International variation in health care consumption in 16 European countries:
National and individual drivers in the case of mild medical conditions.

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Healthcare Preference:
*Will I see a doctor or not?*
International spending on healthcare:
Why studying healthcare preferences?

• Large difference in spending, from 5% in Estonia, to 17% of GDP in USA (OECD)
• Important part of healthcare is non-urgent
• Is such large spending good or bad?
• Thus, should you encourage or discourage healthcare seeking?
• Going too much, or going too little?
• Do people prefer a doctor for their health problems, or someone else?
• Can we influence this?
• What are drivers of this preference?
Why studying healthcare preferences?
Attitudes influencing healthcare preferences: trust

- Healthcare services are perceived as high risk products, with strong credence aspects.
- As healthcare is a largely relational service; trust is essential for co-operation and production of healthcare services.
- Better results when trust is high (e.g. placebo-effect)
- Trust will be an important predictor of healthcare behavior (Gilson, 2003, Morgan & Hunt, 1994; Hall et al, 2001; 2002; Mechanic 1998)
Healthcare preferences: Schwartz Human Values (Schwartz 1992)

Conforming to others, valuing personal security and traditions, not prone to doing things independently or seeking adventure

More inclined to ones own interest instead of the welfare of others, seeking power over others
Healthcare preferences:
Societal Tightness Looseness: (Gelfand et al 2011)
Tightness Looseness

• Freedom of behavior depending on the situation:
  – Strong versus weak situations
  – In tight societies; much more situations seen as strong
  – You should comply to social norms in strong situations
  – In a permissive society there is a higher tolerance to deviant behavior.
  – Tightness here is not an individual feeling, but the societal pressure.
Country level drivers of healthcare preferences: tightness versus looseness

• Amount of freedom to deviate from dominant culture is an influential factor for healthcare behavior
  – Both healthcare and societal tightness are associated with risk.
  – not captured by cultural values frameworks of Hofstede, Inglehart or Schwartz: it is not about “guiding principals”

• Social Tightness develops by circumstances
  – Leads to higher prevention focus and self regulation in individuals
  – Prevention focus will likely lead to higher preference for visiting a doctor (e.g. “better safe then sorry”)
Tightness Looseness scores: Gelfand et al. (2011)
Model:

Country level predictors:
- Trust in Medical Doctor
- Conservation
- Openness-to-change
- Self-enhancement
- Self-transcendence

Country level control variables:
- Insurance system
- Physician density
- GDP PC

Tightness/Looseness

Preference for professional medical help

Individual level control variables:
- Age (plus squared)
- Education
- Health impairment
- Gender
- Children <12
- Perceived state of healthcare
- Perceived personal health
- Interpersonal trust
- Organizational trust
Methodology (1/3)

• European Social Survey 2004 (ESS)
  – Bi-annual survey
  – Core Questionnaire plus Rotating Modules

• In total 23,312 respondents from 16 countries:
  – Austria, Belgium, Germany, Estonia, Spain, France, United Kingdom, Greece, Hungary, Iceland, Netherlands, Norway, Poland, Portugal, Turkey and Ukraine.
Methodology (2/3)

• Measures:
  – Preference for Professional Medical Help (4 items)
  – Trust in doctor (3 items)
  – Interpersonal trust (3 items)
  – Institutional trust (7 items)
  – Number of years of education
  – Subjective health
  – Perceived state of healthcare:
  – Children <12 in household
  – Health Impairment
Methodology (3/3)

• Schwartz Human Values
  – Portrait Values Questionnaire (2001; specifically developed for the ESS), 21 items, 6 point scale
  – “this person is very much---not at all like me”

• Tightness Looseness
  – Scores taken from Gelfand et al. (2011, in *Science*)

• Control variables:
  – GDP PC: Eurostat (2014)
  – Physicians per 1000: OECD (2014)
  – Insurance systems: KPMG (2014)
## Results HLM: individual control variables

<table>
<thead>
<tr>
<th>Control variables</th>
<th>estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age centered</td>
<td>0.011**</td>
</tr>
<tr>
<td>Age centered and squared</td>
<td>-0.0001 **</td>
</tr>
<tr>
<td>Education in years centered</td>
<td>-0.012**</td>
</tr>
<tr>
<td>Health impaired</td>
<td>0.047*</td>
</tr>
<tr>
<td>Gender (Male = 1, Female = 0)</td>
<td>-0.124**</td>
</tr>
<tr>
<td>Children under 12 in household</td>
<td>0.025*</td>
</tr>
<tr>
<td>Perceived state of healthcare</td>
<td>-0.003</td>
</tr>
<tr>
<td>Self-perceived health</td>
<td>-0.050**</td>
</tr>
<tr>
<td>Interpersonal trust</td>
<td>-0.020**</td>
</tr>
<tr>
<td>Institutional trust</td>
<td>0.027**</td>
</tr>
</tbody>
</table>
# Results HLM: Trust and Human Values

<table>
<thead>
<tr>
<th>Variable</th>
<th>estimate</th>
</tr>
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<tbody>
<tr>
<td>Trust in medical doctor</td>
<td>0.062**</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Personal values</th>
<th>estimates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Enhancement</td>
<td>0.036</td>
</tr>
<tr>
<td>Self-transcendence</td>
<td>-0.069 **</td>
</tr>
<tr>
<td>Conservation</td>
<td>0.103**</td>
</tr>
<tr>
<td>Openness-to-change</td>
<td>-0.084**</td>
</tr>
</tbody>
</table>
## Results HLM: Country level

<table>
<thead>
<tr>
<th>Country level</th>
<th>estimates</th>
</tr>
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<tbody>
<tr>
<td>Tightness Looseness</td>
<td>0.131**</td>
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<thead>
<tr>
<th>Robustness Checks</th>
<th>estimates</th>
</tr>
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<tbody>
<tr>
<td>GDP Per Capita 2004</td>
<td>0.000 n.s.</td>
</tr>
<tr>
<td>Physician density</td>
<td>-0.028 n.s.</td>
</tr>
<tr>
<td>Private/mixed/public insurance</td>
<td>0.123 n.s.</td>
</tr>
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</table>
Tightness of Society and Choice of Professional Medical Help in Case of Mild Medical Conditions

Number of times professional help is preferred (max = 4)

Tightness - Looseness (high score indicates a tight society)

Countries included: Greece, Spain, France, Portugal, United Kingdom, Turkey, Norway, Austria, Germany, Poland, Netherlands, Belgium, Estonia, Hungary, Ukraine.
Conclusions

• Trust in doctor has a positive influence on preference for professional medical help.

• Both personal values and societal tightness explain preference for professional medical help.
  – Conservation has a positive effect. ✔
  – Openness to change has a negative effect. ✔
  – Self enhancement has a positive effect ✗
  – Self transcendence also has a negative effect. ✔
  – Societal tightness, not looseness increases preference ✔ for medical help.
### Additional Analyses

- **Cross level interactions**

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<tr>
<td>Conservation * Tightness</td>
<td>0.108**</td>
</tr>
<tr>
<td>Openness-to-change * Tightness</td>
<td>0.001</td>
</tr>
<tr>
<td>Self transcendence* Tightness</td>
<td>-0.001</td>
</tr>
<tr>
<td>Self-enhancement * Tightness</td>
<td>-0.021**</td>
</tr>
<tr>
<td>Trust * Tightness</td>
<td>-0.002 n.s.</td>
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Theoretical Implications

• On the individual level, personal values play an important role in preference, compared to other individual variables.

• On the country level, tightness versus looseness explains a substantial part of variance (about 40%)

• Tightness Looseness seems to be a promising addition to the field of cross cultural health research.
Practical Implications

• People scoring high on conservation, low on openness to change and low on self transcendence are likely to show a higher demand for professional healthcare.
• People scoring high on openness to change and self transcendence will be more open to use other channels for medical care.
• Socially tight cultures/countries have a higher average preference for professional healthcare.
• Important for cross national organisations to better target health care communications (like EU or WHO)
THANK YOU!

• Questions?