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Benefits and Costs of IFRS Adoption by Czech Private Companies: mvQCA

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1 Motivation

- Mandatory IFRS adoption around the world:
  - heterogeneity in the economic consequences of IFRS
  - the importance of country- and company specifics
  - (Jeanjean and Stolowy 2008), (Li 2010), (Houqe et al. 2012), (Ahmed, Neel, and Wang 2013), (Glaum et al. 2013), (Cascino and Gassen 2015)

- (Christensen 2012): researchers generally tend to overemphasise the net benefits of IFRS adoption despite having a massive evidence of a relatively small number of voluntary IFRS adopters <= revealed preference theory (Samuelson 1938)

- Reporting incentives to provide transparent financial statements:
  - indirect control: usually proxied by ownership structure, leverage, or country’s earnings management (Daske et al. 2013)
  - direct control requires individual measurement of each company’s perception of explicit and implicit benefits and costs of IFRS adoption (not public data, subjective, selection bias, changes over time)
Evidence on listed companies:

- Few pioneer-studies (Jermakowicz and Gornik-Tomaszewski 2006), (Fox et al. 2013), (Morris et al. 2014) confirm the theoretical conjecture of (Christensen 2012)

- Unknown or limited capital market benefits vs costly, complex, and burdensome transition process as well as significantly increased ongoing operating costs

- Higher implementation costs are needed to have chance to any benefits

- Even parent listed companies willing to provide users with high-quality data struggle with quality of inputs from subsidiaries => simplified assumption of accounting research about integrity of consolidated groups contradicts the findings of the organisational research on the parent-subsidiary links

Organisational business research stresses different strategic responses of subsidiaries to parents’ commands => institutional duality (Oliver 1991), (Kostova and Roth 2002)

The existence of higher tension between local practices and global accounting standards is esp. evidenced in transition countries (Alon 2013), (Albu, Albu, and Alexander 2014)
2 Research design

GOAL
The relation between benefits and costs of forced IFRS adoption by Czech private companies under foreign control (conditions, under which benefits might be at least comparable with the costs)

PILOT CASE STUDY
- interviews with 3 companies (German/French owners) => A: IFRS directly after acquisition; B: German GAAP replaced by IFRS; C: French GAAP replaced by IFRS
- increased workload and complexity in reporting; only marginal benefits (in MA)
- only ceremonial adoption in early phases (Kostova and Roth 2002), (Daske et al. 2013)
- certain change in attitude after the introduction of IFRS bonus scheme
- refinement of research goal to hypotheses, which are tested in …

A FOLLOW-UP SEMI-STRUCTURED SURVEY
- test of hypotheses using “what if” approach and applying QCA (Ragin 1987)
H1: The costs of forced IFRS adoption exceed the corresponding benefits by Czech private subsidiaries under foreign control

H2: The benefits, if any, are expected to be realised within the internal structure of subsidiaries and not in relations with external parties

H3: The positive attitude of the subsidiaries’ management towards the outcomes of IFRS adoption is conditioned by the implementation of executives’ bonus plan based on IFRS results

H4: Different combinations of factors influencing the form, processes, and outputs of IFRS reporting can result in similar outcomes regarding the cost-benefit analysis
2.1 Sample

- Biggest issue and main limitation to research => however relevant for all studies on forced adopters, as IFRS data are not publicly available by definition

- Population:
  - all Czech companies under control of EU-15 listed parent companies from Amadeus
  - only subsidiaries with controlling owners selected (>50% of share capital)
  - companies acquired before 2000 (to have at least 5+5 years history)
  - 613 companies => random sample of 200 firms => direct contacts to persons responsible for corporate reporting searched for in public resources
  - 74 contacts found => 51 agreed => 41 surveys attempted => 33 surveys fully completed (37 structured questions plus 7 open questions on issues surrounding forced IFRS adoption)
2.2 Costs and benefits of IFRS adoption

- Costs of IFRS adoption are real, however not always determinable (complex ERP solutions not covering only IFRS; low discretion in selection of an appropriate conversion method, etc.):
  - both one-time and regular costs around 0.03% of turnover

- Standard capital market benefits not available & IFRS used alongside with Czech GAAP => “what if” approach to inspect the perception of IFRS usefulness:

  Having several years’ experience with IFRS as the part of your MNE group, would you expect that IFRS adoption in statutory financial statements of your company (if applied the option offered by Act on accounting) will bring following benefits compared to Czech GAAP
<table>
<thead>
<tr>
<th>Attitude</th>
<th>Median</th>
<th>Mean</th>
<th>S. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) IFRS will facilitate acquiring equity capital</td>
<td>1</td>
<td>1.79</td>
<td>0.93</td>
</tr>
<tr>
<td>(2) IFRS will facilitate bond issues</td>
<td>2</td>
<td>1.85</td>
<td>0.80</td>
</tr>
<tr>
<td>(3) IFRS will facilitate access to bank loans</td>
<td>1</td>
<td>1.82</td>
<td>1.70</td>
</tr>
<tr>
<td>(4) IFRS will facilitate communication with trade partners</td>
<td>2</td>
<td>2.36</td>
<td>1.27</td>
</tr>
<tr>
<td>(5) IFRS will facilitate communication with general public</td>
<td>2</td>
<td>1.85</td>
<td>0.83</td>
</tr>
<tr>
<td>(6) IFRS will facilitate reporting within the group</td>
<td>4</td>
<td>3.61</td>
<td>1.30</td>
</tr>
<tr>
<td>(7) IFRS will provide management with better information</td>
<td>2</td>
<td>2.39</td>
<td>1.20</td>
</tr>
</tbody>
</table>

Scale values: Strongly disagree [1]; Disagree [2]; Neutral [3]; Agree [4]; Strongly agree [5]
2.3 Model

BENEFIT-COST ~ METHOD + FREQUENCY + DIFFERENCES + AREAS + BONUS

- **BENEFIT-COST:**
  - perception based on personal experience with specifics in a given company
  - 5-point Likert scale
  - relative by its nature and can capture a wide range of combinations

- **METHOD:**
  - method used for the conversion of Czech GAAP to IFRS
  - three methods: financial statements level; trial balance level; dual accounting SW
  - in many cases decided by parent company => subsidiary cannot avoid higher costs
  - different costs & different potential for information database => unclear impact on dependent variable
David Procházka

- **FREQUENCY:**
  - frequency of IFRS reporting to parent company (from monthly to annually)
  - monthly reporting higher costs, but more information vs annual reporting with low costs and benefits => ambiguous impact on dependent variable

- **DIFFERENCES:**
  - number of significant differences between Czech GAAP and IFRS
  - if minor differences only, hardly any benefits and the C-B relation will be determined by conversion method & if major differences, even costly solution might be outweighed by benefits => unclear impact on dependent variable

- **AREAS:**
  - number of management accounting areas, in which IFRS based figures are utilised
  - with increasing infiltration of IFRS into MA, benefits shall increase as well

- **BONUS:**
  - if compensation based on IFRS, then better perception of benefits
## Tab. 2: QCA variables: descriptive statistics

<table>
<thead>
<tr>
<th>Attitude</th>
<th>Median</th>
<th>Mean</th>
<th>S. D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Relation between costs and benefits</td>
<td>3</td>
<td>2.52</td>
<td>1.06</td>
</tr>
<tr>
<td>(2) Method of conversion from Czech GAAP to IFRS</td>
<td>2</td>
<td>2.48</td>
<td>0.51</td>
</tr>
<tr>
<td>(3) Frequency of IFRS reporting to the MNE’s parent</td>
<td>4</td>
<td>3.45</td>
<td>0.94</td>
</tr>
<tr>
<td>(4) Differences between Czech GAAP and IFRS</td>
<td>2</td>
<td>1.97</td>
<td>2.35</td>
</tr>
<tr>
<td>(5) Management accounting areas utilising IFRS</td>
<td>1</td>
<td>1.64</td>
<td>1.39</td>
</tr>
<tr>
<td>(6) Benchmark for management compensation</td>
<td>1</td>
<td>0.73</td>
<td>0.45</td>
</tr>
</tbody>
</table>

Values (4): Up to 12 areas
Values (5): Up to 6 areas
Values (6): [0] Czech GAAP; [1] IFRS
2.4 Research method

2.4.1 Standard logistic regression

2.4.2 Qualitative Comparative Analysis (QCA)

- QCA synthesises both quantitative (interest in generalization) and qualitative (case orientation, interest in complexity) approaches (Sehring, Korhonen-Kurki, and Brockhaus 2013)

- The method allows to identify “different paths with the same results” or “similar conditions leading to the different results” (Ragin 1987)

- Based on Boolean algebra, QCA simplifies the complex data structures in a logical and holistic manner (Vancea 2006)

- Advantage for the paper:
  - QCA is strong especially in on-site surveys with restricted size of sample (33 units)
  - QCA is able to overcome mutual interconnections among METHOD, FREQUENCY, DIFFERENCES and their unclear impact on the dependent variable => correlation/regression analysis usually leads to “insignificant” conclusion
3 Results

3.1 Correlation and regression

Tab. 3: Spearman’s correlation coefficients

<table>
<thead>
<tr>
<th></th>
<th>CB</th>
<th>F</th>
<th>M</th>
<th>B</th>
<th>D</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost-benefits (CB)</td>
<td>1.00</td>
<td>0.17</td>
<td>0.23</td>
<td>0.37**</td>
<td>0.12</td>
<td>*<em>0.55</em></td>
</tr>
<tr>
<td>Frequency (F)</td>
<td>1.00</td>
<td>0.49*</td>
<td>0.48*</td>
<td>-0.07</td>
<td>0.39**</td>
<td></td>
</tr>
<tr>
<td>Method (M)</td>
<td>1.00</td>
<td>0.46*</td>
<td>0.08</td>
<td>0.40**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bonus (B)</td>
<td>1.00</td>
<td>0.15</td>
<td>0.40*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Differences (D)</td>
<td>1.00</td>
<td></td>
<td>0.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Areas (A)</td>
<td></td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Spearman’s coefficients: * 1% significance level; ** 5% significance level
Tab. 4: Logistic regression

<table>
<thead>
<tr>
<th></th>
<th>Basic logistic regression</th>
<th></th>
<th>Penalised logistic regression</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate</td>
<td>Std. Error</td>
<td>P-value</td>
<td>Estimate</td>
</tr>
<tr>
<td>(Intercept)</td>
<td>-1.276</td>
<td>1.926</td>
<td>0.508</td>
<td>-0.859</td>
</tr>
<tr>
<td>F1</td>
<td>-0.680</td>
<td>2.108</td>
<td>0.747</td>
<td>-0.599</td>
</tr>
<tr>
<td>F2</td>
<td>-1.067</td>
<td>2.244</td>
<td>0.634</td>
<td>-0.866</td>
</tr>
<tr>
<td>M1</td>
<td>-0.184</td>
<td>1.075</td>
<td>0.864</td>
<td>-0.091</td>
</tr>
<tr>
<td>B1</td>
<td>1.190</td>
<td>1.227</td>
<td>0.332</td>
<td>0.919</td>
</tr>
<tr>
<td>D</td>
<td>0.319</td>
<td>0.221</td>
<td>0.149</td>
<td>0.215</td>
</tr>
<tr>
<td>A</td>
<td>0.890</td>
<td>0.471</td>
<td>0.059*</td>
<td>0.649</td>
</tr>
</tbody>
</table>

Note: (Heinze and Ploner 2004) method based on (Firth 1993), calculated in R using “logistf”
3.2 QCA
3.2.1 Necessity conditions

- Inclusion = how often a condition is present, given the presence of the outcome, in relation to the overall presence of outcome \( Inclusion_N(C) = \frac{\sum_{c_i=1|o_i=1} c_i}{\sum_{o_i=1} o_i} \)

- Coverage = how often a condition is present, given the presence of the outcome, in relation to the overall presence of the condition \( Coverage_N(C) = \frac{\sum_{c_i=1|o_i=1} c_i}{\sum_{c_i=1} c_i} \)

Tab. 5: QCA necessity conditions

<table>
<thead>
<tr>
<th>Combination</th>
<th>Inclusion</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  ( B{1} + A{2} )</td>
<td>0.900</td>
<td>0.720</td>
</tr>
<tr>
<td>2  ( B{1} + D{1} )</td>
<td>0.950</td>
<td>0.720</td>
</tr>
<tr>
<td>3  ( B{1} + D{2} )</td>
<td>0.950</td>
<td>0.731</td>
</tr>
</tbody>
</table>
Fig. 1  Necessity conditions for non-negative CB relation
3.2.2 Sufficient conditions

- Inclusion = how often the outcome is present, given the presence of a condition, in relation to the overall presence of the condition $Inclusion_S(C) = \frac{\sum o_i=1|c_i=1}{\sum c_i=1}$

- Coverage = how often the outcome is present, given the presence of a condition, in relation to the overall presence of the outcome $Coverage_S(C) = \frac{\sum o_i=1|c_i=1}{\sum o_i=1}$
### Tab. 6: QCA sufficient conditions of complex solution

<table>
<thead>
<tr>
<th>Combination</th>
<th>Inclusion</th>
<th>Coverage</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>F{2} * B{1} * D{0} * A{2}</td>
<td>1.000</td>
<td>0.150</td>
</tr>
<tr>
<td>2</td>
<td>F{2} * M{1} * B{1} * A{2}</td>
<td>1.000</td>
<td>0.250</td>
</tr>
<tr>
<td>3</td>
<td>F{0} * M{0} * B{0} * D{2} * A{0}</td>
<td>1.000</td>
<td>0.050</td>
</tr>
<tr>
<td>4</td>
<td>F{1} * M{0} * B{0} * D{2} * A{0}</td>
<td>1.000</td>
<td>0.050</td>
</tr>
<tr>
<td>5</td>
<td>F{1} * M{0} * B{1} * D{0} * A{1}</td>
<td>1.000</td>
<td>0.050</td>
</tr>
<tr>
<td>6</td>
<td>F{1} * M{1} * B{1} * D{1} * A{2}</td>
<td>1.000</td>
<td>0.050</td>
</tr>
<tr>
<td>7</td>
<td>F{2} * M{0} * B{0} * D{1} * A{2}</td>
<td>1.000</td>
<td>0.050</td>
</tr>
<tr>
<td>8</td>
<td>F{2} * M{0} * B{1} * D{2} * A{1}</td>
<td>1.000</td>
<td>0.100</td>
</tr>
</tbody>
</table>

**Total:** 1.000 0.650 13*
Tab. 7: QCA sufficient conditions of parsimonious solution

M1: A{2} + M{0}*D{2} + F{1}*B{1}*D{0} \Rightarrow CB

<table>
<thead>
<tr>
<th>Combination</th>
<th>Inclusion</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 A{2}</td>
<td>1.000</td>
<td>0.400</td>
</tr>
<tr>
<td>2 M{0}*D{2}</td>
<td>1.000</td>
<td>0.200</td>
</tr>
<tr>
<td>3 F{1}*B{1}*D{0}</td>
<td>1.000</td>
<td>0.050</td>
</tr>
<tr>
<td></td>
<td>1.000</td>
<td>0.650</td>
</tr>
</tbody>
</table>

- IFRS-based compensation plan for management is necessary, but not sufficient condition for the non-negative perception of benefits and costs of IFRS adoption by Czech subsidiaries
4 Conclusions

- Forced IFRS adoption by Czech subsidiaries under foreign control brings some benefits, esp. in internal accounting tasks (improvement in MAS).

- Based on own experience with the IFRS usage within MNE group, Czech subsidiaries do not believe that voluntary IFRS adoption in statutory financial statements would bring them incremental benefits => risks for reporting incentives.

- The voluntary IFRS adoption is rare, despite it might decrease overall reporting costs and workload and thus improve C-B relation ⇔ the respondents express the concerns about tax risks, if option of Act on accounting utilised => the attitude may change following CCCTB approval or following change in tax law.
References


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An Application to Compare National REDD+ Policy Processes.” Center for International Forestry Research (CIFOR), Bogor, Indonesia.

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