# Assessing the benefits of different groundwater protection levels: results and lessons learnt from a contingent valuation survey in the Upper Rhine valley aquifer, France

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#### Abstract

The paper presents the results of a contingent valuation survey aiming at assessing population willingness to pay for groundwater protection in the Upper Rhine Valley (URV) aquifer. The perception of groundwater pollution issues is first described based on a sample of 668 questionnaires. Values are elicited for two scenarios consisting of restoring drinking water quality (scenario 1) and eliminating all traces of polluting substances (restoration of natural quality, scenario 2). Stated WTP amounts are on average equal to respectively  $42.6 \in$ and  $77 \in$  per household per year (for a ten years period during which remediation measures are implemented). Factors determining WTP are investigated using various multivariate analyses. Finally, the total benefits associated with each scenario are estimated at the regional level: 31.3 and 49.3 millions  $\in$  per year are found for scenarios 1 and 2 respectively.

KEYWORDS: Contingent valuation, Willingness to pay, groundwater, quality thresholds

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# 1 Introduction

Following the publication of the Water Framework Directive (2000/60/EC)in 2000, European Member States are currently initiating very ambitious water protection programs aiming at restoring good ecological and chemical status for all water bodies before 2015. Whilst the directive defines environmental objectives for surface water bodies, it has not been considered appropriate to define new groundwater quality standards which would be applied uniformly to all groundwater bodies across Europe. Instead, the legislator has preferred to leave up to each Member State to determine concentration threshold values for all major polluting substances. According to the recent groundwater Daughter Directive, such thresholds values can be set at regional or local levels in order to reflect local natural or economic specific characteristics. The Directive explicitly recognizes that the costs of groundwater protection actions should remain proportionate with the environmental and economic benefits they generate. As a result, policy makers express a growing demand for economic assessment of costs and benefits associated to different levels of groundwater protection. However, existing studies generally focuses on a unique groundwater protection or restoration scenario and rarely assess the benefits associated with different protection scenarios. This study presents an attempt to fill this gap through a case study where the benefits of two groundwater protection scenarios and corresponding environmental quality standards are assessed through a contingent valuation survey.

# 2 A presentation of the Upper Rhine aquifer and groundwater improvement scenarios

The Upper Rhine Valley (URV) alluvial aquifer was selected to conduct a case study as part of the European 7<sup>th</sup> PCRD BRIDGE project. This crossborder alluvial aquifer, located between Germany and France, extends over 4 200 km<sup>2</sup> (Figure 1). With a reserve of approximately 45 billions cubic meters of water, that is approximately half of the volume of Lake Geneva, this aquifer is one of the largest fresh water reserves in Europe. Groundwater from the URV fulfils 75% of the drinking water needs and about half of the industrial water needs. More than three millions inhabitants of the Alsace Region (France) and the Land of Baden-Wurttemberg (Germany) directly depend on this resource for their water supply. Although usable for drinking purposes without prior treatment in most locations, groundwater has progressively been affected by diffuse and point source pollution since the 1970's.

The URV aquifer is severely affected by four major pollutions: nitrates, pesticides, chloride and Volatile Organic Compounds (VOCs). The nitrate



Figure 1: Location of the Upper Rhine Valley aquifer (shaded area)

pollution problem is particularly acute on both sides of the Rhine. About 15% of the 1 100 monitored points showed in 1997 a nitrate concentration exceeding 50 mg/l and the European guide value of 25 mg/l was exceeded in 36% of the monitored points. On the French side of the aquifer, atrazine and its metabolite (desethyl-atrazine) are detected in respectively 59% and 63%of monitored points in 1997 due to intensive use for maize and vine crops. Concentrations exceed the drinking quality thresholds  $(0.1 \ \mu g/l)$  in around 15% of the samples [3]. A large area is affected by chloride pollution, originating from the potash mining industry, on the French and German side of the aquifer. The latest maps produced in 2000 show that the plumes extend over approximately 40 km. Because of the relatively higher density of saline water, deep layers are more affected than surface layers. High concentrations in VOCs have been detected downstream of several industrial areas. In a groundwater quality measurement campaign carried out in 1996-97, VOC were found in 38% of the french and german groundwater samples. Around 6% of the samples show concentrations higher than 10  $\mu$ g/l, which is the maximum value for drinking water use according to the EU standard [3]. Other contaminants have been locally reported, including heavy metals, polycyclic aromatic hydrocarbons (PAH) and oils. Nitrates, pesticides and chloride pollutions benefit from years of investment aiming at shifting increasing concentrations tendancies. Measures will still operate in the next 10 years and positive results can be already observed. Thus, VOCs remain the fourth and important groundwater problem to consider. VOCs regulations exist in air pollution sector and contribute to limit groundwater impacts. Though, as high VOCs concentrations are found in groundwater, specific measures are to be taken, in order to improve groundwater quality.

# 3 Methodology

The objective of the study is to assess population willingness to pay for restoring two alternative levels of groundwater quality [2]. The standard contingent valuation method is used in order to catch both use and non-use values. The questionnaire employed is designed for postal mailing. Two set of questions are asked to respondents: (i) whether or not they are willing to pay for the proposed scenarios; and (ii) how much they are willing to pay for each scenario. The elicitation format used is a payment card, range of which was tested during the questionnaire pretest. The questionnaire includes additional questions on groundwater perceptions and uses and socioeconomic characteristics of the respondents.

The business as usual scenario described in the questionnaire (reference situation) assumes that in 2015: (i) nitrates, pesticides and chlorides concentrations in groundwater should satisfy the standards thanks to the maintained efforts to reverse the tendencies; (ii) in the absence of specific VOCs groundwater protection and remediation actions, VOCs pollution plumes would extend leading to the contamination of urban drinking water wells and to negative environmental impacts.

An action scenario, consisting in restoring groundwater quality up to current drinking water standards, is first considered and assessed by respondents. A second scenario consisting of restoring natural quality (removal of all traces of solvents) is then assessed by respondents. Scenarios are presented in Figure 2 below.

The contingent valuation survey was carried out between March and July 2006. Following a pretest of the questionnaire through 140 face-toface interviews, the questionnaire was sent out by mail to 5 000 Alsatian households. Over this sample, 4 000 households fed through the aquifer were selected, half in rural localities and half urban areas. The remained questionnaires (1 000) were sent in municipalities located outside the aquifer and using other water resources. The data collected are then used to model households' decision to pay for the two scenarios (Logit model, where the explained variable is a binary one taking the value one if the households accept to pay, zero otherwise). The stated willingness to pay amount is modelled using a linear regression (excluding protest answers) and a Tobit model (including and excluding protest answers). Based on the results of the multivariate analysis, an assessment of the total benefits of each groundwater protection scenario is carried out, based on assumptions related to the population concerned by groundwater protection in the region.

	Scenario 1	Scenario 2	
Objective	Restoring drinking groundwater quality	Restoring natural groundwater quality (no traces of solvents in the long term)	
PoM timing	10 years	10 years	
Actions implemented as part of the scenario	- Remediation measures implemented in historical contaminated sites located in areas where CS exceeds drinking water threshold value	<ul> <li>Remediation measures implemented in historical contaminated sites located in areas where traces of solvents are detected</li> </ul>	
	<ul> <li>Preventive measures applied (through regulation) in all enterprises using chlorinated solvents and located in areas where concentrations in solvents exceed drinking water threshold.</li> </ul>	<ul> <li>Preventive measures applied (through regulation) in all enterprises using chlorinated solvents and located in areas where traces of solvents have been detected</li> </ul>	
Expected benefits	<ul> <li>Drinking water quality level restored within 10 years but traces of CS remain in the aquifer, with risk of impacts on</li> </ul>	- Natural quality restored, traces of CS disappear within 50 years: natural attenuatio contribution.	
	ecosystems. - Reduction in drinking water treatment cost.	- Environmental benefits for ecosystems and water related species, absence of risk for humans using groundwater.	
		- Heritage benefits (for future generations).	

Figure 2: Description of groundwater restoration scenarios

# 4 Empirical results

#### 4.1 Description of respondents' population

A total of 668 usable questionnaires were returned out of the 5 000 sent by mail. The response rate (13.4%) is conforming to similar methods. The survey first allows understanding the perception of groundwater pollution problem by the population. Concerning the perception of groundwater pollution, 22% of the respondents never heard about Upper Rhine pollution aquifer cases whereas 54% did. According to the respondents, the main causes of groundwater pollution are agriculture and industry. When asked to identify within a list the polluting substances which are present in the aquifer, respondents mainly quote nitrates (86%) and pesticides and herbicides (84%). They are fewer to quote heavy metals (44%), chlorides (45%)and hydrocarbons (33%). Chlorinated solvents are quoted by 53%, putting them in third position after nitrates and pesticides. After having read the description of the current situation in terms of water quality in Alsace, 82%declare that they were not well (or not at all) informed about it before reading the text. Most respondents (80%) consider the two proposed hypothetical scenarios as credible.

Sixty two percent of the respondents accept to contribute to the first scenario: the mean WTP declared is  $42.6 \in 2007$  per households. In the case of the second scenario, 54% of the respondents are willing to contribute. The corresponding mean WTP is 77  $\in 2007$  per household. Unexpectedly and in both scenario cases, the average willingness to pay of respondents living above with aquifer is not higher than WTP declared by respondents living outside the aquifer - which was one of the assumptions to be tested. These

values can be compared with the  $117 \in 2007$  and  $65 \in 2007$  for users and non-users respectively found in a 1993 contingent valuation assessing WTP for groundwater protection in the same region [5, 4]. A major finding is the relatively high protest rate close to 53% for the first scenario (17% for the second). This attitude is mainly due to the fact that the scenario is perceived as inconsistent with the polluter pays principle. Other respondents reject the scenario due to the proposed payment vehicle and assert that they would be willing to pay but not through an increase of their water bill.

#### 4.2 Models results and aggregation

The results of the linear Logic model shows that the main significant variables are the realism of the described scenarios, the number of children in the household, the income and the number of known polluting substances (Figure 3). The frequency of tap water consumption does not appear as a significant variable as found by Stenger and Willinger.

Logistic regre	ession			Number	ciobs =	488
Scenario 1				LR chi	.2(14) =	42.75
				Prob >	chi2 =	0.0001
Log likelihood	d = -292.8085	6		Pseudo	R2 =	0.0680
g17potac	Coef.	Std. Err.	z	P> z	[95% Conf.	Intervall
	+					
alloieir	- 0399534	0450092	-0.86	0 388	- 1270699	049363
-0	00000001	.0100002	1.20	0.000	1040501	.0170000
dabare	4000522	2056252	1.05	0.153	- 0020650	.9170903
rred_cab_w.r	1 .4000525	.2050255	1.95	0.052	0029039	.8030700
dogratipol	.005608	.2/9046/	0.02	0.904	5413135	. 3323293
qeracteau	2318023	.2209524	-1.05	0.294	064861	.2012564
pb_nappe	.0156403	.0843727	0.19	0.853	1497272	.1810077
poll_indus~s	2693017	.2062646	-1.31	0.192	673573	.1349696
subst_poll	.061832	.0717338	0.86	0.389	0787637	.2024276
situation_~e	.8607737	.431483	1.99	0.046	.0150825	1.706465
one_progra~c	.5469368	.2489254	2.20	0.028	.059052	1.034822
log_age	-1.26276	.3552239	-3.55	0.000	-1.958986	5665339
log q27prf~f	5798394	.2620281	-2.21	0.027	-1.093405	0662738
log income	. 325762	.1343498	2.42	0.015	.0624413	.5890828
q30asso	. 6268109	.3187228	1.97	0.049	.0021258	1.251496
cons	1.729821	1.738225	1.00	0.320	-1.677038	5.136679
Rows in red show v	ariables significant	with a 1% confide	ence; in gree	n at 5%; in blu	ue at 10%.	
Logistic regr	ession			Number	of obs =	513
Scenario 2				LB chi	2(17) =	72.11
				Prob >	chi2 =	0.0000
Log likelihoo	d = -310.6808	7		Pseudo	R2 =	0.1040
a23matac	Coaf	std Fry	-	D>   =	195% Conf	Intervall
dronacac	+			12121	[550 0001.	Incorvarj
alloisir	0222496	0456727	0.72	0 465	- 0561692	1020654
quoisii	E000701	.0436727	1.04	0.465	0361683	1 076074
qzpuit	1 .5208721	.2837307	1.84	0.000	0352298	1.076974
rreq_tap_w~r	018596	.2023557	-0.09	0.927	4152059	.3780139
q5distrpol	1314781	.278212	-0.47			4138074
				0.637	0/0/035	
qeracteau	2066828	.2097572	-0.99	0.324	6177993	.2044338
pb_env	2066828 402797	.2097572 .1977438	-0.99 -2.04	0.324	6177993 7903677	.2044338 0152264
poll_menages	2066828  402797  1925328	.2097572 . <b>1977438</b> .5362893	-0.99 -2.04 -0.36	0.324 0.042 0.720	6177993 7903677 -1.24364	.2044338 0152264 .8585748
poll_menages situation_~e	2066828  402797  1925328   .7052593	.2097572 . <b>1977438</b> .5362893 .4411472	-0.99 -2.04 -0.36 1.60	0.037 0.324 0.042 0.720 0.110	6177993 7903677 -1.24364 1593734	.2044338 0152264 .8585748 1.569892
<pre>poll_menages situation_~e q21naturel~p</pre>	2066828  402797  1925328   .7052593   1.279202	.2097572 .1977438 .5362893 .4411472 .704164	-0.99 -2.04 -0.36 1.60 1.82	0.037 0.324 0.042 0.720 0.110 0.069	6177993 7903677 -1.24364 1593734 1009345	.2044338 0152264 .8585748 1.569892 2.659338
poll_menages situation_~e q21naturel~p two_progra~c	2066828  402797  1925328   .7052593   1.279202   .9254696	.2097572 .1977438 .5362893 .4411472 .704164 .2560194	-0.99 -2.04 -0.36 1.60 1.82 3.61	0.0324 0.042 0.720 0.110 0.069 0.000	6177993 7903677 -1.24364 1593734 1009345 .4236808	.2044338 0152264 .8585748 1.569892 2.659338 1.427258
<pre>qefacteau     pb_env poll_menages situation_~e q2Inaturel~p two_progra~c sexe</pre>	2066828  402797  1925328   .7052593   1.279202   .9254696  4147685	.2097572 .1977438 .5362893 .4411472 .704164 .2560194 .220355	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88	0.837 0.324 0.042 0.720 0.110 0.069 0.000 0.060	6177993 7903677 -1.24364 1593734 1009345 .4236808 8466563	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193
<pre>qefacteau     pb_env poll_menages situation_~e q2lnaturel~p two_progra~c     sexe log q27prf~f</pre>	2066828  402797  1925328   .7052593   1.279202   .9254696  4147685  4267504	.2097572 .1977438 .5362893 .4411472 .704164 .2560194 .220355 .2529312	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69	0.037 0.324 0.042 0.720 0.110 0.069 0.000 0.060 0.092	6177993 7903677 -1.24364 1593734 1009345 .4236808 8466563 9224864	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856
<pre>gelacteau     pb_env     poll_menages     situation_~e     q2lnaturel~p     two_progra~c         sexe     log_q27prf~f         duree</pre>	2066828  402797  1925328   .7052593   1.279202   .9254696  4147685  4267504  4946927	.2097572 .1977438 .5362893 .4411472 .704164 .220355 .2529312 .2457321	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69 -2.01	0.0037 0.324 0.042 0.720 0.110 0.069 0.000 0.060 0.092 0.044	6177993 7903677 -1.24364 1593734 1009345 .4236808 8466563 9224864 9763187	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856 0130667
<pre>gefacteau     pb_env     poll_menages     situation_~e     q2Inaturel~p     two_progra~c         sexe     log_q27prf~f         duree         sec ind</pre>	2066828  402797  1925328   .7052593   1.279202   .9254696  4147685  4267504  4946927   .0009067	.2097572 .1977438 .5362893 .4411472 .704164 .2560194 .220355 .2529312 .2457321 .2736577	-0.99 -2.04 -0.36 1.60 1.82 <b>3.61</b> -1.88 -1.69 -2.01 0.30	0.0037 0.324 0.042 0.720 0.110 0.069 0.000 0.060 0.092 0.044 0.767	6177993 7903677 -1.24364 1593734 1009345 .4236808 8466563 9224864 9763187 4554525	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856 0130667 .617266
<pre>dpracteau     pb_env poll_menages situation_~e q2Inaturel~p two_progra~c sexe log_q27prf~f duree sec_ind sens travail</pre>	2066828  402797  1925328  .7052553   1.279202   .9254696  4147685  4267504  4946927   .0009067   .8842334	.2097572 .1977438 .5362893 .4411472 .704164 .2260194 .220355 .2529312 .2457321 .2736577 .2321958	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69 -2.01 0.30 3.81	0.003/ 0.324 0.720 0.110 0.069 0.000 0.060 0.092 0.044 0.767 0.000	6177993 7903677 -1.24364 1593734 1009345 .4236808 8466563 9224864 9763187 4554525 .429138	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856 0130667 .617266 1.339329
<pre>dpracteau     pb env poll_menages situatione q2lnaturel~p two_progra~c sexe log_q27prf~f duree sec_ind sans travail    </pre>	2066828  402797  1925328   .7052593   1.279202   .9254696  4147685  4267504  4946927   .0009067   .6842334	.2097572 .1977438 .5362893 .4411472 .704164 .2560194 .220355 .2529312 .2457321 .2736577 .2321958 .2968442	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69 -2.01 0.30 3.81 2.25	0.037 0.324 0.042 0.720 0.110 0.069 0.069 0.060 0.092 0.044 0.767 0.000 0.024	6177993 7903677 -1.24364 1593734 1009345 .4236808 8466563 9224864 9763187 4554525 .429138	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856 0130667 .617266 1.339329 1.250084
dpracteau pb_env poll_menages situatione q2lnaturel-p two_progra~c sexe log_q2/prf-f duree sec_ind sans_travail q30asso	2066828  402797  1925328   .7052593   1.279202   .9254696  4147685  4946927   .009067   .8042334   .6662001   .292531	.2097572 .1977438 .5362893 .4411472 .704164 .2560194 .220355 .2529312 .2457321 .2457321 .2457321 .2321958 .2968442 .2469445	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69 -2.01 0.30 3.81 2.25 -1.60	0.037 0.324 0.042 0.720 0.110 0.069 0.000 0.060 0.092 0.044 0.767 0.000 0.024 0.110	617/993 6177993 7903677 -1.24364 1593734 1009345 8466563 9224864 9763187 4554525 429138 .0864763 9864763	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856 0130667 .617266 1.339329 1.250084
<pre>dpracteau     pb env poll_menages situatione     q2lnaturel-p     two_progra~c         sexe     log_q2?prf~f         duree         sec_ind         sans_travail         q30asso         nappe         crart</pre>	2066828  402797 1925328   .7052538   .279202   .9254696  4147685  4267504  4946927   .0809067   .8842334 .6662801  3992631   .155410	.2097572 .1977438 .5362893 .4411472 .704164 .220355 .2529312 .2457321 .2736577 .2321958 .2968442 .2498045	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69 -2.01 0.30 3.81 2.25 -1.60	0.037 0.324 0.042 0.720 0.110 0.069 0.000 0.060 0.092 0.044 0.767 0.000 0.024 0.024 0.110 0.122	6177933 7903677 -1.24364 1533734 1009345 .4236008 846553 9224864 9763187 4554525 .429138 .0864763 808871 25292	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856 0130667 .617266 1.339329 1.250084 .0903448 4200625
defacteau pb_env poll_menages situation_~e d2lnaturel-p two_progra~c sexe log_d27prf~f duree sec_ind sans_travail q30asso nappe cons	2066828  402797  1925328   .7052593   .279202   .9254696  4147685  4267504   .446627   .8040234   .6682801   .3952631  3952631  554818	2097572 1977438 5362893 4411472 704164 220355 2829312 2457321 2736577 2321958 2968442 2498442 2498045 1.007611	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69 -2.01 0.30 3.81 2.25 -1.60 -1.54	0.037 0.324 0.042 0.720 0.110 0.069 0.000 0.069 0.044 0.767 0.000 0.024 0.110 0.123	6177993 7903677 -1.24364 1593734 1099345 .4236808 8466563 9224864 9763187 4554525 .429138 .0864763 888871 -3.5297	.2044338 0152264 .8585748 1.569892 2.659338 1.427258 .0171193 .0689856 0130667 .617266 1.339329 1.250084 .0903448 .4200636
<pre>dpfacteau pb=env poll_menages situation_~e q2lnaturel~p two progra~o sexe log_q27prf~f duree sec_ind sans_travail _dosso nappe _cons </pre>	2066228  402797 1925328   .7052593   .279202   .9254696  4147685  4946927   .0009067   .6842334   .6682801  3952631 -1.554818	2097572 .1977438 .5362993 .4411472 .704164 .2560194 .220355 .2529312 .2457321 .2736577 .2321958 .2968442 .2498045 .2498045	-0.99 -2.04 -0.36 1.60 1.82 3.61 -1.88 -1.69 -2.01 0.30 3.81 2.25 -1.60 -1.54	0.037 0.324 0.042 0.720 0.110 0.069 0.000 0.069 0.044 0.767 0.000 0.024 0.110 0.123	. 6177993 . 6177993 . 7903677 . 1.24364 . 1593734 . 1009345 . 4236008 . 8466563 . 9224864 . 9763187 . 4554525 . 429138 . 0864763 . 088871 . 3.5297	.2044338 -0152264 .8585748 1.569892 2.65938 1.427258 0171193 .0689856 -0130667 .617266 1.339329 1.250084 .0903448 .4200636

Rows in red show variables significant with a 1% confidence; in green at 5%; in blue at 10%.

Figure 3: Results of the Logit model for scenarios 1 and 2

Two models were tested to explain stated WTP amounts: linear regres-

sion (Figure 4) and Tobit model. Unexpectedly, the knowledge of the water bill has a negative impact on the WTP amount. Significant variables are quite different from the Logit model. They are income, knowledge of water bill, concern about groundwater pollution, practice of water activities (leisure), and use and non-use values of groundwater advocated as motivations to pay. Explanatory powers of the models are satisfying in each case.

Linear regression       Number of obs = 314         Boenario 1       F(18, 255) = 2.31         Prob > F = 0.0021       Prob > F = 0.0021         Reduct       F(18, 255) = 2.31         log_one_wtp         Coef. Std. Err. t P> t        [954 Conf. Interval]         gloisiz2  1338252 .0614521 -2.18 0.0302547653012885       gdotts         gdotts       .060671 .1248766 0.49 0.6271860867 .00433       gdotts         gddataup251203 .104171 -2.27 0.024466527033729       pb/nkgpe] .006328 .105325 -0.68 0.3882383094 .1162515         poll_indus0.01288 .105325 -0.64 0.3882983094 .1162515       nubst_poll .166460 .37051 0.021 0.812044218 .104679         situation0 .066406 .370651 0.021 0.826 .0638043208 .13657478       nubst_poll .166460 .370561 0.021 0.826 .063736522         glipotrulme00717 .221281 -0.21 0.6824425252 .384418       nubst_poll .1628 .105523 1.69 0.060007156 .4047881         log_dincome I .2640057 .1555805 1.65 0.099 .0600007056 .4047881       log_dincome I .2641057 .1558052 -1.11 0.266373815 .015579         gdinocame I .2641057 .1558052 -1.11 0.26637381 .015789       std18159         gdidftyp137121 .1230522 -0.10 0.918 .25533 .2310117         gdidftyp137121 .1230522 -1.11 0.26637381 .205739										
seenario 1         F(18, 255) = 2.31           Prob > F = 0.0021           log_one_wtp         Coef. Std. Err. t P> t  [955 Conf. Interval]           gloidiz2  1332252 .0614521 -2.18 0.0302547653012885           gdpit   .0606671 .1249766 0.49 0.627185087 .026433           freq_tap_wrl  0652308 .1031226 -0.67 0.503272258 .1338364           gddattsal  2811293 .1104671 -2.27 0.03322547653 .200443           gddattsal  2811293 .1104671 -2.27 0.024 -4665270337259           pb nappel .076135 .0402911 1.86 0.064 -0643208 .156747           poll   .0581349 .036744 1.59 0.115014218 .1304672           romp prome   .2664264 .3720651 0.23 0.8166457558 .8187267           onapprome   .2664264 .3720651 0.23 0.8166457558 .8187267           gdipotvalue  0470717 .2212831 -0.21 0.8324825552 .3884218           log_gdp_incme   .366052 .1765107 0.60 0.547200793 .4538604           log_gd_incme   .3680421 .156523 1.69 0.060 -0.0470564 .5781859           auf_fin5  0127608 .1238652 -1.11 0.266373515 .1050744           auf_fin5  0127608 .1238657 -0.10 0.918255333 .2310117           gd0amo   .3745541 .1415722 .2.652 0.909 .0959346 .6531736          cons   .8128516 1.57673 0.55 0.606 -2.282225 3.907933           gdingtrup   .1065861 .129674 0.82 0.411 .145925           idefrapp   .066386 0.05493 -0.010 0.3143188853 .101776           gdotut   .1066868 .129674 0.82 0.411 .1459355	Linear regress	sion				Number of obs	= 314			
Prob > F         =         0.0011           Requared         0.1348           Root MSE         =         .87177           requared         0.1348         Robust           gloisiz2        1338252         .0614521         -2.18         0.030        2547653        012895           gcpuit        060671         .1248766         0.49         0.627        1850967         .306433           gdsdistrpol        0481493         .1362729         -0.35         0.724        3163396         .202041           gdfactau        251293         .104671         -2.27         0.024        466527        033729           poll_induws        010288         .105235         -0.86         .388        2983094         .1162515           subst_poll         .036764         1.58         0.115        014218         .304679           situation        0106406         .3702101         .2883041         .283094         .1162515           lggrotvalm=        047017         .221281         .0.21         .638678         .0600         .0607766         .4047881           log_gdifterf        118076         .1409732         .1.22         .2242153         .053149 </td <td>Scenario 1</td> <td></td> <td></td> <td></td> <td></td> <td>F( 18, 295)</td> <td>= 2.31</td>	Scenario 1					F( 18, 295)	= 2.31			
Resquared         =         0.1348           log_one_wtp         Coef.         Std. Err.         t         P> t          [936 Conf. Interval]           qlloimiz2        1338252         .0614521         -2.18         0.030        2547653        012885           gdpuid         .060671         .1247766         0.490         0.627        1850967         .306433           freq_tap_wrs1        0652306         .1031826         -0.67         0.553        272298         .333384           q5datemal        2511293         .104671         -2.27         0.024        4685327        0337259           pbnappel         .076215         .040211         1.66         0.664        04218         .1306719           subst_poll         .050126         .13281         0.115        014218         .1306719           subst_poll         .050484         .370651         0.23         0.616        6437653         .113767           aust_poll         .0504005         .17617         .21281         0.23         .61618         .63864         .370571         .2408793         .435533         .1305749           auf_pomel         .2401771         .52168551         .65         .699         <						Prob > F	= 0.0021			
Root MSE         =         .87177           Iog_one_wtp         Coef.         Std. Err.         t         P> t          [954 Conf. Interval]           qlloisiz2        1338252         .0614521         -2.18         0.030        2647653        012885           gdpuit        060671         .1248786         0.49         0.627        1853087        306433           freq_tap_wrl        062308        031286         -0.67         0.533        27228        134836        2724						R-squared	= 0.1348			
Index infinition         Robust         Point         (355 Conf. Interval)           ing_one_wtp         Coef.         Std. Err.         t         P>[t]         [355 Conf. Interval]           ing_opinit         0.000671         1.248766         0.030        2547653        012285           gdpinit         0.000671         1.248766         0.030        2547653        012285           gdpinspin         0.06071         1.248766         0.030        2547653        012285           gdpinspin         0.06213         0.04071        1853967        0133384         .220041           gdfactsau        2511293         .1014671         -2.27         0.024        4685327        0337259           subst_poll         -0.05135         .040271         .016213         .016211         .66         0.064         .06437055         .118727           subst_poll         .0504846         .370651         0.23         .04218         .130477           subst_poll         .0504840         .370651         0.23         .442353         .1657453           gdipotvalme        180612         .1605023         1.89         0.60        6487653         .1137652           gdipotvalme        1						Root MSE	= .87177			
Icg_one_wtp         Coef.         Sold Err.         t         P> t          [95% Conf. Interval]           qlloisir2        1338252         .0614521         -2.18         0.030        2547653        012885           qprit         .0606671         .1248786         0.49         0.677        1550987         .306433           freq_tag_wrf         .062308         .1031826         -0.67         0.503        27298         .1338344           gddatargol         .051283         .104611         -2.27         0.024        4665327        033727           pb_nappe         .0762135         .0409211         1.86         0.064        04043208         .1567478           poll_indus-s         .051248         .1033235        086         0.386        238304         .1167217           one_program         .2807262         .1489416         1.09         0.60        012996         .573542           ql\$potvalu-e         .086404         .3720651         0.21         0.832        4823652         .38804           log_grape         .005005         .1755107         0.60         .0877056         .407881           log_grape         .005005         .1556052         .165         0.099 <td></td> <td></td> <td></td> <td></td> <td></td> <td>ROOC MDE</td> <td>0/1//</td>						ROOC MDE	0/1//			
log_one_wtp         Coef.         Std. Err.         t         P> t          [95% Conf. Interval]           qlloisir2        1338252         .0614521         -2.18         0.030        2547653        012885           gdpuit         .0606671         .1247766         .49         0.627        155087         .306433           feq_tag_wrr        0682308         .1031826         -0.67         0.503        272298         .338344           gdfasteau        2511293         .104671         -2.27         0.024        4685327        0337259           pb_nappe         .0762135         .0409211         1.66         0.064        004206         1.587478           subst_poll        0501288         .033235         -0.62         0.0816        687565         .6187267           ong prograce         .2807262         .1488416         1.89         0.660        0121998         .3735252           qlspotvalme        0470717         .212831        01         .82552         .3864218           ogg_ipref.f        1718076         .140932        12         .224         .4492483         .1065041           log_gincome         .2641097         .152652         .651376         <										
log_one_wtp         Coef.         State         p> t          [35% Conf. Interval]           qlloisir2        1338252         .0614521         -2.18         0.030        2547653        012885           gdpuit         .0606671         .1248786         0.49         0.627        1550987         .306433           gdfastarpol        06128308         .1031826         -0.67         0.503        724        3163396         .232041           gdfastarpol        061283         .1052325         -0.86         0.388        2583094         .15657470           poll_indus-s        0510286         .1053235         -0.86         0.388        2583094         .156517267           one_progravel         .2807262         .1489416         1.89         0.060        042129         .3786522           ql\$potvalu-e        0470717         .2212831         -0.21         0.832        4823652         .388418           log_gage         .1005005         .1765107         0.60        0870756         .4077881           log_income         .2641097         .1595665         1.65         0.099        0499664         .5781659           gdiatrpi        1371221         .1230652        10<			Debuet							
log_one_wtp         Coer.         Std. Err.         t         P>1t1         [199 Cont. Interval]           qlotsir2        1338252         .0614521         -2.18         0.030        2547653        012885           qcputt         .0606571         .1247766         .0.503        272289         .338384           qsdisterpol        0641493         .1362729         -0.35         0.7724        4685327        0337259           pb_nappe         .0762135         .0409211         1.66         0.064        043208         .103759           subst_poll         .0581349         .036764         1.58         0.115        012196         .573652           qlspotvalnee        0470717         .2212831         -0.120         .823        4825552         .3884218           qlspotvalnee        0470717         .212831         -0.10         0.0564        0499664         .573652           qlspotvalnee        247551         .165050         .175107         0.60        4270793         .4538644           log_gincome         .2641097         .155685         .165         0.099        0499664         .5731859           gdistrop         .1110214         .1238657         -0.10			Robust							
qlloisir2  1338252 .0614521 -2.18 0.0302547653012885           g2puit   .0606671 .1248786 0.49 0.6271550987 .306433           gdadistrpol   .0481493 .1362729 -0.35 0.7243163396 .220041           gdfactaau   .2511293 .1104671 -2.27 0.0243163396 .220041           gdfactaau   .2511293 .1104671 -2.27 0.0243163396 .220041           gdfactaau   .2511293 .1104671 -2.27 0.0244685327 .0.037259           pb mappe   .0762135 .0409211 .1.66 0.0640043208 .1557470           poll_indus-s   .051349 .036764 1.58 0.115014218 .1304873           subst_poll   .0581349 .036764 1.58 0.115014218 .130487267           ons_programe   .2607262 .1408416 1.69 0.0600027096 .573658           g19potvalu-e   .0964304 .3720691 0.23 0.8166457658 .8137267           ons_programe   .260505 .1765107 0.60 0.5472408793 .433804           log_gincome   .2641097 .1595685 1.65 0.0990049664 .5781859           d1og_gincome   .2641097 .1595685 1.65 0.0990049664 .5781859           diffigu  1371221 .1230652 -1.11 0.266378315 .1055713           gdiaseo   .3745541 .1415722 2.65 0.009 .0989346 .6531736          cons   .812816 1.572673 0.52 0.606 -2.28229 .3.90793           scenario 2         F( 19, .264) = 2.74           Prob > F         .010844           gdiatrpol   .003986 .1299674 0.82 0.4111489358 .362735           gdiatrpol   .003988 .1463656 -0.06 0.94922159090164437           gdiatrpol   .0039888 .1463656 -0.07 0.862	log_one_wtp	Coei.	sta. Err.	t	P> t	[95% Coni.	Interval]			
qlotsir2      1338252       .0614521       -2.18       0.030      2547653      012885         gcgtut       .0605671       .1247766       .0503      272289       .338344         gdfacteau      2511293       .1104671       -2.27       0.034      4665327      037259         pb nappe       .0762135       .0409211       1.86       0.064      0643208       .1556746         poll_indus-s      051028       .103235       -0.86       0.388      2883034       .115215         subst_poll       .051149       .036764       1.59       0.115      04218       .130479         situation_e       .0804304       .3720691       0.23       0.816      687565       .8187267         ong prograve       .2807262       .1488416       1.89       0.060      0421996       .373522         qlspotvalnee       .2007262       .122331       .09       0.060      0429364       .135623         qlspotvalnee       .2007262       .122851       .050       .050       .156747         og_giptrsf      1718076       .1238657      010       0.916      256333       .330117         qglspotvalnee       .241977       .22055<										
g2piit       .0606671       .1248786       0.49       0.627      1850987       .306433         gdfactarpol      0481493       .1362729       -0.35       0.724      3163396       .220041         gdfactaru      2511293       .1104671      27       0.024      4669327       -0.33729         pbinappe       .0762135       .0409211       1.66       0.064      0043208       .1357470         poll_indus-s      0510286       .035235       -0.86       0.388      2583094       .1165119         subst_poll       .0864804       .3720691       0.23       0.816      6457656       .8187267         ons_progravel       .2807262       .148916       1.89       0.606      0027056       .4047881         log_gdpeine       1.058052       .165       0.057      0338804       .05831       .055331       .05056       .4047881         log_gdpeine       .120761       .1526805       1.65       0.099      0499664       .5781859         diffup       .131721       .123652      10       0.567      235223       .3307373         log_gincome       .2461097       .1526635       1.65       0.099      0499664       .57818	qlloisir2	1338252	.0614521	-2.18	0.030	2547653	012885			
freq_tap_w-r  0652308       .1031826       -0.67       0.503      272289       .1333844         q5datroau  2511293       .1104671       -2.27       0.024      4663327       -0.307269         pb pappe   0.762135       .0409211       1.66       0.064      064206       .1557476         poll_indus-s  0510288       .1053235       -0.86       0.388      2583094       .1162519         subst_poll       .0581349       .036764       1.58       0.115      014218       .1304879         omp progra~c       .2807262       .1488416       1.89       0.060      657555       .8187267         q19potvalu-e      047017       .221231       -0.21       0.83255       .482555       .3884218         q19potvalu-e      047017       .212331       -0.21       0.83255       .482555       .3884218         q19potvalu-e      047017       .212331       -0.060      4492643       .1056331         log_d1potvalu-e      047017       .212831       -0.224      4492643       .1056331         log_d27prf-f      1718076       .159685       1.611572      265333       .330117         q30assol       .3745541       .1415722       2.65       0.0	q2puit	.0606671	.1248786	0.49	0.627	1850987	.306433			
dsdistpol  0481493       .1352729       -0.35       0.724      3163396       .220041         g6facteau  2511293       .1104671      27       0.024      4665327      0337289         pb_mappe   .0762135       .0409211       1.86       0.064      0043208       .1567478         poll_indurs   .0581349       .036764       1.58       0.115      014218       .1304679         situatione   .0864804       .3720691       0.23       0.816      0647058       .8736522         q13potvalu-e   .067262       .1488416       1.89       0.060      021909       .5736522         q13potvalu-e   .0670262       .1480416       1.89       0.060      0087056       .4047881         log_g3pe   .1065005       .1755107       0.60       0.547      2306733       .435804         log_gdage   .1065005       .1755107       0.60       0.99      0499664       .5781859         difftyp  1317076       .140732      12       0.224      4452483       .10553176         log_gincome   .2641097       .1595805       1.65       0.099      0499664       .5781859         suff_info      017608       .123652      010       0.918      258533       .331017 <td>freq_tap_w~r</td> <td>0692308</td> <td>.1031826</td> <td>-0.67</td> <td>0.503</td> <td>272298</td> <td>.1338364</td>	freq_tap_w~r	0692308	.1031826	-0.67	0.503	272298	.1338364			
gfacteau      2511293       .1104671       -2.27       0.024      466537      037259         pb1_nppp       .0762135       .0409211       1.66       0.064      064206       .1567476         poll_induss      0510288       .1053235       -0.86       0.386      2883094       .1162519         subst_poll       .0564304       .3720691       0.23       0.816      6657555       .8187267         ong programe       .2807262       .1488416       1.89       0.060      042189       .3736522         q15potvalne      190017       .2212831       -0.21       0.835       .4538040         q15potvalne      190017       .212311      0       0.050      452552       .384218         q12gtprift      1718076       .1409732      122       0.224      4492483       .105631         log_inome       .2641097       .1536652      111       0.266      379315       .1050749         suff_info      1371221       .1236527       -0.10       0.918      2428333       .231017         q20anse       .3128516       1.572673       0.52       0.606       -2.82222       3.907933         suff_info      13765	q5distrpol	0481493	.1362729	-0.35	0.724	3163396	.220041			
ph mappe         .0762135         .0409211         1.66         0.064        0043208         .116517           poll_indures        0910288         .035235        086         0.388        2883094         .1162519           situation_e         .0864804         .3720691         0.23         0.816        6457658         .8187267           glspotvalue        047017         .2212831         -0.21         0.832        4823652         .3884218           glspotvalue        047017         .2212831         -0.21         0.832        4823652         .3884218           log_age         1.005005         .1765107         0.60        007956         .4047881           log_gdperf        110767         1.4079732        12         0.224         .4492483         .1055331           log_gdpic        0170760         .1236527        010         0.918        236333         .331017           g30asco         .3745541         .1415722         2.65         0.009         .0699446         653173           cons         simifcant wiha 1% confidence, in green at 5% in blue at 10%.         Einear regression         Soenario 2         F(19, 264) = 2.74           Frob SF         0.0102         .228229	q6facteau	2511293	.1104671	-2.27	0.024	4685327	0337259			
poli_indum-s   .0910288 .103225 -0.86 0.3882983094 .1162519         subst_poll   .0581349 .036764 1.58 0.115014219 .1304879         ome_programe   .2807262 .1488416 1.69 0.0600121998 .8187267         ome_programe   .2807262 .1488416 1.69 0.0600121998 .8187267         q13potvalue   .040717 .221281 -0.21 0.8324825652 .3884218         q13potvalue   .040717 .221281 -0.21 0.8324825652 .3884218         q13potvalue   .040717 .221281 -0.00 0.547200739 .4433804         log_age   .105005 .1775107 0.00 0.547200739 .4433804         log_age   .105005 .175107 0.00 0.547200739 .453804         log_agref+f   .1718076 .1409732 .1.22 0.2244492483 .1050749         stf_info   .0127608 .1238657 -0.10 0.918256333 .20117         q03maso   .3745541 .1415722 .2.55 0.009 .0959346 .6531736         _cons   .8128516 1.572673 0.52 0.606 -2.282229907933         _cons   .8128516 1.572673 0.52 0.606 -2.282229907933         _cons   .8128516 1.572673 0.52 0.606 -2.282229907933         _cons   .8128516 1.572673 0.52 0.606 -2.28229907933         _cons   .8128516 1.572673 0.52 0.606 -2.28229907933         _dot trap = .0009       .0959346 .6531736         _got trap = .0009       .0959346 .6531736         _got trap = .0009       .0009009046275791         _got trap = .0009       .000900100000000000000000000000000000	pb nappe	.0762135	.0409211	1.86	0.064	0043208	.1567478			
substpoll         .0581349         .036764         1.58         0.115        014218         .1306479           situation_e         .086404         .370651         0.23         0.816        6457555         .8187267           qlSpotvalu~e        047017         .2212831         -0.21         0.832        4825552         .848716           qlSpotvalu~e        058005         .1758107         0.60         0.877        2408733         .433804           log_age         .1005805         .1758107         0.60         0.877        2408733         .433804           log_dinome         .2641097         .1555685         1.65         0.099        0499664         .651136           diffupt        1311221         .123652        11         0.266        373315         .105749           suff_info        017608         .123652        010         0.918        35333         .310117           q30meso         .378541         .1415722         2.65         0.009         .059344         .6531736           _cons         .818216         1.572673         0.52         0.606        238229         3.907933           _cons         .8182516         1.572673         0.52 </td <td>poll indus~s</td> <td>0910288</td> <td>.1053235</td> <td>-0.86</td> <td>0.388</td> <td>2983094</td> <td>.1162519</td>	poll indus~s	0910288	.1053235	-0.86	0.388	2983094	.1162519			
<pre>situation_ve   .0864804 .3720691 0.23 0.8166457658 .6137267 one_prograve   .2807262 .1488416 1.89 0.0600121998 .5736522 gl\$potvaln~e   .1980412 .1050523 1.89 0.0600021966 .4047881 log_get 1.05005 1.175107 0.60 0.5472200793 .4453884 log_gd?prf-f1718076 .1409732 -1.22 0.2244452483 .1056331 log_inome   .2641097 .155865 1.65 0.0990499664 .5781859 aiffintp  1371221 .1230652 -1.11 0.266373319 .1050745 suff_intp  1371221 .1230652 -1.01 0.518256533 .2310117 gd3maso   .3745541 .1415722 2.65 0.099 .0959346 .6531736 oons   .8128516 1.572673 0.52 0.606 -2.282223 3.907933 oons   .8128516 1.572673 0.52 0.606 -2.285223 3.907933 oons   .8128516 1.572674 0.82 0.4111489585 .3628735 freq_tap_vr   .1070642 .1060549 -1.01 0.314315853 .0628735 freq_tap_vr   .1070642 .1060549 -1.01 0.314315853 .0628735 freq_tap_vr   .1070642 .1060549 -1.01 0.314315853 .0628735 freq_tap_vr   .0093988 .146366 -0.06 0.9492951509013346 .17569 gd5distrpoll   .0039888 .1466566 -0.17 0.82 0.4170453901 .1092777 situation_e   .1651757 .406555 0.53 0.77046418 .572644 gd5matvala-e   .138614 .1673375 0.63 0.407494318 .572644 gd5matvala-e   .138614 .1673375 0.83 0.4071906345 .465473 gd5matvala-e   .138614 .1673375 0.63 0.4071906345 .465473 gd5matvala-e   .1386147 .134555 0.416 0.1152567078 .500</pre>	subst poll	.0581349	.036764	1.58	0.115	014218	.1304879			
one programe         :2807262         :1488416         1.69         0.060        0121996         :573522           q1\$potvalne         :.0470717         :221281         -0.21         0.832         :482565         :384216           q1\$potvalne         :.1980412         :105523         1.89         0.060        0087056         :4047881           log_qage         :1085005         :175107         0.60         0.547        2408793         :433804           log_qincome         :2641097         :1558085         1.65         0.099        0499664         :5781859           atf_info         -0127608         :123652         -0.10         0.916        358333         :330117           q30masol         :378541         :1415722         2.65         0.009         .0059346         :6531736	situation ~e	.0864804	.3720691	0.23	0.816	6457658	.8187267			
q13pctvalu~e      0470717       .2212831       -0.21       0.832      4823652       .3884218         q13pctvalu~e       .1980412       .1050523       1.89       0.060      0607056       .407781         log_ad?prf-f      1718076       .1409732       -1.22       0.224      4492483       .105631         log_income       .26(1997       .155665       1.65       0.099      0499664       .5781859         auffwtp      137121       .1230652      01       0.9164       .378319       .1050749         suff_info      0127608       .1230657       -0.0       0.918      2565333       .3310117         q30asso       .3745541       .415722       2.65       0.099       .0959346       .6531736	one progra~c	.2807262	1488416	1.89	0.060	0121998	.5736522			
q19potvaln~e       .1980412       .1050523       1.89       0.060      0087056       .4047881         log_gage       .1065005       .1755107       0.60       0.847      2408793       .433804         log_gincome       .2641097       .1555805       1.65       0.099      0499664       .5781859         adiftypl      1311221       .1230652      110       0.266      373315       .1057181         q30mesol       .3745541       .1415722       2.65       0.009       .0959346       .6531736	g19potvalu~e	0470717	.2212831	-0.21	0.832	4825652	.3884218			
log_age         1.005005         1.755107         0.60         0.547        2400793         .435804           log_ag7prf-f        1718076         .1409732        1.22         0.224        4492483         .1056331           log_income         .2641097         .1558655         1.65         0.099        0499664         .5781859           auff_intc        1718076         .1230652        10         0.916        2563333         .330017           g30meso         .3745541         .1415722         2.65         0.009         .0959346         .6531736          oons         .8128516         1.572673         0.52         0.606        228229         3.907933	g19potvalp~e	.1980412	1050523	1.89	0.060	0087056	4047881			
<pre>log_dput = 1.000000 1.10010 0.000 0.0004000100 0.000 1.00000000000000000000000</pre>	log are	1065005	1765107	0.60	0.547	- 2408792	4538804			
Log_acpErst       -1.1240073       -1.122       0.224       -1.432403      208333         log_income       2.8481097       .11250652       -1.11       0.266      373319      508334         aiffwtp      3712121      230652       -1.11       0.266      373319      508745         aiff_nol      017608      230657      00       0.918      2663333      331017         g30asso      3745541      1415722       2.65       0.009      0959346      6531736	low w27mmf f	.1000000	1400700	-1.00	0.017	2400/93	1050004			
log_indexms       .209109.       .1230652       -1.01       0.266      373315       .1053049         eff_info      0127608       .1230657       -0.10       0.918      256333       .230117         q30assol       .3745541       .1415722       2.65       0.009       .0953046       .6531736	iog_qz/pri~i	1/100/0	1505005	1.55	0.224	4492403	.10000001			
ullrwcp       -1.31       1.1200632       -1.11       0.266      37333       .2300179         gdOaseo       .3745541       .1415722       2.65       0.009       .0959346       .6531736	log_income	.2041097	1000650	1.05	0.099	0499004	1050740			
BitT_info        012/005         1.12869         -0.100         0.918        2865333         .283011/ .0551346	diriwtp	13/1221	.1230652	-1.11	0.200	3/9319	.1050749			
gd0ase	suff_info	0127608	.1238657	-0.10	0.918	2565333	.2310117			
	q30asso	.3745541	.1415722	2.65	0.009	.0959346	.6531736			
Rows in red show variables significant with a 1% confidence, in green at 5%, in blue at 10%.           Linear regression         Number of obs = 284           Scenario 2         F(19, 264) = 2.74           Prob > F = 0.0002         R-squared = 0.1684           log_tot_reg           Ccef. Std. Err. t         Evict             globir:         1         Robust           qloisir:         1         Robust           gloisir:         1         Robust           gloisir:         1         Robust           gloisir:         1         Robust           gdistrpol         1         0696701         -2.20         0.028        2915909         -0164437           gdistrpol         1         0696701         -2.20         0.028        2915909         -0164437           gdistrpol         1         0696701         -2.20         0.028        2915909         -0164437           gdistrpol         1         0.0696701         -2.20         0.028        2915909         -0164437           gdistrpol         1         0.069474         0.82         0.411        3158553         1017659           gdistrpol         1         0.06955         0.411        048386         .027	_cons	.8128516	1.572673	0.52	0.606	-2.282229	3.907933			
Rows in red show variables significant with a 1% confidence, in green at 5%; in blue at 10%.           Linear regression         Number of obs = 284           Scenario 2         F(19, 264) = 2.74           Prob > F = 0.0002         R-squared = 0.1584           log_tot_reg           Coef. Std. Err. t P> t  [95% Conf. Interval]           qloisiz2           -1540173 .0698701 -2.20 0.02829159090164437           qdput           1.069688 .1299674 0.82 0.4111489358 .3628735           fgdfacteau          22722 .1158362 -2.18 0.03048080240246416           pb nappe           .088358 0.465543 1.90 0.0590133386 1.146437           gdfacteau          22722 .1158362 -2.18 0.03048080240246416           pb nappe           .0883358 0.445433 1.90 0.0590133386 1.1464365           gdfacteau          252722 .1158362 -2.18 0.03048080240246416           poll_indurs          01264 1.066515 -0.17 0.86522518 1.922612           subst_poll           .0039483 1.46555 0.06592375910 1.92777           situation_et           .1538614 .1673375 0.83 0.407644918 .9572644           q25natvalu-et           .138614 .1673375 0.83 0.4071906245 .46584373           q25natvalu-et           .138614 .1673375 0.83 0.40715906245 .368373           g25natvalu-et           .138614 .1673375 0.83 0.1660661978 .338271           log_gd7prf-f										
Linear regression Soenario 2 Number of obs = 284 F(19, 264) = 2.74 Prob > F = 0.002 R-squared = 0.1584 Root MSE = .66678 log_tot_reg   Coef. Std.Err. t P>tt [95% Conf. Interval] qloisir2   -1.540173 .0698701 -2.20 0.0282915990164437 qdpuit   .106668 .1299674 0.82 0.4111469858 .9628735 freq_tap_w-r  1070642 .1060549 -1.01 0.3143158853 .1017569 qdfatsrpol  0033988 .1463656 -0.06 0.9492975912 .278736 qdfatsrpol  0033988 .0455433 1.90 0.0590033386 .176102 goll_indurs   -0.01284 .1066515 -0.17 0.86522818 .1922612 subst_pol   .0319438 .0392759 0.81 0.4170453901 .1022777 two_progra-c   .2630647 .5102666 -1.87 0.0621959799 .04692177 two_progra-c   .2630647 .5102660 -1.87 0.0621959799 .04692177 two_progra-c   .2630647 .5102660 -1.87 0.0621959799 .04692177 two_progra-c   .2630647 .5102660 -1.87 0.0621959799 .0469217 two_progra-c   .2630647 .5102660 -1.87 0.0621959799 .0463431 log_qde   .2432433 .181689 1.30 0.1551252918 .611779 402777-ft .2138614 .1673375 0.83 0.4071906245 .4683473 q255ntvaln-e   .1581767 .406555 -0.18 0.10106615561 .5878666 gdfatsrey   .1338614 .1673375 0.83 0.4071906245 .4683473 q255ntvaln-e   .138614 .1673375 0.68 0.707842430 .18177 400g27p7f-f2186178 .1583585 -1.38 0.1660661978 .384231 log_ace   .2432438 .181688 1.30 0.1551252918 .6117794 log_income   .1965147 .143555 -1.02 0.307399475 .1230414 suff.top  03453 .130267 -1.02 0.307399475 .1230414 suff.top  133453 .130267 -0.40 0.66326778 5.007929 	Rows in red show v	ariables significant	with a 1% confide	Rowe in rad show warishlas significant with a 1% confidence, in grean at 5%; in blue at 10%						
Linear regression Number of obs = 284 Scenario 2 F(19, 264) = 2.74 Prob > F = 0.0002 R-squared = 0.1584 Root MSE = .66878 log_tot_reg   Coef. Std. Err. t P> t  [95% Conf. Interval] qloisir2  1540173 .0658701 -2.20 0.02029159090164437 qdpuit   .1069668 .1299674 0.82 0.4111489358 .362735 rfrq_tap_wr   .1070642 .1060549 -1.01 0.3143158553 .1017859 qdfatcaeu  222722 .115862 -2.16 0.0304000240246416 pb_nappe   .0863358 .0455433 1.90 0.0590033366 .176102 poll_indurs   .0319438 .0382739 0.81 0.4170453901 .1092777 situatione   .1561757 .406515 -0.17 0.365225181 .1922612 subst_poll   .0319438 .0382739 0.81 0.4170453901 .1092777 situatione   .1561757 .406515 1.607 0.1610605561 .537356 q255atval-e   .1250167 .1163375 0.83 0.4071962454 .4663473 q255atval-e   .1380147 .116385 1.607 0.1110605561 .637356 qd27rf-f   .2136178 .153355 -1.38 0.1660661978 .3842371 log_are   .242433 .116768 1.30 0.1551530424 .0611877 qd27prf-f   .2136178 .153355 -1.38 0.16913302647 .024318 log_are   .4431555 -0.18 0.1660661978 .384231 log_are   .243243 .132555 -0.246 0.033 0.1660561978 .334231 log_are   .243243 .132555 -0.46 0.6443333266 .30144 suff.into  061415 .132555 -0.46 0.646333326 .300447 qs0asso   .408734 .143554 2.85 0.005 .1225721 .500729 			THE REAL OF COMMENCE	ence, in greei	a ac	0100 at 1070.				
Scenario 2         F(19, 264) = 2.74           Prob > F = 0.0002         R-squared = 0.1584           Root MSE = .66878         Root MSE = .66878				alce, in gree	ii at 570, 11	0140 81 1070.				
Prob > F         =         0.0002           R=squared         =         0.1534           Rcot MSE         =         .66878           log_tot_reg         Coef.         Scd. Err.         t         P>Iti         [95% Conf. Interval]           qloisir2        1540173         .0698701         -2.20         0.028        2915909        0164437           qdpuit         1.069668         .1299674         0.82         0.411        1489358         .362735           freq_tsp_wrf        1070642         .1060549        101         0.314        3158535         .10178569           gdfactaeu        22722         .115962        21         0.033366         .1761024           poll_indurs        0181284         .1068515         0.17         0.485        228718         .1922612           subst_poll        3158367         .3102661        17         0.856        228718         .1922612           glanturel-p        9550807         .5102660        187         .0652        1959799         .0496217           two_progra-c         .2634047         .1645315         1.60         .0111        0605561         .5178365           g25natvaln-e	Linear regress	sion		ince, in gree	n at 570, m	Number of obs	= 284			
R-squared         =         0.1534           Root         Root         Root         Root           log_tot_reg         Coef.         Std. Err.         t         P> t          [95% Conf. Interval]           qloisir2        1540173         .0698701         -2.20         0.028        2915909        0164437           qdpuit         .1069688         .1299674         0.82         0.411        1489358         .3628735           fdgdatcau        2312907         .0164437         .033988         1.463566        00         0.314        3158853         .0302759           gddatrpol        0033988         .1463566        06         0.949        2375912         .2787936           gdfacteau        22722         .1158362         -2.18         0.033        400024        0246416           pb_nappe         .083358         .0455433         1.90         0.059        033386         1.902612           subst_poll         .0319438         .0352759         0.81         0.417        0453901         1032777           situation_et         .151757         .06655         .038         0.707        44418         .9572644           q25natvalu-et         .13	Linear regress Scenario 2	sion		nice, in gree	ii iii 570, iii	Number of obs F(19, 264)	= 284			
Root MSE         =         .56878           log_tot_reg         Ccef.         Std. Err.         t         D>(t)         [95% Conf. Interval]           qloisir2        1540173         .0698701         -2.20         0.028        2915909        0164437           qdpuit         1.0068688         .1298674         0.82         0.411        1489358         .3628735           freq_top_wrf        1070642         .1060549        01         0.314        3158553         .0178569           gdfatstrpol        0033988         .1463656         -0.06         0.949        2975912         .277936           gdfatstrpol        0033988         .0455433         1.90         0.059        0033366         .1760102           poll_indurs        0181284         .1066515        017         0.865        295181         .1922612           subst_poll         .0319438         .0392759         0.81         0.417        0643901         .1092777           stubat_poll        3561757         .406555         0.80         0.701        644918         .5972644           q2inaturel~p        9550887         .5102666        187         0.062         -1.959799         .0496217	Linear regress Scenario 2	sion		nice, in gree		Number of obs F( 19, 264) Prob > F	= 284 = 2.74 = 0.0002			
Robust           log_tot_reg         Ccef.         Std. Err.         t         P> t          [95% Conf. Interval]           qloisir2        1540173         .0696701         -2.20         0.028        2915909        0164437           qdpuit         1.069668         .1299674         0.82         0.411        1489355         .3622735           freq_tap_w~r        1070642         .1060549         -1.01         0.314        3158853         .1017569           g5distrpol        003988         .1463556         -0.06         0.949        2375912         .277836           g6distrpol        0393988         .1463556         -0.06         0.949        2375912         .2778736           g6distrpol        0633988         .0455433         1.90         0.059        033386         .176102           poll_indus-s        0181284         .106855         -0.17         0.865        228518         .1922612           subst_poll         .0319438         .0382759         0.81         0.417        0453901         .10292777           situation_e         .151757         .4068515         -0.17         0.865         .52818         .1922612           subst_poll <t< td=""><td>Linear regress Scenario 2</td><td>sion</td><td></td><td>nice, in gree</td><td>ii iii 570, iii</td><td>Number of obs F(19, 264) Prob &gt; F R-squared</td><td>= 284 = 2.74 = 0.0002 = 0.1584</td></t<>	Linear regress Scenario 2	sion		nice, in gree	ii iii 570, iii	Number of obs F(19, 264) Prob > F R-squared	= 284 = 2.74 = 0.0002 = 0.1584			
Iog_tot_reg         Robust           log_tot_reg         Ccef.         Std. Err.         t         P>(t)         [95% Conf. Interval]           qlloisir2        1540173         .0698701         -2.20         0.028        2915909        0164437           gdpuit         .1069668         .1299674         0.82         0.411        1489358         .3628735           freg_tag_w-r        1070642         .1060549        101         0.314        3158655         .1017659           gdfactaeul        222722         .1180362        216         0.030        480024        0246416           pb_nappe         .0863358         .0455433         1.90         0.059        033386         .170102           subst_poll         .0319438         .0392759         0.81         0.417        0453901         .1092777           subst_poll         .0319438         .0392759         0.81         0.417        0453901         .1092777           subst_poll         .0319438         .0392759         0.81         0.417        0453901         .0392775           subst_poll         .1338614         .1673375         0.66        1959799         .04962177           two_progra-c	Linear regres: Scenario 2	sion		ince, in greei	i ili 570, ili	Number of obs F(19, 264) Prob > F R-squared Root MSE	= 284 = 2.74 = 0.0002 = 0.1584 = .86878			
log_tot_reg         Robust           log_tot_reg         Ccef.         Std. Err.         t         P>(t)         [95% Conf. Interval]           qlloisir2  1540173         .0698701         -2.20         0.028        2915909        0164437           qdpuit         1.066668         .1299674         0.82         0.411        1489358         .3628735           freq_tep_w~r        1070642         .1060549         -1.01         0.314        3158853         .1017569           g5distrpol        0039898         1463556         -0.06         0.949        2375912         .2787936           g6distrpol        063386         .0455433         .00         0.059        0033366         .1760102           pbnppel         .0663386         .0455433         .00         .049        005201         .1092777           situation_~et         .1561757         .406555         -0.17         0.865        225518         .1922612           subst_poll         .0520407         .164515         -0.17         0.865        225518         .1922777           situation_rel         .1561757         .406555         0.38         0.407        1643918         .572644           q2inatval-et	Linear regres: Scenario 2	sion		Lice, in greet	i ili 570, ili	Number of obs F( 19, 264) Prob > F R-squared Root MSE	x = 284 = 2.74 = 0.0002 = 0.1584 = .86878			
log_tot_reg           Coef.         Std. Err.         t         P>(t)         [95% Conf. Interval]           qlloisir2          1540173         .0658701         -2.20         D.028        291590        0164437           qdpuit         1.066668         .1299674         0.82         0.411        148535         .562735           freg_tap_w-r          1070642         .1060549         -12.08         0.314        3158853         .1017569           qdfatsrpol        0033308         .1463656         -0.06         0.989        2875912         .2379366           qdfatsrpol        083386         .0455433         1.90         0.059        0033386         .170102           subst_poll         .083358         .0455433         1.90         0.059        0033386         .170102           subst_poll         .0319438         .0352759         0.81         0.417        0453901         .1022777           stumation_et         .151757         .066515        017         0.86561         .5873666           q25matvala-et         .1388614         .1673375         0.83         0.407         .1906245         .4683473           q25matvala-et         .1380197         .1143622         1.30 </td <td>Linear regres: Scenario 2</td> <td>sion</td> <td></td> <td></td> <td></td> <td>Number of obs F(19, 264) Prob &gt; F R-squared Root MSE</td> <td>= 284 = 2.74 = 0.0002 = 0.1584 = .86878</td>	Linear regres: Scenario 2	sion				Number of obs F(19, 264) Prob > F R-squared Root MSE	= 284 = 2.74 = 0.0002 = 0.1584 = .86878			
qlloisir2        1540173         .0698701         -2.20         0.028        2915909        0164437           q2puit         1.069668         .1299674         0.82         0.411        1489358         .3628735           freq_tap_w-r        1070642         .1060549         -1.01         0.314        3158653         .1017569           g5distropl        003988         .146355         -0.06         0.949        3158653         .1017569           g5distropl        003988         .146355         -0.06         0.949        335863         .107569           g5distropl        063358         .0455433         .090         0.093        400024        0246416           pb_mppel         .0663358         .0455433         .090        033366         .1760102           poll_indurs-s        031284         .1065513         -0.17         0.855        228518         .1922612           subt_poll         .0312483         .0392759         0.810         .0417        0453901         .1092712           g2inature-p         .1356187         .406555         0.38         0.701        644918         .952644           g2inature-p         .1356187         .406555 <t< td=""><td>Linear regres: Scenario 2</td><td>sion</td><td>Robust</td><td></td><td></td><td>Number of obs F(19, 264) Prob &gt; F R-squared Root MSE</td><td>2 = 284 = 2.74 = 0.0002 = 0.1584 = .86878</td></t<>	Linear regres: Scenario 2	sion	Robust			Number of obs F(19, 264) Prob > F R-squared Root MSE	2 = 284 = 2.74 = 0.0002 = 0.1584 = .86878			
qlloisir2  1540173       .0698701       -2.20       0.020      291990      0164437         qdpuit   .1069688       .129674       0.82       0.411      1489358       .5627355         freq_tap_w-r  1070642       .1060549       -1.01       0.314      3158853       .1017569         qdfacteau  222722       .1186362       -2.18       0.030      4000024      024616         pb_nappe   .085358       .0455433       1.90       0.059      0033366       .1770102         subst_poll   .0319438       .0392759       0.81       0.417      0453901       .1022777         stust_poll   .0319438       .0392759       0.81       0.417      0453901       .1022777         trop_porgace   .2650867       .5102668       -1.87       0.062      1959799       .0496217         trop_porgace   .2650407       .1626515       0.60       0.111      065561       .5873656         q25matvala-e   .1388614       .1673375       0.68       0.407      1906245       .4684313         q25matvala-e   .1388614       .1673375       0.83       0.407      1906245       .4684373         q25matvala-e   .138617       .1438255      138       0.166      0661973       .3984371 <td>Linear regress Scenario 2</td> <td>sion Coef.</td> <td>Robust Std. Err.</td> <td>t.</td> <td>P&gt; t </td> <td>Number of obs F(19, 264) Prob &gt; F squared Root MSE</td> <td><pre>284 = 2.74 = 0.0002 = 0.1584 = .86878 Interval]</pre></td>	Linear regress Scenario 2	sion Coef.	Robust Std. Err.	t.	P> t	Number of obs F(19, 264) Prob > F squared Root MSE	<pre>284 = 2.74 = 0.0002 = 0.1584 = .86878 Interval]</pre>			
q2puit           .1065668         .1299674         0.82         0.411        1489358         .362735           freq_tap_w-r          1070642         .1060549         -1.01         0.314        3158853         .10175896           q5distrpol          0033988         .1463656         -0.06         0.349        2375912         .2775369           q6distrpol          0033988         .1463656         -0.06         0.349        2375912         .2775369           gbarge         .086358         .0455433         .09         0.059        033386         .1760102           poll_pindures          0122242         .1158362         -0.17         0.865        228518         .1922612           subst_poll           .0312484         .106555         0.38         0.701        644918         .5572694           q2inture1-p           .1561757         .4068515         1.60         0.111        06539561         .5873656           q25natvalu-e           .138614         .1673375         0.83         0.407        164918         .5873656           q25natvalu-e           .1389674         .168355        083         0.407        1505245         .683473           q25natvalu-e           .	Linear regress Scenario 2	sion Coef.	Robust Std. Err.	t	P> t	Number of obs F(19, 264) Prob > F R-squared Root MSE [95% Conf.	<pre>284 = 2.74 = 0.0002 = 0.1584 = .86878 Interval]</pre>			
freq_tap_w-r      1070642       .1060549       -1.01       0.314      3158853       .107569         g5distrp01      0093968       .1463656       -0.06       0.949      2375936         g6facteau      222722       .1158362       -2.18       0.030      4008024      0246416         pb_nappe       .0863358       .0455433       1.90       0.059      033386       .176102         subst_poll_indurs      012244       .1066515      017       0.865      225518       .1922612         subst_poll       .0319438       .0392759       0.81       0.417      0453901       .1092777         situation_et       .151757       .06655       .0.38       0.701      644918       .5926867         q25natvalu-et       .138614       .1673375       0.83       0.407      1906245       .4658473         q25natvalu-et       .1388614       .1673375       0.83       0.407      10661978       .4684231         log_acpet       .2432438       .1871668       1.30       0.166      0661978       .8482371         log_ad7prf-f      2186178       .1583585      138       0.166      0661978       .8191887         log_ad7pr	Linear regress Scenario 2	sion Coef. 1540173	Robust Std. Err.	t -2.20	P> t  0.028	Number of obs F(19, 264) Prob > F R-squared Root MSE [95% Conf. 2915909	<pre>284 2.74 2.74 0.0002 0.1584 0.1584 Interval]0164437</pre>			
g5distrpol  0033988         .1463656         -0.06         0.949        2575912         .2787936           g6facteau  252722         .1158362         -2.16         0.030        4080024        0246416           pb_nappe   .0863358         .0455433         1.90         0.059        033386         .1760102           poll_indus-s  0121284         .1066515         -0.17         0.865        225518         .1922612           subst_poll   .0319438         .032759         0.81         0.417        0453901         .1022777           stuation_we   .1561757         .406655         0.38         0.701        644918         .9572694           q2inaturel-ye  550887         .5102666         -1.87         0.062         -1.959799         .0496217           two progra-c         .2634047         .1645315         1.60         0.111        0605561         .5873656           q25natvalu-e   .1389614         .1673375         0.83         0.407        1596245         .4683473           q25natvalu-e   .1389197         .114822         1.39         0.166        0661978         .3842371           log_age   .2432438         .1871688         1.30         0.195        1552918         .611794	Linear regress Scenario 2 log_tot_reg qlloisir2 q2puit	sion Coef.	Robust Std. Err. .0698701 .1299674	t -2.20 0.82	P> t  0.028 0.411	Number of obs F(19, 264) Prob > F R-squared Root MSE [95% Conf. 2915909 1489358	<pre>284 = 2.74 = 0.0002 = 0.1584 = .86878 Interval]0164437 .3628735</pre>			
q6facteau        222722         .1158362         -2.18         0.030        4808024        0224416           pb_nappe         .0863358         .0455433         1.90         0.059        0033386         .17661022           subst_poll_indus-s        0131284         .1066515         -0.17         0.865        225318         .1922612           subst_poll         .0319438         .0392759         0.81         0.417        0453901         .1092777           situation_e         1.511757         .06655         0.38         0.701        644918         .9572644           q2Inature1-p        9550667         .5102666         -1.87         0.062         -1.959799         0.496217           two_pcoracc         .2634047         .1645315         1.60         0.111        0605561         .5873656           q25natvalu-e         .1388614         .1673375         0.83         0.407        1906245         .46342371           log_age         .2432438         .1871668         1.30         0.166        0661978         .3842371           log_age         .2432438         .1871658         1.38         0.169        3302423         .091887           log_accome         .196147	Linear regress Scenario 2 log_tot_reg qlloisir2 q2putt freq tap wrr	Sion Coef. 1540173 .1069688 1070642	Robust Std. Err. .0698701 .1299674 .1060549	t -2.20 0.82 -1.01	P> t  0.028 0.411 0.314	Number of obs F(19, 264) Prob > F R-squared Root MSE [95% Conf. 2915909 1489358 3158853	<pre>284 = 2.74 = 0.0002 = 0.1584 = .86878 Interval]0164437 .3628735 .1017569</pre>			
pb_nappe         .0863358         .0455433         1.90         0.059        0033386         .1760102           poll_indus-s        0121284         .1066515         -0.17         0.855        228518         .1922412           subst_poll         .0319438         .032759         0.81         0.417        0453901         .102277           stutatione         .1561757         .406855         0.38         0.701        644918         .9572694           q2Inaturel-p        9550887         .5102668         -1.877         0.062561         .5873656           q2Snatvalu-e         .1338614         .1673375         0.63         0.407        1986245         .4683473           q2Snatvalu-e         .1338614         .1673375         0.83         0.407        1986245         .46843473           q2Snatvalu-e         .1338614         .1673375         0.83         0.407        1986245         .46843473           q2Snatvalu-e         .1338614         .1673375         0.83         0.407        1986245         .46843473           q2Snatvalu-e         .1326178         .158355        084         0.497         .3942311           log_gincome         .1965147         .134555        1.38<	Linear regress Scenario 2 log_tot_reg qlloisir2 q2puit freq_tap_w-r q5distrpol	sion Coef. 1540173 .1069688 1070642 0093988	Robust Std. Err. .0698701 .1299674 .1060549 .1463556	t -2.20 0.82 -1.01 -0.06	P> t  0.028 0.411 0.314 0.949	Number of obs F(19, 264) Prob > F R-squared Root MSE 2915909 1489358 3158853 2975912	<pre>284 2.74 2.74 0.0002 0.1584 .86878 Interval] .0164437 .3628735 .1017569 .2787936</pre>			
poll_indua-s        0191284         .1068515         -0.17         0.865        228518         .1922612           subst_poll         .0319438         .0382759         0.81         0.417        0453901         .1922777           situation_el         .151757         .406555         0.81         0.417        0453901         .1922777           g2inature1-p        9550887         .5102668        187         0.062         -1.959799         0486217           two_pcograce         .2630407         .1645315         1.60         0.111        0605561         .5873656           q25natvalu-e         .138614         .1673375         0.83         0.407        1906245         .4683473           q25natvalu-e         .1380194         .1143822         1.39         0.166        0661976         .3842311           log_age         .2432438         .1871698         1.30         0.195        1252918         .6117794           log_g27prf-f        2186177         .143555        046         0.644         .330326         .2001497           idiftutp        133453         .130267        02         .0307        3898475         .1230414           suff_info        0614315	Linear regress Soenario 2 log_tot_reg qlloisir2 q2puit freq_tap_wr q5distrpol offacteau	Coef. 1540173 .1069688 1070642 0093988 252722	Robust Std. Err. .0696701 .1299674 .1060549 .1463656 .1158362	t -2.20 0.82 -1.01 -0.06 -2.18	P> t  0.028 0.411 0.314 0.949 0.030	Number of obs F(19, 264) Prob > F R-squared Root MSZ [95% Conf. 2915909 1469355 3158853 3158853 2975912	<pre>284 2.74 2.74 0.0002 0.1584 .86878 Interval]0164437 .3628735 .1017569 .2787936</pre>			
subst poll         .0319438         .0322759         0.81         0.417        0453901         .1022777           situation -e         1.561757         .406855         0.38         0.701        644918         .9572694           q2inaturel-p        9550687         .5102668        187         0.062         -1.955799         .0496217           two prograde         .2634047         1.645315         1.60         0.111        0605561         .55372694           q25natvala-e         .1388614         .1673375         0.83         0.407        1906245         .4683473           q25natvala-e         .1389197         .1143822         1.39         0.166        0661978         .3842371           log_qage         .2432438         .1871698         1.30         0.155        1523918         .6117794           log_qincome         .1965147         .138585        148         0.165        0684224         .0931837           log_income         .193453         .1302677         -1.02         0.307        3399475         .1220414           suff_info        0614415         .1328555         -0.46         0.644        3330326         .2001497           q30asso         .408734	Linear regress Scenario 2 	Coef. 1540173 .1069688 0093988 252722 .0863325	Robust Std. Err. .0696701 .1299674 .1060549 .1463656 .1158362 .0455433	t -2.20 0.82 -1.01 -0.06 -2.18 1.90	P> t  0.028 0.411 0.314 0.949 0.030 0.059	Number of obs Number of obs F(19, 264) Prob > F R-squared Root MSE 	<pre>284 2.74 0.0002 0.1584</pre>			
<pre>situation -e   .1561757 .406855 0.38 0.701644918 .5572694 g2inature1-p   .9550887 .5102668 -1.87 0.062 -1.959799 .04696217 two_prograc   .2630407 .1645315 1.60 0.1110605561 .5873656 g25natvalu-e   .1398614 .1673375 0.83 0.4071906245 .4633473 g25natvalu-e   .1398614 .1673375 0.83 0.4071906245 .463473 g25natvalu-e   .1390197 .1143622 1.39 0.1660661978 .3842371 log_age   .2432438 .1871688 1.30 0.155152918 .611794 log_g27prf-f   .2186178 .1583585 -1.38 0.1695304243 .091887 log_infutp   .133453 .130267 -1.02 0.3073899475 .1230414 suff.inf0   .061415 .132555 -0.46 0.6443230326 .201497 g3Dasso   .408734 .1436584 2.85 0.005 .1258721 .691596oons   2.240611 1.40545 1.59 0.1125267078 5.007929</pre>	Linear regress Scenario 2 log_tot_reg qloisir2 qfpitsrp qfpitsrp qffacteau pb nappe poll indus-s	Coef. 1540173 .1069688 1070642 0093988 252722 .0863358 0181284	Robust Std. Err. 1299674 1060549 1463656 1158362 0455433 1066515	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17	P> t  0.028 0.411 0.314 0.949 0.030 0.059 0.865	Number of obs F(19, 264) Prob > F R-squared Root MSE -2915909 1489358 3158653 2975912 400024 033386 22518	<pre>2 = 284 = 2.74 = 0.0002 = 0.1584 = .86878 Interval] 0164437 .3628735 .1017569 .2787936 0246416 .1760102 .1922612</pre>			
q21naturel-p        9550887         .5102668         -1.87         0.062         -1.959799         .0446217           two_progra-c         .2634047         .1645515         1.60         0.111        0605561         .587959           q25natvaln-e         .1389614         .167375         0.83         0.407        16005561         .587959           log_apet         .2432438         .1871658         1.39         0.166        0661978         .3842371           log_apet         .2432438         .1871658         1.30         0.156        0661978         .3842371           log_aformet         .1965147         .1583585         -1.38         0.166        0684228         .6412524           diffytp        313453         .130267        026        3899475         .123414           suff_into        061415         .132655        046         0.644        333034         .201487           q30asso         .408734         .143654         2.85         0.005         .1258721         .691596           _cons         2.240611         1.40545         1.59         0.112        5267078         5.007929	Linear regress Scenario 2 log_tot_reg qlloisir2 q2puit freq_tap_w-r q5distrpol qbfactau pb_nappe poll_indu=-s subst.poll	Coef. 1540173 .1069688 070642 0093968 252722 .0863358 0181284 .0314438	Robust Std. Err. .0698701 .1299674 .1060549 .1463656 .1158362 .04555433 .1065515 .0392759	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.83	<pre>P&gt; t  0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417</pre>	Number of obs Number of obs f(19, 264) Prob > F R-squared Root MSE 	<pre>284 = 2.74 = 0.0002 = 0.1584 = .66878 Interval]0164437 .3628735 1017569 .27879360246416 .1760102 .1922612 .1922727</pre>			
two_progra-c   .2634047 .1645315 1.60 0.1110605561 .5873656 q25natvalu-e   .1386614 .1673375 0.83 0.4071906245 .4663473 q25natvalu-e   .1390197 .1143622 1.39 0.1660661978 .3842371 log_q27pf-f   .2432438 .1871688 1.30 0.1951625218 .6117794 log_q27pf-f   .2186178 .158355 -1.38 0.169530243 .0931887 log_income   .1965147 .134555 1.46 0.1450684228 .4614522 diffutp  133453 .130267 -1.02 0.3073895475 .1230414 suff_inf0  061415 .132555 -0.46 0.6463320326 .201497 q30asso   .408734 .1436584 2.85 0.005 .1225721 .691596 	Linear regress Scenario 2 log_tot_reg qloisir2 qfloisir2 qfScteau pb_nappe poll_indus-s subst_poll	Coef. 1540173 .1069683 1070642 0093988 252722 .0863358 081358 .0181358 .1561757	Robust Std. Err. 1299674 1060549 1463565 1150362 0455433 1066515 0392759	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.81	<pre>P&gt; t  0.028 0.411 0.314 0.030 0.059 0.865 0.417 0.701</pre>	Number of obs F(19, 264) Prob > F R-squared Resquared [95% Conf. 2915909 1489358 3158653 3158653 3158653 3158653 32975912 400024 0033366 229518 0453901 644918	<pre>2 = 284 = 2.74 = 0.0002 0.1584 = .86878 </pre>			
cm_programs         1.5054747         1.663375         0.633         0.4077        10803561         1.683375           q2Snatvaln-e         1.1580197         1.143822         1.39         0.166        0661978         .3842371           log_ape         2.4242438         1.8171668         1.30         0.156        1652918         .6117794           log_aforme         1.965147         1.1583585         -1.38         0.169        5304243         .818717           log_income         1.965147         1.1583585         -1.38         0.169        3304243         .818717           log_income         1.965147         1.328555         -0.46         0.64428         .4614522           diffytp        133453         .1302677         -1.02         0.307        3895475         .1201497           g30asso         .408734         .1436584         2.85         0.005         .1258721         .691596           _cons         2.240611         1.40545         1.59         0.112        5267078         5.007929  >	Linear regress Scenario 2 log_tot_reg qlloisir2 qdpuir qdpuir qdfacteau pb nappe poll_indus-s subst_pol situation_e qdlnature_	Coef. 1540173 .1069688 2070642 0093988 252722 .0863358 0181284 .0319438 .1561757 950687	Robust Std. Err. .0698701 .1299674 .1060549 .1463656 .0455433 .1068515 .0392759 .406855	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.81 0.381 0.381 0.381	P> t  0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.065	Number of obs Number of obs f(19, 264) Prob > F R-squared Root MSE 	<pre>2 = 284 = 2.74 = 0.0002 = 0.1584 = .86878 Interval] 0164437 .3628735 .1017569 .2787936 0246416 .1760102 .1922612 .1922777 .9572694 .0496217</pre>			
g25natval.me       1.1300197       1.143052       1.39       0.166      1906245       4.863473         log_age       .2432438       1.871688       1.30       0.166      0661978       .3842371         log_age       .2432438       1.871688       1.30       0.195      1252918       6117794         log_income       .1965147       .1535355      188       0.165      0664228       .4614522         difftyp      133453       .130267       -1.02       0.307      3395475       1.230414         suff_info      0614415       .132555      046       0.644      3330326       .2001497         q30asso       .408734       .1436584       2.855       0.005       .1226721       .691596         _cons       2.240611       1.40545       1.59       0.112      5267078       5.007929	Linear regress Scenario 2 log_tot_reg qloisir2 qdpuit freg_tap_v-r qSdistrpol qfGatchau pb_nappe poll_indus-s subst_poll situation_re q2Indus-res	Coef. 1540173 .1066688 1070642 0093988 252722 .0863358 0181284 .0319438 .1561757 5550867 2550867	Robust Std. Err. .0698701 .1299674 .1060549 .1463656 .0455433 .106655 .302759 .406655 .5102668	t -2.20 0.82 -1.01 -0.06 -2.19 0.017 0.81 0.38 -1.87 1.67	P> t  0.028 0.411 0.314 0.030 0.059 0.865 0.417 0.701 0.701 0.701	Number of obs F(19, 264) Prob > F R-squared Resquared [95% Conf. -291500 -1480555 -3158853 -2975912 -400024 -0033386 -228518 -035386 -228518 -0453901 -644918 -195799 -645561	= 284 = 2.74 = 0.0002 = 0.1534 = .86878 			
log_acpel         .139301         .119302         .139         0.166        0661970         .384371           log_acpel         .2432439         .1871669         .130         0.156        1052918         .6117794           log_acprf-f        2186178         .1583585        138         0.169        5304243         .991187           log_income         .1965147         .134555         .146         0.146        364228         .4614522           diffutp        133453         .130267         -1.02         0.307        3895475         .1230414           suff_into        061415         .132555        046         0.644        3230326         .2001497           q30asso         .408734         .1436584         2.85         0.005         .1258721         .691596          cons         2.240611         1.40545         1.59         0.112        5267078         5.007929	Linear regress Scenario 2 log_tot_reg dloisir2 qdpuit reg_tag.w-r qdfactsau pb_nappe poll_indus-s subst_poll siuution_e q2inature.e q2inature.e	coef. 1540173 .1069683 1070642 0093988 0093988 0181284 .0319438 .1561757 555084 254047 354047	Robust Std. Err. .0698701 .1299674 .1060549 .1463656 .0455433 .1068515 .0392759 .406855 .5102668 .1445315	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.81 0.38 -1.87 1.60 0.92	<pre>P&gt;[t] 0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.062 0.111 0.062</pre>	Number of obs Number of obs f(19, 264) Prob > F R-squared Root MSE 	= 284 = 2.74 = 0.0002 0.1534 = .86878 0164437 0164437 0164437 0164437 0164437 0164437 024616 0266 026616 0266616 026616 026616 0266616 02			
Log_q2pr: 1.252430 1.071655 1.30 0.1561525416 0.011794 log_q27pr:f  2186178 .1535355 -1.38 0.1695304243 0.0931837 log_income   .1965147 1.134555 1.46 0.1456684228 4.614522 diffwtp  133453 .130267 -1.02 0.3073899475 .1230414 suff info  0614415 .1328555 -0.46 0.6443330326 .2001497 q30asso   .408734 .1436584 2.85 0.005 .1258721 .691596 cons   2.240611 1.40545 1.59 0.1125267078 5.007929	Linear regress Scenario 2 log_tot_reg qloistr2 qQput freq_tap_w-r qSdistrpol qffacteau pb_nappe poll_indus-s subst_poll situation_e q2Inaturel-p q2Datval-e q2Datval-e q2Datval-e	Coef. 1540173 .1069688 1070642 0093988 222722 .0863358 081284 .0319438 .1561757 2550887 2550887 2550847 .2856047	Robust Std. Err. .0698701 .1299674 .1060549 .1463656 .1158362 .0455433 .1068515 .3092759 .406655 .5102668 .1645515 .1645515 .1645515	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.81 0.38 -1.87 1.60 0.83	<pre>P&gt; t  0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.062 0.111 0.407 0.162</pre>	Number of obs F(19, 264) Frob > F R-squared Resquared Root MSE 	= 284 = 2.74 = 0.0032 = 0.1584 = .66878 016437 016437 0164437 .262735 0246416 02464547 0246416			
Log_gerprint1951/7 .155355 -1.38 0.169530243 .091887 log_income   .195147 .134555 1.46 0.1450684228 .4614522 diffutp  133453 .130267 -1.02 0.3073899475 .1230414 suff_info  0614415 .132555 -0.46 0.6443230326 .201497 g30asso   .408734 .1436584 2.85 0.005 .1258721 .691596 	Linear regress Scenario 2 log_tot_reg qlloisir2 qdpuit freg_tap_w-r qdfatteau pb nappe poll_indus-s subst_poll situatione q2Inaturel-e q2Inaturel-e q2Snatvalu-e q2Snatvalu-e	1540173 .1066683 1070642 0093988 .252722 .0863358 .1561757 .2528087 .2528087 .2534047 .1386614 .1590197	Robust Std. Err. .0690701 .1299674 .1060549 .1463656 .0455433 .1068515 .0392759 .406855 .5102668 .167375 .147375 .143822		P> t  0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.701 0.701 0.701 0.701 0.701 0.701 0.701 0.701 0.701	Number of obs Number of obs f(19, 264) Prob > F R-squared Root MSZ .2915909 .1489355 .2975912 .400024 .0033386 .22518 .0453901 .644918 .195799 .0605561 .195799 .0605561 .1906245 .190625 .190625 .190625 .190625 .190625 .190625 .1906	= 234 = 2.74 = 0.0002 = 0.1534 = .86878 0164437 .3628735 .1017569 .2787936 024616 .10282735 .101757936 .2787936 .2787936 .2482431 .0496217 .5873656 .4683473 .3842311			
log_income         .195147         .124555         1.46         0.145        0684228         .46414522           diffutpl        133453         .130267        02         0.30775         .1230414           suff_info        0614415         .1326555         -0.46         0.644        3330326         .2001497           g30asso         .408734         .1436584         2.85         0.005         .1256721         .681596	Linear regress Scenario 2 log_tot_reg dloisir2 q2puit freq_tap_wor g6disterol g6facteau pb_nappe poll_indus-s subst_poll situation_re q2inatumel-p q25natval-e q25natval-e q25natval-e	Coef. 1540173 .1065688 1070642 0093988 252722 .0063358 081284 .0319438 .1561757 .2536047 .1385614 .1590197 .2432438	Robust Std. Err. .0698701 .1299674 .1060549 .1463656 .1150362 .0455433 .1068515 .302668 .1645315 .1645315 .1645315 .143822 .1143822	t -2.20 0.82 -1.01 -0.06 -2.10 1.90 -0.17 0.81 0.38 -1.87 1.60 0.83 1.39 1.30	<pre>P&gt; t  0.028 0.411 0.314 0.949 0.030 0.059 0.417 0.701 0.665 0.417 0.701 0.666 0.111 0.407 0.166 0.195</pre>	Number of obs F(19, 264) Frob > F R-squared Resquared Root MSZ 	= 284 = 2.74 = 0.002 0.1884 = .86878 -01.6437 .3622735 .1017569 .278796 .0246416 .1760102 .1922612 .1922612 .1922612 .5873656 .4633473 .3842371 .8873565			
airitp133453 .139267 -1.02 0.3073895475 .1230414 suff ind0614415 .132855 -0.46 0.6443230326 .201497 g30asso   .408734 .1436584 2.85 0.005 .1258721 .691596 	Linear regress Scenario 2 log_tot_reg qloisir2 glpit freg_tap_w-r qsdistrpol situatione q2inaturel-p two_progra-c q2Snatualu-e q2Snatualu-e log ag7prf-f	1540173 .1069683 .1070642 .0093988 .252722 .0863358 .1561757 .253087 .253087 .253087 .253087 .253087 .1386614 .1590197 .2432438 .2284278	Robust Std. Err. .0698701 .1269674 .1060549 .1463656 .0455433 .1068515 .3092759 .406855 .5102668 .167375 .1143822 .1871698 .183385	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.81 0.81 0.83 -1.87 1.60 0.83 1.39 1.39 -1.38	<pre>P&gt; t  0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.062 0.111 0.407 0.166 0.195 0.169</pre>	Number of obs Number of obs F(19, 264) Prob > F R-squared Root MSE 	= 234 = 2.74 = 0.0002 = 0.1554 = .6878 0164437 .362735 .1017559 .2787936 0246416 .192612 .1922777 .8572656 .4633473 .3842371 .6463247			
sull_lnro  0614415         .1328555         -0.46         0.644        3230326         .201497           g3Dasso   .408734         .1436584         2.85         0.005         .12258721         .691596           _cons   2.240611         1.40545         1.59         0.112        5267078         5.007929	Linear regress Scenario 2 log_tot_reg qloisir2 q2puit freq_tap_wer poll_indus-s subst_poll situatione q2Inaturel-p q2Enatval-e q2Enatval-e log_ag2Tptf-f log_dapref.	Coef. 1540173 .1069688 0093968 252722 .0063356 0181284 .0319438 .1561757 .2534047 .138614 .1590197 .2434438 .243438	Robust Std. Err. .1299674 .1660549 .1463556 .1150362 .0455433 .1066515 .1066515 .1066515 .1066515 .102668 .1645515 .1143822 .1143822 .1143822 .134555 .134555	t -2.20 0.82 -1.01 -0.06 -2.18 0.82 -0.17 0.17 0.83 -1.87 1.60 0.83 1.30 -1.38 -1.30 -1.30 -1.46	<pre>P&gt; t  0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.062 0.111 0.062 0.125 0.166 0.195 0.165</pre>	Number of obs F(19, 264) Prob > F R-squared Root MSZ [95% Conf. -2915909 -1489358 -3158853 -2975912 -4600024 -0033366 -225518 -0453901 -644918 -0655561 -1905245 -0661978 -15304243 -5304245 -0884228	= 284 = 2.74 = 0.0002 = 0.1584 = .66878 0164437 .3628785 0164437 .3628785 0246416 1760102 .1922612 .192612 .1926612 .1926612 .1926612 .1926612 .1926			
guasso   .408734 .1436584 2.85 0.000 .1258721 .651596 	Linear regress Scenario 2 log_tot_reg dlloisir2 q2puit freq_tap_w-r q5distppol q6facteau pb_nappe poll_indus-s subst_poll situation_re q2inaturel-p two_progra-c q2snatualu-e q2snatualu-e q2snatualu-e log_age log_q2prf.e log_incose	Coef. 1540173 .1069683 1070642 0093988 .0863358 .081284 .0319438 .1561757 .2634047 .1338614 .1590197 .243438 2186178 .286147 133453	Robust Std. Err. .0690701 .1299674 .1060549 .1463556 .0455433 .1066515 .0392759 .406855 .5102660 .1673375 .1143822 .1871698 .134555 .130267		<pre>P&gt; t  0.028 0.411 0.314 0.949 0.030 0.059 0.417 0.701 0.701 0.1062 0.116 0.195 0.169 0.145</pre>	Number of obs Number of obs Fr [19, 264] Prob > F R-squared Root MSE [95% Conf. 2915909 1489358 3158653 2975912 400024 0033386 225518 0453901 644918 1959799 0605561 1906245 19065 1906	= 234 = 2.74 = 0.0022 = 0.1554 = .66878 Interval] 0164437 0164437 0164437 0246416 102767936 0246416 02464437 0246444 0246444 02464444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 0246444 024644444444444444444444444444444444444			
cons   2.240611 1.40545 1.59 0.1125267078 5.007929	Linear regress Scenario 2 log_tot_reg qloisir2 qdpuit freq_tap_wr-r qdfactsau pb_nappe poll_indus-s subst_poll situatione q2factvalu-e q2factvalu-e q2factvalu-e q2factvalu-e log_ap2rf-f log_income diffwip suff_info	Coef. -1540173 1069668 -1070642 -0093968 -252722 0063358 -0181284 0319438 -156175 -2550807 -2550807 -2550807 -2432438 -2186147 -1386614 -1396147 -0614415	Robust Std. Err. .0690701 .1299674 .1660549 .1463556 .1066515 .0392759 .406655 .5102668 .1645315 .1645315 .1645315 .1143822 .1143822 .134555 .130267 .1326555	t -2.20 0.82 -1.01 -0.06 -2.18 0.82 -1.90 -0.17 0.81 0.38 -1.87 1.60 0.83 1.39 1.30 -1.38 -1.38 -1.60 0.46 -2.00 0.46	<pre>P&gt;1t1 0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.062 0.111 0.166 0.195 0.169 0.145 0.307</pre>	Number of obs Number of obs f(19, 264) Prob > F R-squared Root MSE 	= 284 = 2.74 = 0.0002 = 0.1584 = .68878 = .01584 = .68878 = .0164437 .3628785 0246416 1760102 .1922612 .192612 .1926612 .1926612 .1926612 .1926612 .1926			
	Linear regress Scenario 2 log_tot_reg dloisir2 q2puit freq_tap.w-r q5distrpol q6facteau pb_nappe poll_indus-s subst_poll situatione q2fantvalu-e q2fantvalu-e log_age log_q27prf.f log_income aiffutp suff_info q30aaso	Coef. 1540173 .1069683 0070642 0093988 252722 .0863358 081284 .0319438 .1561757 9550807 .2634047 .1338614 .1590197 .2432438 2186178 .2186178 .2186147 .1338614 .1966147 0134415 .0614415 .06	Robust Std. Err. .0698701 .1299674 .1060549 .1463656 .0455433 .1066515 .0392759 .406655 .5102668 .1673375 .1143822 .1871698 .1583585 .134555 .1326555 .1436584	-2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.81 0.88 -1.87 1.60 0.83 1.39 1.39 1.39 1.39 1.39 1.39 1.39 2.85	<pre>P&gt; t  0.028 0.411 0.314 0.949 0.030 0.059 0.865 0.417 0.701 0.062 0.115 0.169 0.145 0.169 0.145</pre>	Number of obs F(19, 264) Prob > F R-squared Resquared Root MSE [95% Conf. -2915905 -1489355 -3158655 -3158655 -3158655 -3275912 -400024 -0033366 -228518 -0033365 -2297591 -644918 -065561 -1959799 -0605561 -1959799 -075979 -0759	= 234 = 2.74 = 0.0029 0.1584 = .66878 -01.64437 .3628783 -0164437 .36287836 -0246416 .1017569 .2767936 -0246416 .1922612 .19265612 .1926612 .1926612 .1926612 .192661			
	Linear regress Scenario 2 log_tot_reg qloisir2 qdpuis freq_tap_v-r qdfactsau pb nappe poll_indus-s subt_poll situatione qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatauuel-op qloatau-op qloata		Robust Std. Err. .0690701 .1299674 .1060549 .1463656 .0455433 .1068515 .0392759 .406855 .5102660 .1645315 .167375 .1143822 .183585 .134555 .130267 .134555 .1302674 .124555	t -2.20 0.82 -1.01 -0.06 -2.18 1.90 -0.17 0.31 0.38 1.39 1.30 -1.38 1.46 0.83 1.39 1.30 -1.38 1.46 2.85 1.59	<pre>P&gt; t  0.028 0.411 0.314 0.949 0.059 0.865 0.417 0.701 0.062 0.111 0.066 0.185 0.169 0.145 0.169 0.145 0.145 0.644 0.002</pre>	Number of obs Number of obs f(19, 264) Prob > F R-squared Root MSE .2915909 .1489358 .3158853 .2975912 .400024 .0033386 .228518 .0433901 .644918 .0635901 .1959799 .0605561 .1959799 .060545 .1906245 .30684228 .330326 .300624	= 234 = 2.74 = 0.0002 0.1534 = .86878 0164437 .3628735 1017569 0246416 0246416 0246416 0246416 0246416 0246416 024971 .8973656 4635473 .842371 .6117794 .0951887 .46314522 123014452 .212301457 .691586 5.007929			

Rows in red show variables significant with a 1% confidence; in green at 5%; in blue at 10%.

Figure 4: Results of the OLS regression for scenarios 1 and 2

The predicted WTP range between 19.6 and 29.7  $\in$  2007 per household for the first scenario and between 35 and 50.8  $\in$  2007 per household for the second scenario according to the regression model used and the inclusion of protest answers or not (Figure 5).

Estimated mean WTP (€2007)	OLS regression	Tobit with protests	Tobit without protest
Scenario 1	29,7€	19,6€	20,7€
Scenario 2	50,8€	35,7€	35,0€

Figure 5: Predicted WTP according to the models

#### 4.3 Aggregation

Finally, the total benefits of the Upper Rhine Valley aquifer are estimated after a sample bias correction. The average WTP per socio-professional categories are reported and extrapolate to the Alsatian population according to its regional socio-professional distribution [1]. Thus, the total benefits of groundwater protection is estimated at 31.3 million  $\in$  2007 per year for 10 years for the scenario 1 (drinking quality level) and 49.3 million  $\notin$  2007 per year for 10 years for scenario 2 (natural water quality level).

# 5 Conclusion

The results of the survey highlight that the population is concerned by groundwater protection. The average stated WTP amounts was estimated at  $42.6 \in 2007$  per households and per year for 10 years for restoring drinking water quality and  $77 \in 2007$  per year for 10 years for restoring natural. There is no statistical difference between WTP amounts declared by households living above the aquifer (and using it for water supply) and others living outside the aquifer. This suggests that groundwater option value and non-use value are significant. The methodology implemented however did not allow assessing separately direct use value, option value and non-use values. The study also reveals that the population is very sensitive to the implementation of the polluter pays principle. Many respondents have refused to contribute to the scenarios, arguing that polluters (industries) should pay. Similar attitudes would probably be encountered for all pollution issues where pollution damage cost can be attributed to legal entities - theoretically liable to pay for remediation costs.

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