.33] 0.88 ^{***}	0.108	0.036**	0.011**		
SUR	[0.41 , 0.69] 0.80***	[0.63 , 1.11] 0.99***	0.424	0.254	[0.42 , 0.73] 0.81***	[0.66 , 1.17] 1.01***	0.442	0.267	0.124		
TEC*REA	[0.62 , 0.98] 9.66 ^{***}	[0.72 , 1.26] 9.85**	0.984	0.970	[0.63 , 1.03] 9.60***	[0.75 , 1.36] 9.82**	0.982	0.966	0.513		
REC*REA	[3.62 , 15.70] -21.51 ^{***}	[2.13 , 17.57] -17.18 ^{**}	0.749	0.645	[3.41 , 16.05] -21.76 ^{****}	[1.86 , 18.10] -17.54 ^{**}	0.756	0.664	0.670		
REC*SUS	[-33.03 , -9.99] 13.09 ^{**}	[-31.57 , -2.79] 19.25 ^{***}	0.624	0.485	[-33.96 , -10.35] 13.01 ^{**}	[-33.03 , -33.31] 19.26***	0.616	0.486	0.760		
HSMIN	[2.66 , 23.52] 21.87 ^{***}	[5.45, 33.05] 38.00 ^{***}	0.062^{*}	0.011**	[2.82,24.21] 21.93***	[6.07 , 34.52] 38.39***	0.064^{*}	0.015**	0.004***		
HSMAX	[15.54, 28.20] 183.65*** [149.41, 217.89]	[27.49, 48.51] 245.96 ^{***} [190.47, 301.45]	0.174	0.061*	[16.05 , 29.52] 184.92 ^{***} [154.25 , 225.86]	[28.50, 52.01] 249.08 ^{***} [199.47, 320.93]	0.176	0.082^{*}	0.027**		

Table 3. Welfare Measures From Choice and Recoded Ranking Nested Logit Models with Socioeconomic Variables. Parametric and Bootstrapping

Note: C: choice model; RC: ranking recoded as a choice model; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

Variables		
Attribute parameters	Choice model	Recoded ranking model
BIO	0.4329***	0.4702***
	(0.0715)	(0.0653)
TEC	0.4417***	0.2557***
	(0.0699)	(0.0463)
REC	0.4555****	0.3065***
	(0.1397)	(0.1175)
EMP	0.0169***	0.0167***
21111	(0.0024)	(0.0020)
SUR	0.0282***	0.0217***
	(0.0040)	(0.0029)
BID	-0.0279***	-0.0182***
	(0.0035)	(0.0024)
BIO*REA	-0.0221	-0.1477***
	(0.0660)	(0.0558)
BIO*SUS	0.1566**	0.0331
	(0.0631)	(0.0514)
TEC*REA	0.3018***	0.1951***
	(0.0998)	(0.0739)
REC*REA	-0.5716***	-0.2476*
	(0.1769)	(0.1438)
REC*SUS	0.3209**	0.3594***
	(0.1600)	(0.1380)
4SC*INC	0.0010****	0.0008***
	(0.0002)	(0.0001)
ASC*PRO	1.3511****	0.8380***
	(0.2688)	(0.2176)
ASC*AGE	-0.0349***	-0.0257***
	(0.0089)	(0.0069)
Standard Deviation Parameters	***	***
BIO	0.4892***	0.3659***
	(0.1332)	(0.1075)
TEC	0.8178 ^{***} (0.1935)	0.2553*** (0.2720)
	1.2098***	1.0251***
REC	(0.3587)	(0.3075)
	0.0413***	0.0290***
SUR	(0.0079)	(0.0067)
N	3,464	3,380
LogL (β)	-2,459.206	-2,456.187
LogL (0)	-3,805.593	-3,713.310
p^2	0.352	0.337
Likelihood Ratio tests ^a	$H_1: \beta \lambda^C = \beta \lambda^{RC}$	Reject H1: $\beta\lambda^{C} = \beta\lambda^{RC}$?
χ^2 (C vs RC)	26.954	No
	20.754	110

 Table 4.
 Choice and Recoded Ranking Random Parameters Logit with Socioeconomic

 Variables

Note: C: choice model; RC: recoded ranking model; Standard errors are shown in brackets; N: number of observations; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

 a For the hypothesis H1, the χ^2 statistic for 18 degrees of freedom at the 5% level is 27.869.

	Dootsti apping		s of the Equality of	vicali values					
		Parar	netric				Bootstrapping		
Attributes	С	RC	Nonoverlapping	t-test	С	RC	Nonoverlapping	t-test	Complete
									combinatorial
	Mean	Mean	p-value	p-value	Mean	Mean	p-value	p-value	p-value
BIO	18.25***	23.66***	0.322	0.167	18.34***	23.87***	0.326	0.184	0.085^{*}
	[14.02, 22.48]	[17.27, 30.05]			[14.19, 23.09]	[17.77, 31.65]			
TEC	14.92***	13.70***	0.803	0.717	14.94***	13.76***	0.826	0.732	0.361
	[10.76, 19.08]	[8.56, 18.84]			[11.08, 19.35]	[9.05, 19.43]			
REC	13.92***	17.81^{***}	0.734	0.629	13.64***	17.50***	0.762	0.645	0.329
	[4.55, 23.29]	[5.11, 30.51]			[4.77, 23.34]	[5.34, 31.08]			
EMP	0.60^{***}	0.90^{***}	0.162	0.049^{**}	0.60^{***}	0.91***	0.150	0.055^{*}	0.021**
	[0.44, 0.76]	[0.65, 1.15]			[0.45, 0.77]	[0.68, 1.21]			
SUR	0.99^{***}	1.17^{***}	0.562	0.400	0.99^{***}	1.17^{***}	0.590	0.418	0.207
	[0.74, 1.24]	[0.84, 1.50]			[0.75, 1.27]	[0.86, 1.57]			
TEC*REA	10.13***	11.21***	0.889	0.837	10.14***	11.25***	0.890	0.830	0.419
	[3.76, 16.50]	[3.12, 19.30]			[3.96, 16.61]	[3.50, 19.40]			
REC*REA	-21.23***	-16.98**	0.772	0.679	-21.09***	-16.85**	0.760	0.673	0.333
	[-33.70 , -8.76]	[-32.82 , -1.14]			[-34.48 , -9,67]	[-33.82 , -1.91]			
REC*SUS	14.22**	19.97**	0.675	0.549	14.61**	20.56^{**}	0.682	0.547	0.276
	[2.89, 25.55]	[4.96 , 34.98]		**	[3.58 , 27.06]	[6.13 , 37.71]	*	**	**
HSMIN	25.80***	41.94***	0.107	0.029^{**}	25.99***	42.38***	0.096^{*}	0.031**	0.011**
	[18.39, 33.21]	[29.81, 54.07]			[18.78, 33.94]	[31.15, 56.24]			*
HSMAX	210.13***	270.99***	0.276	0.129	210.42***	272.40***	0.280	0.145	0.062^{*}
	[167.89, 252.37]	[204.70, 337.28]			[170.94 , 258.16]	[212.01, 351.09]			

Table 5. Welfare Measures From Choice and Recoded Ranking Random Parameters Logit Models with Socioeconomic Variables. Parametric and

Bootstrapping Measures. Tests of the Equality of Mean Values

Note: C: choice model; RC: ranking recoded as a choice model; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g., *, **, ***) denote significance at the 10%, 5%, and 1% level, respectively.

•					
Attribute parameters		e model	Recoded ranking model		
BIO)99***	0.3252***		
		0236)	(0.0236		
TEC	0.3	182***	0.2576^{***}		
	(0.	0263)	(0.0259)		
REC	0.2	726 ^{***}	0.3200***		
	(0.0	05156)	0.0514		
EMP	0.1	041***	0.0119***		
	(0.	0011)	(0.0011)		
SUR	0.0	159***	0.0151***		
	(0.	0014)	(0.0013)		
BID	-0.0	206***	-0.0159***		
	(0.	0017)	(0.0016)		
ASC	35.	2069	20.7001		
	(63	.7087)	(30.9704)		
$IV(\alpha_{REF})$	0.0	0893	0.1411		
()	(0.	1518)	(0.1886)		
N	3.	600	3,594		
LogL (β)	-2,5	88.361	-2,636.731		
LogL (0)	-4,9	06.096	-4,891.540		
ρ^2	0.4	4724	0.4609		
Likelihood Ratio tests ^a	HA: $\beta^{C} = \beta^{RC}$	HB: $\lambda^{C} = \lambda^{RC}$	Reject H1: $\beta\lambda^{C} = \beta\lambda^{RC}$?		
χ^2 (C vs RC)	8.806	0.894	No		

 Table 6.
 Choice and Recoded Ranking Nested Logit Models with an Alternative

Specific Constant for Reforestation Alternatives

Note: C: choice model; RC: recoded ranking model; Standard errors are shown in brackets; N: number of observations; IV (α_{REF}): inclusive value parameter of the REF branch; Asterisks (e.g.,***) denote significance at the 1% level.

^a For the hypothesis H_A, the χ^2 statistic for 9 degrees of freedom at the 5% level is 16.919. For the hypothesis H_B, the χ^2 statistic for 1 degree of freedom at the 5% level is 3.841.

Attribute parameters	Choice mode	el R	ecoded ranking model		
BIO	0.2549***		0.3231***		
bio	(0.0387)		(0.0392)		
TEC	0.3165***		0.1872***		
IEC	(0.0437)		(0.0456)		
REC	0.2540***		0.2303****		
REC	(0.0860)		(0.0887)		
EMP	0.0107^{***}		0.0123****		
	(0.0012)		(0.0012)		
SUR	0.0155****		0.0148^{***}		
SUK	(0.0014)		(0.0014)		
RID	-0.0207****		-0.0161***		
BID	(0.0017)		(0.0017)		
	-0.0234		-0.1218**		
BIO*REA	(0.0511)		(0.0529)		
	0.1092***		0.0585		
BIO*SUS	(0.0481)		(0.0477)		
	0.1885***		0.1682***		
TEC*REA	(0.0593)		(0.0582)		
	-0.0852		0.0309		
TEC*SUS	(0.0542)		(0.0546)		
	-0.4261 ****		-0.2324**		
REC*REA	(0.1143)		(0.1141)		
	0.2528**		0.2926***		
REC*SUS	(0.1061)		(0.1078)		
	8.5999		11.0979		
ASC	(5.2859)		(7.1153)		
	0.3469**		0.3598*		
$IV\left(\alpha_{REF}\right)^{a}$	(0.1705)		(0.1893)		
Branch parameters	(0.1700)		(0.1070)		
*	0.0013*		0.0007		
INC	(0.0008)		(0.0005)		
	2.4065*		0.7752		
PRO	(1.3629)		(0.7697)		
	-0.1457**		-0.1628*		
AGE	(0.0737)		(0.0880)		
N	3,464		3,380		
$\log L(\beta)$	-2,460.439		-2,440.141		
$L_{OSL}(p)$					
LogL(0) ρ^2	-4.717,560		-4,600.418		
	0.4785	C DC	0.4700		
Likelihood Ratio tests ^a	HA: $\beta^{C} = \beta^{RC}$	H _B : $\lambda^{C} = \lambda^{RC}$	Reject H ₁ : $\beta\lambda^{C} = \beta\lambda^{RC}$?		
χ^2 (C vs RC)	19.990	0.024	No		

 Table 7.
 Choice and Recoded Ranking Nested Logit with an Alternative Specific

Constant for Reforestation Alternatives and Socioeconomic Variables

Note: C: choice model; RC: recoded ranking model; Standard errors are shown in brackets; N: number of observations; IV (α_{REF}): inclusive value parameter of the REF branch; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

^a For the hypothesis H_A, the χ^2 statistic for 18 degrees of freedom at the 5% level is 28.869. For the hypothesis H_B, the χ^2 statistic for 1 degree of freedom at the 5% level is 3.841.

Attributes parameters	$C4_{L}$	RC4L	C4 _F	RC4 _F
BIO	0.4192***	0.4231***	0.4773***	0.4272***
210	(0.0405)	(0.0367)	(0.0390)	(0.0372)
TEC	0.4389***	0.3547***	0.4499***	0.2566***
120	(0.0577)	(0.0491)	(0.0565)	(0.0517)
REC	0.5261***	0.4266***	0.3031***	0.4778^{***}
	(0.0953)	(0.0850)	(0.0997)	(0.0997)
EMP	0.0196***	0.0188^{***}	0.0127***	0.0151***
	(0.0020)	(0.0019)	(0.0020)	(0.0019)
SUR	0.0199***	0.0178^{***}	0.0247^{***}	0.0215***
	(0.0024)	(0.0022)	(0.0025)	(0.0025)
BID	-0.0249***	-0.0163***	-0.0252***	-0.0223***
	(0.0037)	(0.0030)	(0.0041)	(0.0038)
$W(\alpha)^a$	1.3963***	1.2310***	1.4557***	1.4200***
$IV\left(\alpha_{REF}\right)^{a}$	(0.1053)	(0.0885)	(0.1055)	(0.0989)
N	1,800	1,788	1,800	1,788
$LogL(\beta)$	-1,307.251	-1,309.405	-1,304.492	-1,311.968
LogL (0)	-2,453.741	-2,433.640	-2,452.355	-2,437.105
ρ^2	0.467	0.462	0.468	0.462

 Table 8.
 Choice and Recoded Ranking Nested Logit Models Estimated Using the

Four First and Using the Four Last Sets of Alternatives per Respondent

Note: C4L: choice model using the four first sets of alternatives per respondent; C4F: choice model using the four last sets of alternatives per respondent; RC4L: recoded ranking model using the four first sets of alternatives per respondent; RC4F: recoded ranking model using the four last sets of alternatives per respondent; Standard errors are shown in brackets; N: number of observations; IV (α_{REF}): inclusive value parameter of the REF branch; Asterisks (e.g.,***) denote significance at the 1% level.

^a Although IV(α_{REF})>1, the Herriges and Kling (1996) condition for local utility maximisation is fulfilled.

Likelihood Ratio test ^a	HA: $\beta^{C} = \beta^{RC}$	HB: $\lambda^{C} = \lambda^{RC}$	Reject H ₁ : $\beta\lambda^{C} = \beta\lambda^{RC}$?
χ^2 (C4L versus RC4L)	4.512	0.078	No
χ^2 (C _{4F} versus RC _{4F})	9.680	0.242	No
χ^2 (Cq1 versus RCq1)	6.556	0.962	No
χ^2 (Cq2 versus RCq2)	5.472	6.474	Yes
χ^2 (Cq3 versus RCq3)	12.678	0.656	No
χ^2 (Cq4 versus RCq4)	6.324	0.820	No

 Table 9.
 Likelihood Ratio Tests for the Equality of Parameter Vectors

Note: C4L: choice model using the four first sets of alternatives per respondent; C4F: choice model using the four last sets of alternatives per respondent; RC4E: recoded ranking model using the four last sets of alternatives per respondent; CQ1: choice model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the previous choices/rankings"; CQ2: choice model including respondents that scored with 1, 2 or 3 the follow-up "The number of choices/rankings"; CQ3: choice model including respondents that scored with 1, 2 or 3 the follow-up "The number of choices/rankings"; RCQ1: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "The number of choices/rankings"; RCQ2: recoded ranking model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the first four choices/rankings than about the last four choices/rankings"; RCQ3: recoded ranking model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the previous choices/rankings"; RCQ2: recoded ranking model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the previous choices/rankings"; RCQ3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCQ3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCQ3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCQ3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCQ3: recoded ranking model including respo

^a For the hypothesis H_A, the χ^2 statistic for 8 degrees of freedom at the 5% level is 15.507. For the hypothesis H_B, the χ^2 statistic for 1 degree of freedom at the 5% level is 3.841.

		Parame	tric	Bootstrapping					
Attributes	C4L	RC4L	Nonoverlapping	t-test	C4L	RC4L	Nonoverlapping	t-test	Complete
									combinatorial
	Mean	Mean	p-value	p-value	Mean	Mean	p-value	p-value	p-value
BIO	16.85***	26.04***	0.221	0.095*	17.32***	27.30***	0.199	0.177	0.036**
	[11.58, 22.13]	[16.61 , 35.46]			[12.66 , 23.69]	[18.91, 41.05]			
TEC	17.65***	21.83***	0.545	0.405	18.08***	22.82***	0.535	0.445	0.189
	[12.39, 22.90]	[13.50, 30.16]			[13.33 , 24.73]	[15.37, 34.31]			
REC	21.15***	26.25***	0.650	0.528	21.49***	27.12***	0.643	0.578	0.266
	[11.94, 30.37]	[13.37, 39.12]			[12.95 , 32.33]	[15.64 , 44.63]			
EMP	0.79^{***}	1.16***	0.267	0.126	0.80^{***}	1.21***	0.267	0.203	0.056^{*}
	[0.55, 1.02]	[0.74, 1.57]			[0.60, 1.13]	[0.85 , 1.82]			
SUR	0.80^{***}	1.10^{***}	0.424	0.265	0.82^{***}	1.16***	0.424	0.330	0.130
	[0.52, 1.07]	[0.64 , 1.55]			[0.57, 1.19]	[0.75 , 1.82]			
HSMIN	22.92***	38.29***	0.198	0.079^{*}	23.58***	40.15***	0.186	0.155	0.032**
	[14.43, 31.41]	[23.37, 53.20]			[16.38, 35.00]	[27.39, 62.36]			
HSMAX	217.05***	310.43***	0.206	0.111	222.68***	324.93***	0.225	0.216	0.046**
	[162.19 , 271.91]	[209.64 , 411.21]			[175.27, 304.28]	[238.46 , 486.25]			

Table 10.Welfare Measures From Choice and Recoded Ranking Nested Logit Models Estimated Using the First Four Sets of Alternatives
per Respondent. Parametric and Bootstrapping Measures. Tests of the Equality of Mean Values

Note: C4L: choice model using the four first sets of alternatives per respondent; RC4L: recoded ranking model using the four first sets of alternatives per respondent; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

		Parame	etric	Bootstrapping					
Attributes	C4F	RC4F	Nonoverlapping	t-test	C4F	RC4F	Nonoverlapping	t-test	Complete
					_				combinatorial
	Mean	Mean	p-value	p-value	Mean	Mean	p-value	p-value	p-value
BIO	18.90***	19.14***	0.968	0.957	19.55***	19.88***	0.969	0.952	0.477
	[13.04 , 24.76]	[12.77, 25.51]			[14.41, 27.65]	[14.25 , 28.54]			
TEC	17.82***	11.50***	0.276	0.124	18.42***	11.93***	0.265	0.164	0.064^{*}
	[11.78, 23.86]	[6.16 , 16.83]			[12.96 , 26.65]	[7.00, 18.74]			
REC	12.00***	21.41***	0.335	0.175	12.16***	21.94***	0.342	0.228	0.088^*
	[3.52, 20.49]	[10.76, 32.05]			[4.14 , 21.94]	[12.15, 36.00]			
EMP	0.50^{***}	0.67^{***}	0.490	0.318	0.52***	0.70^{***}	0.485	0.349	0.157
	[0.29, 0.72]	[0.42, 0.93]			[0.33, 0.77]	[0.48 , 1.01]			
SUR	0.98^{***}	0.96***	0.960	0.932	1.01***	1.00^{***}	0.985	0.973	0.474
	[0.66 , 1.29]	[0.63 , 1.29]			[0.73, 1.47]	[0.70, 1.48]			
HSMIN	20.95***	30.75***	0.312	0.157	21.67***	31.93***	0.327	0.229	0.083^{*}
	[12.85, 29.04]	[19.86, 41.65]			[14.47, 32.43]	[22.44 , 47.38]			
HSMAX	204.42***	221.14***	0.790	0.704	211.16***	229.30***	0.781	0.752	0.350
	[147.25 , 261.59]	[156.38 , 285.90]			[162.31, 300.02]	[173.49 , 329.64]			

 Table 11.
 Welfare Measures From Choice and Recoded Ranking Nested Logit Models Estimated Using the Last Four Sets of Alternatives per Respondent. Parametric and Bootstrapping Measures. Tests of the Equality of Mean Values

Note: C4F: choice model using the four last sets of alternatives per respondent; RC4F: recoded ranking model using the four last sets of alternatives per respondent; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

(county agree)					
	Cho	oice	Ranking sample		
Follow-up statements	sam	ple			χ^2 -test ^a
	Mean	Ν	Mean	Ν	-
I correctly understood the information provided in the	4.30	429	4.37	429	-0.05 ^b
previous choices/rankings	(0.95)		(0.95)		
I had difficulties in stating my answers in the previous	2.10	429	2.07	429	14.08
choices/rankings	(1.23)		(1.26)		
The number of choices/rankings that I faced has been	2.45	429	2.64	429	12.87
excessive	(1.44)		(1.48)		
I thought more about my answers of the first four	3.02	429	3.04	429	22.76
choices/rankings than about the last four choices/rankings	(1.59)		(1.59)		

Table 12. Respondent's Scores About the Valuation Exercise from 1 (totally disagree) to 5 (totally agree)

Note: Standard errors are shown in brackets; N: number of observations.

^a χ^2 with 16 degrees of freedom at the 5% level = 26.30 (the contingency table had five rows and five columns).

^b In this case, the χ^2 test cannot be fulfilled since at least one cell of the contingency matrix is equal to zero. The statistic showed is a

t-test statistic for testing the difference between mean values (*t-test* statistic at the 5% level = 1.96).

Attribute parameters	Cq1	C _{Q2}	C _{Q3}	C _{Q4}	$\mathbf{R}C_{Q1}$	RC _{Q2}	RC _{Q3}	RC _{Q4}
BIO	0.5079***	0.5370***	0.5054***	0.5151***	0.3529***	0.4070***	0.4374***	0.5043***
DIO	(0.0583)	(0.0508)	(0.0473)	(0.0434)	(0.0506)	(0.0450)	(0.0404)	(0.0383)
TEC	0.5581***	0.5416***	0.5113***	0.4561***	0.4201***	0.3412***	0.3583***	0.3905***
ILC	(0.0879)	(0.0748)	(0.0677)	(0.0599)	(0.0714)	(0.0658)	(0.0552)	(0.0523)
REC	0.3923***	0.4842^{***}	0.3017***	0.3735^{***}	0.2731^{*}	0.3117***	0.5512***	0.4538^{***}
REC .	(0.1408)	(0.1213)	(0.1116)	(0.1008)	(0.1474)	(0.1159)	0.4374 ^{***} (0.0404) 0.3583 ^{***}	(0.0920)
EMP	0.0122***	0.0161***	0.0152***	0.0166***	0.0147***	0.0166^{***}		0.0187^{***}
	(0.0027)	(0.0025)	(0.0022)	(0.0020)	(0.0026)	(0.0023)	$\begin{array}{cccc} (0.1021) & (0.09) \\ 0.0196^{***} & 0.018 \\ (0.0020) & (0.00) \\ 0.0211^{***} & 0.022 \\ (0.0025) & (0.00) \\ -0.0246^{***} & -0.01 \end{array}$	(0.0019)
SUR	0.0182^{***}	0.0257^{***}	0.0213***	0.0240^{***}	0.0195^{***}	0.0209^{***}	0.0211***	0.0218***
JUK	(0.0033)	(0.0031)	(0.0028)	(0.0026)	(0.0032)	(0.0029)	$\begin{array}{c} 0.4374^{***}\\ (0.0404)\\ 0.3583^{***}\\ (0.0552)\\ 0.5512^{***}\\ (0.1021)\\ 0.0196^{***}\\ (0.0020)\\ 0.0211^{***}\\ (0.0025)\\ -0.0246^{***}\\ (0.0038)\\ 1.4426^{***}\\ (0.1037)\\ 1.750\\ -1.244.624\\ -2.391.358\end{array}$	(0.0024)
BID	-0.0251***	-0.0320***	-0.0314***	-0.0298***	-0.0119***	-0.0182***	-0.0246***	-0.0199***
DID	(0.0056)	(0.0052)	(0.0048)	(0.0042)	(0.0041)	(0.0041)		(0.0033)
$IV (\alpha_{REF})^a$	1.2517***	1.4736***	1.5444***	1.6833***	1.1478^{***}	1.3967***	1.4426***	1.4751***
IV (OREF)	(0.1418)	(0.1288)	(0.1283)	(0.1200)	(0.1099)	(0.1187)	$\begin{array}{c} 0.4374^{***} \\ (0.0404) \\ 0.3583^{***} \\ (0.0552) \\ 0.5512^{***} \\ (0.1021) \\ 0.0196^{***} \\ (0.0020) \\ 0.0211^{***} \\ (0.0025) \\ -0.0246^{***} \\ (0.0038) \\ 1.4426^{***} \\ (0.1037) \\ 1.750 \\ -1.244.624 \\ -2.391.358 \end{array}$	(0.0096)
Ν	776	1,287	1,584	2,191	732	1,230	1,750	2,190
LogL (β)	-536.933	-882.242	-1,157.302	-1,560.313	-558.768	-916.852	-1,244.624	-1,520.676
LogL (0)	-1,052.197	-1,760.594	-2,157.074	-2,998.555	-988.428	-1,673.950	-2,391.358	-3,000.634
ρ^2	0.490	0.499	0.463	0.480	0.435	0.452	0.480	0.493

 Table 13.
 Choice and Recoded Ranking Nested Logit Models Estimated Using the Information of the Follow-ups

Note: Cq1: choice model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the previous choices/rankings"; Cq2: choice model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; Cq3: choice model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; Cq3: choice model including respondents that scored with 1, 2 or 3 the follow-up "I hought more about my answers of the first four choices/rankings that about the last four choices/rankings"; RCq1: recoded ranking model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the previous choices/rankings"; RCq2: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCq3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCq3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCq3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCq3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCq3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I hought more about my answers of the first four choices/rankings that I faced has been excessive"; RCq4: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I thought more about my answers of the first four choices/rankings

^a Although IV(α_{REF})>1, the Herriges and Kling (1996) condition for local utility maximisation is fulfilled.

		Param	etric		Bootstrapping					
Attributes	Cq1	RC Q1	Nonoverlapping	t-test	Cqı	RC Q1	Nonoverlapping	t-test	Complete	
									combinatorial	
	Mean	Mean	p-value	p-value	Mean	Mean	p-value	p-value	p-value	
BIO	20.24***	29.60***	0.513	0.389	21.78***	32.52	0.475	0.890	0.170	
	[11.88 , 28.59]	[10.01 , 49.19]			[14.05 ,36.77]	[16.80, 82.97]				
TEC	22.24***	35.24***	0.450	0.333	23.80***	38.32	0.405	0.889	0.130	
	[12.95, 31.52]	[10.63 , 59.85]			[15.25, 39.10]	[19.47 , 103.71]				
REC	15.63***	22.91*	0.707	0.615	16.40	25.34	0.719	0.891	0.329	
	[3.62, 27.64]	[-2.78, 48.60]			[4.48, 33.30]	[-4.59 , 70.28]				
EMP	0.49***	1.24***	0.211	0.119	0.52^{**}	1.28	0.168	0.877	0.028^{**}	
	[0.20, 0.77]	[0.33, 2.14]			[0.27, 0.92]	[0.66, 3.72]				
SUR	0.73***	1.63***	0.254	0.153	0.79^{***}	1.78	0.198	0.860	0.046**	
	[0.35, 1.10]	[0.46 , 2.80]			[0.43 , 1.40]	[0.87, 5.30]				
HSMIN	14.97***	35.42***	0.282	0.165	16.27^{*}	37.56	0.247	0.869	0.058^{*}	
	[4.82, 25.11]	[8.38, 62.46]			[6.66, 32.47]	[16.64 , 113.98]				
HSMAX	201.19***	373.44***	0.273	0.169	216.27***	402.66	0.221	0.869	0.051^{*}	
	[125.97 , 276.41]	[139.96 , 606.92]			[149.97, 357.12]	[229.66 , 1,106.1]				

 Table 14.
 Welfare Measures From Choice and Recoded Ranking Nested Logit Models Estimated Using the Follow-up "I correctly understood the information provided in the previous choices/rankings". Parametric and Bootstrapping Measures. Tests of the Equality of Mean Values

Note: CQ1: choice model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the previous choices/rankings"; RCQ1: recoded ranking model including respondents that scored with 3, 4 or 5 the follow-up "I correctly understood the information provided in the previous choices/rankings"; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

		Parame	etric		Bootstrapping					
Attributes	Cq2	RCq2	Nonoverlapping	t-test	Cq2 Mean	RCq2	Nonoverlapping	t-test	Complete	
									combinatorial	
	Mean	Mean	p-value	p-value		Mean	p-value	p-value	p-value	
BIO	16.79***	22.31***	0.468	0.327	17.32***	24.50	0.447	0.754	0.144	
	[11.68 , 21.91]	[12.53, 32.10]			[12.79, 24.40]	[15.28, 39.79]				
TEC	16.94***	18.71***	0.814	0.749	17.44***	20.34	0.792	0.845	0.367	
	[11.51 , 22.37]	[9.32, 28.10]			[12.53, 24.45]	[11.64, 34.41]				
REC	15.14***	17.09***	0.862	0.814	15.37***	18.45	0.870	0.898	0.416	
	[6.78, 23.50]	[3.17, 31.00]			[7.54, 25.23]	[4.54, 37.23]				
EMP	0.50***	0.91***	0.219	0.096^{*}	0.52***	1.00	0.194	0.562	0.031**	
	[0.29, 0.72]	[0.48 , 1.35]			[0.33, 0.77]	[0.60, 1.66]				
SUR	0.80^{***}	1.15***	0.395	0.250	0.83***	1.26	0.405	0.666	0.111	
	[0.53 , 1.07]	[0.63 , 1.67]			[0.59, 1.20]	[0.76, 2.11]				
HSMIN	17.98***	33.31***	0.204	0.090^{*}	18.60***	36.63	0.173	0.606	0.030**	
	[10.34, 25.62]	[17.31, 49.31]			[12.04 , 29.14]	[22.14, 62.43]				
HSMAX	187.78***	266.79***	0.317	0.182	193.56	291.84	0.305	0.696	0.070^{*}	
	[137.21 , 238.34]	[162.46 , 371.13]			[150.85 , 270.18]	[195.73 , 476.90]				

 Table 15.
 Welfare Measures From Choice and Recoded Ranking Nested Logit Models Estimated Using the Follow-up "I had difficulties in stating my answers in the previous choices/rankings". Parametric and Bootstrapping Measures. Tests of the Equality of Mean Values

Note: Cq2: choice model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; RCq2: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I had difficulties in stating my answers in the previous choices/rankings"; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

		Parame	etric		Bootstrapping					
Attributes	CQ3	RCQ3	Nonoverlapping	t-test	CQ3	RCQ3	Nonoverlapping	t-test	Complete	
									combinatorial	
	Mean	Mean	p-value	p-value	Mean	Mean	p-value	p-value	p-value	
BIO	16.12***	17.79***	0.750	0.653	16.56***	18.36***	0.748	0.681	0.325	
	[11.42 , 20.82]	[12.23 , 23.35]			[12.31, 22.92]	[13.38, 25.46]				
TEC	16.31***	14.57***	0.737	0.638	16.73***	15.03***	0.748	0.679	0.322	
	[11.39 , 21.23]	[9.27, 19.88]			[12.29, 22.97]	[10.32, 22.01]				
REC	9.62***	22.42***	0.142	0.039**	9.67***	22.82***	0.139	0.060^*	0.020^{**}	
	[2.11 , 17.13]	[12.84, 31.99]			[2.61 , 17.96]	[14.05, 35.03]				
EMP	0.48^{***}	0.80^{***}	0.171	0.051*	0.50***	0.82^{***}	0.190	0.085^*	0.028^{**}	
	[0.29, 0.67]	[0.53, 1.06]			[0.33, 0.72]	[0.59, 1.14]				
SUR	0.68^{***}	0.86^{***}	0.519	0.349	0.70^{***}	0.89^{***}	0.515	0.405	0.182	
	[0.45, 0.91]	[0.56, 1.15]			[0.49 , 1.02]	[0.62, 1.29]				
HSMIN	16.27***	27.69***	0.167	0.054^{*}	16.77***	28.56***	0.167	0.089^{*}	0.030^{**}	
	[9.49 , 23.05]	[18.28, 37.10]			[10.83 , 26.02]	[20.23, 40.86]				
HSMAX	169.84***	223.17***	0.305	0.151	174.38***	229.94***	0.307	0.230	0.080^*	
	[126.83 , 212.85]	[164.55 , 281.79]			[138.12 , 239.30]	[179.28, 317.08]				

 Table 16. Welfare Measures From Choice and Recoded Ranking Nested Logit Models Estimated Using the Follow-up "The number of choices/rankings that I faced has been excessive". Parametric and Bootstrapping Measures. Tests of the Equality of Mean Values

Note: CQ3: choice model including respondents that scored with 1, 2 or 3 the follow-up "The number of choices/rankings that I faced has been excessive"; RCQ3: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "The number of choices/rankings that I faced has been excessive"; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.

		Parame	etric	Bootstrapping					
Attributes	CQ4	RCq4	Nonoverlapping	t-test	CQ4	RCq4	Nonoverlapping	t-test	Complete
									combinatorial
	Mean	Mean	p-value	p-value	Mean	Mean	p-value	p-value	p-value
BIO	17.26***	25.38***	0.223	0.096*	17.67***	26.39***	0.205	0.151	0.039**
	[12.51 , 22.01]	[17.08, 33.68]			[13.36, 23.37]	[19.11, 37.38]			
TEC	15.28***	19.65***	0.462	0.309	15.62***	20.40^{***}	0.434	0.335	0.193
	[10.73 , 19.84]	[12.55 , 26.75]			[11.55, 21.38]	[14.07, 30.27]			
REC	12.51***	22.83***	0.269	0.125	12.60***	23.38***	0.273	0.169	0.058^*
	[5.17, 19.85]	[11.88, 33.79]			[5.66, 20.76]	[13.31, 37.68]			
EMP	0.56***	0.94^{***}	0.165	0.054^{*}	0.57***	0.98^{***}	0.135	0.073^{**}	0.016^{*}
	[0.37, 0.75]	[0.62, 1.27]			[0.40, 0.79]	[0.70, 1.41]			
SUR	0.80^{***}	1.10^{***}	0.352	0.198	0.82***	1.14^{***}	0.383	0.272	0.100^{*}
	[0.56, 1.04]	[0.71, 1.48]			[0.60, 1.14]	[0.79, 1.69]			
HSMIN	21.13***	35.54***	0.153	0.050^{**}	21.67***	36.91***	0.141	0.094^{*}	0.021**
	[13.88 , 28.38]	[23.05, 48.02]			[15.40, 31.37]	[26.03 , 54.98]			
HSMAX	189.50***	285.17***	0.145	0.049**	193.91***	295.80***	0.135	0.105	0.021**
	[144.25 , 234.75]	[201.62, 368.72]			[155.62 , 258.15]	[223.34, 428.31]			

 Table 17.
 Welfare Measures From Choice and Recoded Ranking Nested Logit Models Estimated Using the Follow-up "I thought more about my answers of the first four choices/rankings than about the last four choices/rankings". Parametric and Bootstrapping Measures. Tests of the Equality of Mean Values

Note: CQ4: choice model including respondents that scored with 1, 2 or 3 the follow-up "I thought more about my answers of the first four choices/rankings than about the last four choices/rankings"; RCQ4: recoded ranking model including respondents that scored with 1, 2 or 3 the follow-up "I thought more about my answers of the first four choices/rankings than about the last four choices/rankings"; Lower and upper bounds of the confidence interval (95%) are shown in brackets; Asterisks (e.g.,*,**,***) denote significance at the 10%, 5%, and 1% level, respectively.