

Human and Social Capital of Board Members of Renewable Energy Cooperatives in Germany

Results of an online survey (version of April 23 2018)

Institute for International Research on Sustainable Management and Renewable Energy (ISR)

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Management Summary



male, university degree, in their mid fifties



Education and professional experience above German average, gaps in sales and marketing



New business models frequently targeting sales energy



Confident with regard to qualifications for new business models



Good networks, but not for sales and marketing

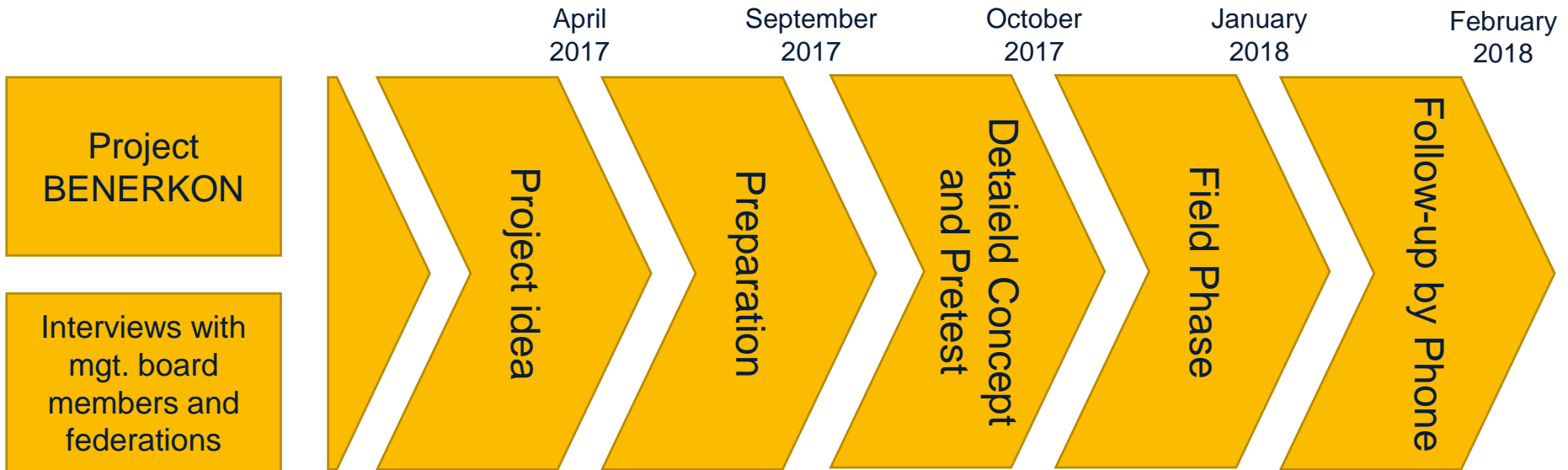
Background

- Boom of renewable energy cooperatives (RECs) in Germany mainly founded on the business model of generating electricity in PV installations and feeding it into the public grid based on the Renewable Energy Act (REA)
- This business model has become largely obsolete due to changes in the REA; RECs looking for new business models
- REC management members perceive lack in qualification and time as well as increased risk as barriers for realizing new business models (results of a previous NGU project)

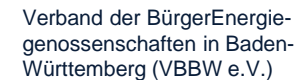
Research questions

- Who are the management board members and supervisory board members of RECs in Germany (demographic characteristics)
- How are management board members paid (main job, part-time job, voluntary work)?
- What are the qualifications of management board members and supervisory board members with regard to implementing new business models?
- Which networks do they have? Can networks compensate for qualification gaps?
- How do they rate the qualifications of the management board and the supervisory board in total?
- Which support structures do exist (advisory committees, project groups)?

Research process



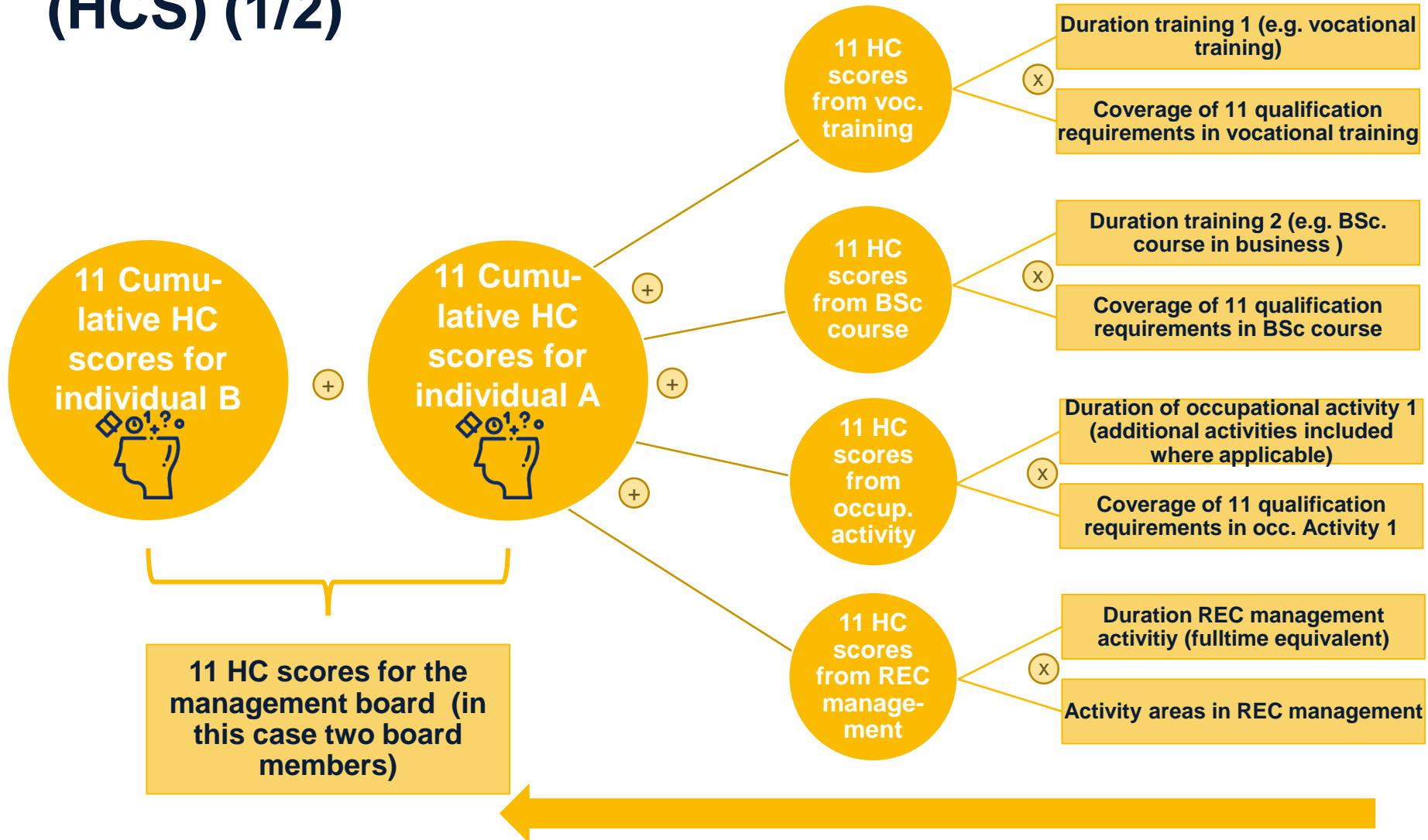
Partners:



Response rates

- The true population, i.e. the total number of RECs in Germany as well as the number of mgt. board members and supervisory board members at the time of the survey are unknown
- The following figures are estimations:
 - Germany:
 - Number of energy coops (not only RECs) stood 2016 at 1.024 (Kahla et al. 2017); RECs in our sample: 125, i.e. at least 12% of all RECs
 - The average number of management board members in our sample is 2.77, for all 1.024 energy coops in Germany we estimate the total number of mgt. board members at 2.836; mgt. board members in our sample: 187, i.e. at least 6.6% of all mgt. board members in Germany
 - Federations involved in our study (bwgv, GVB, Verband der Regionen)
 - RECs in the federations involved: 761; RECs in our sample: 125, i.e. 16% of RECs in the federations involved
 - The average number of management board members in our sample is 2.77, for all 761 energy coops in Germany we estimate the total number of mgt. board members at 2.108; mgt. board members in our sample: 187, i.e. at least 8.9% of all mgt. board members in the RECS from the federations involved

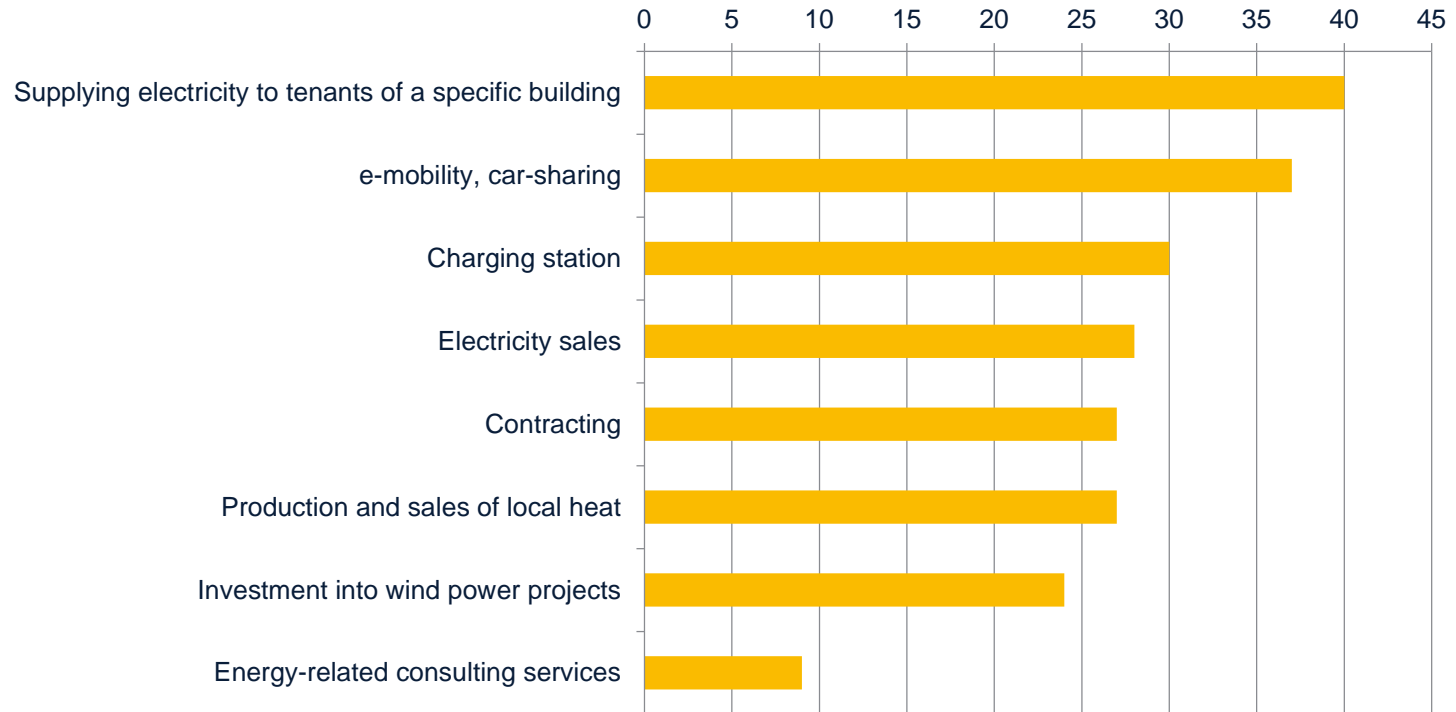
Calculation of human capital score (HCS) (1/2)



Calculation of human capital score (HCS)(2/2)

- Qualification requirements / qualification areas:
 1. Technical know-how
 2. Business know-how (e.g. cost-benefit analysis, financing options)
 3. Legal know-how (e.g. with regard to contracting)
 4. Project development and management
 5. Sales
 6. Marketing and public relations
 7. Employee management, human resources, leadership
 8. Strategy and business planning (e.g. with regard to business concepts or risk management)
 9. Cooperatives as a legal form (e.g. requirements, decision-making rules)
 10. Tax know-how
 11. Renewable energies
- For each training step / educational stage as well as for each occupational activity / job we asked for the coverage of each qualification requirement (Likert scale from „no coverage“ to „very strong coverage“), we also matched the activities in the REC with the requirements

Planned new business models



Number of mentions, multiple answers were possible

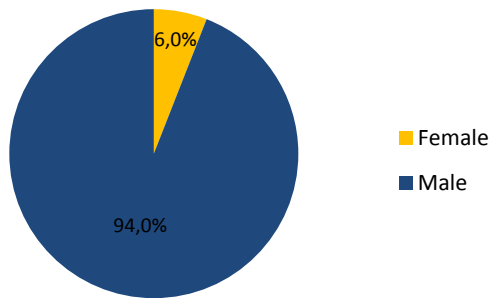
n = 72 RECs

44% of all RECs who answered this question (n=121) are currently planning to change or expand their business models (according to their management board members)

Analysis of management board members' answers

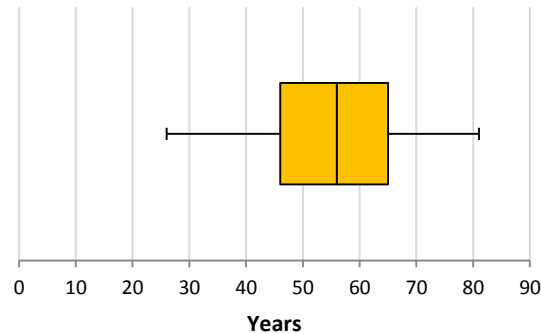
Sociodemographic features of individual mgt. board members

Gender



n = 168

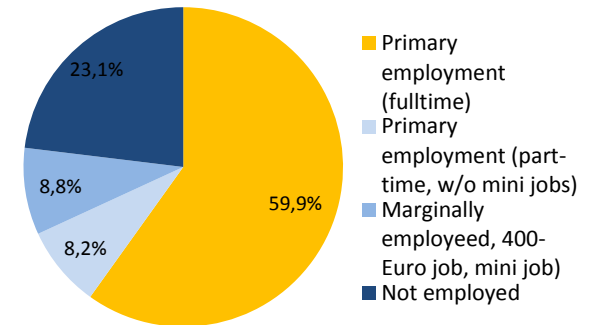
Age



Median = 56 years

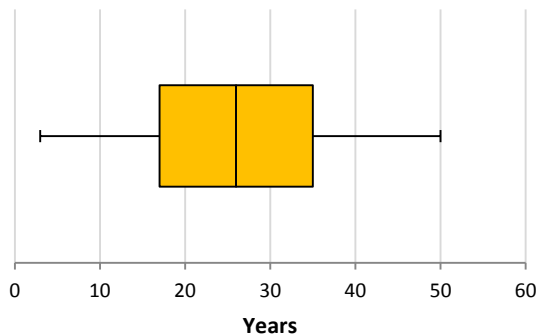
n = 165

Employment situation



n = 182

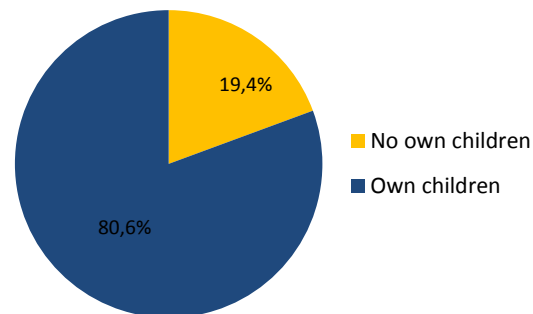
Job experience



Median = 26 years

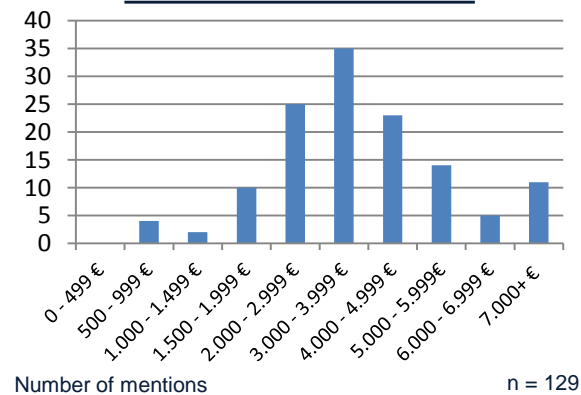
n = 176

Children



n = 160

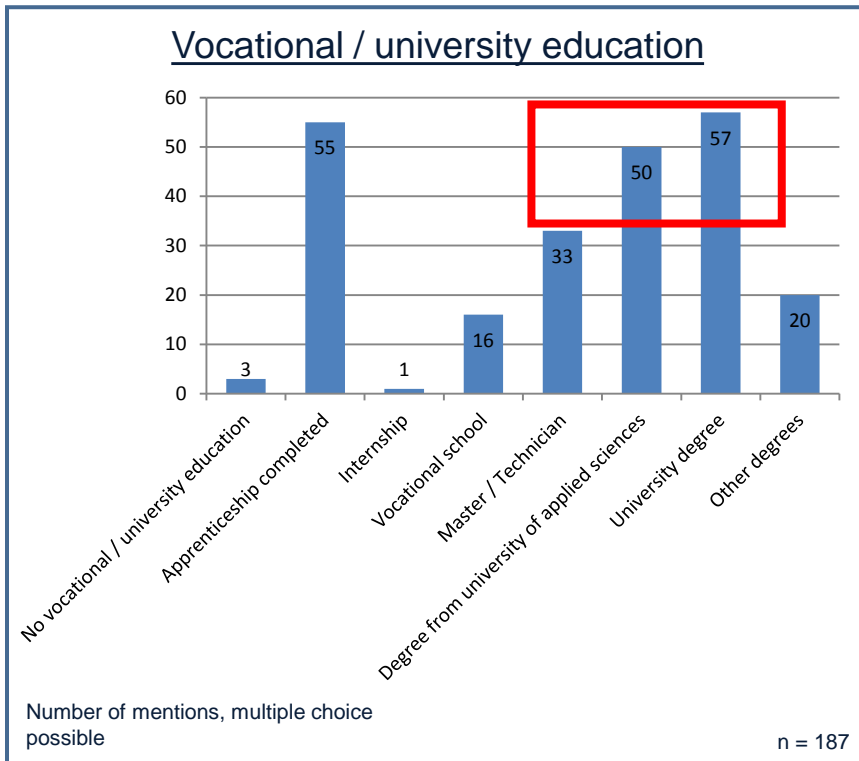
Individual net income



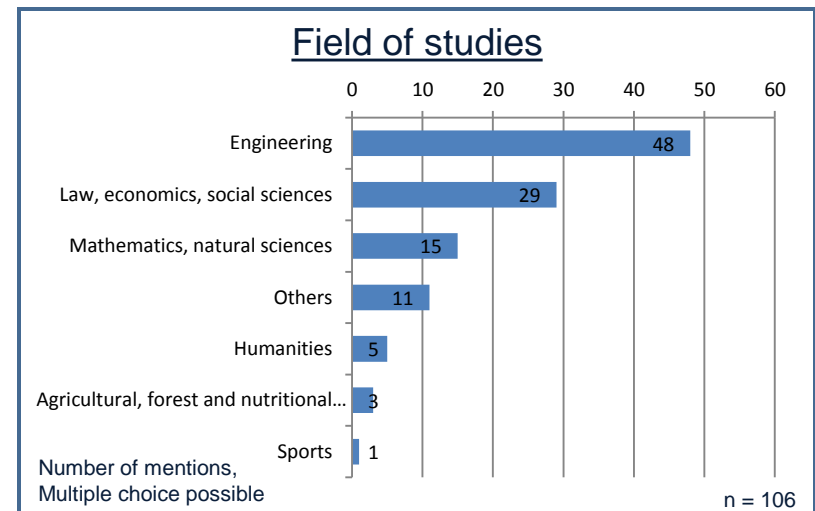
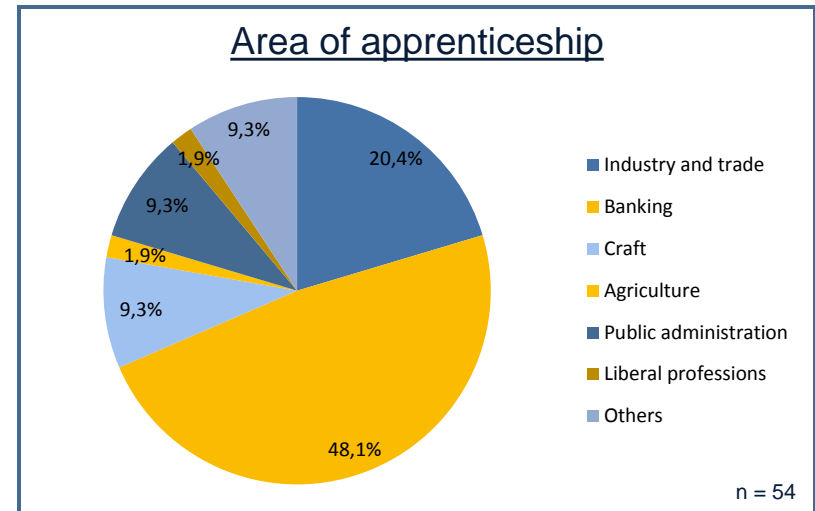
Number of mentions

n = 129

Individual educational attainment of management board members

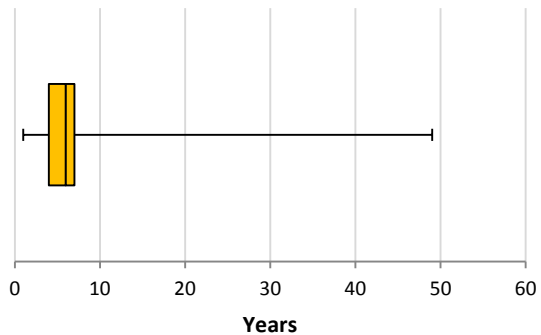


60% of management board members have a university degree



Activities in the REC

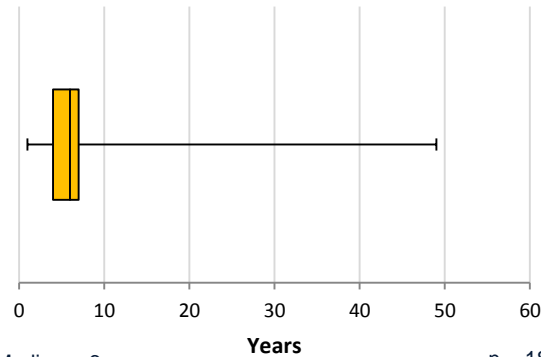
Membership



Median = 6 years

n = 185

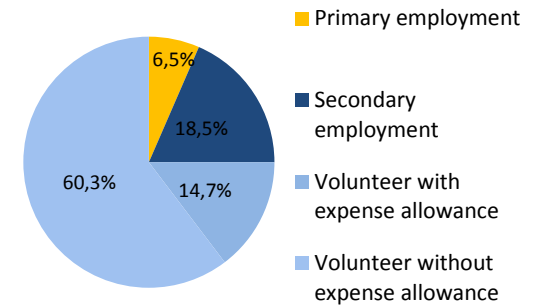
Management board position



Median = 6 years

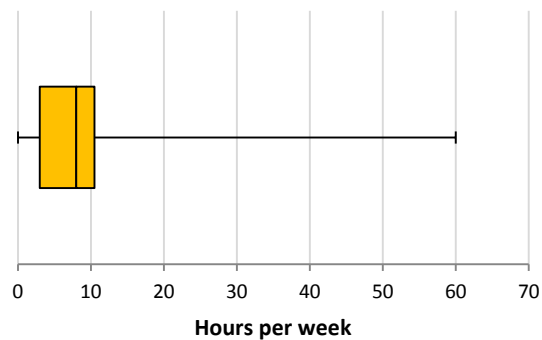
n = 185

Employment status in the REC



n = 184

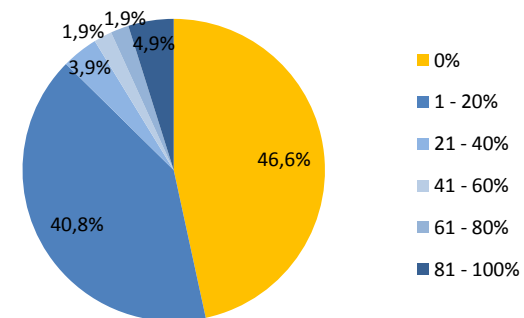
Weekly time spent for REC mgt.



Median = 8 hrs per week

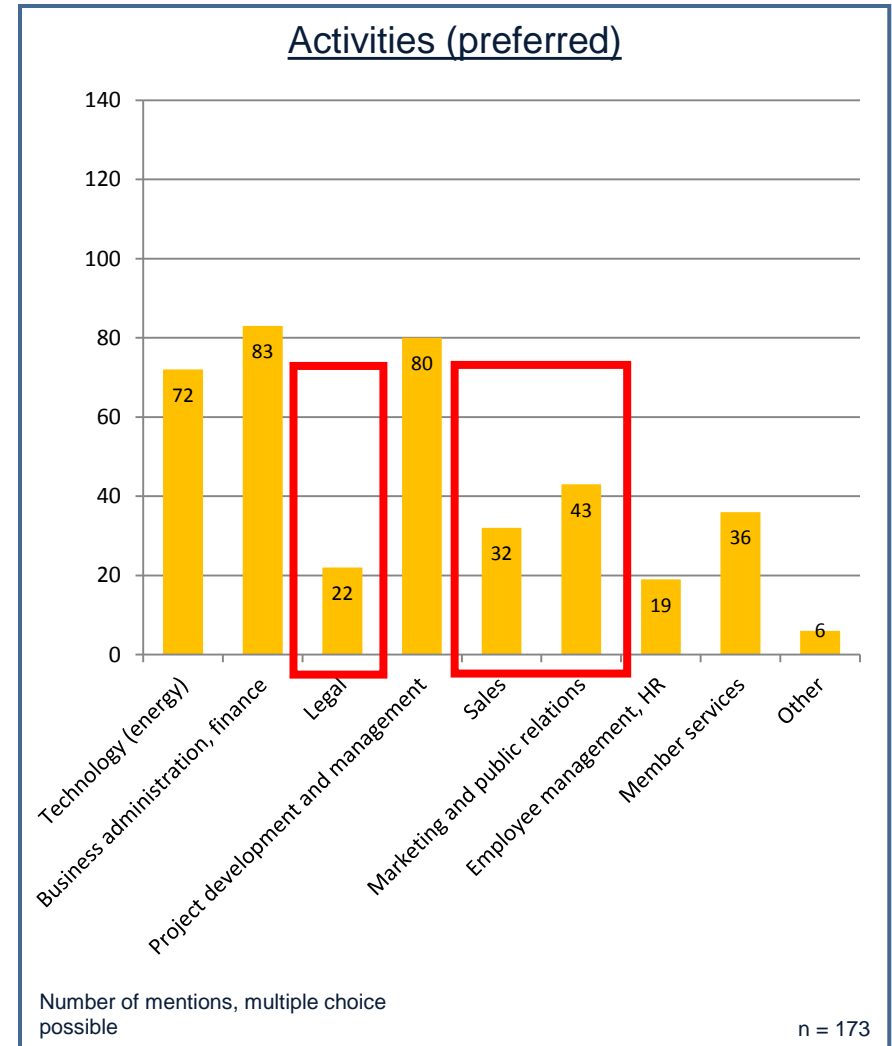
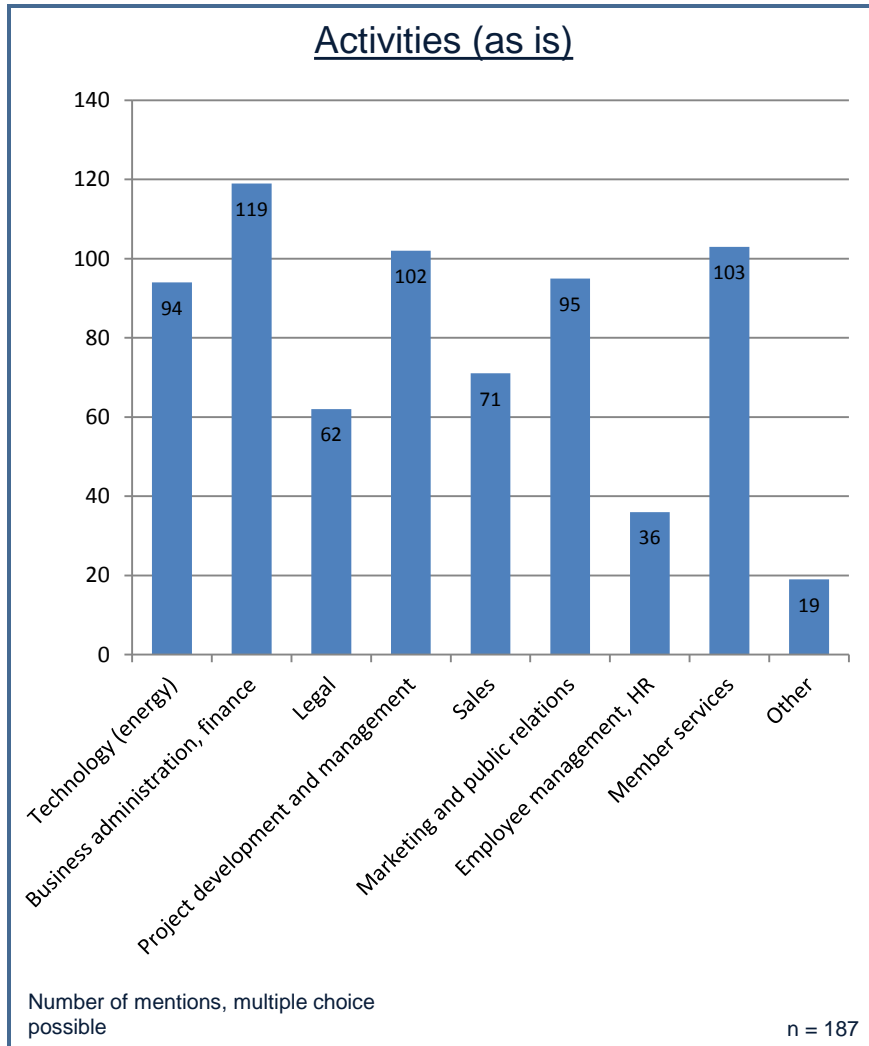
n = 169

Remuneration (income share)

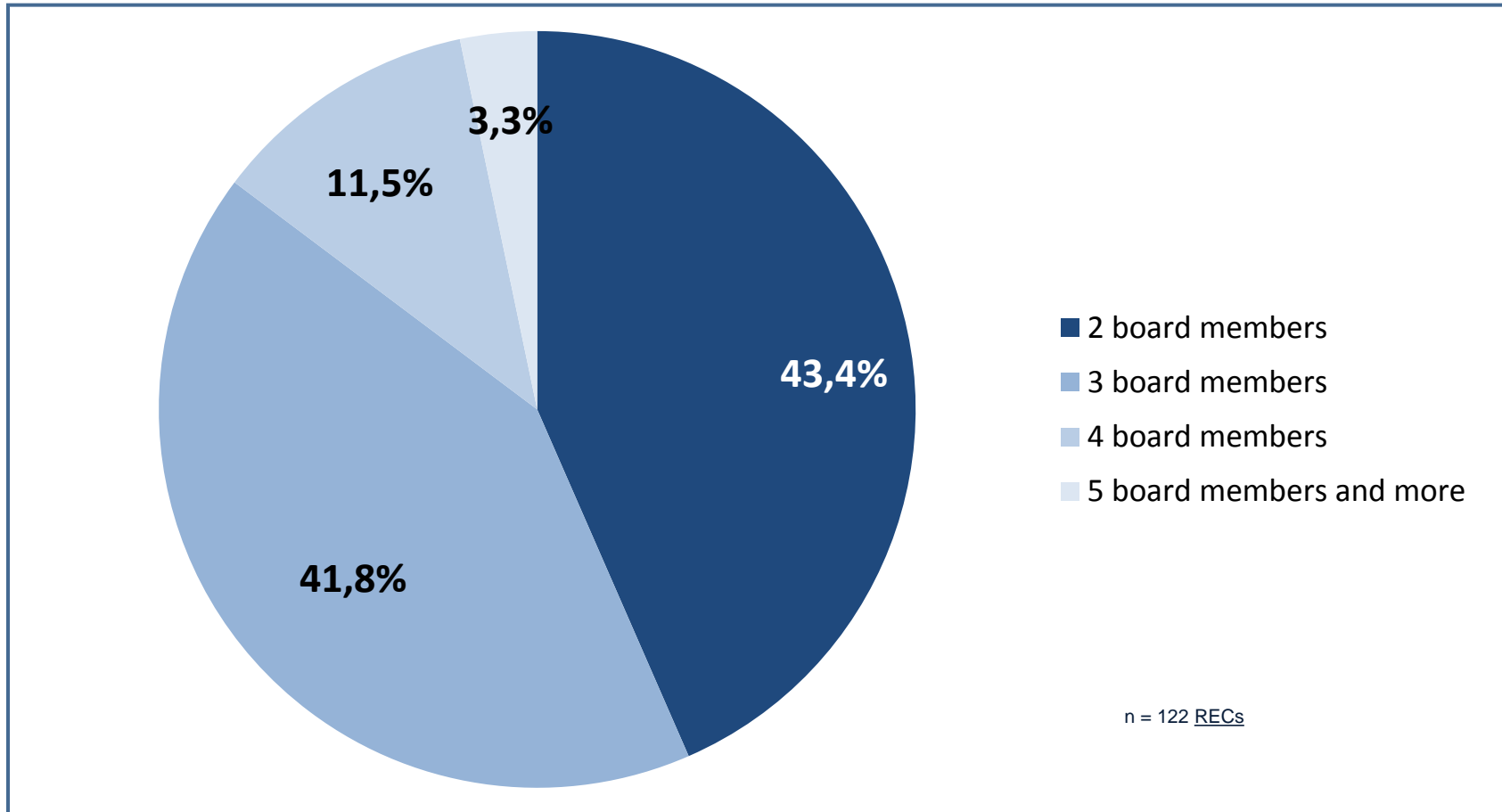


n = 103

Activity areas in the REC



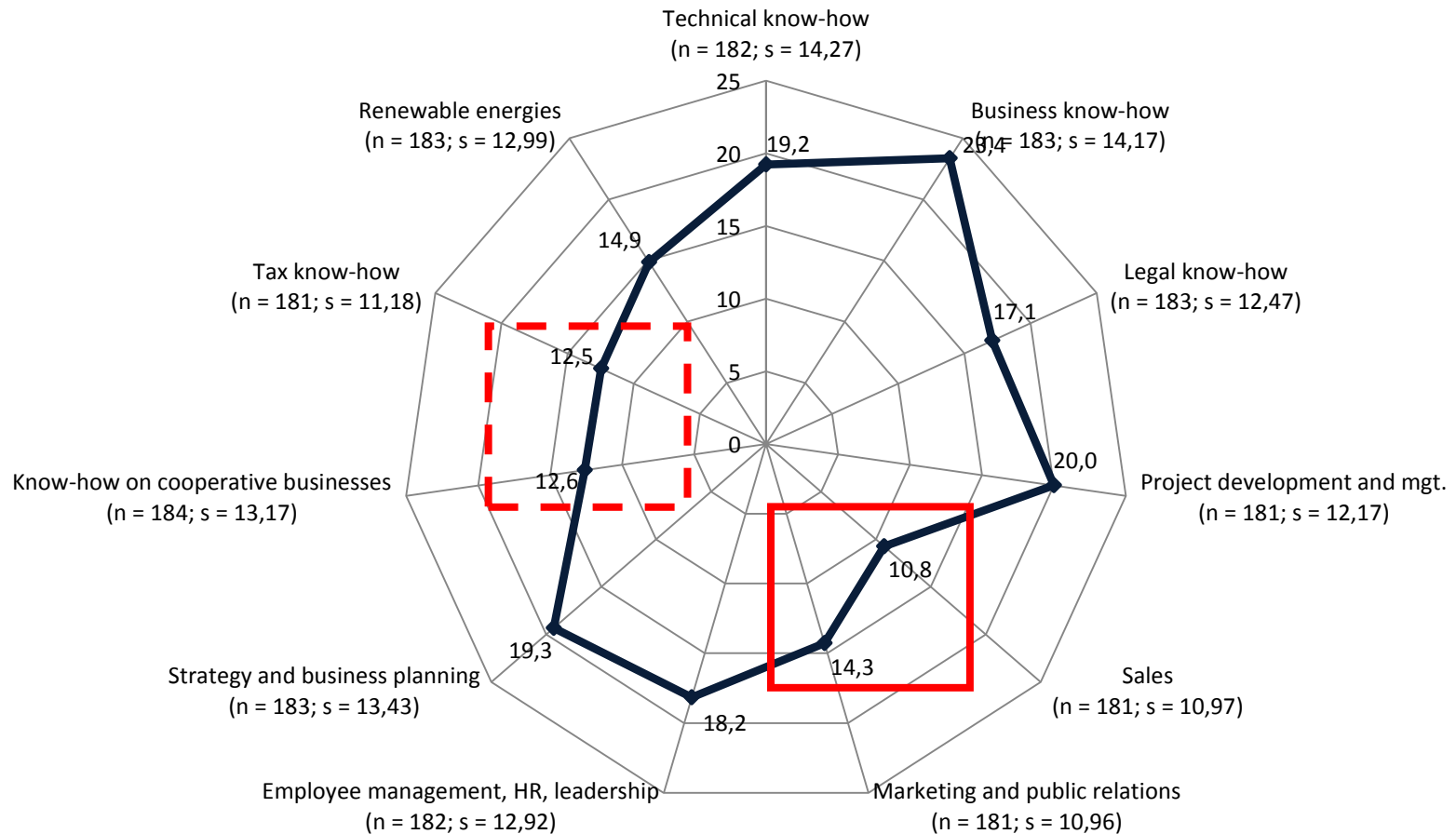
Management board: Number of members



Average: **2,77** management board members per REC

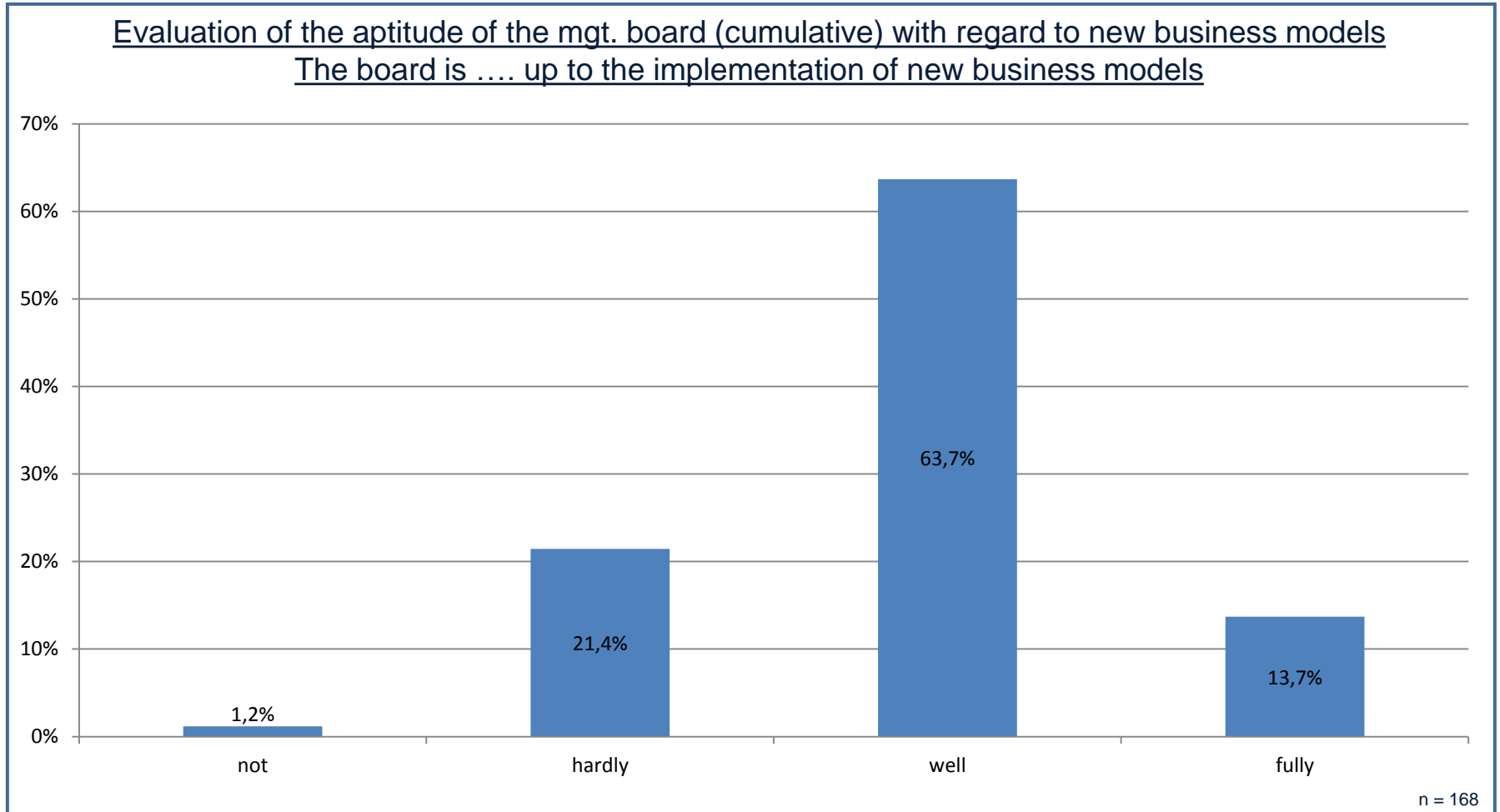
Human capital score: overview of requirement areas

Average individual HCS (all management board members in the survey)



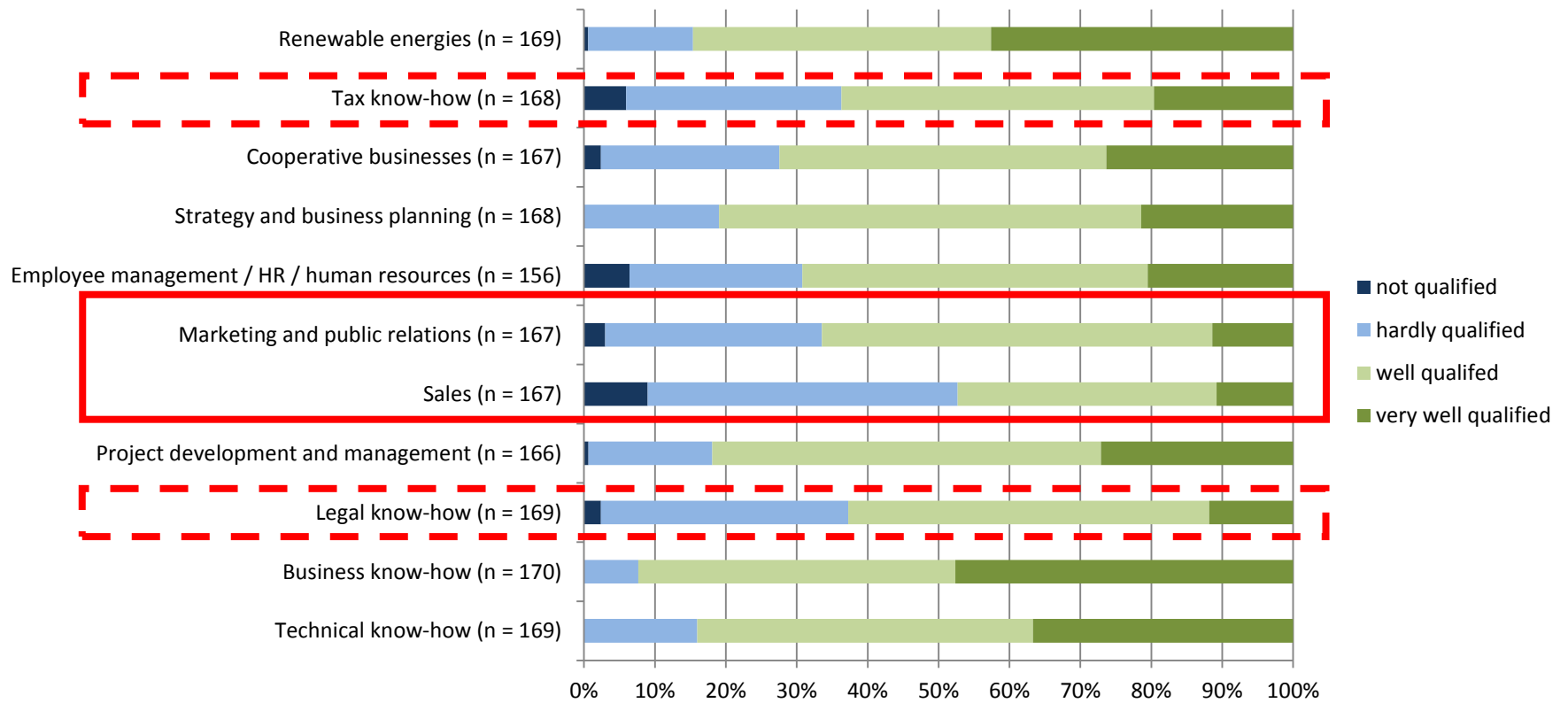
Valid answers (n) and standard deviations (s) in parentheses

Evaluation of qualifications by the management board members (1)



Evaluation of qualifications by the board members (2)

Evaluation of the aptitude of the mgt. board (cumulative) in the 11 qualification areas

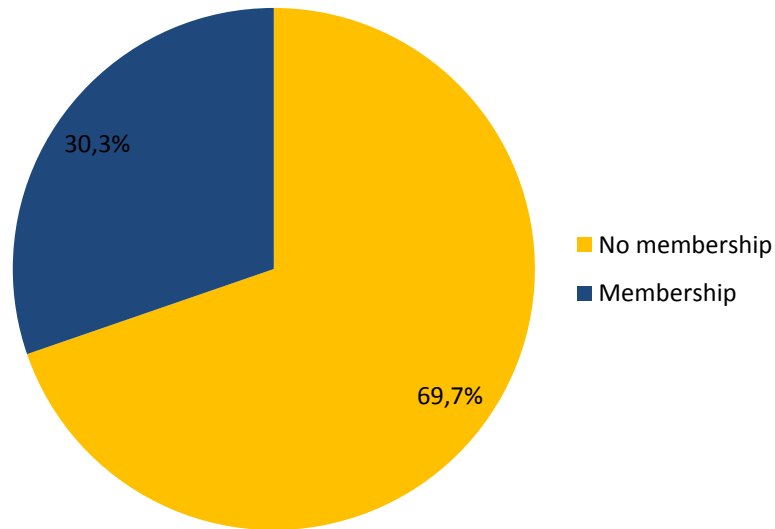


Percentage of answers per qualification area

Valid answers (n) in parentheses

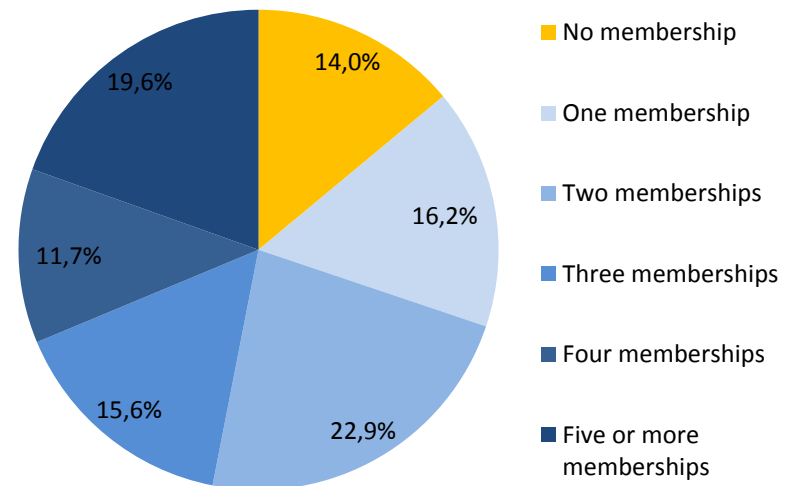
Networks: memberships of management board members

Membership in political parties



n = 175

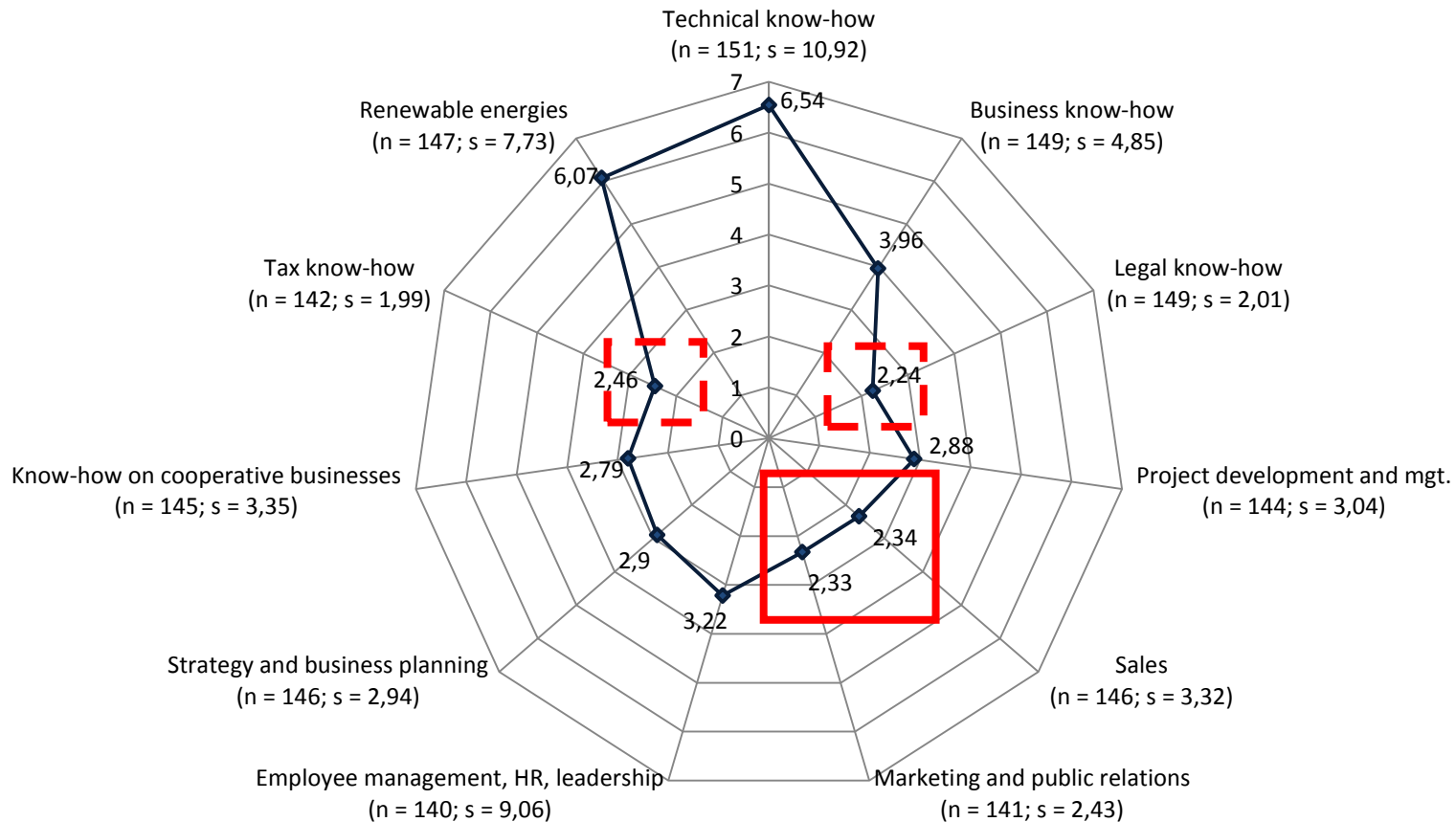
Memberships in clubs / associations



n = 179

Networks: overview of requirement areas

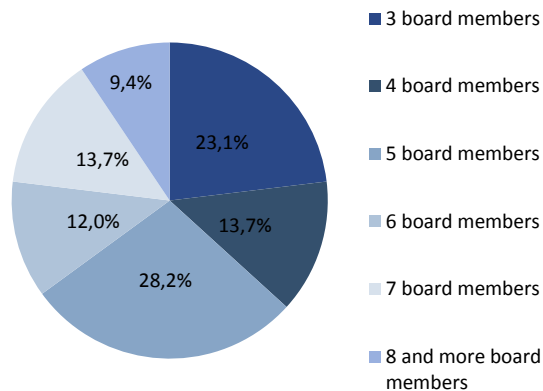
Average number of contacts per person (all management board members in the survey)



Valid answers (n) and standard deviations (s) in parentheses

Support structures

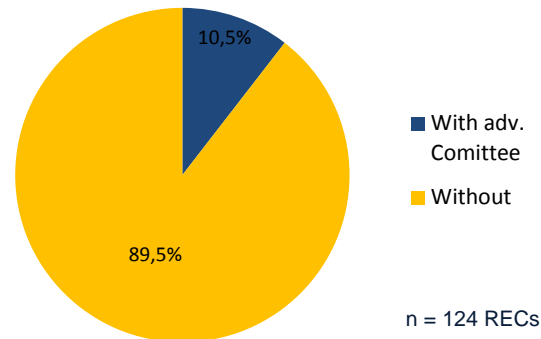
Supervisory board (size)



Average: 5.26
supervisory board
members per REC

n = 117 RECs

Advisory Committee

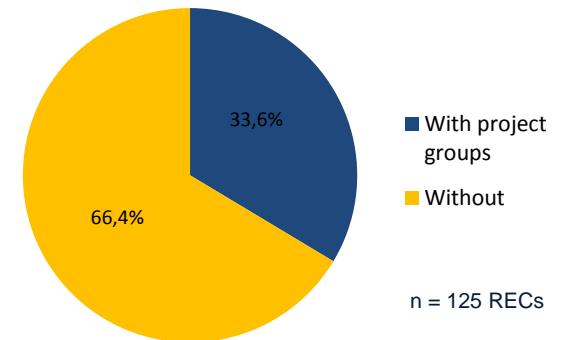


n = 124 RECs

Purpose:

- Consulting / advice
- Support
- Networking outside the REC
- Project development and realization
- Preparation for taking over the office of a mgt. board member

Project groups



n = 125 RECs

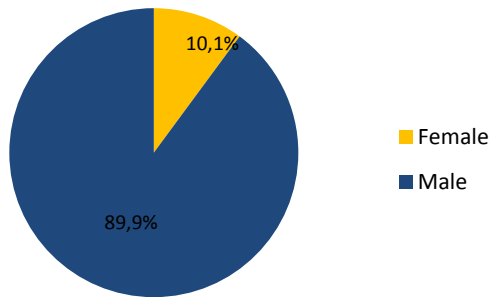
Purpose

- Support with regard to specific technologies
- Marketing / public relations / sales
- Support in administrative tasks

Analysis of supervisory board members' answers

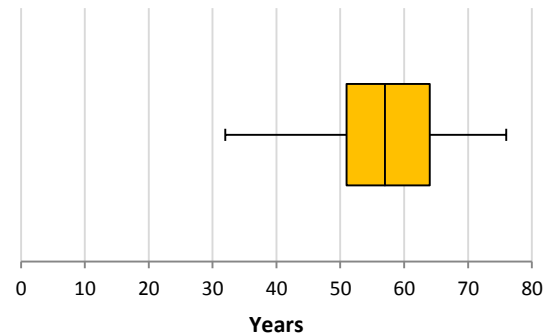
Sociodemographic features of individual supervisory board members

Gender



n = 89

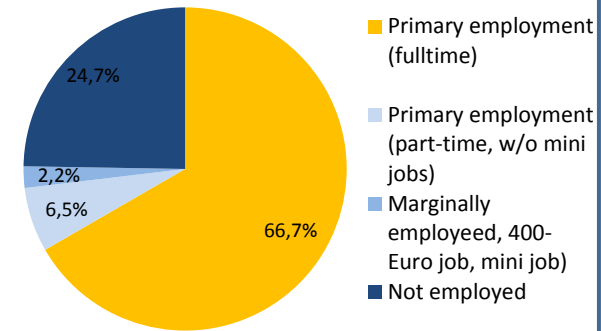
Age



Median = 57 years

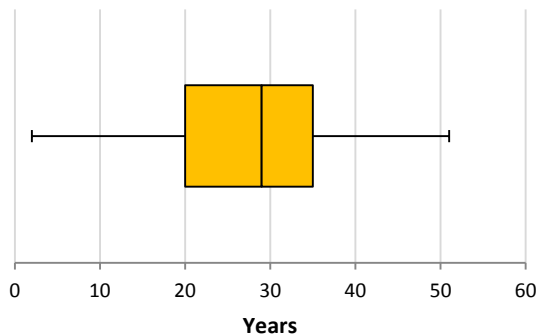
n = 84

Employment situation



n = 93

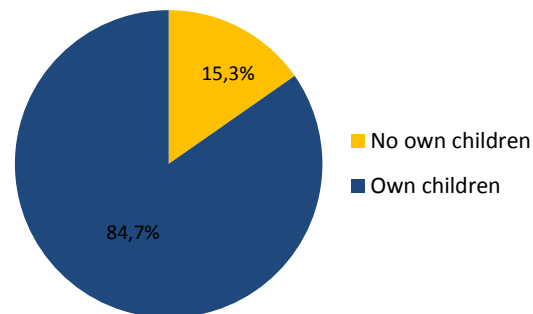
Job experience



Median = 29 years

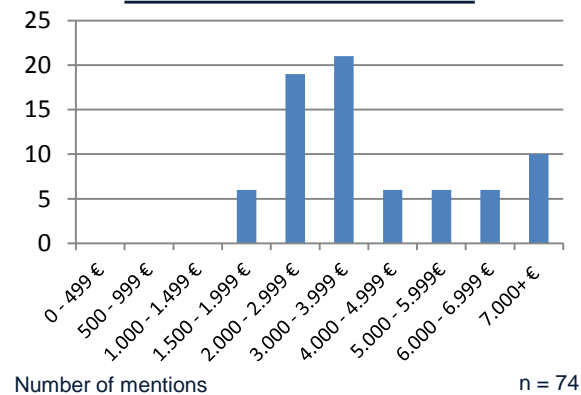
n = 89

Children



n = 85

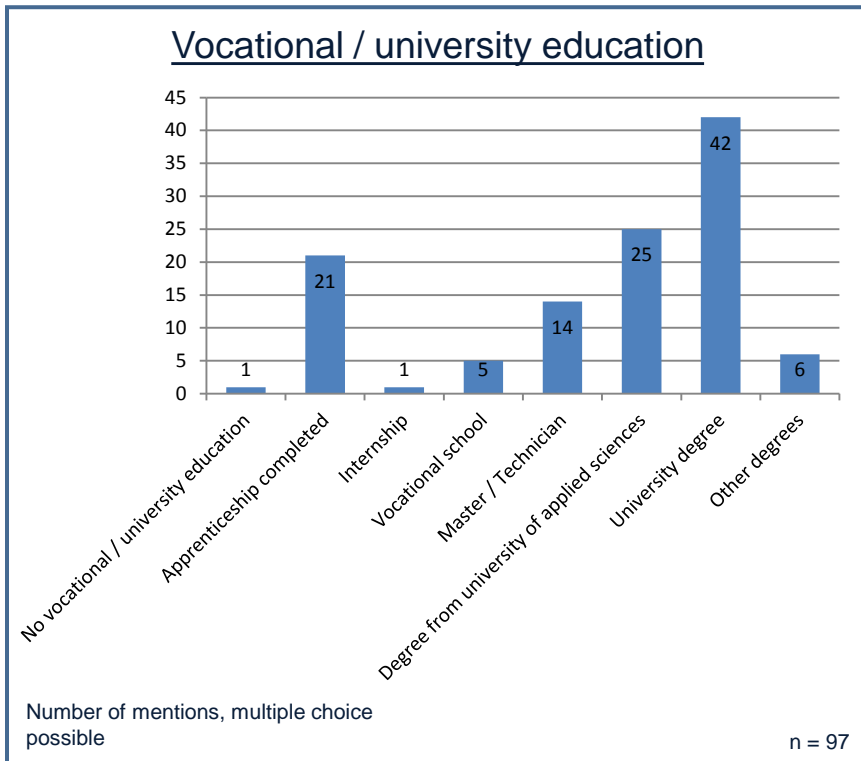
Individual net income



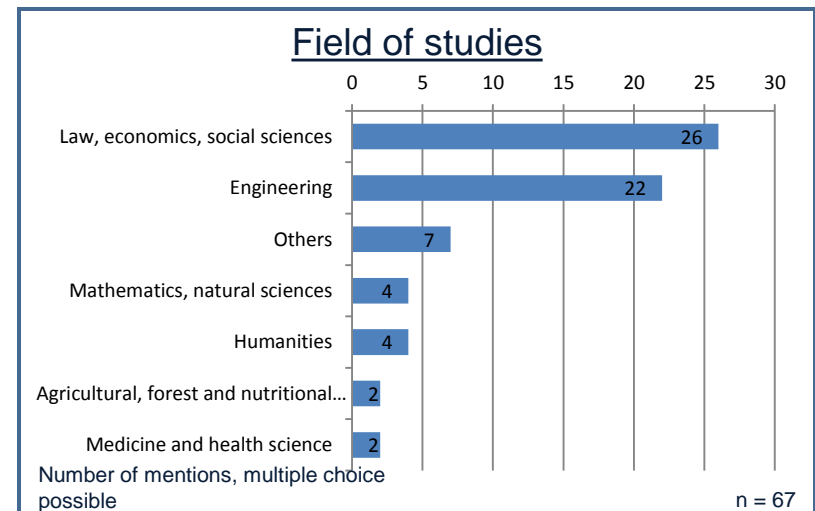
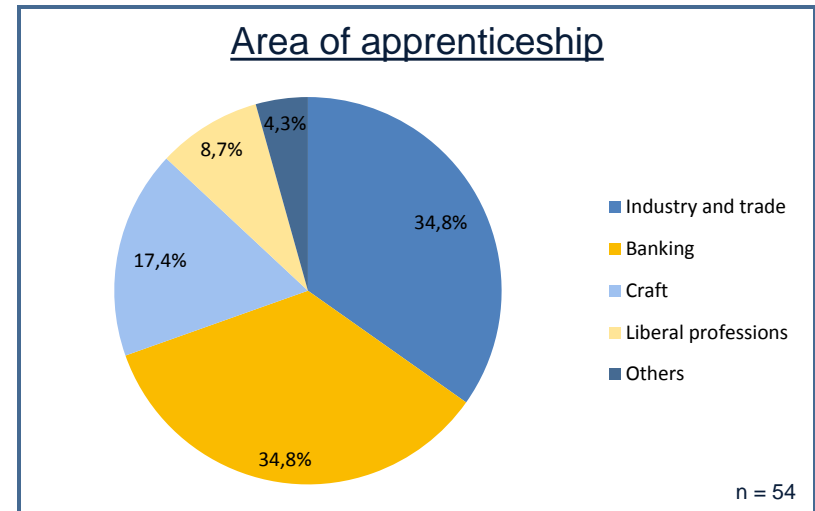
Number of mentions

n = 74

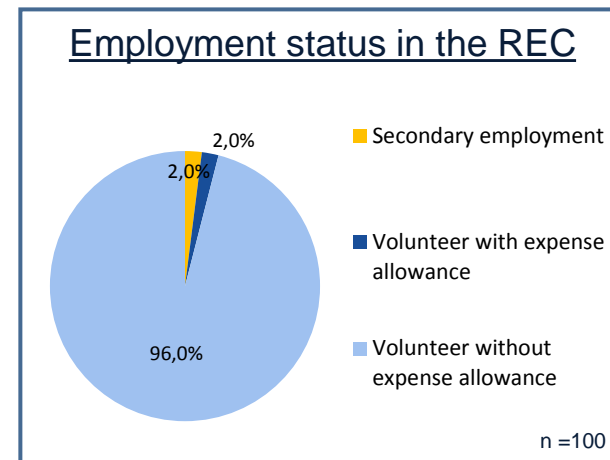
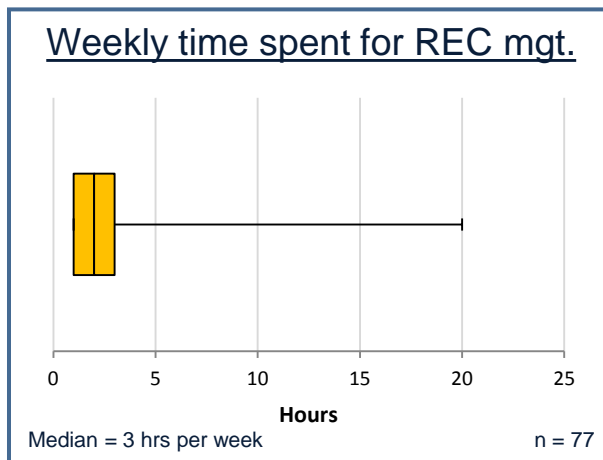
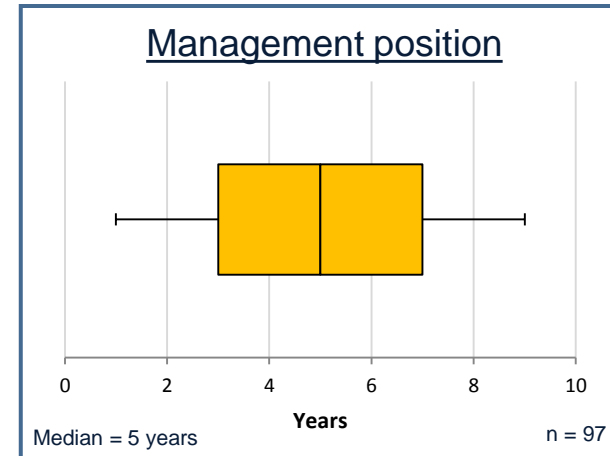
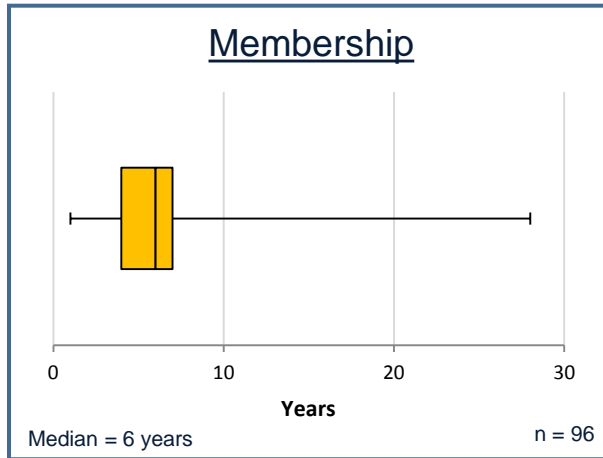
Individual educational attainment of supervisory board members



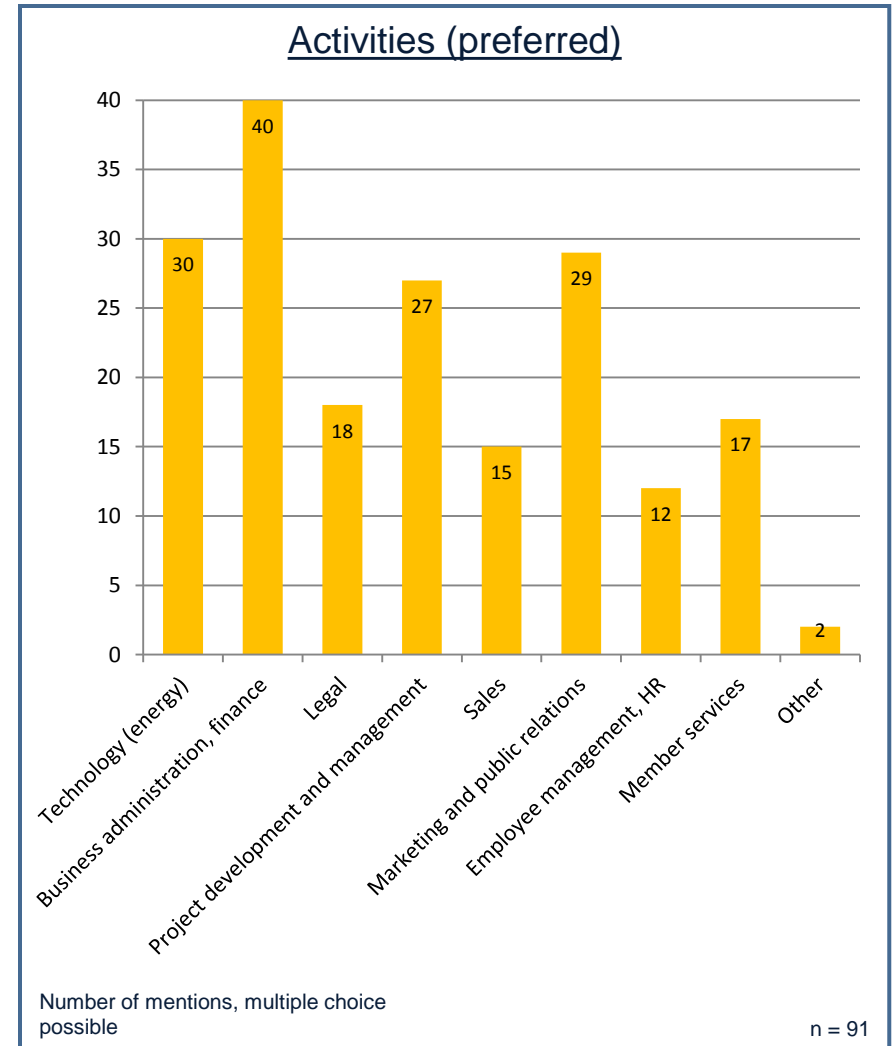
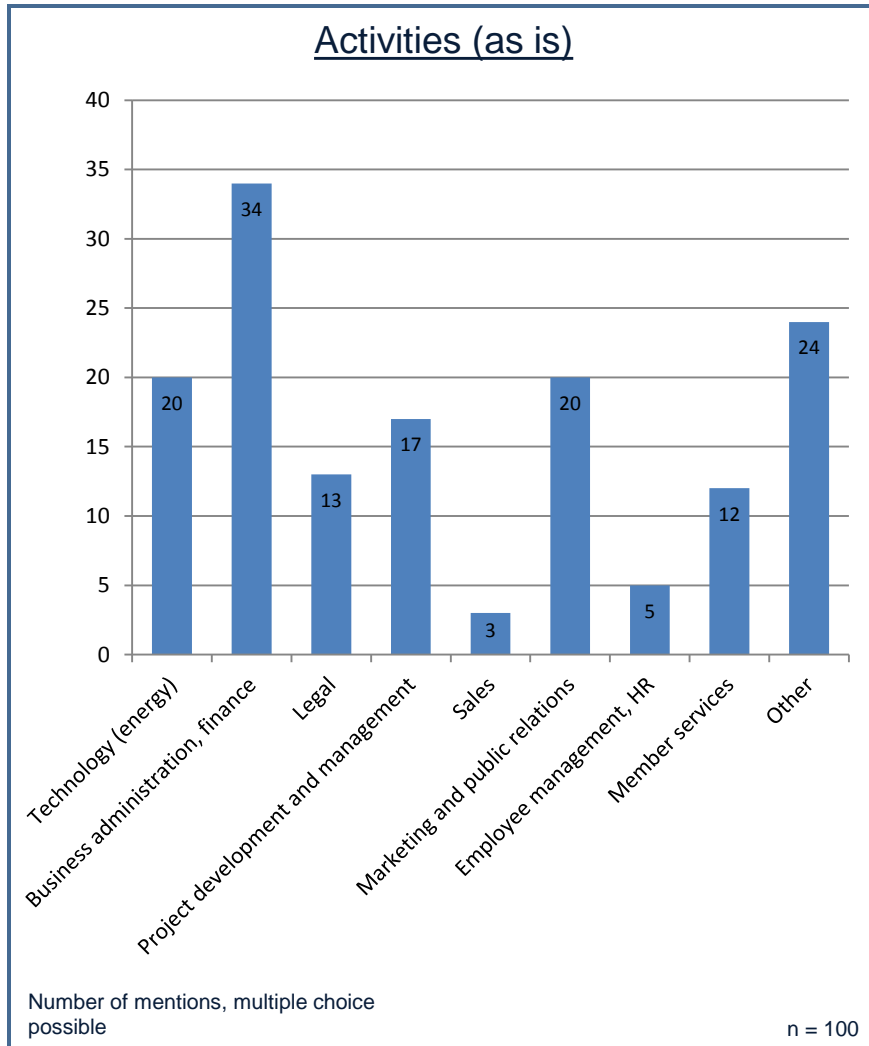
70% of supervisory board members have a university degree



Activities in the REC

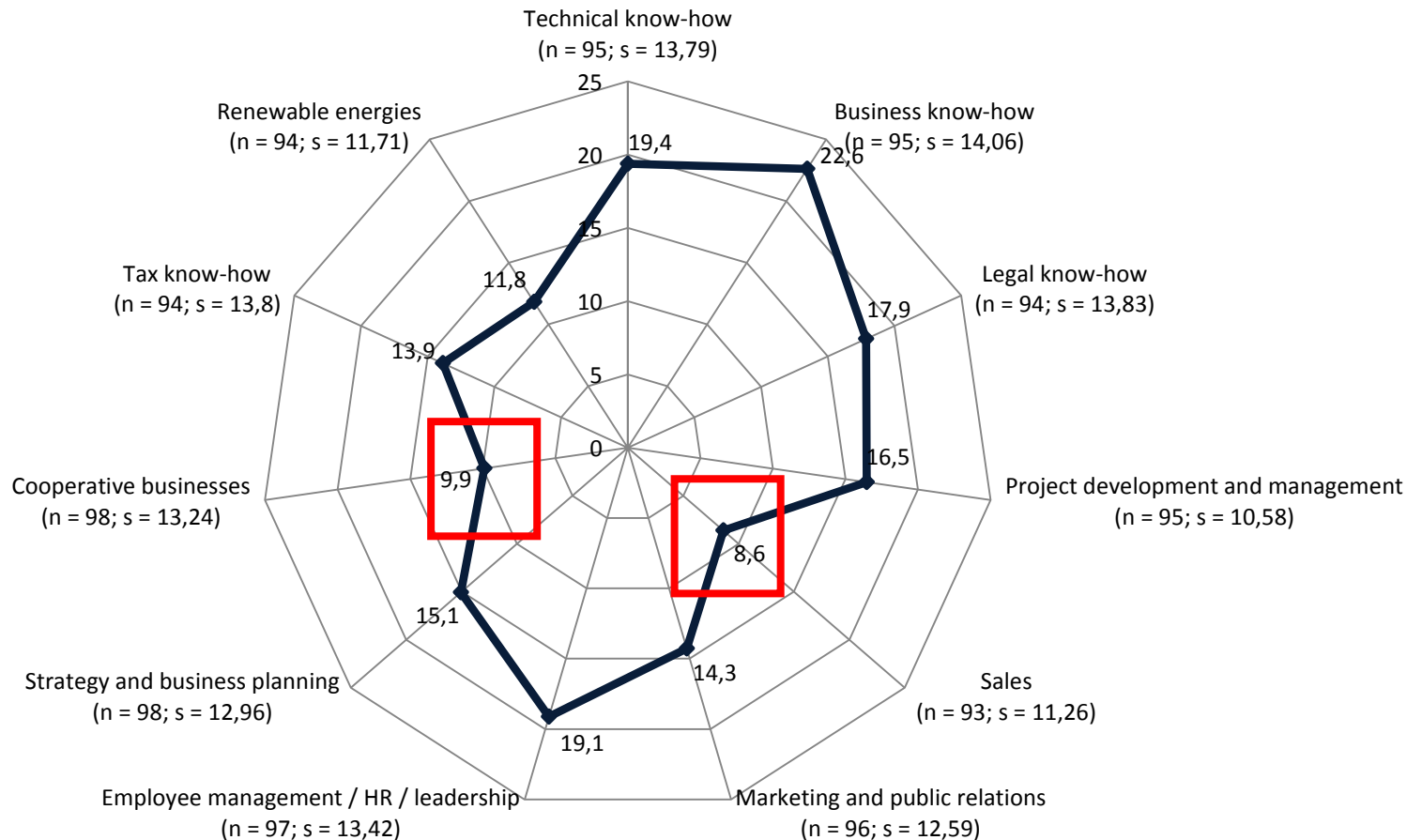


Activity areas in the REC



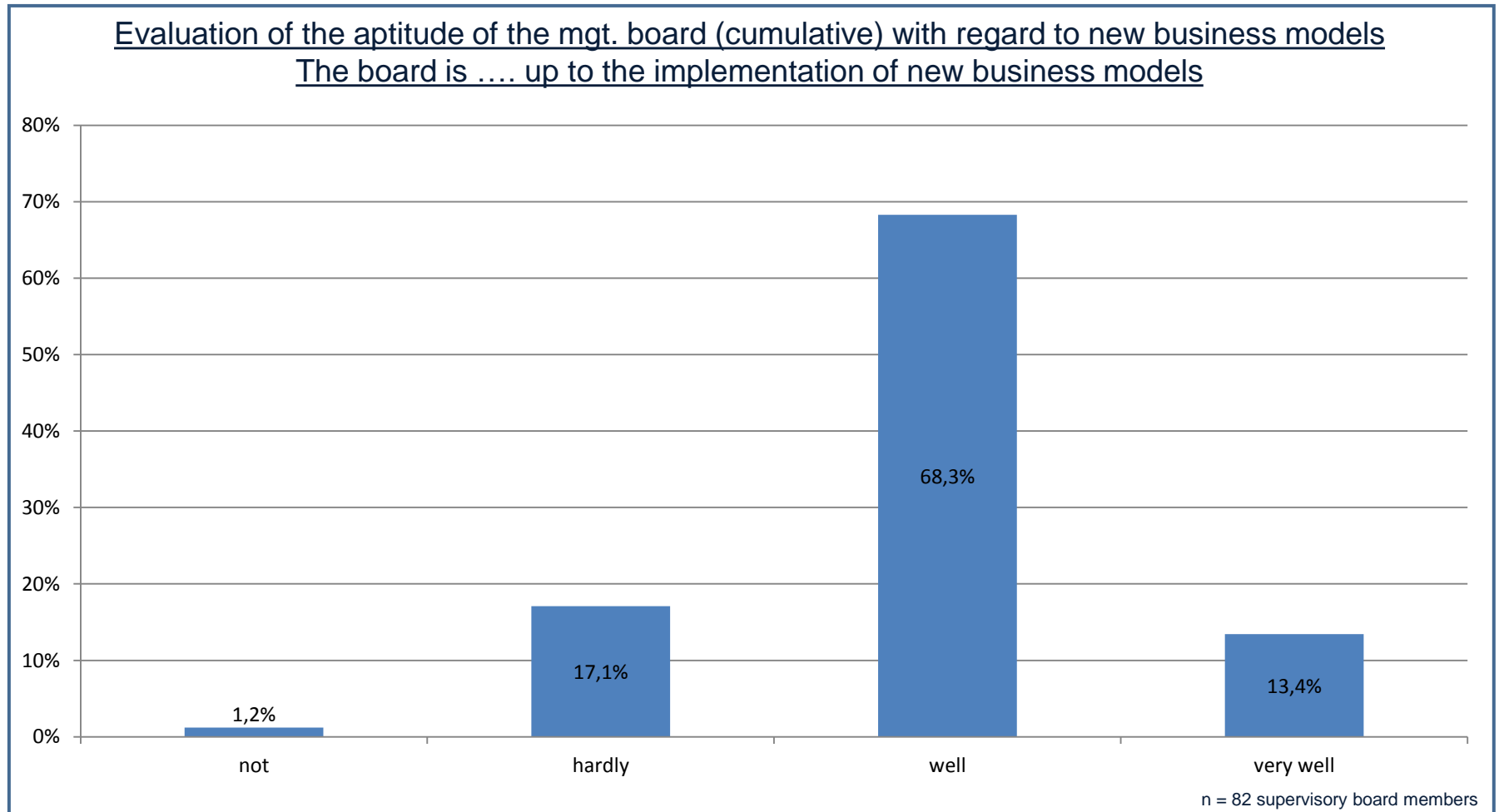
Human capital score: overview of requirement areas

Average individual HCS (all supervisory board members in the survey)



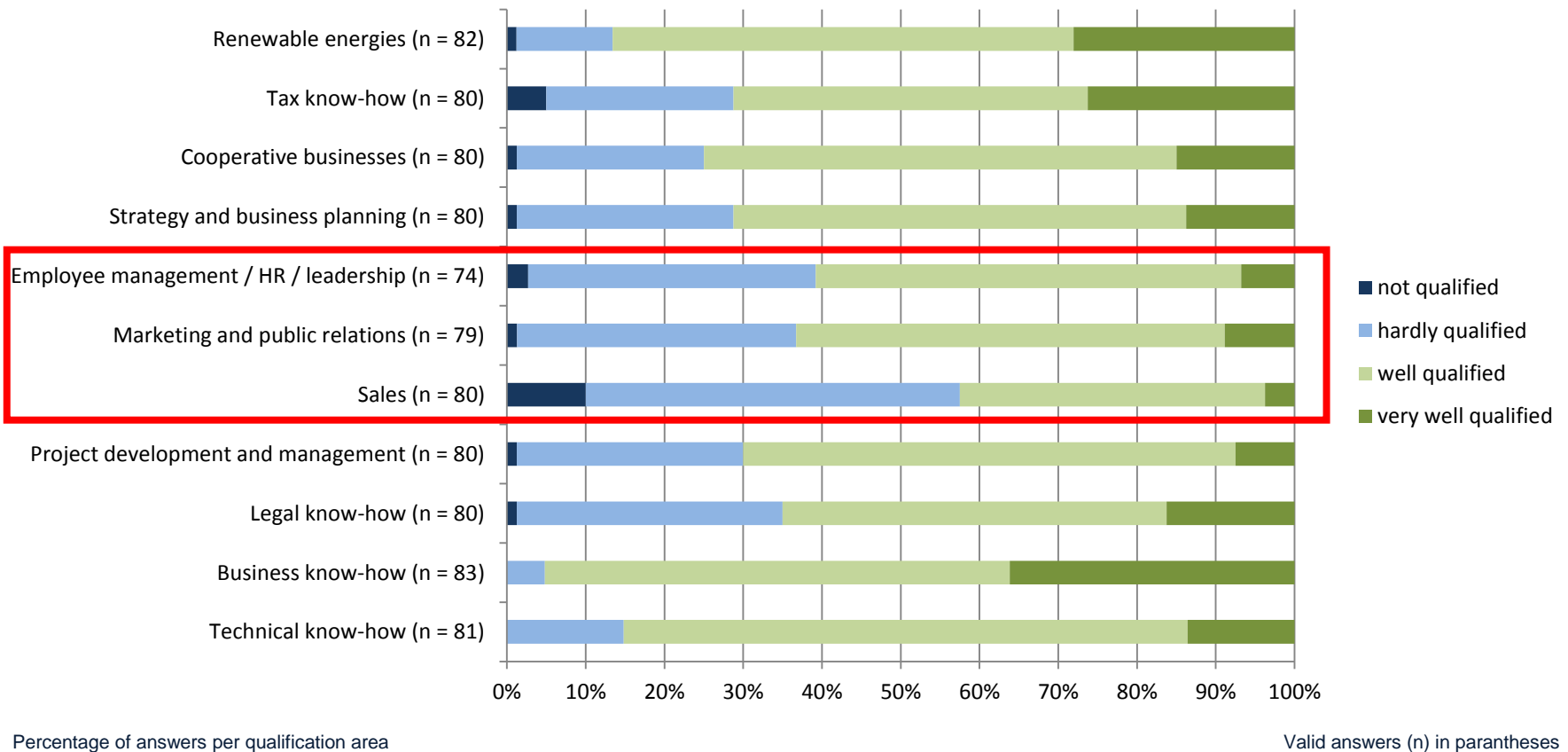
Valid answers (n) and standard deviations (s) in parentheses

Evaluation of qualifications by the supervisory board members (1)



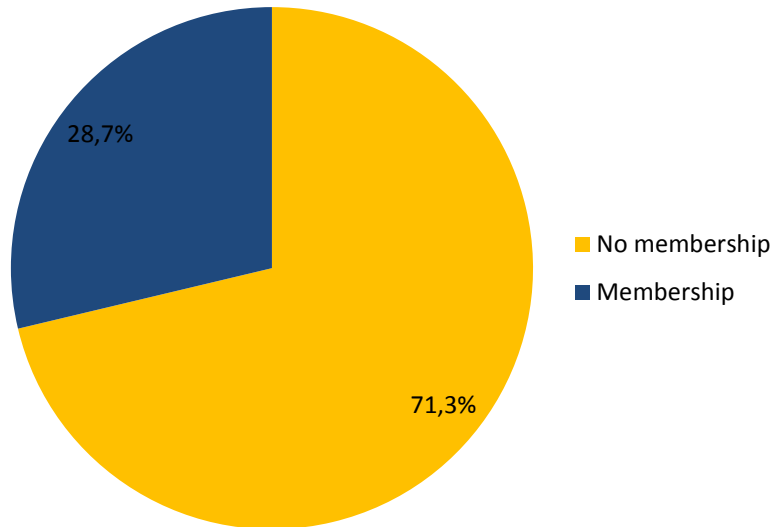
Evaluation of qualifications by the supervisory board members (2)

Evaluation of the aptitude of the supervisory board (cumulative) in the 11 qualification areas



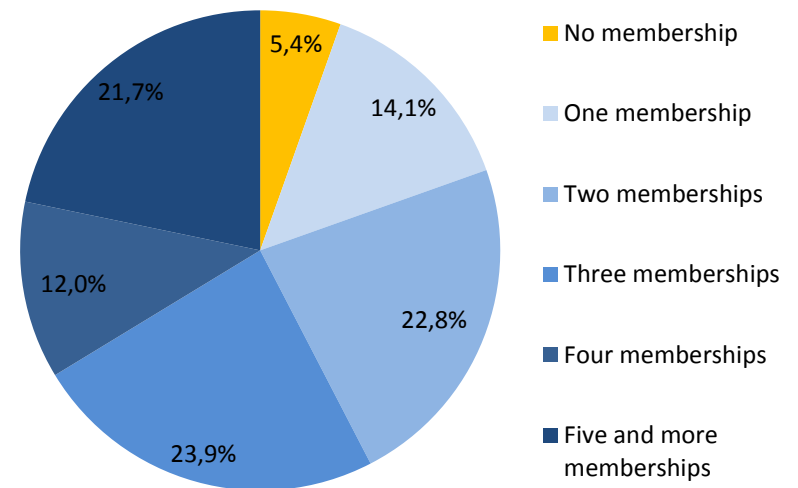
Networks: memberships of supervisory board members

Party membership



n = 94

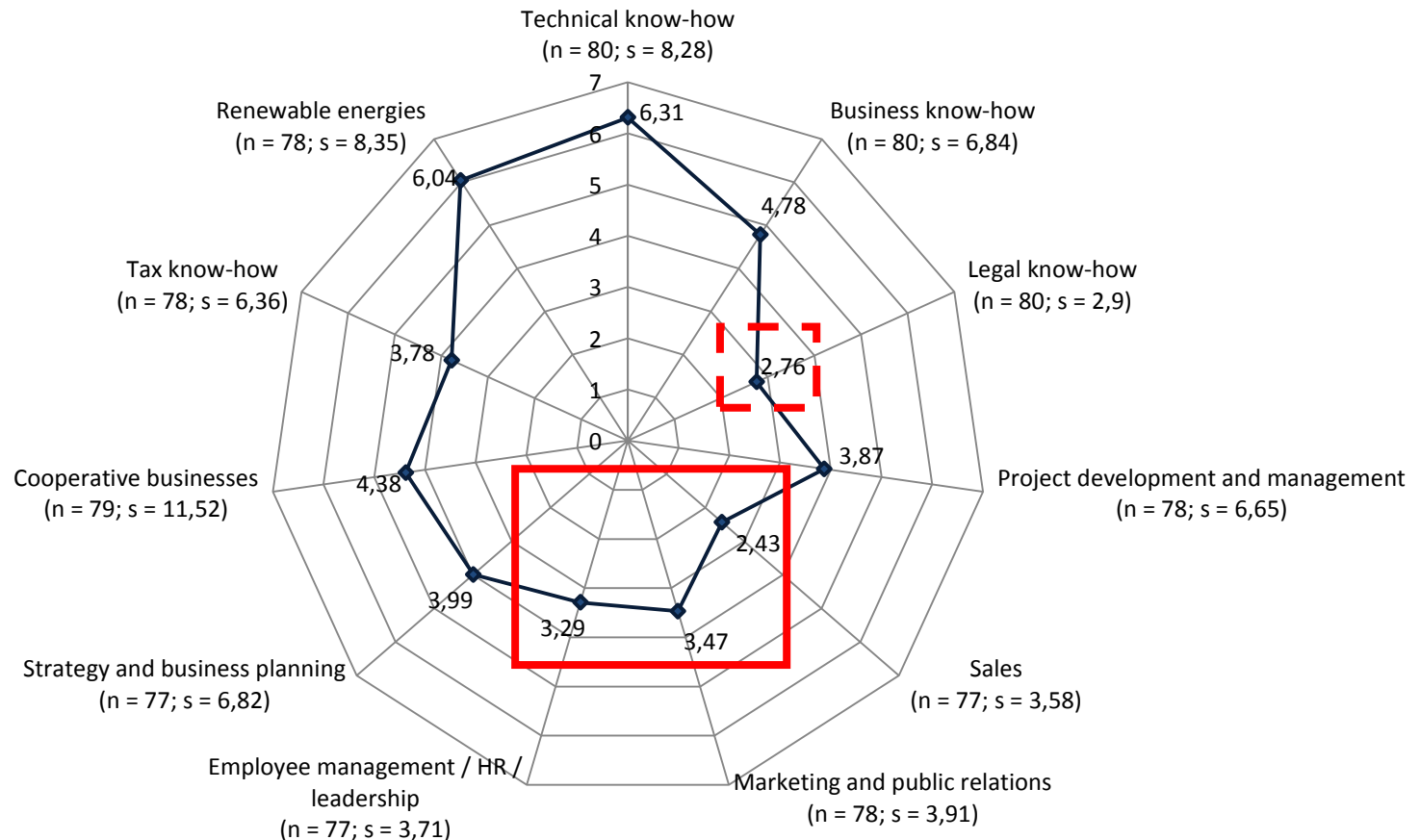
Memberships in clubs / associations



n = 92

Networks: overview of requirement areas

Average number of contacts per person (all supervisory board members in the survey)



Valid answers and standard deviation in parantheses

Conclusion (1/2)

- Almost half of all RECs under survey is planning to implement new business models, primarily sales of energy and services
- Management board members and supervisory board members are older and better educated than the German population and have a higher income
- The human capital profile of both management board members and supervisory board members has gaps, especially in marketing and sales. These are also the areas in which most respondents would not like to work in the REC.

Conclusion (2/2)

- Generally, the respondents rated the boards' qualifications high, but see the gaps in marketing and sales. Overall, respondents see management boards and supervisory boards as being up to the task regarding new business models
- Gaps in management board members' qualifications are neither compensated by supervisory boards nor by their networks
- Most management board members (60%) fulfill their positions as volunteers and invest one full day per week for this. Supervisory board members invest three hours per week
- Only a minority of management boards and supervisory boards are supported by advisory committees and work groups / project groups

Picture Credits

- Slide 2:
 - Persons: Icon made by Freepik (https://www.flaticon.com/free-icon/multiple-users-silhouette_33308#term=Person&page=1&position=3) from www.flaticon.com
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- Slide 6:
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 - BWGV: <https://www.wir-leben-genossenschaft.de/de/geno-energieverbund.htm>
 - GVB: https://de.wikipedia.org/wiki/Genossenschaftsverband_Bayern#/media/File:GVB_Logo.svg
 - Regionen: <https://www.genossenschaftsverband.de/>
 - Bürgerwerke: <https://buengerwerke.de/>
 - Energiewende Jetzt: <http://www.energiegenossenschaften-gruenden.de/start0.html>
- Slide 7:
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