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Participatory Value Evaluation: an innovative method to measure citizens' preferences



PVE designed as viable alternative for/next to CBA

- 1. Cost-Benefit Analysis dominant method for evaluation public policies;
- 2. Societal value of a government policy derived from number of euros that individuals are willing to pay from their **private income** for the impacts;
- 3. Longstanding criticism 'private willingness to pay' approach:
 - Philosophy (Kelman, Sagoff, Ackerman and Heinzerling);
 - Economics (Solow, Sunstein; Sen);
 - Psychology/behavioral economics (Thaler, Kahneman).

Consumer-citizen duality:

"Individuals' private WTP may not reflect how they want public policies to change."



What explains the consumer-citizen duality?











































Save Nature & Save Planet Earth For our Children









Route choice experiment (consumer/car driver choice)

- We ask you to choose one of the two routes;
- Both 2x2-lane motorways;
- 80,000 trips per day (29 million trips per year);
- Costs are equal.

	Route A	Route B
Travel time	40 minutes	30 minutes
Number of traffic deaths on the road	2 per year	4 per year



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% Respondents	40%	60%



Government choice experiment (citizen choice)

- The government decided to build a new road
- The government still needs to decide about the route of the new road.
- Government asks you whether you would recommend Route A or B
- Both 2x2-lane motorways
- 80,000 trips per day (29 million trips per year)
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% Respondents	80%	20%



- Mouter, van Cranenburgh, van Wee, 2017. *Do individuals have different* preferences as consumer and citizen? The trade-off between travel time and safety. Transportation Research Part A.
- **Conclusion:** trade-offs individuals make between safety and travel time differ in a **car driver** context (**consumer** of mobility) and a **citizen** context.
- Using **car driver preferences** or **citizen preferences** big influence on results of welfare analysis of government projects:
 - Citizen: 15 min travel time savings for 80,000 trips per day < prevention of 1 traffic death per year;
 - Car driver: 3 minutes travel time savings for 80,000 trips per day > prevention of 1 traffic death per year;
 - Car driver (current Dutch values): 45 sec travel time savings for 80,000 trips per day > prevention of 1 traffic death per year;



What is Participatory Value Evaluation?

 Evaluation method which assesses the preferences for government policy options through mass participation of citizens

The essence of a PVE

- 1. Citizens are put in the shoes of a policy maker in an online environment;
- 2. Citizens see the choice options including pros/cons/impacts of choice options;
- 3. Citizens see the constraints that a government faces;
- 4. Citizens are asked to provide a recommendation;
- 5. Citizens are asked to explain their recommendations.

https://www.youtube.com/watch?v=1D_g_HTnS50



PVE for lifting corona measures

- **Choice situation:** Should the government relax corona measures between May 20 and July 20? And if so, which measures should be relaxed;
- Choice options: 8 relaxation measures (policy options);
- **Impacts:** increase deaths and lasting physical injuries; decrease lasting mental injuries and loss of income;
- **Constraint:** pressure on health system cannot increase with more than 50%.
- Explanation for each relaxation measure they recommended
- Which relaxation measures should **not** be considered?



Raadpleging versoepeling corona maatregelen Maximale druk op zorgsysteem: 50% ② HELP → VERGELIJKEN → SELECTIE OVERZICHT Extra druk op zorg: Extra druk Versoepeling Vergelijken Selectie INFO Bedrijven gaan weer open (horeca en contactberoepen zoals kappers blijven nog wel gesloten) 8% **INFO** Jongeren hoeven onderling geen 1,5 Jongeren hoeven onderling geen 1,5 meter afstand te bewaren 8% 8 meter afstand te bewaren In Friesland, Groningen en Drenthe worden beperkingen opgeheven 20% NFO 15% Horeca en entertainment gaan weer open 10% Directe familieleden hoeven geen 1,5 meter afstand te bewaren Verzorgingstehuizen staan bezoek toe 10% INFO Voor mensen die immuun zijn worden alle beperkingen opgeheven 15% Werknemers in contactberoepen (o.a. kapper) mogen weer werken 8%

Results



Re-open contact professions



Re-open businesses (other than contact professions and hospitality industry)



Direct family members from other households can have social contact



Young people may come together in small groups



Nursing and care homes allow visitors



Re-open hospitality and entertainment industry



All restrictions lifted for people with immunity



All restrictions lifted in Northern provinces





MDCEV model:

Assumptions:

- Assumes that individuals select portfolio with highest utility
- Attractiveness of a policy option defined by attributes and other properties
- Individuals can derive utility from the public resources that are not allocated (in this case, advise against allocating full capacity health system)
- Using the output of choice model we predict most desired portfolio

• Main differences with labelled DCE

- Participants in a DCE express preferences through selecting a *single policy* option. In a PVE, participants select a *bundle of policy options*
- In a PVE, participants express preferences towards the extent to which a scarce public resource should be allocated.





COEFFICIENTS

1: Nursing and care homes allow visitors	2.6867***
2: Businesses open again (except Horeca & contact-jobs)	2.6451***
3. Employees in contact professions go back to work	(0.0202)
o. Employees in contact professions go back to work	(0.0233)
4: Young people may come together in groups	1.8825***
5. All restrictions are lifted for people who are immune	(0.0130)
o. All restrictions are inted for people who are initialle	(0.0193)
6: Restrictions lifted in Friesland, Groningen and Drenthe	1.5954***
	(0.0301)
7: Social contact between family members is allowed again	2.4893***
	(0.0273)
8: Horeca and entertainment open again	2.7346***
	(0.0327)

ATTRIBUTE EFFECTS

Additional 10.000 deaths of people of +70 years	-0.4130***
Additional 10.000 deaths of people of less than 70 years	-0.9286***
Additional 10.000 people with permanent physical injury	(0.1448) -0.1033*** (0.0162)
Minus 10.000 people with permanent mental injury	0.0023
Minus 10.000 households that have lost 15% of income	(0.0038) 0.0094*** (0.0024)
Observations Log-likelihood AIC BIC	26293 -127928.8122 255831.6245 255725.3227



Results

	Average	Pessimistic	Optimistic
1: Nursing and care homes allow visitors			Х
2: Re-open businesses (other than contact professions and hospitality industry)	х		Х
3: Re-open contact professions	х	Х	Х
4: Young people may come together in groups			Х
5: All restrictions lifted for people with immunity			
6: All restrictions lifted in Northern provinces			
7: Direct family members from other households can have social contact	х		х
8: Re-open hospitality and entertainment industry			
Added pressure onto the healthcare system	32%	15%	34%



Qualitative results

Table 6: Nursing and care homes allow visitors: arguments for, arguments against and conditions

	# respondents out of the quotes of 600 respondents analysed in the second round
Arguments for	
The risk of catching the coronavirus does not outweigh the risk of loneliness or dying alone	77
Elderly people in nursing and care homes are very much in need of visitors and social contacts	73
Being able to decide about whether or not family can visit is a fundamental right that should not be violated	17
Not being allowed to visit is also traumatic for family members	13
Lifting this measure is advantageous for healthcare personnel, because it enables extra care from visitors and creates a better atmosphere	12
These people are generally not hospitalised so it does not put that much pressure on ICU	1
Arguments against	
Allowing visits leads to more infections	58
Vulnerable people should be shielded from the rest of society to ensure that the rest of the country can go back to normal	10
This also endangers the health of others, not just residents	7
Relaxing measures that are good for the economy should be prioritised	3



Qualitative results

Table 10: All restrictions lifted in the Northern provinces: arguments for, arguments against and conditions

	# respondents out of the quotes of 600 respondents analysed in the second round
Arguments for	
Low risk of transmission in these provinces. The impact of relaxation measures can be monitored relatively easily	15
Impact of relaxing lockdown measures can be monitored and this provides useful information for future decisions on relaxing lockdown measures	9
Boosts the economy in the North of the Netherlands	7
Arguments against	
Practically unfeasible because this is almost impossible to enforce. People will go to the North	
for entertainment and bring infections to these provinces	122
Solidarity will be undermined and this will not benefit the Netherlands as a whole	113

'Unity' and not 'diversity'

Little support for relaxation options that remove restrictions for specific groups

"We must rise from this crisis together. It's not wise to create divisions."

"There should be no difference between people. We live in one country and all have to follow the same rules. We are all Dutch and that means equal treatment".

"We are a country of 17 million people, who should be treated equally. We fight for equality and against racism so you should not make a distinction between people that live in different parts of the country."



Perceived strenghts

Table 14: number of times that perceived strengths of the PVE method were cited

Perceived strength	# respondents out of the quotes of 600 respondents analysed in the second round
The survey was very clear (clear instruction video and background information)	88
Substantive rationale for participation	
This is an informed advice to the government based on insights regarding the consequences of your advice	76
Provides lot's opportunities to explain my advises and to add nuances	49
The constraint forces participants to make a choice (not possible to just choose everything)	10
The government gets an impression of citizens' preferences regarding this topic	4
Normative rationale for participation	
Positive that the government consults its citizens	52
I had the feeling that my opinion counted	4
Positive that the consultation was accessible for all citizens.	2
Allowed me to provide a contribution to fighting the COVID-19 crisis	1
Instrumental rationale for participation	
Raised my awareness regarding (consequences of) relaxation options	77
Improves transparency regarding the dilemmas the government faces	34
Encourages me to reflect on my own opinions	7
Improves understanding and support for final decisions on relaxation of lockdown measures	5



How much weight has to be given on advice of citizens and of scientists in decisions to relax corona measures?





More information

www.tudelft.nl/covidexit

www.tudelft.nl/pve

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Working paper COVID-19 PVE

https://www.medrxiv.org/content/10.1101/2020.11.09.20228718v1

