SVEUČILIŠTE U RIJECI, EKONOMSKI FAKULTET
DOKTORSKI STUDIJ EKONOMIJE I POSLOVNE EKONOMIJE
I. Filipovića 4, 51 000 Rijeka

Referada za poslijediplomske studije i doktorate

U Rijeci, dana 2.4.2024. godine.

ZAHTJEV ZA OCJENU DOKTORSKOG RADA

Poštovani članovi Fakultetskog vijeća i Povjerenstva za poslijediplomske studije i doktorate,

sukladno članku 35. Pravilnika o doktorskom studiju Ekonomija i poslovna ekonomija (pročišćeni tekst), Ekonomskog fakulteta u Rijeci od 20. ožujka 2023. godine podnosim svoj zahtjev za ocjenu doktorskog rada s naslovom „Društveno prihvatljiv prag troškovne učinkovitosti kao kriterij raspodjele zdravstvenih resursa" kojem prilažem:

1. Indeks
2. Odluka FV o prihvaćanju prijave teme i imenovanje mentora
3. Odluku FV o prihvaćanju prikaza rezultata istraživanja
4. Rješenje o priznavanju ECTS bodova sukladno čl. 27 i 28. Pravilnika o doktorskom studiju
5. Pismenu suglasnost mentora da rad zadovoljava kriterije doktorskog rada (ispunjava mentor/komentor)
6. 4 spiralno uvezena primjerka doktorskog rada
7. životopis na standardiziranom obrascu u 2 primjerka (Europass)
8. kratak sažetak doktorskog rada (300-500 riječi) te pet ključnih riječi na engleskom i hrvatskom jeziku
9. prošireni sažetak koji se piše na engleskom jeziku ukoliko je rad pisan na hrvatskom odnosno na hrvatskom jeziku ukoliko je rad pisan na engleskom jeziku; ne smije biti kraći od 5000 riječi (sadrži ciljeve, postupke, rezultate i zaključke istraživanja zajedno s tablicama/grafikonima te popisom literature)
10. naslov doktorskog rada na hrvatskom i engleskom jeziku (službena lektura)
11. izvješće o provedenoj provjeri izvornosti doktorske disertacije(TURNITIN obrazac – ispunjava ga mentor/komentor)
12. zapis doktorske disertacije u PDF formatu (jedna datoteka) – poslati mailom

U nadi za vašim pozitivnim očitovanjem srdačno vas pozdravljam,

EKONOMSKI FAKULTET RIJEKA
Primljeno 02-04-2024
Kl. ozn. 643-03/24-05/03
Ur. br. 141-01-24-1
Org. jed. 01

STUDENT:

Elizabeta Ribarić

Elizabeta Ribarić

MENTOR SA ZAMOLBOM SUGLASAN :

Izv. prof. dr. sc. Ana Bobinac

Ekonomski fakultet u Rijeci
Ivana Filipovića 4
HR-51000 Rijeka

Rijeka, 2.4.2024.

Ekonomski fakultet u Rijeci

Povjerenstvo za PS i doktorate

Predmet: PISMENA SUGLASNOST ZA PREDAJU DOKTORSKOG RADA

Dajem suglasnost **Elizabeti Ribarić,** studentici doktorskog studija Ekonomije i poslovne ekonomije za predaju u postupak ocjenjivanja doktorskog rada pod naslovom **„Društveno prihvatljiv diferencirani prag troškovne učinkovitosti kao kriterij raspodjele zdravstvenih resursa“.**

Mentor:

Izv. prof. dr. sc. Ana Bobinac

SVEUČILIŠTE U RIJECI
EKONOMSKI FAKULTET

uniri

Izvješće o provedenoj provjeri izvornosti studentskog rada

Opći podatci o studentu:

Sastavnica	Ekonomski fakultet u Rijeci - EFRI
Studij (zaokružiti ili podebljati)	Preddiplomski / Diplomski / **Poslijediplomski**
Vrsta studentskog rada (zaokružiti ili podebljati)	Završni / Diplomski / Završni specijalistički / **Doktorski**
Ime i prezime studenta	Elizabeta Ribarić
JMBAG	272/22

Podaci o radu studenta

Identifikacijski br. podneska	2337776691

Podudarnost studentskog rada:

PODUDARNOST

Ukupno	18%
Izvori s interneta	15%
Publikacije	12%
Studentski radovi	9%

Izjava mentora o izvornosti studentskog rada

Mišljenje mentora

Datum izdavanja mišljenja	02.04.2024.
Rad zadovoljava uvjete izvornosti	**DA** / NE
Obrazloženje mentora (po potrebi dodati zasebno)	Softver Turnitin uslijed zadanog algoritma (unatoč odabranoj opciji *„Exclude bibliographic materials"*) uzima u obzir 51 od ukupnih 71 stranica literature.

Datum

02.04.2024.

Potpis mentora

Izv. prof. dr. sc. Ana Bobinac

europass

Elizabeta Ribarić

Datum rođenja: 28/01/1996 | **Državljanstvo:** hrvatsko | **Spol:** Žensko |

Telefonski broj: (+385) 989365227 (Mobilni telefon) | **E-adresa:** elizabeta.ribaric@gmail.com |

Adresa: Brdina 16, 51000, Rijeka, Hrvatska (Boravište) |

Adresa: Žakanje 60, 47276, Žakanje, Hrvatska (Kućna)

RADNO ISKUSTVO

11/2021 – TRENUTAČNO Rijeka, Hrvatska
ASISTENTICA SVEUČILIŠTE U RIJECI, EKONOMSKI FAKULTET

- znanstveno- istraživački rad
- sudjelovanje u organiziranju radionica
- zapisničarka na obrani specijalističkog rada i doktorskih radova

06/2021 – 11/2021 Rijeka, Hrvatska
ADMINISTRATIVNA RADNICA SPAR D.O.O. HRVATSKA

- dekoraterski poslovi
- knjiženje otpisa
- dnevna sniženja
- izlistavanje primki
- izrada KEUB-a
- unošenje rasporeda u PEP
- ostali poslovi prema nalogu voditelja poslovnice

12/2020 – 06/2022 Rijeka, Hrvatska
TEHNIČKA UREDNICA ZBORNIKA RADOVA EKONOMSKOG FAKULTETA U RIJECI SVEUČILIŠTE U RIJECI, EKONOMSKI FAKULTET

03/2021 – 05/2021 Rijeka, Hrvatska
PRODAJNI PREDSTAVNIK

- poslovi prodaje
- poslovi recepcije
- ostali administrativni poslovi

10/2020 – 01/2021 Rijeka, Hrvatska
ASISTENTICA NA KATEDRI ZA MEĐUNARODNU EKONOMIJU SVEUČILIŠTE U RIJECI, EKONOMSKI FAKULTET

(zamjena za kolegicu na porodiljnom)
- priprema i izvođenje seminarske nastave na kolegijima: Metode izrade stručnog rada i Undergraduate research methods

10/2019 – 09/2020 Rijeka, Hrvatska
ASISTENTICA NA KATEDRI ZA TEORIJSKU EKONOMIJU SVEUČILIŠTE U RIJECI, EKONOMSKI FAKULTET

(zamjena za kolegicu na porodiljnom)

- priprema i izvođenje seminarske nastave na kolegijima: Metode izrade stručnog rada, Undergraduate research methods, Ekonomika prometa i pomorstva, Međunarodna špedicija i logistika i International forwarding and logistics
- koomentorica na završnim radovima
- zapisničarka na obrani doktorskih radova

03/2019 – 09/2019 Rijeka, Hrvatska

OPERATIVNI POSLOVI - STUDENTSKI POSAO E - GLAS D.O.O.

- izrada izvozne dispozicije i organizacija izvoza
- provođenje email kampanje
- zaprimanje i rješavanje upita kupaca
- izrada i slanje ponuda
- pokretanje postupka narudžbe
- komunikacija s dobavljačima
- pakiranje i organizacija otpreme robe kupcima
- priprema dokumentacije za prijavu na natječaje
- ostali administrativni poslovi

2015 – 2019 Rijeka, Hrvatska

DEMONSTRATORICA NA KOLEGIJIMA ORGANIZACIJA, ORGANIZACIJSKO PONAŠANJE I STRUČNA PRAKSA SVEUČILIŠTE U RIJECI, EKONOMSKI FAKULTET

- administrativni poslovi

07/2017 – 09/2018 Rijeka, Hrvatska

RAD U RAČUNOVODSTVU - STUDENTSKI POSAO (NEPUNO RADNO VRIJEME) AUTOTRANS D.D.

- knjiženje materijalne imovine
- urudžbiranje
- slanje podsjetnika za plaćanje
- kniženje, listanje i slanje zateznih kamata
- ishodovanje ispravnih računa
- izrada liste za plaćanje
- arhiviranje računa
- ostali administrativni poslovi

OBRAZOVANJE I OSPOSOBLJAVANJE

03/2022 – TRENUTAČNO Rijeka, Hrvatska

STUDENTICA NA DOKTORSKOM STUDIJU Sveučilište u Rijeci, Ekonomski fakultet

Adresa Ivana Filipovića 4, 51000, Rijeka, Hrvatska

01/03/2023 – 30/06/2023 Beč, Austrija

CEEPUS - STUDENTICA NA DOKTORSKOM STUDIJU Sveučilište u Beču, Fakultet poslovne ekonomije, ekonomije i statistike

- Vienna Joint Economics Seminar
- Academic Writing and Publishing

Internetske stranice https://wirtschaftswissenschaften.univie.ac.at/en/

10/2017 – 07/2019 Rijeka, Hrvatska

MAGISTAR EKONOMIJE Sveučilište u Rijeci, Ekonomski fakultet

Adresa Ivana Filipovića 4, 51 000, Rijeka, Hrvatska

10/2014 – 07/2017 Rijeka, Hrvatska

PRVOSTUPNIK EKONOMIJE Sveučilište u Rijeci, Ekonomski fakultet

Adresa Ivana Filipovića 4, 51000, Rijeka, Hrvatska

JEZIČNE VJEŠTINE

Materinski jezik/jezici: **HRVATSKI**

Drugi jezici:

	RAZUMIJEVANJE		GOVOR		PISANJE
	Slušanje	Čitanje	Govorna produkcija	Govorna interakcija	
ENGLESKI	B2	B2	B2	B2	B2
NJEMAČKI	A2	A2	A2	A2	A2

Razine: A1 i A2: temeljni korisnik; B1 i B2: samostalni korisnik; C1 i C2: iskusni korisnik

DIGITALNE VJEŠTINE

Društvene mreže (LinkedIn, Facebook, WhatsApp, Viber) | Komunikacijski programi (Skype, Zoom, Webinar, Google meet, BigBlue Button) | Iskusna u radu sa Microsoft Office paketom (PowerPoint, Excel, Word) | Informacije i komunikacija, pretraživanje interneta | Rad na Računalu

DODATNE INFORMACIJE

PUBLIKACIJE

Monetary value of health – a practical decision-making framework combining equity considerations and WTP

- u recenzijskom postupku u European Journal of Health Economics
- rad napisan u koautorstvu sa: Ana Bobinac, Ismar Velić

VOLY: The Monetary Value of a Life-Year at the End of Patients' Lives – 2024

Applied health economics and health policy, vol. 22, no. 1, pp. 97-106
- rad napisan u koautorstvu: Ana Bobinac, Ismar Velić

Zdravstvena pismenost u Republici Hrvatskoj – 2022

- Revija za socijalnu politiku, vol. 29, no. 3, pp. 427-443
- rad napisan u koautorstvu sa: Ana Bobinac, Nikolina Dukić Samaržija

Budget Impact Analysis of Pharmacist-Led Medication Management in Cardiovascular and Type 2 Diabetic Patients

– 2022
- Healthcare, vol. 10, no. 4
- rad napisan u koautorstvu sa: Iva Mucalo, Andrea Brajković, Marija Strgačić, Djenane Ramalho-de-Oliveira, Ana Bobinac

Challenges of 3PL Providers in Implementation of Intelligent Sollutions into the Supply Chain – 2022

International Conference on Sustainable Logistics and Transport
- Sustainable logistics, pp. 139-156
- rad napisan u koautorstvu sa: Helga Pavlić Skender, Petra Zaninović

Komparacija modela banaka hrane u odabranim europskim zemljama – 2022

- poglavlje u knjizi
- rad napisan u koautorstvu sa: Danijela Sokolić

Challenges in Organizing a Food Donation System: Requirements and Barriers for the Food Business Operators

– 2021
10th INTERNATIONAL SCIENTIFIC SYMPOSIUM REGION, ENTREPRENEURSHIP, DEVELOPMENT
- rad napisan u koautorstvu sa: Danijela Sokolić

An Overview of Modern Technologies in Leading Global Seaports – 2020

Pomorski zbornik, vol. 59, no. 1
- pregledni rad

- rad napisan u koautorstvu sa: Helga Pavlić Skender, Marija Jović

RADIONICE

Radionice 2024

Sveučilište u Rijeci:
- Teorija i teorijski doprinos: Kvalitativne metode istraživanja
- Radionica o Stata programu
- Kvalitativne metode istraživanja: Anketa
- Kvalitativne metode istraživanja: Case study
- Pohrana istraživačkih podataka (dataset) u Dabar
- English for Academic Teaching

Radionice 2023

University of Vienna:
- National and international funding opportunities for early postdocs
- The Future of Scientific Integrity in an Open Science: Challenges and Prospects
- Introduction to the multidisciplinary database Web of Science
- Getting fit for funding - How to write an effective proposal
- Academic Writing in English
- Finding and accessing the literature for your PhD proposal
- Watch out: Predatory Publishing
- Typical Tense and language mistakes
- Research Data Management for PhD Students: Introduction to Data Archiving, Publishing and Reuse
- English Pronunciation
- Social Media and my career
- Capturing the Essence: Presenting your Research in 3 Minutes
- Publication Strategies in the academics' publish or perish competition
- Conversation in English: Conference & Meeting Situations
- Piquing non-academic employers' interest: communicating your uniqueness effectively
- Well-being in academics
- Professional presentation of research results

University of York:
- Health Economics Theory for Empirical Economists: Modelling the Demand for and Supply of Health Services

Sveučilište u Rijeci:
- ProQuest One Business

Radionice 2022

Sveučilište u Rijeci:
- Applied Microeconometrics: Causal Inference and Policy Evaluation with Applications in R and Stata
- Econometric workshop
- Akademsko pisanje
- Informacijske službe i usluge za istraživače i alati za postizanje vidljivosti autora
- Alati za pretraživanje znanstvenih informacija
- Alati za upravljanje znanstvenim informacijama
- Alati za objavljivanje znanstvenih radova
- Alati za vrednovanje radova i znanstvenih časopisa

Imperial College London:
- Introduction to Statistics & Data Analysis in Public Health (Coursera)

Radionice 2020

Sveučilište u Rijeci:
- Kompetencijski pristup vrednovanja prema ishodima učenja
- Metodološka radionica za održavanje nastave u online okruženju
- Izazovi mentoriranja doktorskih studenata
- Crowdfunding i plava ekonomija - što je grupno financiranje i kako se koristi u BLUE sektoru
- Oblikovanje e-kolegija za provedbu hibridne nastave
- Crowdfunding as a innovation within the BLUE economy sector
- Qualitative research - Workshop

- Zoom webinar Izazovi u visokom obrazovanju u vrijeme pandemije bolesti COVID-19 i socijalne izolacije: iskustva i potrebe djelatnika visokih učilišta i studenata
- How to Get Published in Academic Journals
- Kako poučavati za kritičko mišljenje: primjena modela poučavanja i učenja kroz aktivnost i rad
- Kako kritički pristupati nastavnom sadržaju u visokoškolskoj nastavi?
- Primjena modela učenja kroz rad: Učenje zalaganjem u zajednici kao model visokoškolske nastave - suradnja s poslovnim sektorom

Radionice 2019

Sveučilište u Rijeci:
- Nacionalni kongres predstavnika studenata

Radionice 2017

Sveučilište u Rijeci:
- Prezentacijske vještine i priprema za uspješno izlaganje seminara

NAGRADE

Nagrada za objavljeni znanstveni rad

2024
Sveučilište u Rijeci, Ekonomski fakultet
Rad: VOLY: The Monetary Value of a Life-Year at the End of Patients' Lives

01/03/2023 – 30/06/2023
OEAD stipendija

Austria´s Agency for Education and Internationalisation, Mobility Programmes, Bilateral and Multilateral Cooperation

Volonterka godine

2018
Grad Rijeka

Poveznica https://dzo-rijeka.hr/elizabeta-ribaric-volonterka-godine-grada-rijeke-2018-g/

Stipendija za izvrsnost

2017
Sveučilište u Rijeci

PROJEKTI

11/2021 – TRENUTAČNO
HRZZ - Vrijednost u zdravstvu: empirijska istraživanja i aplikacija UIP-2019-04-3721
- zaposlena na projektu
- pisanje znanstveno-istraživačkih radova
- pisanje doktorskog rada
- pomoć u izradi godišnjih izvještaja
- pomoć u organizaciji radionica

05/2022 – 10/2023
Zdravstveni observatorij - članica radnog tima europskog projekta
- sudjelovanje na Školi zagovarača, Fužine, 26.-28.9.2022

Poveznica https://zdravstveniopservatorij-krijesnica.hr/

10/2020 – 01/2021
Povećanje zapošljivosti studenata kroz unapređenje Centra za karijere i razvoj stručne prakse - Cezar
- članica projektnog tima
- financiranje projekta: Europski socijalni fond

Poveznica https://www.efri.uniri.hr/hr/o_projektu/1792/324

10/2018 – 07/2019
Hrana i zajednica - izrada diplomskog rada
- sudjelovanje na studijskom putovanju u Bruxelles
- prikupljanje hrane za socijalnu samoposlugu Kruh Sv. Elizabete
- financiranje projekta: Europski socijalni fond

Poveznica https://www.efri.uniri.hr/hr/hrana_i_zajednica/1525/294

KONFERENCIJE I SEMINARI

07/09/2023 – 08/09/2023 – Bologna, Italija
EuHEA - PhD conference - prezentacija rada

05/07/2022 – 08/07/2022 – Oslo, Norveška
EuHEA - Health Economics for Sustainable Welfare System - sudjelovanje na konferenciji iz područja ekonomike zdravstva
- pohađanje radionice "Discrete choice Modeling using Stata"

23/09/2021 – 23/09/2021 – Warsaw, Poljska
International Conference on Sustainable Logistics and Transport - prezentacija rada

LJETNE ŠKOLE

11/07/2022 – 29/07/2022
Health Economics Summer School 2022

- University of Hamburg
- položen ispit iz ljetne škole (8 ECTS bodova)
- usvojena znanja: Europski zdravstveni sustav, Ekonomske evaluacije u zdravstvu i modeliranje, Ekonometrija u zdravstvu, Bihevioralna ekonomija za zdravlje: Koncepti, metode i primjena, Kauzalno zaključivanje i ekonomika rizičnih zdravstvenih ponašanja, Primjena ekonomskih evaluacija u zdravstvu: Evaluacija programa integrirane skrbi

Poveznica https://www.uni-hamburg.de/en/internationales/aktivitaeten/summer-school.html

02/07/2018 – 14/07/2018
EFRI Summer School 2018

Sveučilište u Rijeci, Ekonomski fakultet
- slušanje predavanja i seminara iz područja Europske unije na engleskom jeziku
- izrada završnog rada - analiza poslovanja poduzeća "Valamar"

VOLONTIRANJE

01/2021 – 02/2021 Marinići
INC d.o.o. - poslovi prodaje

12/2016 – 06/2020 Rijeka
Dom za odgoj djece i mladeži Rijeka - pomoć u učenju
- sudjelovanje u slobodnim aktivnostima štićenika doma

2018 – 2019 Rijeka
Studentski zbor Ekonomskog fakulteta - voditeljica Bala ekonomista
- voditeljica projekta prikupljanja hrane na Ekonomskom fakultetu za Socijalnu samoposlugu Kruh sv. Elizabete
- suorganizatorica radionice Financijska pismenost 2019
- sudjelovanje u ostalim aktivnostima Zbora

2016 – 2019 Rijeka
Gradsko društvo Crvenog križa Rijeka - Klub 25 - sudjelovanje na akcijama darivanja krvi
- prezentacije o važnosti darivanja krvi u srednjim školama
- sudjelovanje u organizaciji Velikih 10
- podpredsjednica Kluba 25 (veljača 2018 - siječanj 2019)
- koordinacija volontera na akcijama darivanja krvi
- promocija akcija darivanja krvi (lijepljenje plakata i kreiranje događaja na Facebook-u)

ORGANIZACIJSKE AKTIVNOSTI

03/2019 – 12/2021
EDT Conference

- izrada baze mailova
- slanje poziva za konferenciju
- uređivanje LinkedIn stranice EDT konferencije
- vođenje evidencije prijavljenih sudionika, predanih sažetaka radova i cijelih radova
- izrada certifikata za sudionike konferencije i članove organizacijskog tima
- priprema materijala i paketa dobrodošlice
- doček i evidentiranje sudionika
- podjela zadataka i koordinacija članova organizacijskog tima
- tehnička podrška tijekom trajanja konferencije
- tehnička urednica Zbornika EDT

Poveznica https://www.edt-conference.com/

03/2018 – 07/2021
International Summer School EFRI

- slanje poziva za ljetnu školu
- promocija i odgovaranje na upite na Keystone-u
- vođenje evidencije prijavljenih studenata
- izrada Letter of Acceptance
- izrada Velike i Male brošure, te akreditacija polaznika
- informiranje i doček polaznika
- dodjeljivanje zadataka članovima tima
- izrada i slanje završnih Certifikata za sudionike, organizacijski tim i predavače
- sudjelovanje u pripremi završnog izvještaja

Poveznica https://summerschool-efri.com/

2020
Voditeljica radionice

International Summer School EFRI
- održavanje radionice na temu "Competitiveness and innovation of waste management in Croatia"
- mentorica studentima za izradu završnog rada na temu "Challenges of applying waste management in the EU"

11/2018 – 03/2019
International Business Study Trip 2019

- članica organizacijskog tima
- polaznica studijskog putovanja
- pisanje završnog izvještaja

EFRI Buddy 2018

- vođenje grupe studenata prve godine smjera poduzetništvo
- upoznavanje studenata sa pravima i obvezama te ključnim informacijama vezanim uz studiranje i snalaženje u gradu

DODATNO

10/2022 – TRENUTAČNO
Predstavnica doktoranada Ekonomskog fakulteta u Rijeci

Certifikat - Cambridge English BEC Vantage

Studija o pozitivnoj praksi provođenja stručne prakse na Europskim visokim učilištima

2018 – 2019
Članica studentskog zbora Ekonomskog fakulteta u Rijeci

2018 – 2019
Predstavnica studenata u Odboru za osiguravanje i unapređivanje kvalitete Ekonomskog fakulteta u Rijeci

2017 – 2019
Predstavnica studenata u Centru za karijere Ekonomskog fakulteta u Rijeci

Članica stručnog povjerenstva za provođenje reakreditacije 2018

Članica panela Hrvatskog društva ekonomista 2018

Sudjelovanje na JM Modulu 2016

VOZAČKA DOZVOLA

Vozačka dozvola: B

SAŽETAK

Financiranje inovativnih lijekova predstavlja izazov za ograničene javnozdravstvene proračune diljem svijeta. Brojne europske države prilikom donošenja odluka o financiranju lijekova (posebno kad je riječ o patentom-zaštićenim lijekovima) koriste ekonomske evaluacije za čiju interpretaciju koriste jasno definirani prag troškovne učinkovitosti. Bez obzira na široku uporabu ekonomskih evaluacija pri odlučivanju o financiranju lijekova iz javnih proračuna (i posljedično, široku upotrebu praga troškovne učinkovitost), u Republici Hrvatskoj prag troškovne učinkovitosti nije određen niti do sada empirijski istraživan te zbog toga nije moguće interpretirati ekonomske evaluacije odnosno odrediti kada je lijek u Hrvatskoj troškovno-(ne)učinkoviti. Cilj ovog rada je istražiti monetarnu vrijednost jedinice zdravstvene koristi (različito definiranu) kao osnovu za informiranu raspravu o visini praga troškovne učinkovitosti u Hrvatskoj i tako doprinijeti široj raspravi o povećanju troškovne-učinkovitosti izdvajanja za lijekove iz javnozdravstvenog proračuna.

Prilikom provedbe istraživanja korištena je metoda spremnosti za plaćanje. Spremnost za plaćanje procijenjena je iz društveno-individualne perspektive i primjenom poreza kao metode plaćanja. Provedeno je online istraživanje na reprezentativnom uzorku Republike Hrvatske (N=1.500) s obzirom na dob (stariji od 18 godina), razinu obrazovanja, spol i regionalnu rasprostranjenost.

Rezultati pokazuju da su ispitanici za kvalitetom korigiranu dodatnu godinu života (QALY), spremni platiti 17.000 €, što je jednako 1,15 bruto društvenog proizvoda po stanovniku. Ispitanici su relativno više vrednovali dobitak u zdravstvenom stanju kod djece (u odnosu na dobno neutralnu skupinu i starije od 67 godina) te dobitke u zdravstvenim stanjima u kojima je kvaliteta života relativno niža. Temeljem rezultata istraživanja, prag troškovne učinkovitosti u Hrvatskoj mogao bi biti jedinstven za sva zdravstvena stanja, neovisno o težini bolesti ili dobi pacijenata (17.000 €) ili bi se mogli razlikovati s obzirom na težinu bolesti i dob pacijenata. U tom slučaju njegova vrijednost mogla biti od 16.777 € za lakša zdravstvena stanja do 20.308 € za najteža zdravstvena stanja kod djece.

U radu se također istražuje vrednuju li ispitanici zdravstvena stanja na kraju života ovisno o tome o kojoj se vrsti bolesti radi (karcinomu ili rijetkoj bolesti). Prosječna spremnost za

plaćanje za dodatnu godinu života na kraju života (EoL-VOLY) iznosi 67.000 €, što je jednako oko 5 puta bruto društvenog proizvoda. Pokazalo se da ispitanicima nije važan tip bolesti na kraju života.

Ovo istraživanje predstavlja prve procjene spremnosti za plaćanje po QALY-u i EoL-VOLY-u u Republici Hrvatskoj i jugoistočnoj Europi općenito. Rezultati dobiveni u ovom istraživanju imaju za cilj doprinijeti informiranoj raspravi o visini praga troškovne učinkovitosti u Hrvatskoj i tako pomoći prilikom donošenja odluka o financiranju lijeka iz javnozdravstvenog proračuna koje se temelje (između ostalog) na rezultatima ekonomskih evaluacija.

Ključne riječi: metoda uvjetovanog vrednovanja, QALY, EoL-VOLY, društveno-individualna perspektiva, prag troškovne učinkovitosti u Republici Hrvatskoj

Socially Acceptable Differentiated Cost-Effectiveness Threshold as a Criterion for the Allocation of Healthcare Resources

Elizabeta Ribarić

EXTENDED ABSTRACT

1. INTRODUCTION

The financing of innovative (patent-protected) medicines poses a challenge for public healthcare budgets. Many European countries apply economic evaluations when making decisions about funding health technologies from public budgets, especially when it comes to funding innovative or patent-protected medicines (Santos et al., 2018). The most commonly used type of economic evaluation in healthcare is cost-effectiveness analysis (Vončina et al., 2021; Malinowski et al., 2019). Cost-effectiveness analysis is used to calculate the incremental cost-effectiveness ratio (ICER) of two or more medicines (Drummond et al., 2015). The medicine is considered cost-effective if the value of the ICER is below a predetermined cost-effectiveness threshold. It is intuitive that overpayment for health gains would lead to a loss of social welfare.

The cost-effectiveness threshold can be determined from the perspective of the healthcare system by determining the opportunity cost of funding a particular health technology, which is referred to as the cost-effectiveness threshold on the supply side (k) (Neumann et al., 2018; Sampson et al., 2022; Woods et al., 2016), or on the basis of social preferences, i.e. the monetary valuation of health benefits, which is referred to as the cost-effectiveness threshold on the demand side (v) (Robinson et al., 2017; Ryen & Svensson, 2014; Brouwer et al., 2019). The cost-effectiveness threshold could also be determined using an external economic indicator (e.g. the level of gross domestic product per capita) (Bertman et al., 2016; Chi et al., 2020), but such a threshold neither represents society's preferences nor reflects the opportunity costs. In this paper, the cost-effectiveness threshold is understood as the cost-effectiveness threshold on the demand side.

The cost-effectiveness threshold can be uniform (as in Hungary, Poland and Slovenia; Table 1) or differentiated (as in the UK, Norway, the Netherlands; Table 1), i.e. context-dependent in relation to the characteristics of the patients receiving the medicine or the characteristics of the medicine itself (Versteegh et al., 2019). The differential cost-effectiveness threshold takes into

account the specific characteristics of health interventions or diseases and attempts to strike a balance between fairness and efficiency when conducting economic evaluations of health technologies. Rather than comparing the ICER of each intervention to a single cost-effectiveness threshold, different interventions (depending on the characteristics of the intervention or the intervention beneficiary) are compared to differing cost-effectiveness thresholds (Bobinac, 2012) such that:

$$(1)\ \frac{\Delta C}{\Delta E_i} < v_i$$

The left side of the equation represents the ICER, while v represents the willingness to pay for a unit of health, typically expressed as Quality-adjusted life year (QALY). The index i denotes different groups of patients, i.e. different types of diseases, which means that the willingness to pay for QALYs may depend on the characteristics of patients i (e.g. age, level of disease severity or disease rarity) and that QALYs in certain patients may be considered more valuable that in others (e.g. patients of a younger age, with a more serious health condition, patients with a rare disease).

In different jurisdictions, cost-effectiveness thresholds usually vary according to the severity of the disease or its rarity (Table 1). Therapies for these diseases are usually evaluated using higher cost-effectiveness thresholds, reflecting a higher societal willingness to pay per QALY for more severe health conditions or for medicine to treat rare diseases (Kaufman, 2012; Arroyos-Calvera et al., 2019). Applying higher thresholds in the evaluation of these technologies compared to others means sacrificing the efficiency of health production in favour of a more equitable distribution of health and healthcare (Rowen et al., 2015).

Table 1: Economic evaluations, cost-effectiveness thresholds and applied criteria of distributive justice

State	Type of Economic Evaluation	Outcome	Utility expression	Budget impact analysis	CET***	CET***/ GDP per capita	Distributive justice criteria	Source
UK	CUA, CCA*	QALY	EQ-5D	Obligatory	For all healthcare technologies Lower Higher High (ex end-of-life) Exclusive to rare diseases and medicines with priority procedure: Lower Higher	 0.7 1.0 1.7 3.48 10.45	For all healthcare technologies Disease severity Exclusive to rare diseases and medicines with priority procedure: Absolute shortfall	ISPOR (2023), NICE (2022); Kovács i sur. (2022), Castle, Kelly i Gathani (2022)
Sweden	CEA, CUA, CMA**	QALY, WTP	SG, TTO, EQ-5D	Not part of reimbursement guidelines; can be asked for in other part of application	Lower High Very high	0.2 1.1 2.2	Severity of disease	ISPOR (2020), SBU (2023); Kovács i sur. (2022)
Netherlands	CUA	QALY	EQ-5D	Not obligatory	Lower Medium Higher	0.5 1.2 1.9	Severity of disease	ISPOR (2024); Kovács i sur. (2022)
Poland	CEA, CUA, CC***	Change in health state	EuroQol questionnaire or HUI	Not obligatory	single	2.6	/	ISPOR (2022d) Agencja Oceny Technologii Medycznych i Taryfikacji (2016), Malinowski i sur. (2019); Kovács i sur. (2022)
Slovenia	CEA, CUA, CMA, cost analysis	QALY	N.A.	Obligatory	single	1.2	/	Pravilnik o razvrščanju zdravil na listo (2013), ISPOR (2022c); Vončina i sur. (2021); Kovács i sur. (2022),
Slovak Republic	CUA, CEA	QALY	TTO or SG (VAS)	obligatory	Lower (28* average weekly wage) Higher (40* average weekly wage)	1.8 2.6	Severity of disease, rare disease	ISPOR (2022a), VYHLÁŠKA Ministerstva zdravotníctva Slovenskej republiky o podrobnostiach farmako-ekonomického rozboru lieku (2021), Malinowski i sur. (2019); Kovács i sur. (2022),
Hungary	CUA, CEA, CMA**	QALY	EQ-5D-5L, EQ-5D-3L	obligatory	Unique (3 times GDP per capita)	3	/	Emberi Erőforrások Minisztériuma Egészségügyi Szakmai Kollégium (2024), ISPOR (2022b), Vončina i sur.

								(2021); Kovács i sur. (2022)

Note: / means not applicable; * Cost-comparison analysis; ** It is applied if the benefits between two healthcare technologies are comparable based on available evidence: *** cost-effectiveness threshold

Source: authors' research

The most commonly used criterion in empirical research and medicine funding decision-making is severity of disease (Table 1; Kouakou & Poder, 2021; Lancsar et al, 2011; Richardson et al, 2011; Kovács et al, 2022; Castle, Kelly & Gathani, 2023), which is often expressed as a proportional shortfall (Skedgel et al, 2022). The proportional shortfall is the ratio between the potential QALY gain that a person could achieve with treatment and the actual QALY gain that the person achieves without treatment, defined as (Bobinac, 2012):

$$(2)\ PS = \frac{QALY_n - QALY_m}{QALY_n}$$

where $QALYn$ represents the potential QALY gain the patient could achieve with treatment and $QALYm$ represents the existing QALY gain the patient achieves without treatment.

In addition to the severity of the disease, the age of the recipients of the medicine could also be a criterion that can be implicitly applied in the context of ethical considerations when evaluating new medicines. Although the relationship between age and different disease severities is complicated, disease severity (including PS) may naturally favour younger patients over older ones. However, PS does not adequately reflect societal interests in age (Reckers-Droog, van Exel & Brouwer, 2019), justifying a separate analysis of societal preferences for disease severity and age.

Economic evaluations and Cost-effectiveness threshold in Europe

Many countries around the world require economic evaluations as part of the documentation on which medicine funding decisions are based (Table 1). The guidelines and recommendations for conducting economic evaluations of new medicines in these countries prescribe rules or instructions that are set by a regulatory body or government agency. The guidelines and recommendations vary depending on the country and healthcare system (e.g. NICE, 2023; Regulation on the criteria for inclusion of a medicinal product on the list of medicinal products; VYHLÁŠKA Ministerstva zdravotnictva Slovenskej republiky o podrodnostiach farmako-ekonomického rozboru lieku, 2021). Cost-effectiveness analysis (CEA) and Cost-utility analysis (CUA) are most commonly used when conducting economic evaluations in healthcare, with CEA being favoured (Table 1). Most recommendations or guidelines recommend

expressing treatment outcomes using the QALY measure, with the EQ-5D instrument being the favoured tool for measuring benefits. It is also mandatory in most of the countries analysed to perform a budget impact analysis alongside the cost-effectiveness analysis (Table 1).

When deciding on the inclusion of medicinal products to the positive medicines' list, the Croatian Health Insurance Fund (CHIF) assesses the criteria of the therapeutic value of the medicinal product in relation to the proposed indication and its relative therapeutic value but independently of the framework of economic evaluation (i.e. considers costs within the framework of the budget impact analysis and benefits separately). However, the CHIF allows the application for listing of a medicinal product to be accompanied, in addition to the budget impact analysis, by an economic evaluation prepared for the needs of other European countries (i.e., a cost-effectiveness analysis/cost-utility analysis), unadjusted to the Croatian context in terms of cost or clinical practice (Pravilnik o izmjenama i dopunama pravilnika o mjerilima za stavljanje lijekova na listu lijekova, NN 33/2019-706, 72/2023-1190). CHIF does not require that economic evaluations from other countries be adapted to Croatian data on costs and clinical practise in order to obtain country-specific results for Croatia. For the interpretation of the results of such economic evaluations, which would be based on Croatian data, it is necessary, among other things, to define the threshold of cost-effectiveness in Croatia.

Research objectives and hypotheses

Despite the widespread use of the cost-effectiveness threshold criterion in Europe and elsewhere in the world (Kovács et al., 2022), the cost-effectiveness threshold has not yet been defined (nor empirically investigated) in Croatia, so it is not possible to assess when a particular medicine is cost (in)effective in in the context of the Croatian healthcare system. Countries that do not have a specific (implicit or explicit) cost-effectiveness threshold cannot adequately interpret the results of economic evaluations (Bertram et al., 2016). This can have an impact on the formation of unrealistically high medicine prices and the possibility that the benefits of a new medicine do not justify its high costs (McDougal et al., 2020), i.e. it may well lead to an unsystematic and partial consideration of the costs of interventions separately from their benefits. If, on the other hand, the cost-effectiveness threshold is set in advance, (1) a better negotiating position of decision-makers can be achieved, especially if the cost-effectiveness threshold is set relatively low, (2) additional transparency can be introduced into the decision-making process, (3) a relatively greater health benefit can be achieved for the same amount of

financial resources, which is achieved by directly comparing the costs and benefits of alternative interventions (Santos et al., 2018).

The aim of the thesis is to analyse the monetary value of a health gain (expressed as Quality-adjusted life year - QALY or Life year gained - LYG) in different contexts and thus contribute to the debate on the usefulness of economic evaluations in healthcare decision-making (with particular emphasis on innovative medicines) and on the appropriate level of the cost-effectiveness threshold required for the interpretation of the results of economic evaluations, and thus contribute to a discussion on increasing the "value for money" in healthcare financing in Croatia.

In accordance with the research objective, the hypothesis of the doctoral thesis was formulated as follows: By applying an evidence-based (differentiated) cost-effectiveness threshold as a socially acceptable criterion, it is possible to increase the cost-effectiveness of allocations for medicines from the public budget.

Four auxiliary hypotheses emerged from the basic hypothesis:
AH1: The cost-effectiveness threshold in the Republic of Croatia is lower than 3 times GDP per capita
AH2: The level of the cost-effectiveness threshold varies depending on the severity of the health state
AH3: The level of the cost-effectiveness threshold varies depending on the age of the patients for whom the health technology is intended
AH4: The value of an additional year of life (LYG) is relatively higher for rare diseases and cancer than for other diseases.

2. METHODS

The contingent valuation method enables the assessment of value and demand for products or services that do not have a recognised market price, i.e. that are traded on the open market (Pennington, Gomes & Donaldson, 2017; Carson, 2000; Venkatachalam, 2004). In health economics, the contingent valuation method (also known as the willingness- to-pay method) is used to examine the monetary value of (the benefits from) health programmes or health gains (Bayoumi, 2004). This method elicits population preferences regarding the monetary values of the duration and/or quality of life (Mavrodi & Aletras, 2020). Willingness to pay attempts to

determine the amount a person would pay to prevent a negative outcome (e.g. loss of health) or achieve a positive outcome (e.g. improved health) (Hausman, 2012).

The contingent valuation method is used in this study to determine the monetary value of a quality-adjusted life year (QALY) and the value of a life year at the end of life (EoL-VOLY). The following text provides an explanation of the scenario design used to assess willingness to pay for QALY and EoL-VOLY units.

2.1. Design of the WTP per QALY scenarios

The design used in the assessment of WTP per QALY in the Netherlands (Bobinac et al., 2010, 2012, 2013, 2014) was used to the Croatian context. Based on 42 health states previously used to determine EQ-5D-3L rates for the UK (Kind et al., 1998) and the Netherlands (Lamers et al., 2006), 29 hypothetical scenarios were created. In contrast to most previous studies (Kouakou & Poder, 2021), which were based on the individual perspective of the respondents, the QALY scenarios were based on the social-inclusive-individual perspective. This perspective reflects the real-world conditions of healthcare financing, where everyone participates in the healthcare system but is not sure when or if they will need a particular healthcare service (Dolan & Olsen, 2002; Tsuchiya & Watson, 2017). When assessing WTP per QALY values, respondents answered randomly to one or two of the 29 contingent valuation scenarios to ensure a balance of scenarios. Each scenario graphically represents the quality of life in two health states. The difference between the better and worse state of health represents a hypothetical QALY gain for a constant duration of one year.

The scenarios varied according to the QALY gain, the risk of a QALY gain occurring, the size of the risk group and the age of the patients receiving the medicine. In each scenario, a pre-specified magnitude of QALY gain was assigned a risk of that QALY gain occurring (known as the veil of ignorance, which mimics real-world conditions). The risk values were set at 2%, 4%, 10% or 50%. To better understand the concept of risk, the risk of moving from better to worse health was expressed as X individuals out of 100 (i.e. 2 individuals out of 100). The risks were also expressed in population terms.

Unlike previous studies, in which it was claimed that the new health technology would be financed from the respondents' own resources, in this study the new health technology is financed by an additional tax for one year outside the public health budget. The willingness to pay for the QALY gain was elicited using a payment scale and an open-ended format as

payment vehicles. Respondents could choose the maximum amount they would be willing to pay each month over the next 12 months to avoid a deterioration in health (PaySc-1) and the maximum amount they would not pay under any circumstances (PaySc-2). In the subsequent open-ended question (WTP-OE), respondents gave the monthly amount they would definitely pay within the range of the previously selected payment scales (PaySc-1 and PaySc-2). The payment scale ranges from €0 to €140.

The following fairness criteria were taken into account when creating the scenarios: severity of illness and age of the patient. The severity of illness was expressed by the proportional shortfall. To test whether the preferences of the population vary according to the characteristics of the patients receiving the medication, 5 of the 29 scenarios were repeated. In these scenarios, it was emphasised that the risk group consisted of people older than 67 years (elderly) or younger than 14 years (children).

2.2. Design of the EoL-VOLY scenarios

The estimated EoL-VOLY refers to the WTP per LYG in patients with a 100% risk of death who are about to die; the patient will die, but the question is how long they will live in this state of health. The scenarios analysed the WTP for an extension of life with a certain quality of life. Respondents randomly answered one or two of the 31 hypothetical scenarios generated. As with the WTP per QALY scenarios, the social- inclusive individual perspective is also applied here.

In each scenario, life expectancy is presented under the standard treatment and under the new treatment. Respondents are informed that an unknown group of patients with the standard treatment currently have 6 months to live before death. The scenarios differed in terms of group size, additional years of life gained with the new medicine, quality of life and disease type. The group size in the scenarios was set at 1,000 and 14,000 patients. The group size varied in order to maintain the rarity of the disease under investigation. Depending on the scenario, the new therapy could prolong life by 2, 6, 12, 18 or 48 months. The quality of life in which the patient will live until the end of life is the same under the standard treatment and the new treatment. Depending on the scenario, the quality of life was determined at values of 0.2, 0.4, 0.6 and 0.8. The types of disease in each scenario referred to cancer, a rare disease and a severe illness in general to explore whether respondents had preferences for funding for rare disease and cancer patients versus other end-of-life health conditions. The means of payment are the same as for

the WTP per QALY assessment. In the case of the EoL-VOLY assessment, the payment scales range from €0 to €40.

2.3 The questionnaire

The questionnaire consists of five parts: (1) an introduction informing the respondents about the purpose of the survey and the duration of the questionnaire, (2) socioeconomic and demographic characteristics of the respondents and their current self-rated health status, which is presented on a VAS scale and using the EQ-5D-3L descriptive system, (3) instructions for answering the questions, (4) the willingness to pay for an additional quality-adjusted life year (WTP per QALY) and (5) the willingness to pay for an additional year of life at the end of life (EoL-VOLY). At the end of the questionnaire, respondents had the opportunity to express their opinion on the questionnaire using rating scales and an open question.

The online questionnaire was conducted by a professional market research sampling agency. The survey was conducted on a representative sample of the Croatian population (N=1,500) in terms of age (people over 18), gender, education level and regional distribution. Prior to the full implementation of the questionnaire, a pilot study was conducted with a smaller sample (N=100) to test the clarity of the task, the range of payment scales and the design of the questionnaire. As no problems were identified during the pilot study in relation to the clarity of the task and the questionnaire design, the final survey was conducted.

Parametric (t-tests and multilinear regression) and non-parametric tests (Mann-Whitney U-test) were used to test the hypotheses. Multi-linear regression was used to assess the theoretical validity of the model (in terms of whether the variables behaved as expected). Before running the regression models, Spearman's correlation coefficient was performed (Artusi, Verderio i Marubini, 2002). The data was analysed using Stata 14 statistical software.

If a respondent indicated €0 as the maximum WTP value, they were asked to provide a reason for choosing this amount to check whether the indicated zero value of WTP for the additional tax for the new medicine was a protest response. Possible reasons why respondents did not provide a WTP value were: 'I do not want to pay additional tax', 'I am not in a position to pay additional tax', 'There are more important reasons that deserve priority', 'The medicines mentioned are not sufficiently effective', other reasons and 'I do not know'. Choosing the answer "I do not want to pay additional taxes" represents a protest response. The order of the scenarios is randomised to avoid potential sequencing issues (Bateman & Jones, 2005).

2.4. Analysis: WTP per QALY

The expected QALY gain (or expected QALY loss avoided) estimated in each scenario consisted of the difference in utility between two health states (calculated based on the EQ-5D-3L tariff) combined with the disease duration (1 year) and the probability of health deterioration. The expected QALY gain was calculated as follows:

$$(3)\ Expected\ QALY\ gain = (u(HS1) - u(HS2)) * t * p$$

where u(HS1) represents the current health state, u(HS2) represents the worse health state, t denotes the duration of the health state (disease duration), and p denotes the probability of health deterioration (risk).

The total expected QALY gain for the entire risk population (TEQ) is calculated as follows:

$$(4)\ TEQ = expected\ QALY\ gain * 2{,}043{,}922$$

The expected QALY gain is calculated based on formula (5), and 2,043,922 represents the half of the Croatian population at risk of moving from better to worse health.

The probability is weighted using a one-parameter probability weighting function proposed by Tversky and Kahneman (1979) with estimated health loss parameters (Bleichrodt & Pinto Prades, 2000) to correct for the effect of nonlinear sensitivity to probability and to obtain:

$$(5)\ w(p) = \frac{p^y}{[p^y + (1-p)^y]^{\frac{1}{y}}}$$

where Y=0.674

Using the TEQ calculated with w(p), the average value of WTP per QALY was calculated:

$$(6)\ \text{WTPperQALY} = \frac{(WTP_OE) * 12}{TEQw(p)} * 2{,}980{,}000$$

WTP_OE stands for the monthly WTP from the open question, 12 for the number of payment months and 2,980,000 for the estimated population of Croatia aged 18 and over.

2.5. Analysis: WTP per EoL-VOLY

The value of EoL-VOLY is calculated using the equation:

$$(7)\ EoL\ VOLY = \frac{WTP(OE)*2{,}980{,}000*12}{(LYG\ \ populacije)/\frac{1}{(1+r)^n}}$$

where WTP(OE) is the monthly WTP from open-ended questions, 2,980,000 is the estimated number of Croatian residents aged 18 and over and 12 is the number of months of payment. R is the discount factor applied when life expectancy is more than one year. According to the York Health Economics Consortium (2016), the recommended discount rate for healthcare costs and benefits is 3.5 % and is therefore also used in the calculation of the EoL-VOLY value.

3. RESULTS

The data collected was representative of the Croatian population in terms of age (18 years and older), gender, education level and regional distribution. Average self-assessed health was rated at 75.46 out of 100 points. The majority of respondents were married and employed in the private sector. The average monthly net income of the respondents was €668.26 and the average household size was 3.2 members. Most respondents considered healthcare spending to be inadequate.

3.1. Monetary value of the QALY gain

Each WTP scenario was completed around 75 times. A total of 105 respondents indicated €0 in one or more scenarios, of which 28 responses were protest responses. The mean value of WTP_OE was €16 (median €9, standard deviation €22), WTP_PaySc1 was €11 (median €7, standard deviation €18) and WTP_PaySc2 was €65 (median €28, standard deviation €59), which were statistically different (p=0.00). The majority of WTP_OE (80%) was fairly evenly distributed and ranged between €0 and €20 per month. The following table shows the average and median values of WTP per QALY by scenario and taking into account the age of patients receiving the medicine.

Table 2: Average WTP per QALY values in €

Average WTP per QALY for:	Mean (median)
All age-neutral scenarios	17,000 (6,300)
Elderly	11,700 (5,900)
Children	13,900 (6,800)

Source: Ribarić, Velić i Bobinac (n.d.)

The average estimated WTP per QALY in age-neutral scenarios was €17,000 (median €6,300). The ratio between WTP per QALY and Croatian GDP per capita is 1.15. The WTP per QALY in the age-neutral risk group (€11,900) was almost the same as the WTP per QALY in the older age group (€11,700, median €5,900), but 16% lower than the WTP per QALY estimated for children (€13,900, median €6,800). This suggests that respondents placed a relatively higher value on the gains realised in children.

At the same level of risk, WTP per QALY scores were higher for health conditions with lower quality of life. For example, at a risk of 10%, the WTP per QALY for a quality-of-life gain of 0.203 was €6,800, while the value for a quality-of-life gain of 0.080 was €20,000. In this study, the severity of the patient's health condition is represented by the proportional shortfall, calculated on the basis of Formula 2. Table 3 shows the results of the regression analysis (Model 5), where WTP-OE is the dependent variable and the proportional shortfall is the independent variable. The results of the regression analysis show that the WTP-OE increases by 0.04 for a 1% increase in the proportional shortfall. The coefficient of 0.04% is used to construct differentiated cost-effectiveness thresholds.

To facilitate the understanding and interpretation of the results by policy makers and other stakeholders, the monetary values of QALY unit can be used to construct different cost-effectiveness thresholds by combining data on the following:

(1) average WTP per QALY,

(2) the strength of the relationship between the proportional shortfall and WTP,

(3) the strength of the relationship between the age of patient beneficiaries and WTP.

On this basis, four cost-effectiveness thresholds were constructed (Figure 1):

(1) A single cost-effectiveness threshold for the entire population (€17,000),

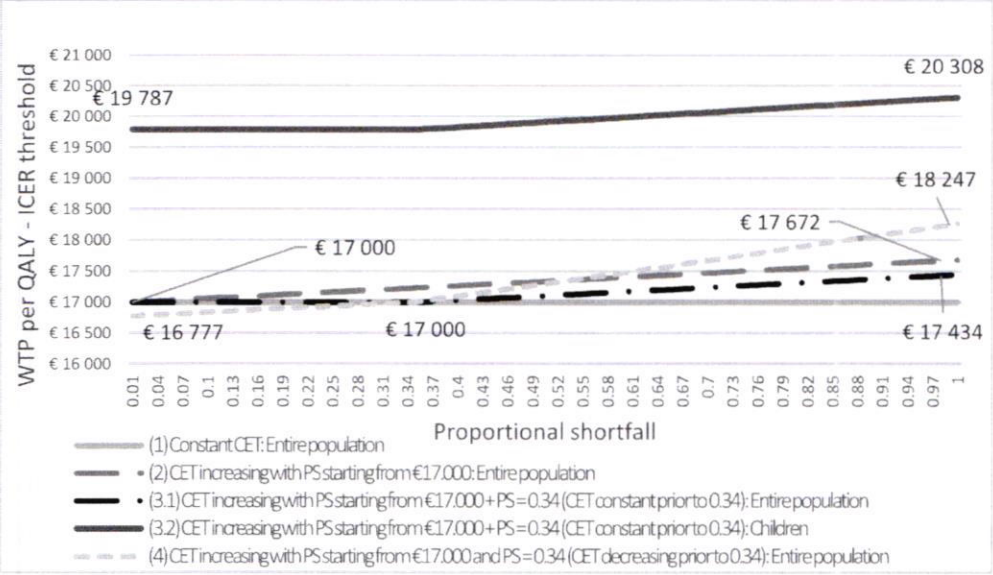
(2) The cost-effectiveness threshold increases by 0.04% for every 1% increase in the proportional shortfall (starting from €17,000),

(3) The cost-effectiveness threshold increases by 0.04% for every 1% increase in the proportional shortfall for children (starting from €19,700; applying a 16% weighting for children),

(4) The cost-effectiveness threshold increases by 0.04% for every 1% increase in the proportional shortfall if the proportional shortfall is less than 0.074 and decreases by the same amount if the proportional shortfall is greater than 0.074 (0.074 is an arbitrary threshold based on the average level of proportional shortfall in the design).

Empirical evidence suggests that cost-effectiveness thresholds can be as high as €20,308 for the most severe conditions in children or as low as €16,777 for less serious health conditions.

Figure 1: Differentiated Cost-Effectiveness Thresholds



Source: Ribarić, Velić i Bobinac (n.d.)

The theoretical validity of the results on willingness to pay for QALYs was tested using regression models (Table 3).

Table 3: Regression models for QALY (log WTP_OE as dependent variable)

	Model 1		Model 2		Model 3		Model 4		Model 5	
Variable	**Koef. (stand. error)**	**p value**	**Koef. (stand. error)**	**p value**	**Koef. (stand. error)**	**p value**	**Koef. (stand. error)**	**p value**	**Koef. (stand. error)**	**p value**
Log(QALY)	0.08 (0.04)	0.03	0.07 (0.04)	0.02	0.08 (0.04)	0.02	0.08 (0.37)	0.02		
Age	0.01 (0.00)	0.00	0.01 (0.00)	0.00	0.01 (0.00)	0.00	0.01 (0.00)	0.00	0.01 (0.00)	0.00
Log(household income)	0.27 (0.05)	0.00	0.24 (0.06)	0.00	0.24 (0.06)	0.00	0.24 (0.06)	0.00	0.24 (0.06)	0.00
VAS			0.00 (0.00)	0.00	0.00 (0.00)	0.00	0.00 (0.00)	0.00	0.00 (0.00)	0.00
Level of education – university degree			0.14 (0.06)	0.01	0.15 (0.06)	0.01	0.14 (0.06)	0.02	0.15 (0.06)	0.01
Minors (yes)			-0.56 (0.06)	0.36	-0.05 (0.06)	0.43	-0.06 (0.06)	0.35	-0.05 (0.06)	0.35
Gender (male)			-0.09 (0.05)	0.11	-0.09 (0.06)	0.12	-0.70 (0.05)	0.20	-0.09 (0.05)	0.12
Marital status – married			0.02 (0.07)	0.81	0.01 (0.07)	0.88	0.01 (0.07)	0.83	0.01 (0.07)	0.82
Enterprenuer*					-0.30 (0.15)	0.046				
The healthcare expenditures are too low (4 and 5)							0.19 (0.05)	0.00		
Log(PS)									0.04 (0.02)	0.09
Cons	-0.40 (0.53)	0.45	-0.33 (0.55)	0.55	-0.4 (0.55)	0.472	-0.61 (0.55)	0.271	-0.77 (0.52)	0.14
Adj. R2	0.024		0.035		0.033		0.036		0.031	
N	2059		2059		2059		2059		2059	

Note: * It refers to respondents who are business owners or self-employed.

Source: Authors' work

The results of the first regression model show statistically significant correlations between the achieved quality of life, the age of the respondents and the household income with the WTP_OE. An increase in quality of life is related to an increase in willingness to pay. As respondents' age and household income increase, so does their willingness to pay. The results of the second regression model show statistically significant relationships between the respondents' level of education, their self-assessed state of health and the WTP_OE. Respondents with a higher level of education have a higher willingness to pay than respondents with a lower level of education. A p-value of 0.00 indicates a high statistical significance between the self-assessed health status of the respondents and the WTP_OE. This means that the probability that the relationship between these two variables is due to chance is very low, i.e. healthier people have a higher willingness to pay. The results of the third regression model show a negative and statistically significant relationship between owning a business or being self-employed and WTP_OE. Respondents who own a business or are self-employed have a (0.30%) lower willingness to pay compared to respondents who are employed in public or

private companies/organisations. The results of the fourth regression model show that while the perception of the need to increase healthcare spending is positively associated with willingness to pay, respondents who perceive healthcare spending as inadequate have a higher willingness to pay than other respondents. The fifth regression model analysed the influence of the severity of illness, expressed as a proportional shortfall (calculated based on Formula 1), on willingness to pay. The model results show that willingness to pay increases as the proportional shortfall increases. In other words, each 1% increase in the proportional shortfall leads to a 0.04% increase in willingness to pay (p=0.09), with statistical significance at the 10% level.

3.2. Monetary value of an EoL-VOLY

On average, each WTP scenario was completed around 75 times. A total of 84 respondents indicated a WTP of €0 in one or more responses, of which 17 were protest responses. All responses (protest and non-protest) were included in the WTP calculation. The average WTP_OE was €13 (median €9, standard deviation €12), the WTP_PaySc1 was €10 (median €7, standard deviation €11) and the WTP_PaySc2 was €27 (median €40, standard deviation €17), and they were statistically different (p=0.00).

Table 4: Average values of EoL-VOLY in €

Average EoL-VOLY for:	Mean (median)
All scenarios	67,000 (40,000)
Cancer (1,000 patients)	99,000 (72,000)
Rare disease (1,000 patients)	90,000 (66,000)
Serious illness (14,000 patients)	57,000 (34,000)
Cancer (14,000 patients)	57,000 (34,000)

Source: Ribarić, Velić i Bobinac (2023)

The average EoL-VOLY calculated on the basis of all scenarios is € 67,000 (median € 40,000). In a group of 1000 patients, the EoL-VOLY for cancer patients is 10% higher than for patients with a rare disease. However, the difference is statistically insignificant. In a group of 14,000 patients, the average value of EoL-VOLY is the same for cancer and a serious disease. These results indicate that there is no preference for the treatment of cancer compared to other severe diseases, which means that the EoL-VOLY does not depend on the disease from which the patient dies. The theoretical validity of the results on willingness to pay for EoL-VOLY was tested using regression models (Table 5).

Table 5: Regression models of EoL-VOLY (log WTP_OE dependent variable)

Variable	Model 1		Model 2		Model 3		Model 4	
	Koef. (stand. error)	**P value**	**Koef. (stand. error)**	**P value**	**Koef. (stand. error)**	**P value**	**Koef. (stand. error)**	**P value**
QoL	2.98 (0.64)	0.00	2.92 (0.63)	0.00	2.86 (0.63)	0.00	2.89 (0.63)	0.00
$(QoL)^2$	-3.24 (0.67)	0.00	-3.20 (0.66)	0.00	-3.15 (0.66)	0.00	-3.15 (0.66)	0.00
LYG * patient group	0.00 (0.00)	0.00	0.00 (0.00)	0.00	0.00 (0.00)	0.00	0.00 (0.00)	0.00
Log (household income)	0.02 (0.05)	0.66	0.00 (0.05)	0.95	0.02 (0.05)	0.73	0.01 (0.05)	0.88
Age	0.00 (0.00)	0.03	0.01 (0.00)	0.00	0.01 (0.00)	0.00	0.01 (0.00)	0.00
VAS			0.00 (0.00)	0.01	0.00 (0.00)	0.01	0.00 (0.00)	0.00
Level of education – university degree			0.08 (0.06)	0.17	0.08 (0.05)	0.15	0.08 (0.05)	0.15
Minors (yes)			0.09 (0.06)	0.12	0.10 (0.06)	0.08	0.08 (0.06)	0.17
Gender (male)			-0.15 (0.05)	0.00	-0.14 (0.05)	0.01	-0.11 (0.05)	0.02
Marital status – married			-0.06 (0.06)	0.37	-0.07 (0.06)	0.30	-0.08 (0.06)	0.28
Enterprenuer*					-0.47 (0.14)	0.00		
The healthcare expenditures are too low (4 and 5)							0.33 (0.05)	0.00
Cons	0.85 (0.47)	0.07	0.74 (0.50)	0.13	0.62 (0.50)	0.21	0.41 (0.50)	0.4
Adj. R2	0.02		0.03		0.03		0.05	
N	2071		2071		2071		2071	

Note: Sperman's correlation coefficient showed that there is a strong relationship between the number of patients and LYG. To avoid the potential problem of multicollinearity, a new variable was created that multiplies the number of LYG patients. * It refers to respondents who are business owners or self-employed.

Source: Author's research

The results of the first regression model indicate statistically significant relationships between quality of life, squared quality of life, the interaction variable (LYG * number of patients), and the age of respondents with WTP-OE. Quality of life has a negative coefficient and is statistically significant, implying that respondents value lower quality of life more, essentially "penalizing" patients with better quality of life at the end of life. The interaction variable is statistically significant, meaning that as the duration and size of the patient group increase, respondents are willing to pay more. The same applies to the age of respondents. Although the household income variable has a positive coefficient, it is not statistically significant. This may suggest that respondents are willing to pay for end-of-life medications, even if it means exceeding their household budget. The results of the second regression model show a statistically significant relationship between self-rated health status and gender with willingness to pay. Similar to the QALY regression models, healthier respondents are willing to pay more

for a new medicine. Regarding gender, men have lower willingness to pay compared to women. The results of the third regression model indicate a statistically significant relationship between ownership of a trade or independent business and WTP-OE. Respondents who own a trade or independent business have lower willingness to pay compared to those who do not own such businesses (e.g., employees in the private and public sectors). The lower willingness of business owners to pay likely stems from their existing financial burden caused by health insurance premiums and potential lack of funds for additional payments. The results of the fourth regression model show that the perception of the need to increase health care spending is positively associated with willingness to pay. Respondents who perceive health care spending as insufficient have a higher willingness to pay compared to other respondents. Similar to the fourth QALY regression model, these results suggest that respondents did not use a higher willingness to pay as a form of referendum for increased health care spending.

4. DISCUSSION

The simplest approach to determining the threshold for cost-effectiveness is to link it to an economic index, such as GDP per capita, because it is relatively easy to understand and does not involve value judgements that often trigger difficult political and social debates with uncertain outcomes. For example, the famous criterion of "three times GDP per capita", proposed as a cost-effectiveness threshold was supported by the WHO for many years and has become an explicitly accepted cost-effectiveness threshold in different jurisdictions Certain countries such as Hungary and Lithuania (Kovács et al., 2022) still use this threshold in the economic evaluation of health technologies, and Croatia also mentions it in its bylaw defining the criteria for inclusion of a medicinal product in the positive medicines' list. However, such a simplified approach also leads to results that are not necessarily in the best social interest. The threshold set in this way has no empirical basis, ignores society's preferences and the limits of the public health budget, and may have negative consequences for public health budgets, as many studies show that such cost-effectiveness threshold is simply too high (e.g. in the context of Hungary, see Kovács et al., 2022). For example, Woods et al. (2016) estimated the supply-side cost-effectiveness thresholds (the opportunity cost of introducing a new health technology) in low- and middle-income countries and showed that the cost-effectiveness threshold should be well below three times GDP per capita. In Malawi, for example, the lowest-income country in the world, the cost-effectiveness threshold is between 1% and 51% of GDP. In Cambodia, a low- and middle-income country, this threshold is between 4% and 51% of GDP per capita. In El Salvador, a country between lower middle and upper middle income, this threshold is

between 11% and 51% of GDP per capita, while in Kazakhstan, a country between upper middle and high income, it is between 32% and 59% of GDP per capita. Linking the cost effectiveness threshold to GDP per capita is not logical in itself, at least from an economic perspective, for two reasons. Firstly, setting a cost-effectiveness threshold based on GDP per capita could lead to an undesirable increase in the cost-effectiveness threshold after economic growth, which is particularly problematic when growth rates are high. For example, the Croatian economy grew from €50,543.1 million in 2020 to €58,455.1million in 2021, i.e. by 15.7% (Eurostat, 2024). In recent decades, other Central and Eastern European countries have also experienced rapid GDP growth. Secondly, setting a cost-effectiveness threshold based on GDP per capita in Croatia would lead to illogical situations. For example, the threshold for 3 time GDP per capita in Croatia in 2021 would equal €44,160 (National Statistical Office, 2022b), while the explicitly defined cost-effectiveness thresholds applied in the United Kingdom varies between €22,400 and €33,600 (Kovács et al., 2022; Table 1). At the same time, GDP per capita in Croatia is around 34% of GDP per capita in the United Kingdom (World Bank, 2023).

Setting the cost-effectiveness threshold is a challenge. If the value of the cost-effectiveness threshold is set too low, drugs that bring relatively greater health benefits compared to existing therapies will not be funded from the public health budget, resulting in a loss of health for society. On the other hand, setting the cost-effectiveness threshold too high can lead to an inefficient allocation of resources and weaken the role of economic evaluations in reimbursement decision-making process. Although new patent-protected medicines can easily fulfil the cost-effectiveness criteria, their high cost often prevents their funding from public health budgets or results in the medicines only being available to a limited number of patients (Kovács et al., 2022; Németh et al., 2022). Therefore, it is crucial to properly align the cost-effectiveness threshold with the financial resources of the country to ensure that the healthcare system optimises the use of available resources to introduce new medicines and improve the quality of healthcare.

The results of this study show that the WTP per QALY in Croatia is €17,000, which corresponds to a ratio between the WTP per QALY and the Croatian GDP per capita of 1.15. This is significantly lower than the cost-effectiveness threshold of 3 times GDP, i.e. much closer to the threshold of 1 times GDP. The Dutch estimates of WTP per QALY were weighted with the same function from Tversky and Khaneman and amounted to €59,600 per QALY (Bobinac et al., 2013). The ratio of the estimated WTP per QALY to Dutch GDP per capita (from 2013) (World Bank, 2023) was 1.43. Compared to the estimates from the Netherlands, the ratio of

WTP per QALY/GDP per capita is lower in Croatia, which is to be expected as higher income elasticity implies lower cost-effectiveness thresholds in countries with lower GDP per capita, while cost-effectiveness thresholds are generally higher in countries with higher GDP per capita (Woods et al, 2016; Revill et al., 2020). However, the ratio WTP per QALY/GDP per capita in Croatia and the Netherlands as well as in most empirical studies (Gyrd-Hansen, 2003; Ahlert, Breyer and Schwettmann, 2016; Song et al, 2018; Jahanbin et al, 2021; Byrne et al, 2005; Lieu et al, 2009; Donaldson et al, 2011; Robinson et al, 2013; Shiroiwa et al, 2013; Thavornchareonsap et al, 2013;; Lim et al, 2017; Igarashi et al, 2019; Moradi et al, 2019; Vallejo-Torres et al, 2020; Ye et al, 2021; Ye et al, 2022; Fischer et al, 2023), remains well below three times GDP per capita. If the assessment of WTP per QALY in Croatia were the basis for determining the level of the cost-effectiveness threshold, this would confirm the first auxiliary hypothesis (AH1), which is that the cost-effectiveness threshold in the Republic of Croatia is below three times GDP per capita.

When analysing the monetary value of the QALY unit, the criteria of distributive justice applied were the severity of the disease, expressed as a proportional shortfall, and the age of the patients receiving the medicine. The monetary values of the QALY unit differed according to the severity of the disease and the age of the patient receiving the medicine. Respondents were more willing to pay relatively more for the treatment of more severe diseases and younger people. As illustrated in Figure 1, the cost-effectiveness thresholds based on this research could increase as the severity of the patient's health condition increases. Specifically, the cost-effectiveness thresholds could range from €16,777 for milder health conditions such as mild skin conditions to €20,308 for more severe health conditions such as cancer and rare diseases. This confirms the second auxiliary hypothesis (AH2), which states that the level of the cost-effectiveness threshold varies depending on the severity of the health condition of the patients for whom the medicine/intervention is intended. Respondents attributed relatively greater importance to the health gains achieved in children compared to the age-neutral risk group. Respondents attributed almost the same importance to health gains in patients over 67 years of age as to patients in the age-neutral risk group. This confirms the third auxiliary hypothesis (AH3), which states that the level of the cost-effectiveness threshold varies with the age of the patients for whom the medicine/intervention is intended.

Serious health conditions are often valued according to higher thresholds in European health systems, with cost-effectiveness thresholds ranging from 3 to 5 times GDP per capita (Németh et al, 2022; Obradovic, Mrhar & Kos, 2009; Dilla et al, 2015; Thongprasert et al, 2013; Pinto-

Prades et al, 2009; Kovács et al, 2022; Castle, Kelly, & Gathani, 2022). Medicines for serious health conditions such as terminal conditions, cancer and rare diseases are often evaluated using higher cost-effectiveness thresholds. The reason for this is to incentivise medicine manufacturers to invest in the research and development of new therapies for these diseases and to ensure access to these drugs for patients. There is often debate about whether and how much more should be paid for these drugs compared to others, taking into account the needs of the industry, patients and limited public health budgets. One approach could be to set an appropriate price for orphan drugs, assuming that the return on investment in the development of these drugs should not be higher than the industry average (Berdud, Drummond, & Towse, 2020). Another approach, which is also applied in this study, is the use of the concept of willingness to pay.

The monetary value of an EoL-VOLY unit in Croatia, estimated from a social-inclusive-individual perspective, is on average €67,000, which is about 5 times the GDP per inhabitant in Croatia. In other words, the study has shown that the value of QALYs gained during life is significantly lower than the value of life extension at the end of life, which additionally speaks in favour of the need to define a differentiated cost-effectiveness threshold in Croatia instead of a single threshold. The subjects in this study did not differentiate between the type of diseases. This does not confirm auxiliary hypothesis four (AH4), which states that the value of an additional year of life is relatively higher for rare diseases and cancers than for other diseases.

The results on the monetary value of the QALY and EoL-VOLY unit are intended to contribute to the literature on the valuation of health in general and to the discussion on the appropriate level of the cost-effectiveness threshold in Croatia (based on QALY unit) and to the discussion on the appropriate cost-effectiveness threshold for end-of-life therapies, such as metastatic disease, which have not yet been observed in Croatia. In contrast to previous empirical studies, the hypothetical scenarios precisely defined the way in which the new drug would be financed (outside the public healthcare budget, in the form of an additional tax) and focussed on the socio-individual perspective of the respondents. Two additional variables were included in the regression models that were not commonly used in previous studies: the status of owning a self-employed business or trade and insufficient allocations for health care. The variable denoting self-employment or business ownership was not explicitly included in previous studies, although it is possible that it is partially included in the employment variable. This study presents the first estimated monetary values of QALY units and EoL-VOLY units for Croatia and Southeast Europe in general.

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URBROJ: 2170-1-41-09-23-1

U Rijeci 28. studenog 2023.

EKONOMSKI FAKULTET RIJEKA
Primljeno 01.12.2023
Kl. ozn. 643-03/23-12/23
Ur. br. 141-01-23-001
Org. jed. 01

POTVRDNICA

Potvrđujem da je predloženi naslov doktorskoga rada

Društveno prihvatljiv diferencirani prag troškovne učinkovitosti kao kriterij raspodjele zdravstvenih resursa

pristupnice Elizabete Ribarić, mag. oec.

u skladu s normama hrvatskoga standardnog jezika.

doc. dr. sc. Maša Plešković
ovlaštena lektorica

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KLASA: 643-01/23-01/81

UR. BROJ: 2170-1-41-01-23-1

U Rijeci, 29.01.2024.

POTVRDA

Potvrdjuem da je lektorirani naslov doktorskog rada doktorandice Elizabete Ribaric,

Socially Acceptable Differentiated Cost-Effectiveness Threshold as a Criterion for the Allocation of Healthcare Resources

u skladu s normom engleskog standardnog jezika.

EKONOMSKI FAKULTET RIJEKA
Primljeno 30-01-2024
Kl. ozn. 643-03/24-13/02
Ur. br. 141-01-24-1
Org. jed. 01

Jadranka Kim Musa

Jadranka Kim Musa, visa lektorica

SVEUČILIŠTE U RIJECI
EKONOMSKI FAKULTET

KLASA: 643-03/22-03/011
URBROJ: 141-07-23-006

Rijeka, 21. ožujka 2023. godine

Temeljem članka 33. Pravilnika o studijima Sveučilišta u Rijeci te članka 11. i čl.33 Pravilnika o poslijediplomskom sveučilišnom (doktorskom) studiju Ekonomije i Poslovne ekonomije Ekonomskog fakulteta u Rijeci, Fakultetsko vijeće Ekonomskog fakulteta u Rijeci na 280. sjednici održanoj 20. ožujka 2023. donijelo je

O D L U K U

Prihvaća se tema doktorske disertacije doktorandice Elizabete Ribarić, mag. oec., pod naslovom

„Vrijednosti u zdravstvu: prag troškovne učinkovitosti i ekonomske evaluacije".

DEKAN:

Prof. dr. sc. Saša Drezgić

DOSTAVITI:

1. Elizabeta Ribarić, mag. oec.
2. mentorici
3. pismohrana

SVEUČILIŠTE U RIJECI
EKONOMSKI FAKULTET

KLASA: 643-03/22-02/008
URBROJ: 2170-57-07-22-002

Rijeka, 20. travnja 2022. godine

Na temelju članka 11. st. 1. podst. 3. i članka 13. st. 1. i 2. Pravilnika o poslijediplomskom sveučilišnom studiju (doktorskom studiju) Ekonomija i poslovna ekonomija i članka 36. Statuta Ekonomskog fakulteta Sveučilišta u Rijeci, Fakultetsko vijeće Ekonomskog fakulteta Sveučilišta u Rijeci je na 264. sjednici održanoj 19. travnja 2022. godine donijelo

ODLUKU

Doc. dr. sc. Ana Bobinac imenuje se za mentoricu doktorandici Elizabeti Ribarić, mag. oec.

EKONOMSKI FAKULTET · SVEUČILIŠTA U RIJECI

DEKAN

Prof. dr. sc. Alen Host

Dostavlja se:
1. Elizabeta Ribarić, mag. oec.
2. Mentorici
3. pismohrana

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SVEUČILIŠTE U RIJECI
EKONOMSKI FAKULTET

KLASA. 643-03/23-04/10
URBROJ: 141-07-23-002

Rijeka, 13. veljače 2024. godine

Temeljem članka 65. Pravilnika o studijima Sveučilišta u Rijeci te članka 11. Pravilnika o doktorskom studiju Ekonomija i poslovna ekonomija Ekonomskog fakulteta u Rijeci, Fakultetsko vijeće Ekonomskog fakulteta u Rijeci na 296. sjednici održanoj 12. veljače 2024. godine donijelo je

O D L U K U

Prihvaća se prikaz rezultata istraživanja doktorskog rada doktorandice Elizabete Ribarić, mag. oec., pod naslovom:

„Društveno prihvatljiv diferencirani prag troškovne učinkovitosti kao kriterij raspodjele zdravstvenih resursa".

DEKAN:
Prof. dr. sc. Saša Drezgić

EKONOMSKI FAKULTET SVEUČILIŠTA U RIJECI

DOSTAVITI:

1. doktorandici
2. mentorici
3. pismohrana

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KLASA: 643-03/23-09/036
URBROJ: 141-07-23-002

Rijeka, 05. rujna 2023. godine

Temeljem članka 16. Pravilnika o doktorskom studiju Ekonomija i poslovna ekonomija Ekonomskog fakulteta u Rijeci (dalje: Pravilnika), Povjerenstvo za poslijediplomske studije i doktorate je povodom zamolbe doktorandice Elizabete Ribarić, mag. oec., na 381. sjednici održanoj dana 04. rujna 2023. god. donijelo sljedeću

ODLUKU

Usvaja se zamolba doktorandice Elizabete Ribarić, mag. oec. te joj se priznaje sljedeća izvršena obveza na doktorskom studiju Ekonomije i poslovne ekonomije:

1. Sudjelovanje na metodološkim ljetnim školama, radionicama i sl. u okviru sveučilišnih mreža/programa (EDAMBA, CESEENET,CEEPUS...)

OBRAZLOŽENJE

Doktorandica je sudjelovala na metodološkoj radionici „Vienna Joint Economics Seminar" u sklopu boravka na Faculty of Business, Economics and Statistics, University of Vienna, 29. lipnja 2023. u Beču. Za navedenu radionicu priznaje se 4 ECTS.

Predsjednik Povjerenstva
za PS i doktorate

Doc. dr. sc. Vinko Zaninović

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KLASA: 643-03/23-09/32
URBROJ: 141-07-23-002

Rijeka, 05. rujna 2023. godine

Temeljem članaka 11. i 22. Pravilnika o doktorskom studiju ekonomije i poslovne ekonomije Ekonomskog fakulteta u Rijeci (dalje: Pravilnika), Povjerenstvo za poslijediplomske studije i doktorate je povodom zamolbe doktorandice Elizabete Ribarić, mag. oec., na 381. sjednici održanoj dana 04. rujna 2023. donijelo sljedeću

ODLUKU

Prihvaća se zamolba doktorandice Elizabete Ribarić, mag. oec. za podobnost boravka na Faculty of Business, Economics and Statistics, University of Vienna, te joj se priznaje 20 ECTS bodova.

OBRAZLOŽENJE

Boravak na Faculty of Business, Economics and Statistics, University of Vienna u periodu od 01.03.2023 - 30.06.2023. godine udovoljava uvjetima Pravilnika za izvršenje obveze na doktorskom studiju „boravak na inozemnom sveučilištu u trajanju od 3 mjeseca" te je za isto izdana potvrda od strane navedenog Sveučilišta.

Predsjednik Povjerenstva
za PS i doktorate

Doc. dr. sc. Vinko Zaninović

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Rijeka, 05. rujna 2023. godine

Temeljem članka 16. Pravilnika o doktorskom studiju Ekonomija i poslovna ekonomija Ekonomskog fakulteta u Rijeci (dalje: Pravilnika), Povjerenstvo za poslijediplomske studije i doktorate je povodom zamolbe doktorandice Elizabete Ribarić, mag. oec., na 381. sjednici održanoj dana 04. rujna 2023. god. donijelo sljedeću

ODLUKU

Usvaja se zamolba doktorandice Elizabete Ribarić, mag. oec. te joj se priznaje sljedeća izvršena obveza na doktorskom studiju Ekonomije i poslovne ekonomije:

1. Sudjelovanje na metodološkim ljetnim školama, radionicama i sl. u okviru sveučilišnih mreža/programa (EDAMBA, CESEENET,CEEPUS...)

OBRAZLOŽENJE

Doktorandica je sudjelovala na metodološkoj radionici „Academic writing&publishing" u sklopu boravka na Faculty of Business, Economics and Statistics, University of Vienna, 27. lipnja 2023. u Beču. Za navedenu radionicu priznaje se 5 ECTS.

Predsjednik Povjerenstva
za PS i doktorate

Doc. dr. sc. Vinko Zaninović

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KLASA: 643-03/23-09/045
URBROJ: 141-07-23-002

Rijeka, 21. rujna 2023. godine

Temeljem članka 60. Pravilnika o studijima Sveučilišta u Rijeci te članaka 11. i 24. Pravilnika o doktorskom studiju Ekonomija i poslovna ekonomija Ekonomskog fakulteta u Rijeci (dalje: Pravilnika), Povjerenstvo za poslijediplomske studije i doktorate je povodom zamolbe doktorandice Elizabete Ribarić, mag. oec., na 382. sjednici održanoj 18. rujna 2023. godine donijelo sljedeću

ODLUKU

Usvaja se zamolba doktorandice Elizabete Ribarić, mag. oec., te joj se priznaje izvršena obveza na doktorskom studiju Ekonomija i poslovna ekonomija:

1. Prezentacija znanstvenog rada na međunarodnom znanstvenom skupu; doktorandica stječe 5 ECTS bodova.

OBRAZLOŽENJE

Doktorandica je sudjelovala na EUHEA European health Economics Association PhD conference održanoj od 07. – 08. rujna 2023. godine s radom „VOLY – The monetary value of a life year at the end of patients' life"

S obzirom da navedena konferencija ima uređivački odbor koji se sastoji od minimalnih 70% uglednih inozemnih znanstvenika, po članku 16. i čl. 24 doktorandici se priznaje 5 ECTS bodova.

Predsjednik Povjerenstva
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KLASA: 643-03/23-09/49
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Rijeka, 25. listopada 2023. godine

Temeljem članka 60. Pravilnika o studijima Sveučilišta u Rijeci te članaka 11. i 26. Pravilnika o doktorskom studiju Ekonomija i poslovna ekonomija Ekonomskog fakulteta u Rijeci (dalje: Pravilnika), Povjerenstvo za poslijediplomske studije i doktorate je povodom zamolbe doktorandice Elizabete Ribarić, mag. oec., na 383. sjednici održanoj dana 23. listopada 2023. god. donijelo sljedeću

ODLUKU

Usvaja se zamolba doktorandice Elizabete Ribarić, mag. oec., te joj se priznaje sljedeća izvršena obveza na doktorskom studiju Ekonomije i poslovne ekonomije:

1. Znanstveni članak u međunarodno priznatom znanstvenom časopisu: priznaje se 20 ECTS bodova.

OBRAZLOŽENJE

Doktorandica je objavila članak "Voly - the monetary value of a life year at the end of patients' lives" autora Bobinac, Ana; Ribarić, Elizabeta; Velić, Ismar; u časopisu Applied Health Economics and Health Policy objavljen 10/2023;

Navedeni časopis indeksiran je u Scopus bazi.

Na temelju čl. 16. Pravilnika o doktorskom studiju Ekonomije i poslovne ekonomije članak se boduje s 20 ECTS.

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