

## MULTI COUNTRY PILOT STUDY

Introduction and DC

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## Overall goal

- Develop a standardized valuation protocol and software tool for valuation of EQ-5D-5L, that can be used for all EQ-5D-5L valuation studies.

## Overall Design

- 4 core countries ([This presentation](#))  
Canada, Netherlands, UK, US, Canada
- 4 additional countries for specific methodological issues  
Argentina, China, Singapore, Spain
- N = 400 for each country (total ~ 1600 respondents).
- Respondents: sample from the general population.
- Fully web-based survey.

## Fully web-based

- All valuation tasks (DC, VAS, TTO) fully interactive.
- No interviewer assistance (except UK for TTO).
- All valuations tasks explained by pop-up boxes and animations.
- Data storage at one central server.

## Design 4 Core Countries

- Three different valuation methods  
Discrete Choice modeling (DC)  
Visual Analogue Scale (VAS)  
Lead time Time-Trade Off (lead time TTO)
- Number of health states:  
DC = 400 (200 pairs)  
VAS = 400  
lead time TTO = 100.
- Each of these valuation methods 80 observations for each health state.

## This provides enough data to

- Estimate + test a variety of DC + TTO models.
- Optimize the experimental design.
- Test DC assumptions based on VAS data.
- Compare info from DC and TTO.
- But also: to see if there are significant differences between these 4 countries.

## Discrete Choice Task

Which is better, state A or state B?

- severe problems in walking about
- moderate problems washing or dressing myself
- unable to do my usual activities
- moderate pain or discomfort
- severely anxious or depressed

A

- moderate problems in walking about
- slight problems washing or dressing myself
- no problems with performing my usual activities
- slight pain or discomfort
- extremely anxious or depressed

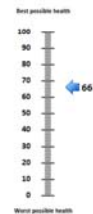
B

## The flying VAS

You have selected health state A as the better health state.  
Please click on the scale to indicate how you would rate state A.

State A

- severe problems in walking about
- severe problems washing or dressing myself
- unable to do my usual activities
- no pain or discomfort
- severely anxious or depressed



**EQ-5D**

## VAS animation

For all valuation tasks

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**EQ-5D**

## DC Parameter estimates

| 20 parameter model       | All countries |           | Canada   |           | NL       |           | UK       |           | US       |           |
|--------------------------|---------------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|
|                          | Estimate      | Std. err. | Estimate | Std. err. | Estimate | Std. err. | Estimate | Std. err. | Estimate | Std. err. |
| mobility 2               | 0.3997        | 0.03      | 0.388    | 0.07      | 0.3256   | 0.08      | 0.4112   | 0.08      | 0.3600   | 0.07      |
| mobility 3               | 0.5034        | 0.03      | 0.4501   | 0.08      | 0.3169   | 0.09      | 0.4577   | 0.10      | 0.5355   | 0.09      |
| mobility 4               | 1.1978        | 0.03      | 1.0943   | 0.08      | 1.1462   | 0.09      | 1.1246   | 0.09      | 1.1039   | 0.09      |
| mobility 5               | 1.7333        | 0.03      | 1.5727   | 0.09      | 1.2856   | 0.10      | 1.7683   | 0.11      | 2.0034   | 0.10      |
| self care 2              | 0.2934        | 0.03      | 0.3674   | 0.07      | 0.2664   | 0.08      | 0.3799   | 0.09      | 0.1781   | 0.08      |
| self care 3              | 0.3699        | 0.03      | 0.4109   | 0.08      | 0.3138   | 0.10      | 0.4031   | 0.09      | 0.3005   | 0.09      |
| self care 4              | 0.9778        | 0.03      | 1.0407   | 0.08      | 0.9378   | 0.09      | 1.1260   | 0.10      | 0.8025   | 0.09      |
| self care 5              | 1.1737        | 0.03      | 1.2009   | 0.08      | 1.3169   | 0.09      | 1.1589   | 0.09      | 1.2614   | 0.09      |
| usual activities 2       | 0.2789        | 0.03      | 0.2943   | 0.07      | -0.0716  | 0.08      | 0.4367   | 0.08      | 0.2291   | 0.08      |
| usual activities 3       | 0.3721        | 0.03      | 0.3996   | 0.08      | 0.1592   | 0.09      | 0.5163   | 0.09      | 0.2103   | 0.09      |
| usual activities 4       | 0.8747        | 0.03      | 0.9512   | 0.08      | 0.9565   | 0.09      | 1.1030   | 0.09      | 0.7853   | 0.09      |
| usual activities 5       | 1.1293        | 0.03      | 1.2675   | 0.08      | 1.1553   | 0.10      | 1.3296   | 0.10      | 1.1652   | 0.09      |
| pain and discomfort 2    | 0.2413        | 0.03      | 0.2069   | 0.07      | 0.4267   | 0.09      | 0.3262   | 0.09      | 0.2700   | 0.08      |
| pain and discomfort 3    | 0.2572        | 0.03      | 0.2599   | 0.08      | 0.3344   | 0.09      | 0.4487   | 0.09      | 0.2069   | 0.09      |
| pain and discomfort 4    | 1.0512        | 0.03      | 1.0396   | 0.08      | 1.4258   | 0.10      | 1.5837   | 0.10      | 1.1852   | 0.09      |
| pain and discomfort 5    | 1.3100        | 0.03      | 1.2552   | 0.08      | 1.8875   | 0.10      | 1.9807   | 0.11      | 1.3210   | 0.09      |
| anxiety and depression 2 | 0.2797        | 0.03      | 0.2298   | 0.07      | 0.1892   | 0.08      | 0.4758   | 0.09      | 0.2857   | 0.08      |
| anxiety and depression 3 | 0.5113        | 0.03      | 0.5500   | 0.07      | 0.4942   | 0.09      | 0.7269   | 0.09      | 0.5929   | 0.09      |
| anxiety and depression 4 | 1.1380        | 0.03      | 1.3430   | 0.08      | 1.5130   | 0.10      | 1.9669   | 0.11      | 1.3179   | 0.09      |
| anxiety and depression 5 | 1.4125        | 0.03      | 1.5697   | 0.08      | 1.9887   | 0.11      | 2.2077   | 0.11      | 1.4708   | 0.09      |
| highest                  | mob 5         |           | mob 5    |           | a&d 5    |           | a&d 5    |           | mob 5    |           |

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**EQ-5D**

## Discrete Choice Model

UK vs. Netherlands (3125 predicted states)

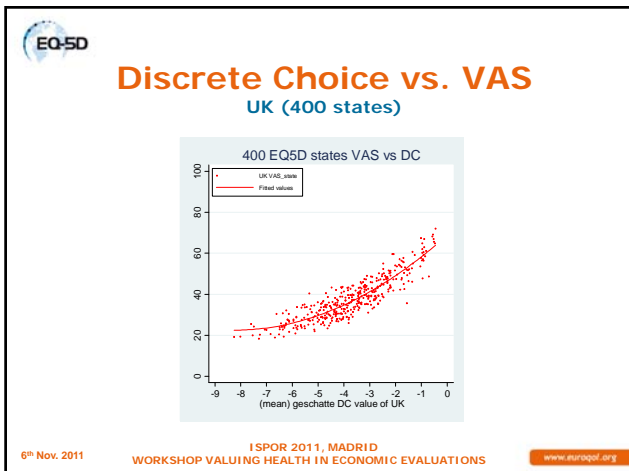
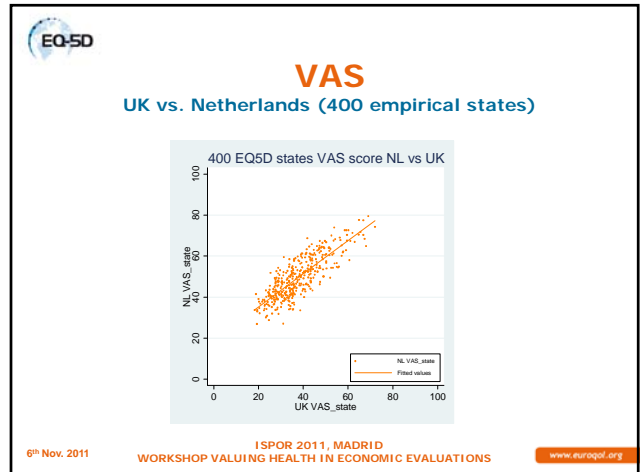
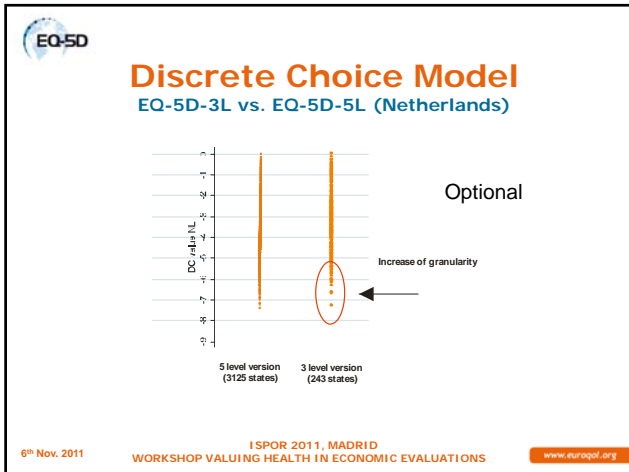
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**EQ-5D**

## Discrete Choice Model

UK vs. US, Netherlands, Canada (3125 predicted states)

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- EQ-5D**
- ## Conclusions
- Results based on the discrete choice (DC) model are surprisingly consistent between the 4 countries.
  - Estimated parameters of the DC model are overly consistent and logical.
  - There is a clear (non-linear) relationship between DC derived values and VAS values.
  - Collecting DC data as done in this study (web-based, sample of the general population, no interviewer assistance) seems feasible.
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