

# Report on Master Thesis

Institute of Economic Studies, Faculty of Social Sciences, Charles University

<b>Student:</b>	Jan Klasek
<b>Advisor:</b>	PhDr. Jana Votapkova Ph.D
<b>Title of the thesis:</b>	Health Technology Assessment of Digital Diabetes Therapeutics

## **OVERALL ASSESSMENT** (provided in English, Czech, or Slovak):

*Please provide a short summary of the thesis, your assessment of each of the four key categories, and an overall evaluation and suggested questions for the discussion. The minimum length of the report is 300 words.*

### **Short summary**

The thesis provides a cost-effectiveness assessment of a mobile application for the support of diabetic patients (specifically, patients suffering from Type 2 diabetes). Based on data from a German sample of 42 individuals, the author performs a health technological assessment through a discrete-time Markov chain. The performed analysis suggests that such an application is cost-effective both in the short and long run.

### **Contribution**

The general topic (i.e., cost-effectiveness of health digital services) is definitely relevant and its importance has increased following the COVID-19 pandemic. Hence, the present thesis clearly makes a contribution with respect to the treatment of Type 2 diabetes. Still, the robustness and generalizability of the findings face several limitations that are well discussed by the author.

### **Methods**

The methods are appropriate and the student proved a good knowledge of them. Overall, the analysis is quite careful and the student is also well aware of the various limitations of his work.

### **Literature**

The literature review could have been better targeted to the discussion of the existing evidence on the use of digital health services (including app) and their impact on patients' health. For example, the part discussing the HTA is not particularly informative with respect to the specific research question.

### **Manuscript form**

Overall, the thesis is quite well written, graphs, tables and citations are appropriate and clear. Still, the manuscript could have been better structured. This is partially connected to my previous comments on the literature review, but not limited to just the literature review. Chapter 3 is quite short and the reader could have benefit from some additional information about the app, its development and the selection of the patients, while Chapter 4 (even if well done) could have shortened a bit as the focus of the thesis is not the HTA of the app rather than on the HTA models themselves.

### **Overall evaluation and suggested questions for the discussion during the defense**

I believe the present thesis fulfills the formal requirements for a master thesis at IES, Faculty of Social Sciences, Charles University. The student formulated a clear research question spelling out three well targeted hypotheses to be tested and performed a quite careful empirical analysis. Overall, the work is

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well written and presented. The results of the Urkund analysis do not raise concerns. For all these reasons, I believe the thesis is ready for defence and I recommend it for the defence suggesting a grade A.

Suggested questions:

- Could you please explain how patients were recruited?
- Why some functions of the app are no longer available after the first year? What are these functions and could they impact the effectiveness of the app?
- Is there any information on the characteristics of the patients involved?

**SUMMARY OF POINTS AWARDED** (for details, see below):

CATEGORY	POINTS
<i>Contribution</i> (max. 30 points)	28
<i>Methods</i> (max. 30 points)	30
<i>Literature</i> (max. 20 points)	16
<i>Manuscript Form</i> (max. 20 points)	17
<b>TOTAL POINTS</b> (max. 100 points)	<b>91</b>
<b>GRADE</b> (A – B – C – D – E – F)	<b>A</b>

**NAME OF THE REFEREE:** Paola Bertoli

**DATE OF EVALUATION:** 06/06/2022

**Digitally signed (06.06.2022):**  
**Paola Bertoli**

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**Referee Signature**

