OP-183 [Beekeeping Economy]
COLOSS results on the Wellbeing of beekeepers in 17 European and 3 African countries

Robert Brodschneider, Georg Schaunitzer
Institute of Biology, University of Graz, Graz, Austria

Beekeeping is troubled and threatened by many issues, such as honey bee diseases, colony losses, poor forage and harvest, honey price and sales, climate change, invasive species, pesticide applications, lack of flowers. Whereas the health of honey bee colonies, and the causes of colony losses have been increasingly investigated in the last decades, the wellbeing of the beekeeping sector has not been thoroughly investigated. We therefore conducted the first multi-country survey on beekeeper wellbeing using the Cantril ladder. This is a widely used self-assessment tool for measuring subjective life satisfaction. It involves individuals imagining a ladder with steps numbered from 0 to 10 and placing themselves at a point that reflects their current and future life satisfaction. This tool provides insights into individuals' perceptions of their own wellbeing and has been utilized in cross-cultural studies, policy evaluations, and public health research. The study aimed to investigate the impact of operation type (operation size) on life satisfaction and explore how different beekeeping-related factors influence life satisfaction. The survey questions were distributed alongside the COLOSS questionnaire on honey bee colony losses and management practices. The Cantril ladder results were compared among beekeepers in different countries and to the general population of each country using data from the World Happiness Report. We collected more than 8000 answers from beekeepers from 17 European and 3 African countries. The highest Cantril ladder result among beekeepers for the time of the survey (2024) was found for the Netherlands, followed by Finland and Denmark, whereas it was lowest for Bulgaria, Portugal and Greece. The life satisfaction of beekeepers significantly correlated with the World Happiness Report data for the countries. In Europe, 'Financial aspects of beekeeping' and 'Technical and financial support for beekeepers' were found to contribute most negatively to life satisfaction, whereas in Africa it was 'Weather and working outdoors' and 'Technical and financial support for beekeepers'. This is the first multi-country study on beekeeper life satisfaction. We hypothesize that wellbeing of large-scale beekeepers might be affected stronger by the problems of the sector.

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Working group: Honey bee, Environment & Society

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Freweini Assefa, Workneh Ayalew, Laima Blažytė-Čereškienė, Robert Chlebo*
Cristina Amaro Costa, Bjørn Dahle, Jiří Danihlík, Samra Hašimbegović, Ewa Mazur,
Maritta Martikkala, Evangelia Kagiali, Séverine Kotrschal, Franco Mutinelli,
Evgeniya Neshova Ivanova, Gilles San Martin, Sidonie Fameni Topé,
Z. Ngalo Otieno-Ayayo, Yudah O. Oyieyo, Oleksandr Oleksandrovych Shkrobanets,
Flemming Vejsnæs, Mbatha B. Wambua, Beatrice T. Nganso

* Sorry, data missing, my fault

- Established 2008
- Conducts large scale surveys on hive management and colony losses
  - Loss rates of 30+ countries, since more than a decade (van der Zee et al., 2012; 2014; Brodschneider et al., 2016; 2018; Gray et al., 2019; 2020; 2023)
  - Risk analysis, best hive management practices

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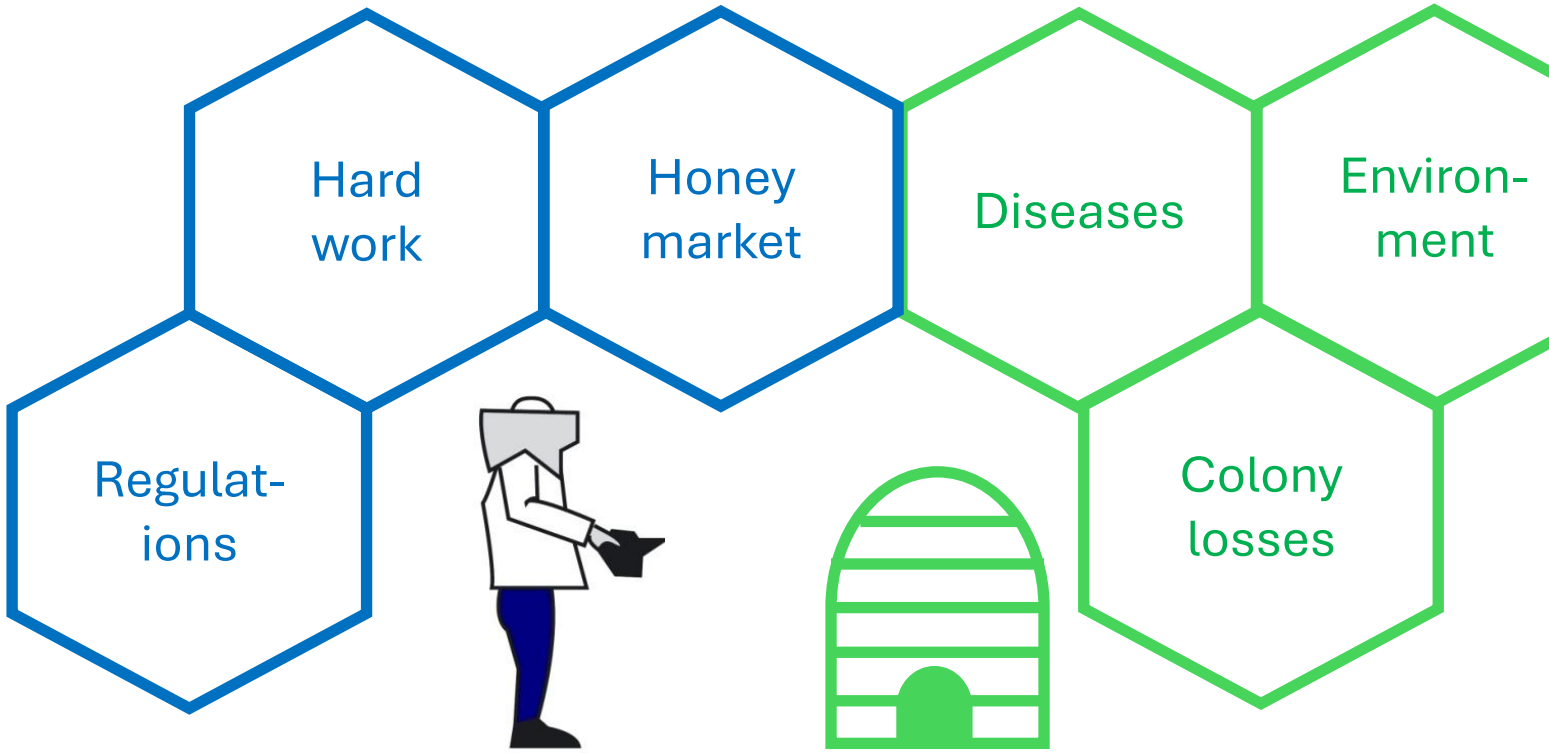

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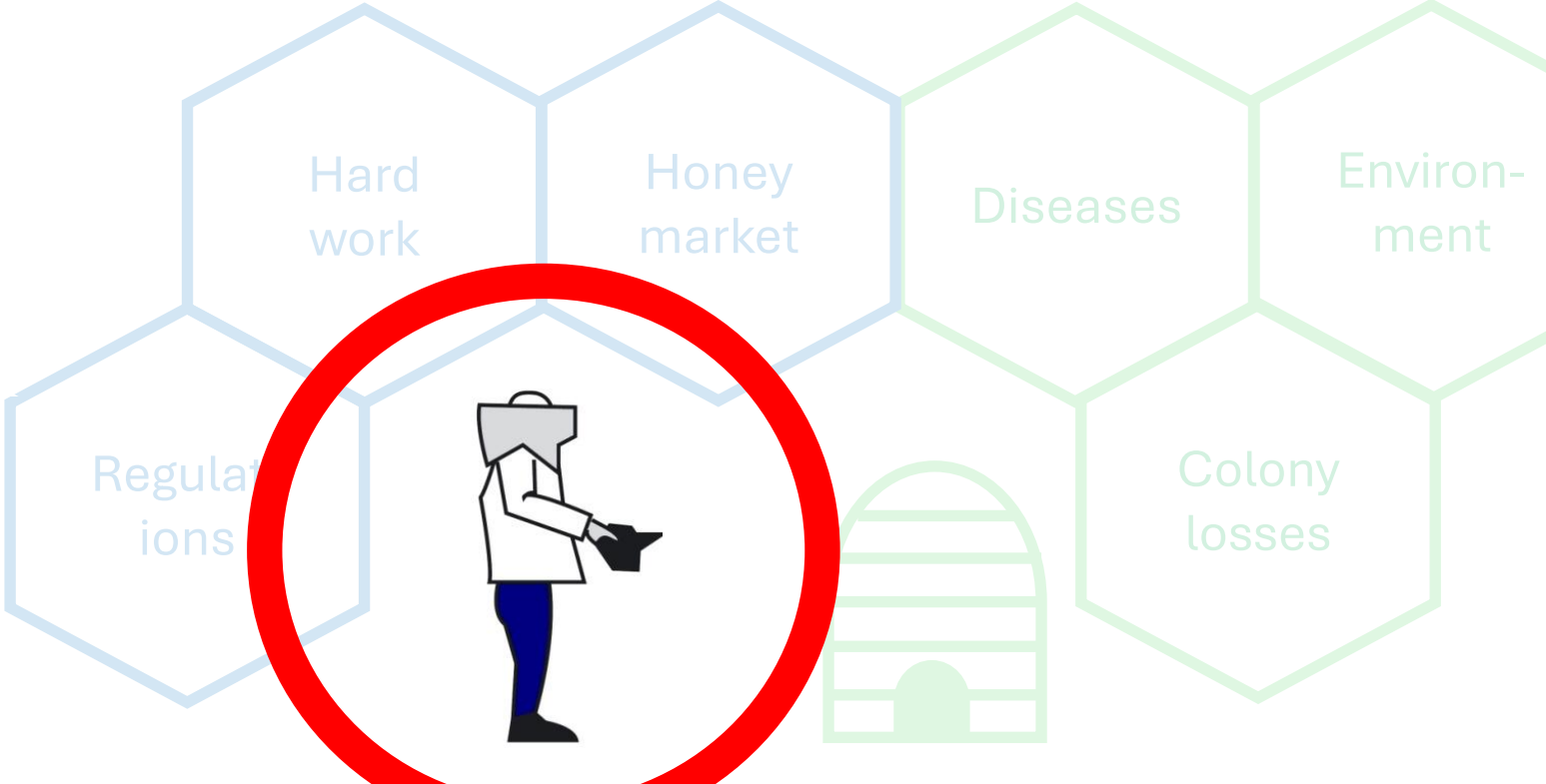


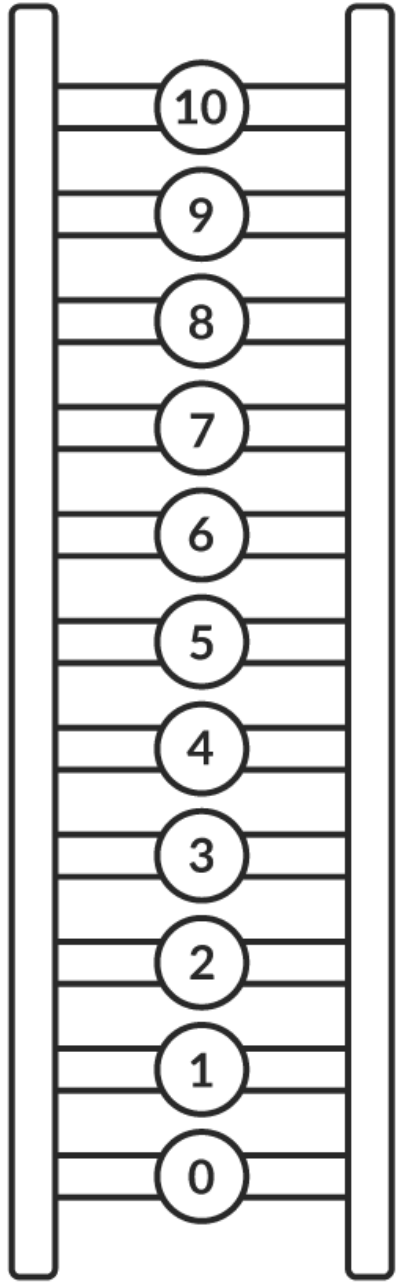
How are beekeepers dealing with all of that?

Method: Cantril ladder

Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?

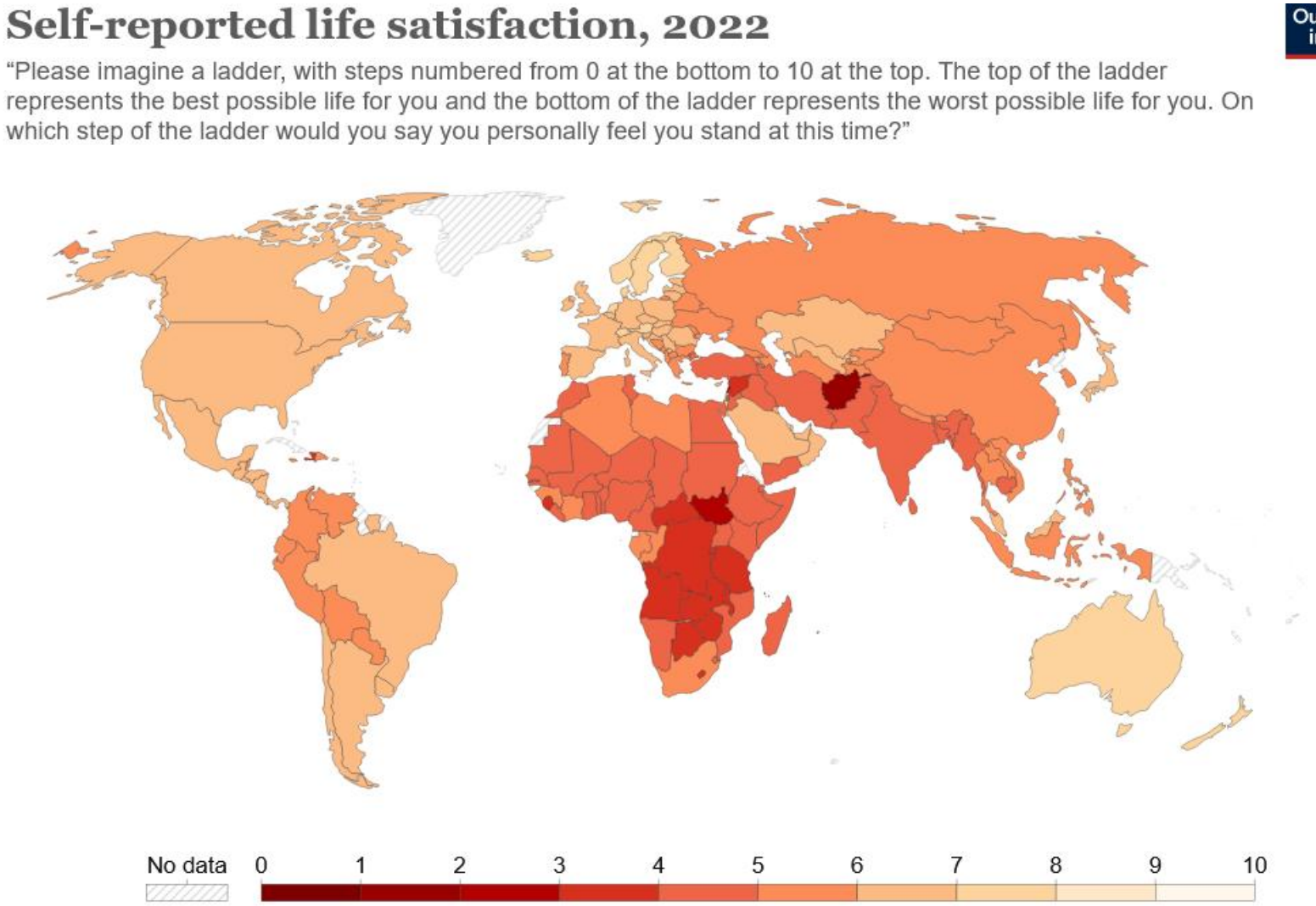
On which step were you standing about 5 years ago?

On which step do you think you will stand about 5 years from now?



Method: Cantril ladder

- https://ourworldindata.org/grapher/happiness-cantril-ladder



Inspired from a study from New Zealand

ARTICLE

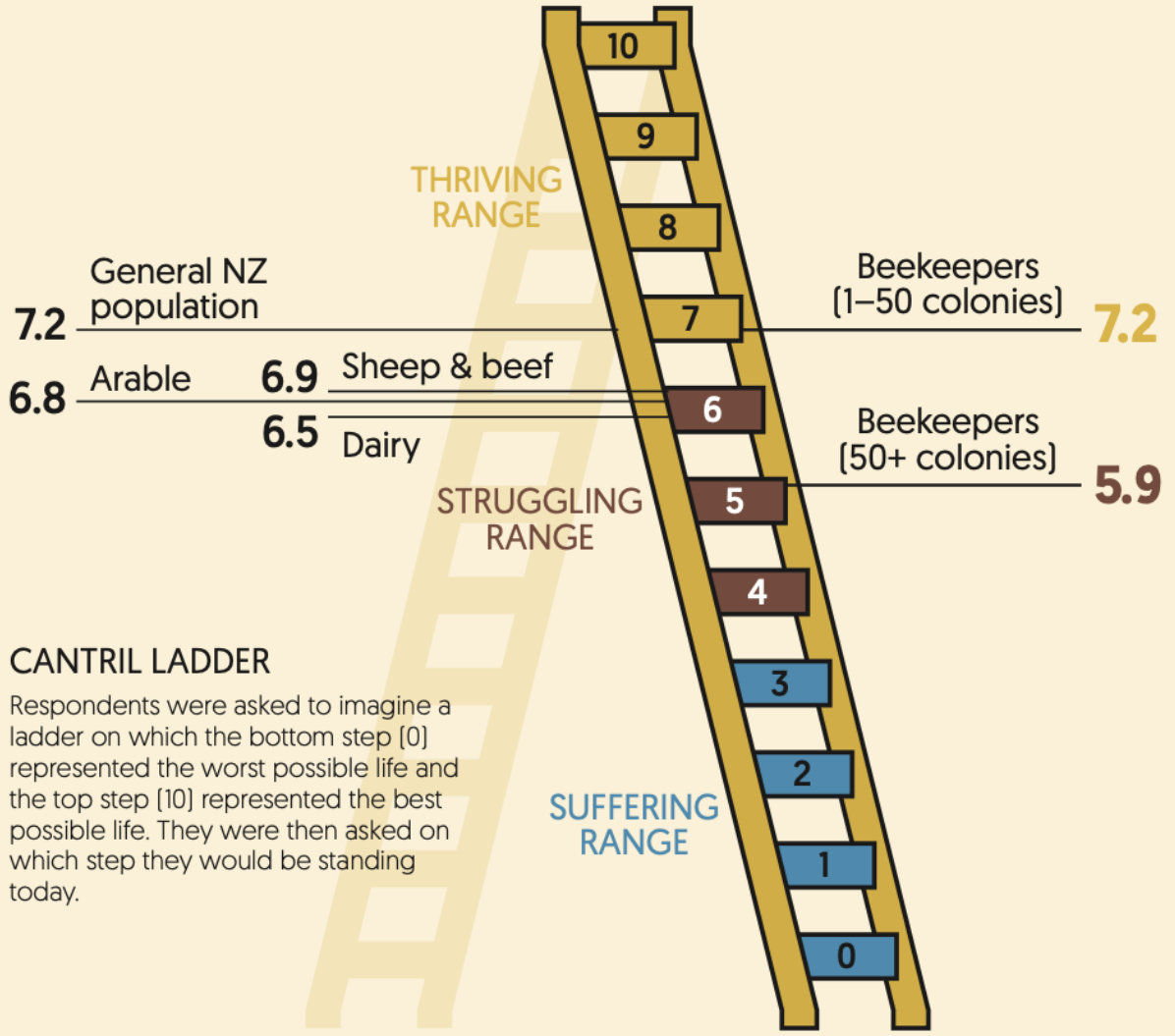
Check for updates

Perspectives on Well-being Among Commercial Beekeepers in New Zealand

Philip Stahlmann-Brown, Patrick Dawkins, Jane Pierce, John Berry, Barry Foster, Ricki Leahy, Jane Lorimer, Russell Marsh and Will Trollope

Beekeepers – well-being

Hobbyist beekeepers reported well-being similar to the general NZ population. Commercial beekeepers reported well-being well below that of the general population as well as other primary producers.



CANTRIL LADDER

Respondents were asked to imagine a ladder on which the bottom step [0] represented the worst possible life and the top step [10] represented the best possible life. They were then asked on which step they would be standing today.

Method

- Piggy-backed with COLOSS monitoring in 2023/24 in
- 15 European countries!
  - More than 7212 answers in total (7212 to 8149 in subquestions)
- 3 African countries
  - 379 answers from 5 sources

→Compare beekeepers life satisfaction in countries

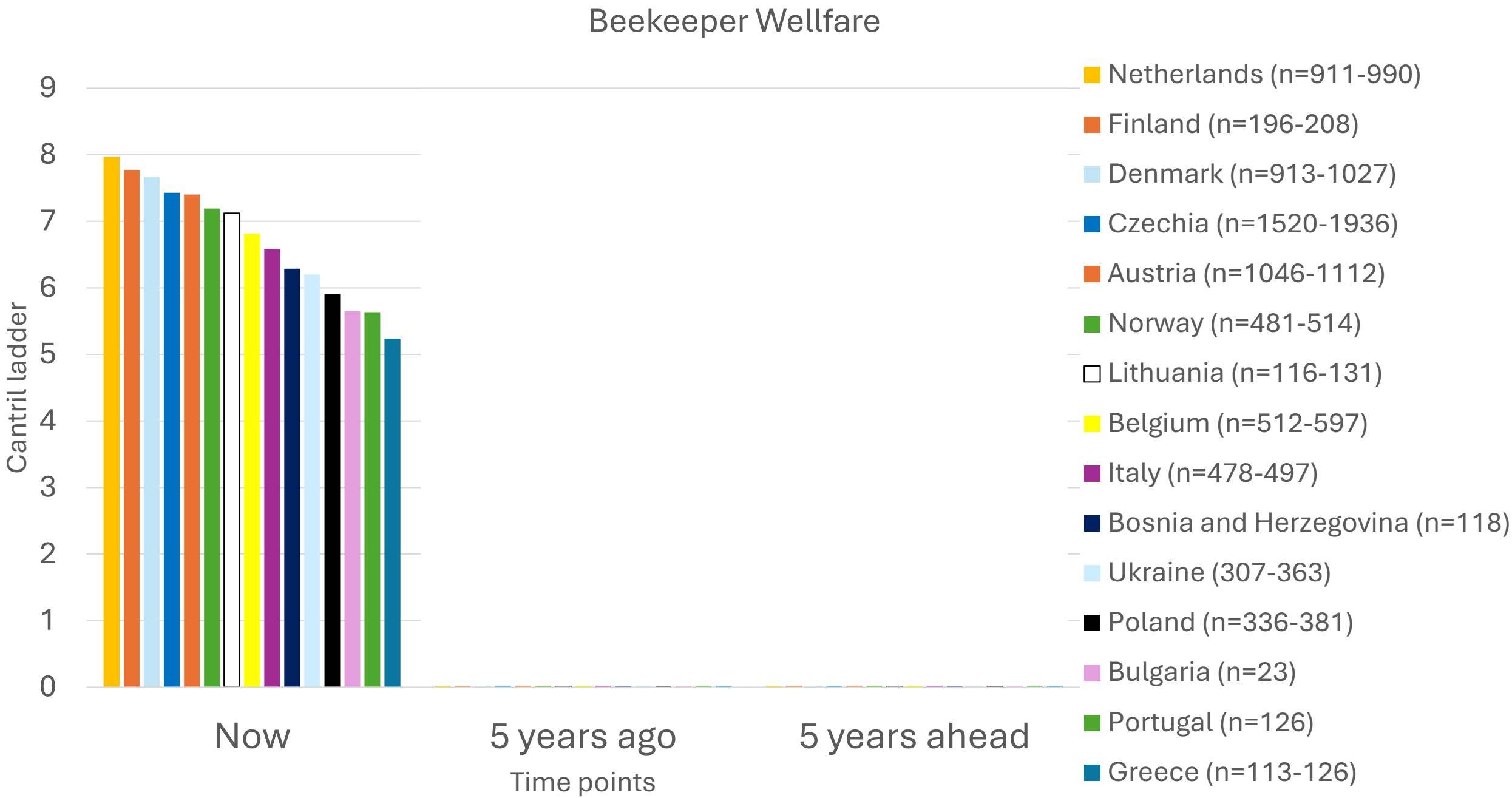
→Compare beekeepers life satisfaction to population (World happiness report)

→Investigate impact of operation type (operation size)

→Factors impacting life satisfaction

Method: Factors impacting life satisfaction

- How positively or negatively do each of the following factors affect how you are feeling at the present time, if at all?
- Honey bee health and biosecurity
- Financial aspects of beekeeping
- Regulations and compliance
- Workload and time management
- Weather and working outdoors
- Other beekeepers and landowners
- Physical aspects of beekeeping
- Technical and financial support for beekeepers


Beekeeper Wellfare
Cantril ladder
9
8
7
6
5
4
3
2
1
0
Now
5 years ago
5 years ahead
Time points
Netherlands (n=911-990)
Finland (n=196-208)
Denmark (n=913-1027)
Czechia (n=1520-1936)
Austria (n=1046-1112)
Norway (n=481-514)
Lithuania (n=116-131)
Belgium (n=512-597)
Italy (n=478-497)
Bosnia and Herzegovina (n=118)
Ukraine (307-363)
Poland (n=336-381)
Bulgaria (n=23)
Portugal (n=126)
Greece (n=113-126)

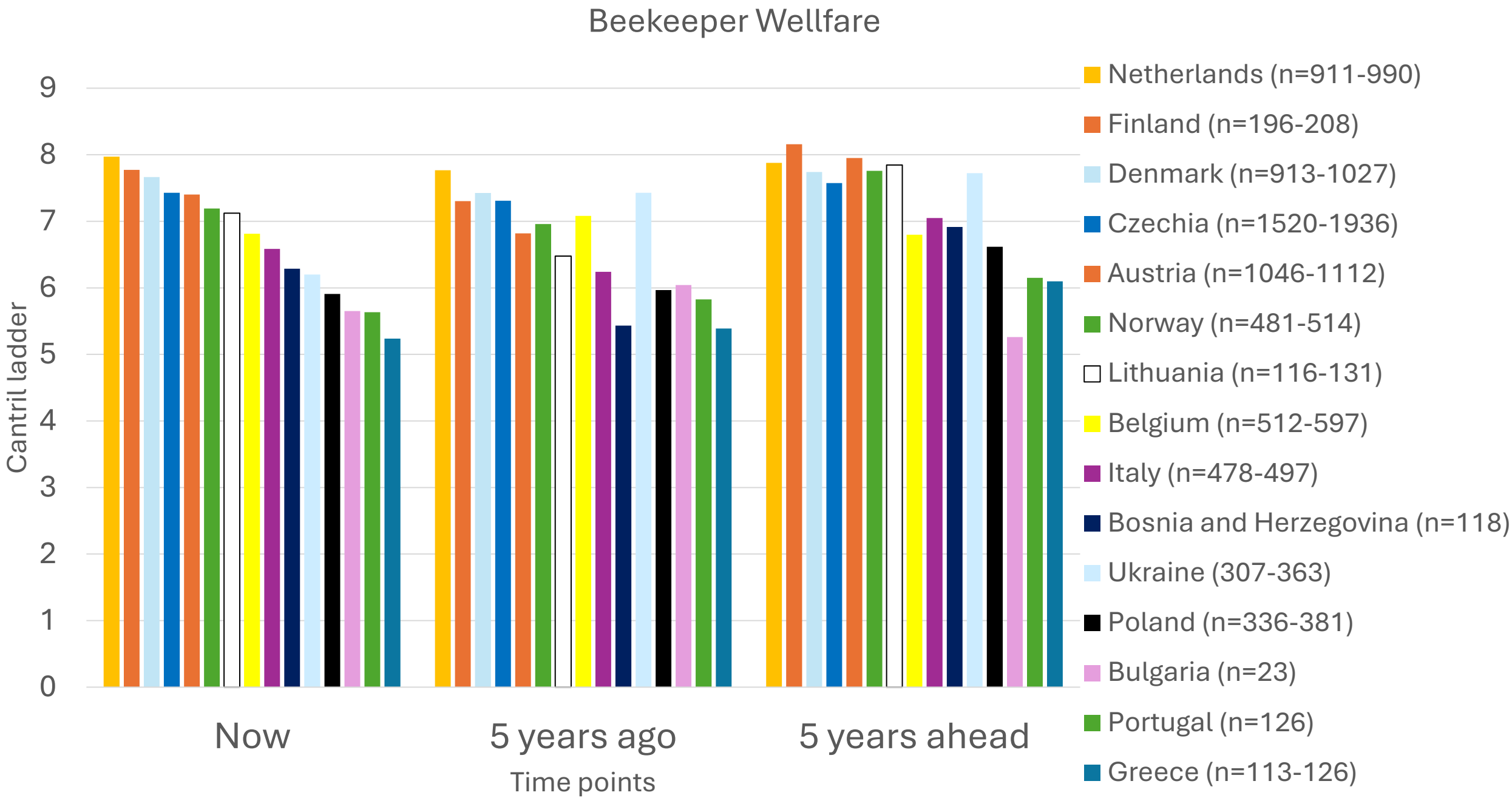

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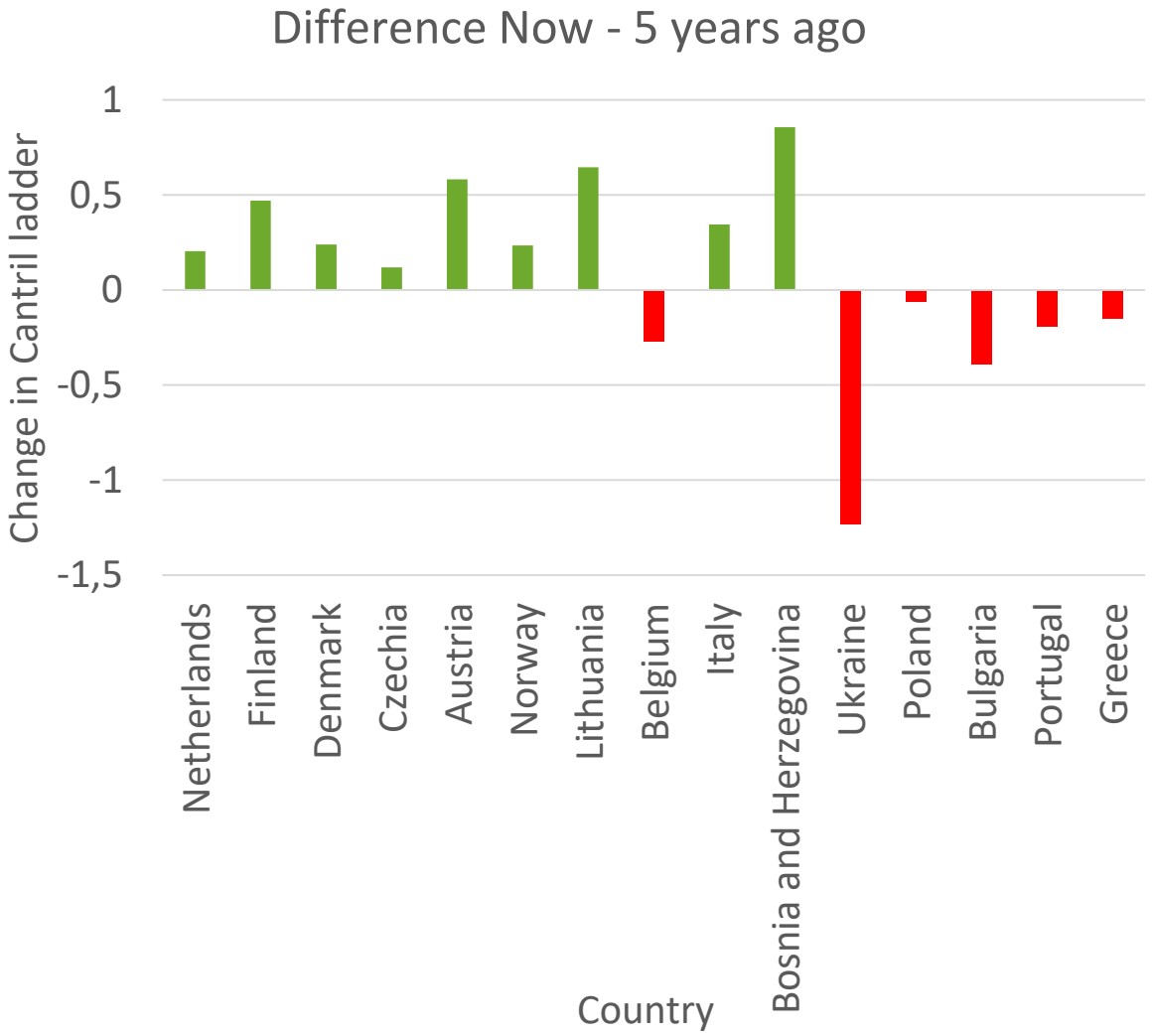
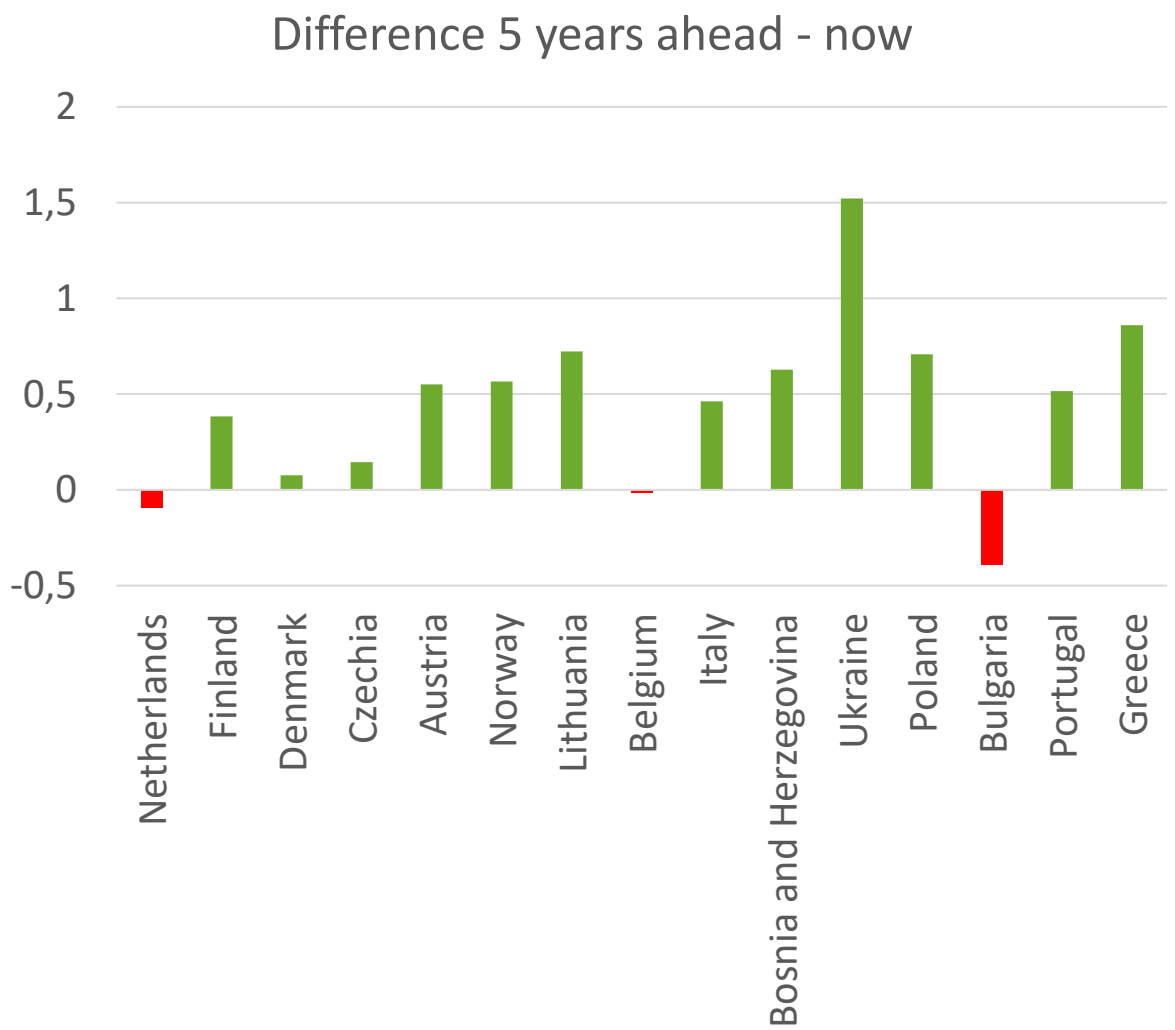
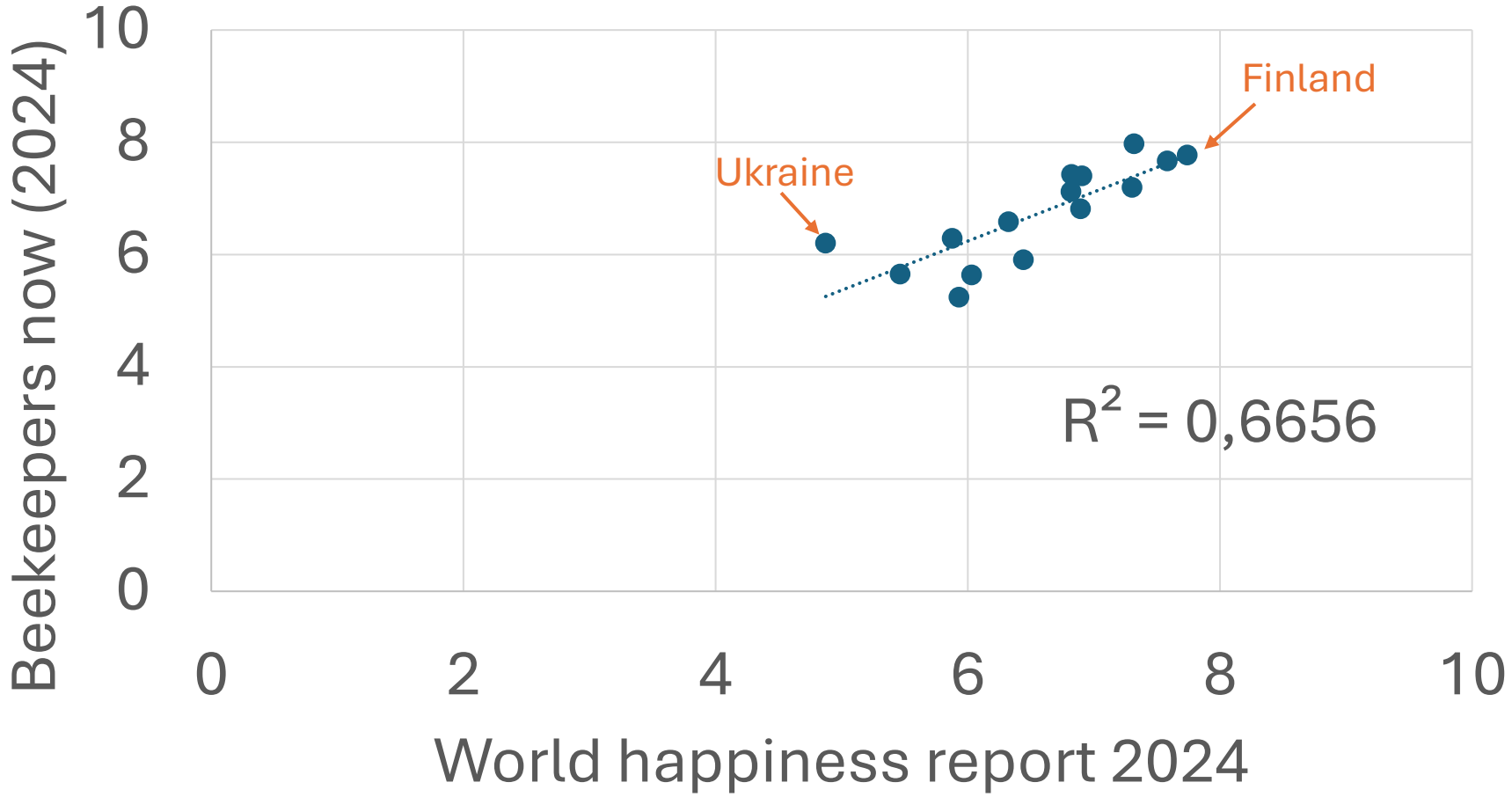
Figure 2. Now, 5 years ago and 5 years ahead

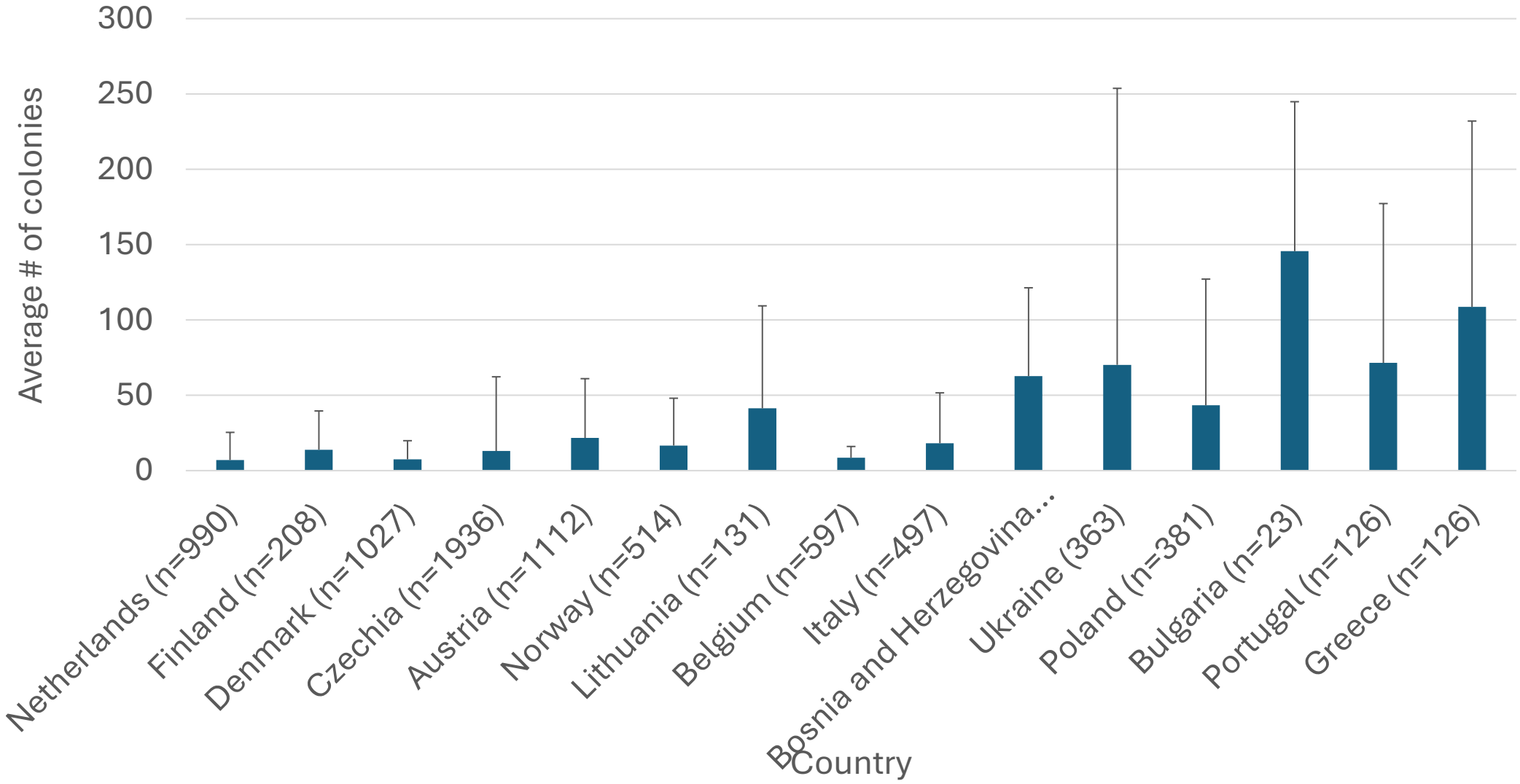




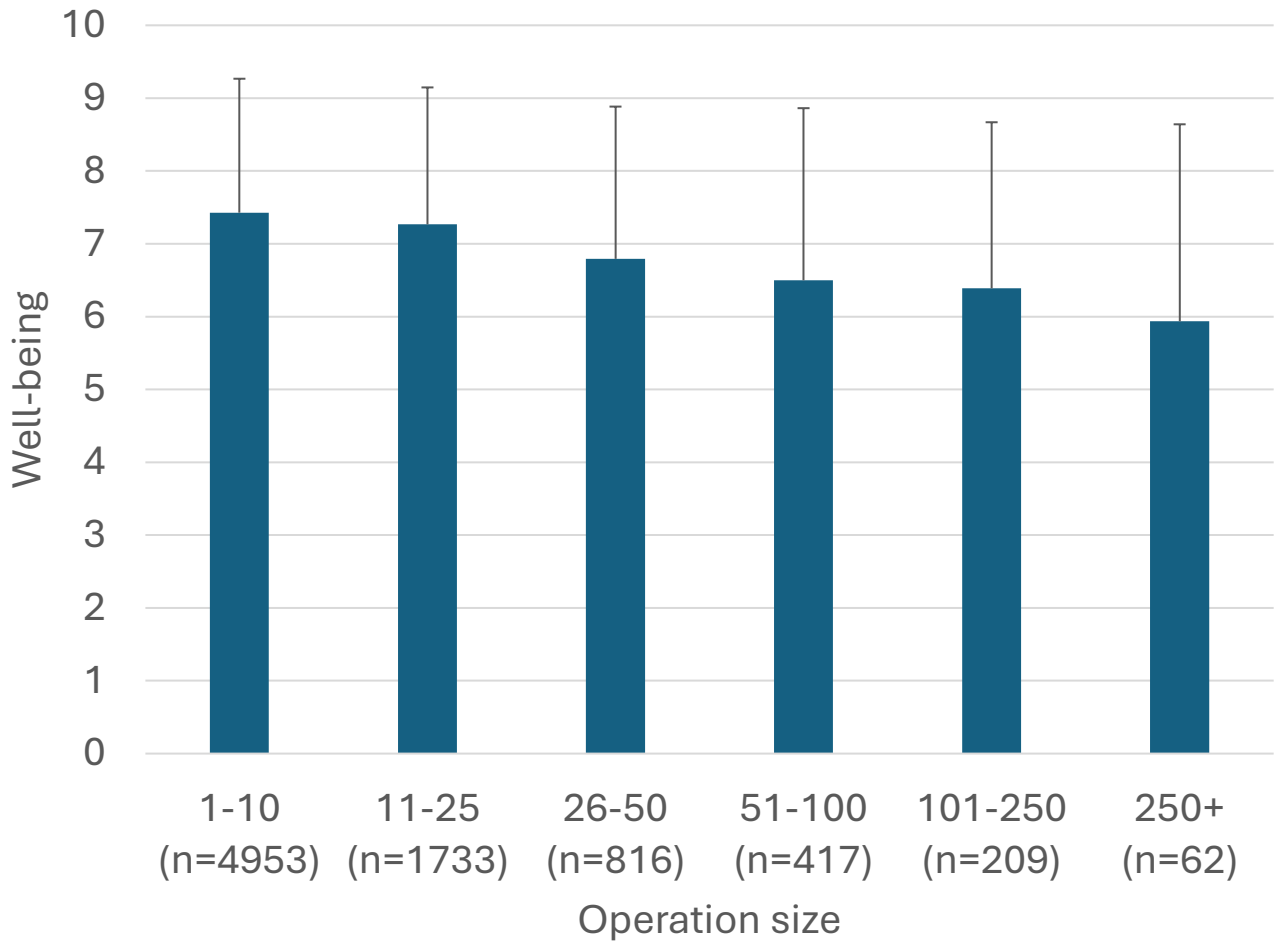
Correlation with population from World happiness report



Operation size



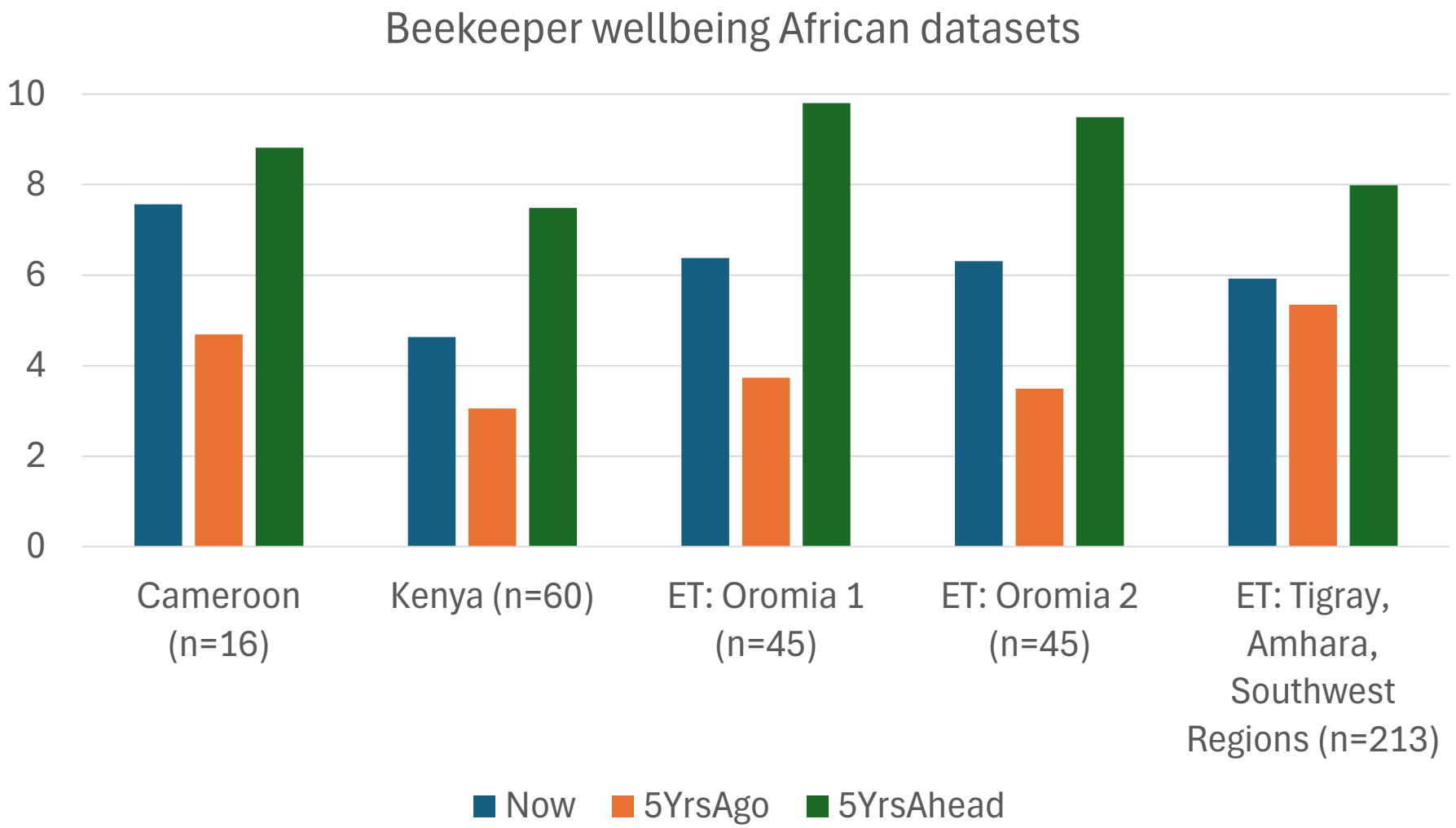
Operation size – 15 European countries



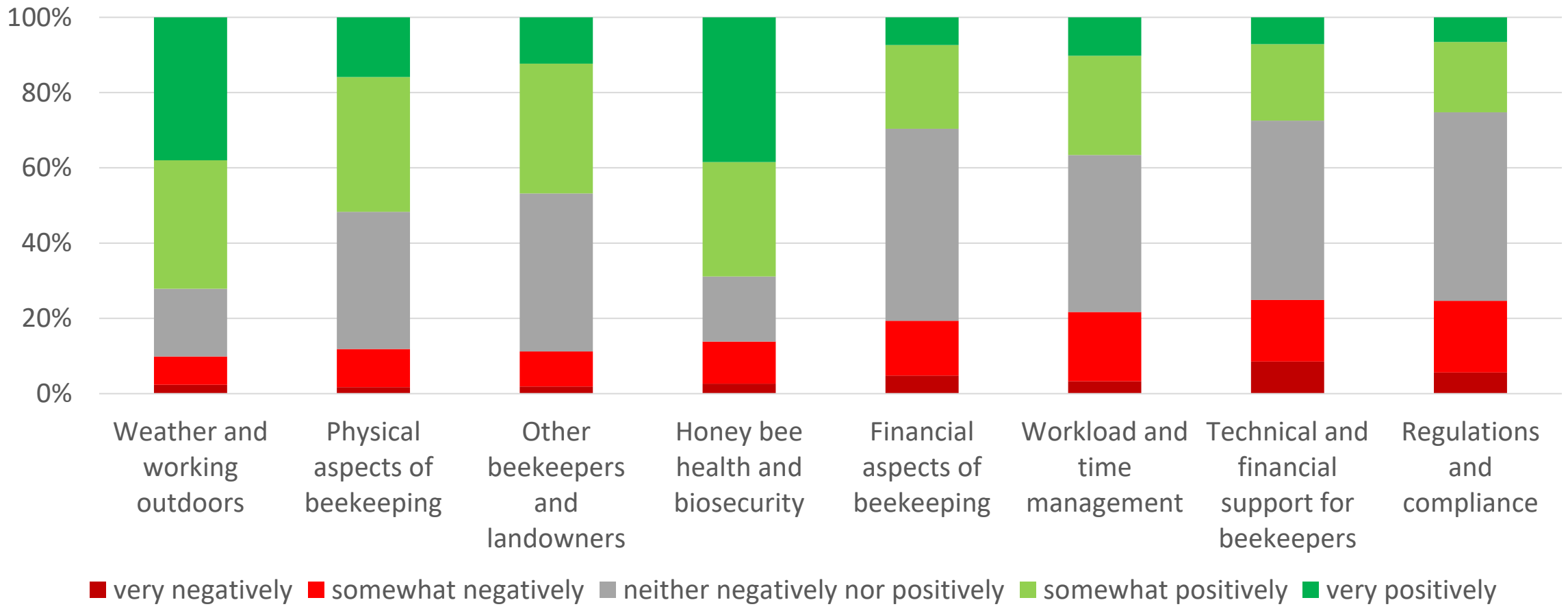
In 250+ class:

Czechia	5
Austria	7
Bosnia and Herzegovina	2
Bulgaria	3
Portugal	6
Italy	3
Lithuania	4
Netherlands	2
Norway	4
Poland	6
Ukraine	26
Greece	14

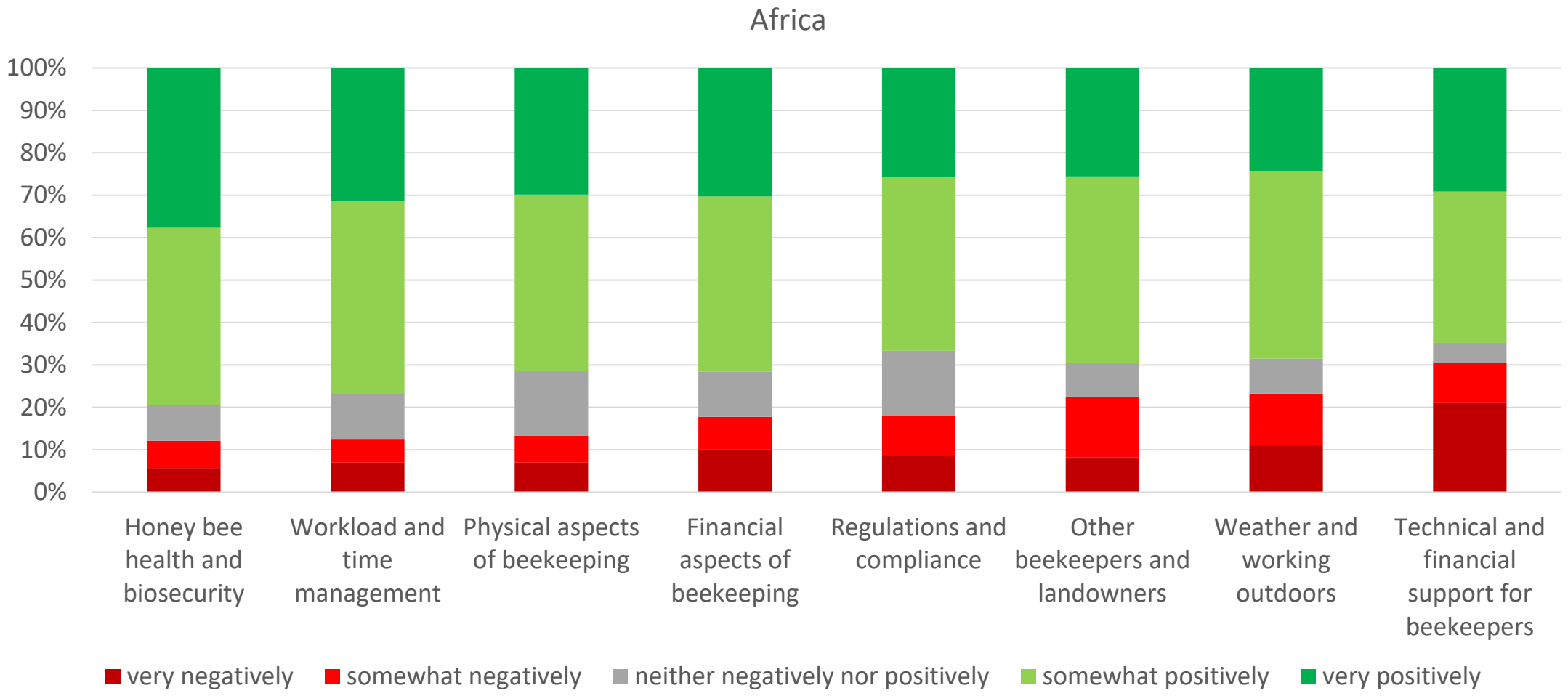
Africa (Beatrice Nganso and co-workers)



Factors impacting life satisfaction - Europe

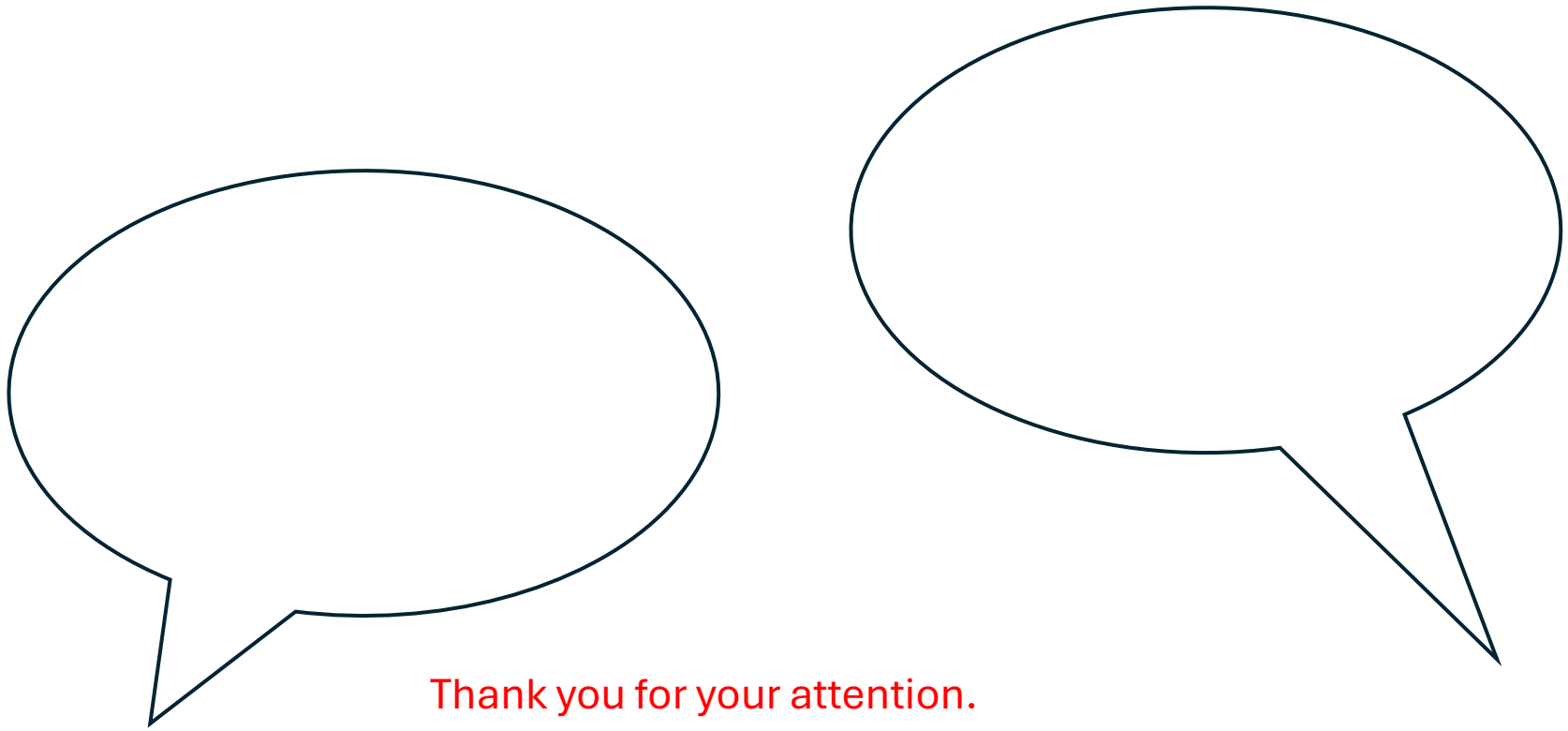


Factors impacting life satisfaction - Africa



Mitigation measures

- What could science/extension/policy/… do to mitigate the low life satisfaction in (professionell) beekeeping?



Thank you for your attention.