Experiences with pre-testing of a survey instrument for forest valuation in the Czech Republic: problems and experiences

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Seminar Economic Valuation of Recreation Functions of Forest Ecosystems

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Presentation

- Description of the pre-survey
- Main findings
- Implication for future work
The project

- Monetary valuation of recreation and aesthetical function of forest in the Czech Republic
- 2006 – 2007
- Ministry of Agriculture of the Czech Republic
- 6 researchers from CUEC

4 WP
- Off-site (2006/7, N = 1200)
- On-site (2007, N = 500)
- Aggregation of results for the CZ (2007)
- Tools - evaluation of policies (2007)
The project

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  - Tools - evaluation of policies (2007)
Off-site survey

- Blueprint: Jan Melichar’s TCM survey Jizerské hory 2005

- Pre-survey (semi-structured interviews)
  - 19-26.10. 2006 (N = 20) – variable sample (Prague)
  - 5.-15.1. 2007 (N = 15) – variable sample (Prague)

- Data collection (SC&C, stratified quota sampling)
  - pilot (Feb 2007)
  - main wave (Feb – Mar 2007)
Description of pre-survey
Pre-survey administration

- 20 semi-structured interviews (varied sample)
- in-hall
- scenario
  - questionnaire (TCM + CE + CVM)
  - supplementary semi-structured questions
  - remuneration of respondents
- 75 minutes
- remuneration of respondents (400 – 500 CZK)
- 3 interviewers
Scenario

- **TCM (recreation trips)**
  - short trips (less than 4 hours – “in the neighborhood”)
  - 1-day trips (4 hours – 1 day)
  - overnight trips

- **CVM (forest bird species)**
  - one protected specie (black stork – ciconia nigra)
  - 19 endangered species

- **CE (attributes of forests – “trip”)**
  - attributes of visited forests (damage, density, leave/coniferous trees, deforestation, bird species, age variability, travel costs, visitors, accommodation, parking lots)
  - rather experimental
TCM

All trips
  - in the forest in CZ
  - during summer season IV – X. 2006

- Short trips
  - in the vicinity of home, did not take more than 4 hours
  - for all locations visited: total number of visits/ monthly frequency, transportation modes, average duration
  - for last location visited: transportation mode, motives, activity, duration, stated TC, number of people

- 1-day trips
  - 4 hrs to 1 day
  - for all locations visited: total number of 1-day visits, transportation mode
  - for last location visited: travel mode, stated TC, number of people, motives, activities

- Overnight trips
  - over 1 day
  - for all locations visited: number of visits, number of days spent in the area
  - for last location visited: duration, type of accommodation, travel mode, number of people, stated TC, motives, activities, other sites visited (multipurpose)
### TCM – example of site sheet (1-day trips)

<table>
<thead>
<tr>
<th>Rekreační oblasti</th>
<th>Počet jednodenních výletů</th>
</tr>
</thead>
<tbody>
<tr>
<td>Střední Čechy</td>
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</tr>
<tr>
<td>1. Český kraj</td>
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<td>2. Kokořínsko</td>
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<td>3. Český kras</td>
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<td>4. Křivoklatsko</td>
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<td>Jižní Čechy</td>
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<td>5. Blansko les</td>
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<td>6. Šumava</td>
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<td>7. Novohradské hory</td>
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<td>Západní Čechy</td>
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<td>8. Český les</td>
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<td>9. Slavkovský les</td>
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<td>10. Krušné hory</td>
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<td>Severní Čechy</td>
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<td>11. České Svýcarsko</td>
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<td>12. Labské pískovce</td>
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<td>13. České Svýcarsko</td>
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<td>14. Lužické hory</td>
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<td>15. Jizerské hory</td>
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<tr>
<td>Východní Čechy</td>
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<tr>
<td>16. Krkonoše</td>
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<td>17. Broumovsko</td>
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<td>18. Orlické hory</td>
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<td>19. Železné hory</td>
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<td>20. Zdánské vrchy</td>
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<td>Severní Morava</td>
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<td>21. Jeseníky</td>
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<td>22. Beskydy</td>
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<tr>
<td>Jižní Morava</td>
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<tr>
<td>23. Moravský kras</td>
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<td>24. Bílé Karpaty</td>
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<td>25. Rodyj</td>
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<tr>
<td>Jižní oblasti (DOPULTE):</td>
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CVM

- **CV questions**
  a) WTP to ensure that current number of black storks nesting in the CZ (300) will be maintained over the next 20 years (otherwise decrease by 50%)
  b) WTP to ensure that current numbers of 19 endangered forest bird species (30 000) will be maintained over the next 20 years (otherwise decrease by 15%)

- **Elicitation format**
  - double bounded dichotomous open-ended format

- **Payment vehicle**
  - annual payments to AOPK for the next 20 years
  - AOPK (Agency for Nature Conservation and Landscape Protection of the CR) will reimburse owners of the forests
  - owners would introduce a protection measures and will be reimbursed for losses due to measures
  - regular controls by AOPK (money will be used)
ČAP ČERNÝ

Současná situace
Čap černý
- hnízdí na celém území ČR
- dává přednost rozšířeným lesům, smíšeným,
  listnatým i jehličnatým
- migrující druhy (stravy polovinu života na cestách a
  v zimovnících)
- současný stav populace černých čapů v Česku - asi
  300 páří

Příčiny ohrožení čapa černého
- citlivý na velkoobchodní lesnické zásahy
- hnízda budoucí na starých vzrostlých stromech
  v porostech
- v současné době populace čapa mění výrazně
  neles
- nevhodné lesní hospodaření může spustit pokles
  populace tohoto druhu o polovinu, ze 300 na 150 za
  20 let

Jak čapu černého chránit - citlivé lesnické
hospodaření
- ochrona v průběhu okolí hnízdišť
  - 1 km kolem hnízda bez lesnických zásahů

Dopady změny hospodaření
- změna založení trávy dřeva
- snížení produkce dřevní hmoty
- snížení výnosy vlastníkům lesů
CE

- Rather experimental (10 attributes)

- Exercise
  - introduction of attributes (“subjective” and “objective”)
  - description of 2 forests using the 10 attributes
  - which of the 2 forests would they choose for a recreation activity?

- Answers to questions...
  - are they able to imagine such forests?
  - which attributed people perceive?
  - which attributes people ignore (reduction of complexity)?
  - which attributes are important to them?
  - which attributes are not perceived at all?
  - what attributes are missing?
CE attributes

- Proportion of damaged trees
- Forest density
- Proportion of broadleaf trees
- Proportion of deforested area
- Number of protected bird species
- Age variability of trees
- Travel cost
- Number of visitors (met in 1 hour)
- Number of accommodation facilities
- Number of parking lots in the vicinity
Results of pre-survey
TCM: pre-survey results

- **General problems**
  - “outdoor recreation” – no wilderness to go in CZ (cultural and social aspects – summer houses, castles, socializing)

- **Short trips**
  - in Prague very important (some daily)
  - problems with TC (annual/ monthly tickets or walking)
  - multipurpose (walk and talk, travel to work, walking a dog/ kids, visits)
  - problems to determine their length and frequency

- **1-day trips**
  - relatively easiest
  - problems with stated TC (esp. women)
  - multipurpose (summer houses, visits) not such a big problem
  - problem are trips within trips

- **Overnight trips**
  - most tricky
  - multipurpose (borders philosophical questions of ultimate motivation)
  - how much time do they really spend out-door?
  - visits to multiple sites (no isolated outdoor areas)
  - stated TC (esp. women, members of family groups etc.)
CVM: pre-survey results

- Everybody supports protection measures, nobody wants to pay...

- CV questions
  - people got the information (in spite of its length – awkward for interviewer)
  
  **Average WTP**
  - 1380 CZK for black storks
  - 1230 CZK for 19 species

- Protesting (50 %)
  - AOPK would misuse/ use inefficiently the money
  - owners will misuse the money
  - not enough people will pay
  - why to pay for one and then for 19? (scammed)

- 1 specie vs. 19 species
  - qualitatively different products – cannot measure scope
CE: pre-survey results

- 2 models of forest (not dominant)
  - FOREST A: in a good shape, low density, lot of broadleaf trees, lot of deforested area, some protected species, variable age, low travel-cost, high number of visitors, low number of accommodation facilities, many parking lots
  - FOREST B: in a bad shape, high density, few broadleaf trees, some deforested area, many protected species, same age, high travel-cost, low number of visitors, high number of accommodation facilities, few parking lots

- Answers:
  - People not just able to imagine such forest, they interpreted both descriptions: FOREST A = municipal forest; FOREST B = mountain forest
  - Their interpretation seemed to influence their decisions (they think up things?)
  - FOREST A preferred for shorter trips, FOREST B preferred for longer trips
  - All attributes perceived, but some only as proxy (number of species = quality of forest)
  - Most important attributes: price, damage, number of visitors
  - People detected inconsistencies (low number of visitors vs. high number of accommodation capacity, accommodation capacity vs. number of parking lots)
  - What seemed to be missing was clear information about precise recreation activity
Implications
## Off-site survey

<table>
<thead>
<tr>
<th>Population</th>
<th>Sample</th>
<th>CVM (2 versions)</th>
<th>TCM (type of trip)</th>
</tr>
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<tbody>
<tr>
<td>Prague</td>
<td>50</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Prague</td>
<td>250</td>
<td>YES</td>
<td>YES</td>
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<tr>
<td>CZ</td>
<td>900</td>
<td>YES</td>
<td>NO</td>
</tr>
<tr>
<td>TOTAL</td>
<td>N = 1200</td>
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Implications

- TCM
  - more precise clarification of outdoor recreation activity
  - other problems cannot be possibly overcome within this project

- CVM
  - further pre-testing
  - smooth down protesting (control mechanism, positive examples)
  - control variables influencing protesting (trust in institutions…)
  - use only two 1-specie CVM (rotation)
  - other problems cannot be possibly overcome within this project

- CE
  - developed strong interest in CE
    - interpretation of attributes
    - interference of attributes
    - what is forest „in general“?
  - decide to drop CE (costly administration)
Thank you for your attention