



OPI

OŚRODEK PRZETWARZANIA INFORMACJI

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NEW SCHOLARLY

DURING THE
TRANSFORMATION PERIOD

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OUTLINE

1. Background: Poland's way towards Open Science
2. Motivation: why this survey ?
3. Survey design
4. Overall community attitude: basic information
5. Quantitative analysis: regression models
6. Conclusions

LEVELS OF IMPLEMENTATION IN POLAND (SOME REFERENCES)

- **Ministry of Science and Higher Education**
 - has announced the priority of introducing the open access to published research results based on public funding. The action will comply with the communication and recommendation released by the European Commission on July 17, 2012.
- **Digital : Libraries, Repositories, Platforms**
 - appr. 101 Digital Libraries, Repository of Centre for Open Science
 - AMUR: first Polish repositories. A. Mickiewicz University. 2010
 - **INFONA: national IT platform of information and knowledge resources**
- **Organizations and associations introducing OS ideas**
 - ICM: CeON Center of Open Science, Digital Center , The Modern Poland Foundation (free textbooks)
- **OA Journals**
 - Dozen of scientific journals. Virtual Library of Science

MOTIVATION

- Still insufficient level of public discussion about Open Science
- Lack of surveys dedicated to Open Science issues
- We could only infer that readiness to accept and support open models in science is still limited...

SURVEY DESIGN

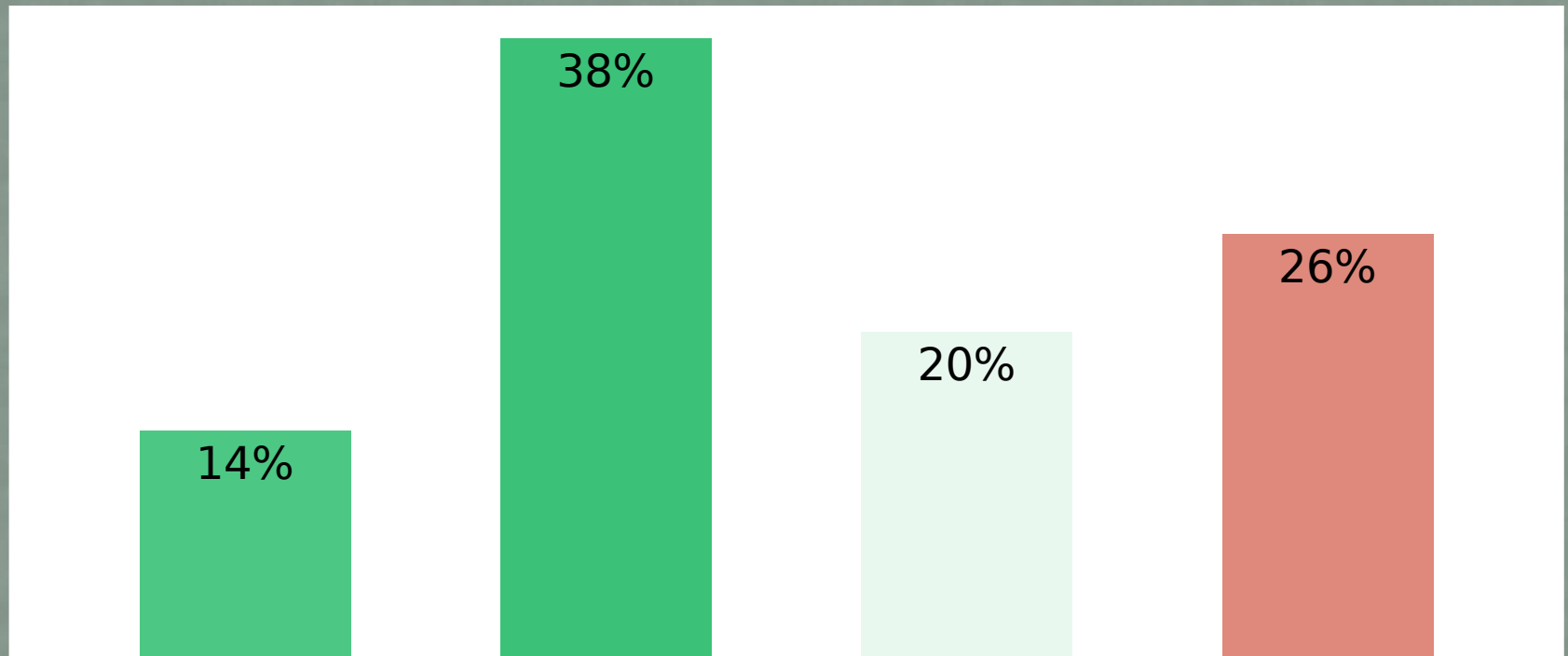
- Online survey
- Four thematic groups of questions: general issues, Open Access, Open Data, Science 2.0
 - **36** questions (attitude, practice, knowledge)
 - **9** demographic questions
- Questionnaire addressed to over 24K Polish scientists holding at least PhD degree
 - **849** completed
 - **456** drop out (after starting)

OVERALL COMMUNITY ATTITUDE

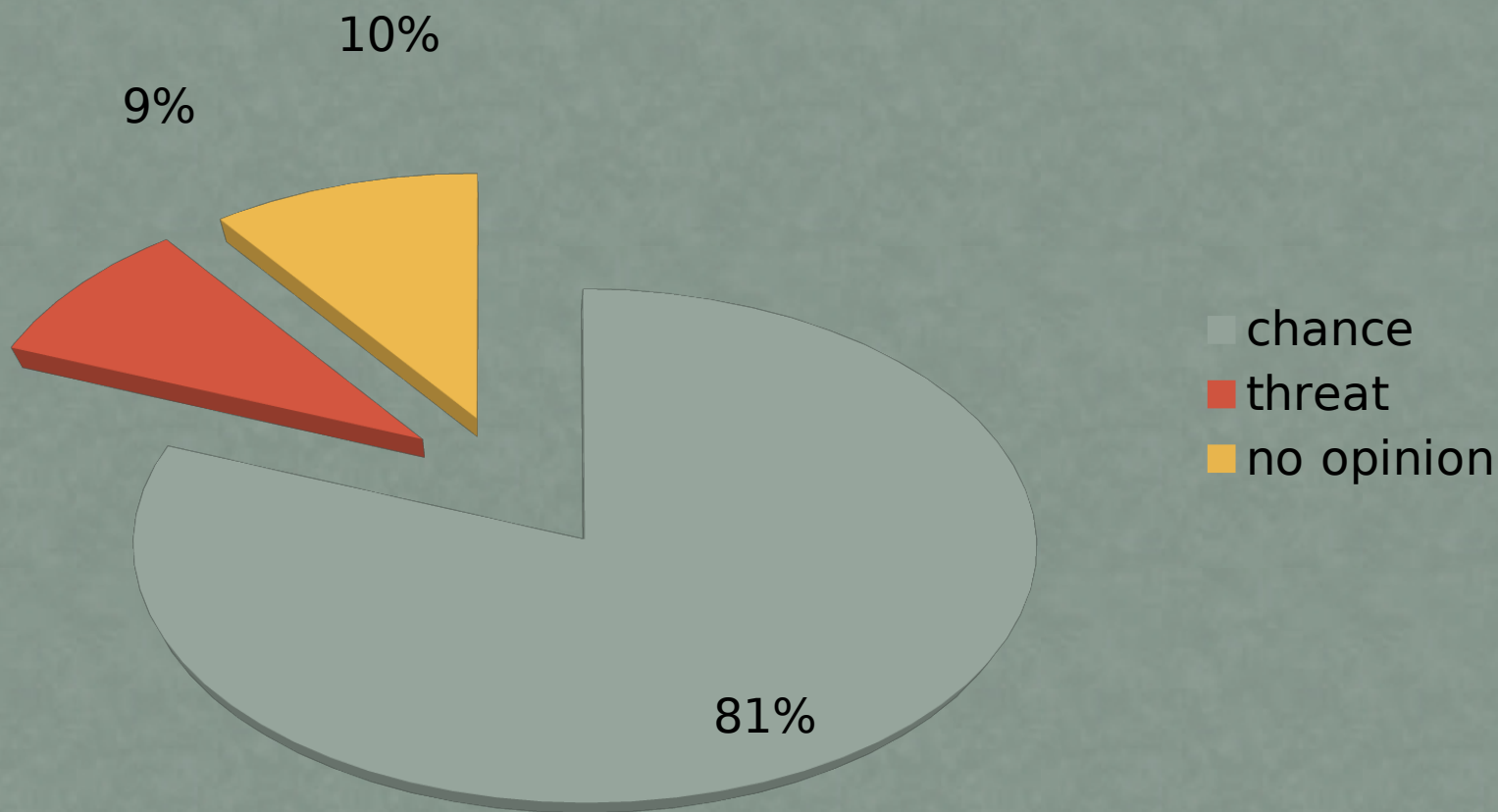
OPEN ACCESS, OPEN DATA, SCIENCE 2.0

HAVE YOU EVER MET UP WITH THE CONCEPT OF OPEN SCIENCE ?

■ yes (know exactly) ■ yes (knowing so -so)
■ yes (don't know) ■ no



**DO YOU THINK OPEN SCIENCE IS A CHANCE OR RATHER THREAT
FOR THE DEVELOPMENT OF YOUR RESEARCH FIELD ?**



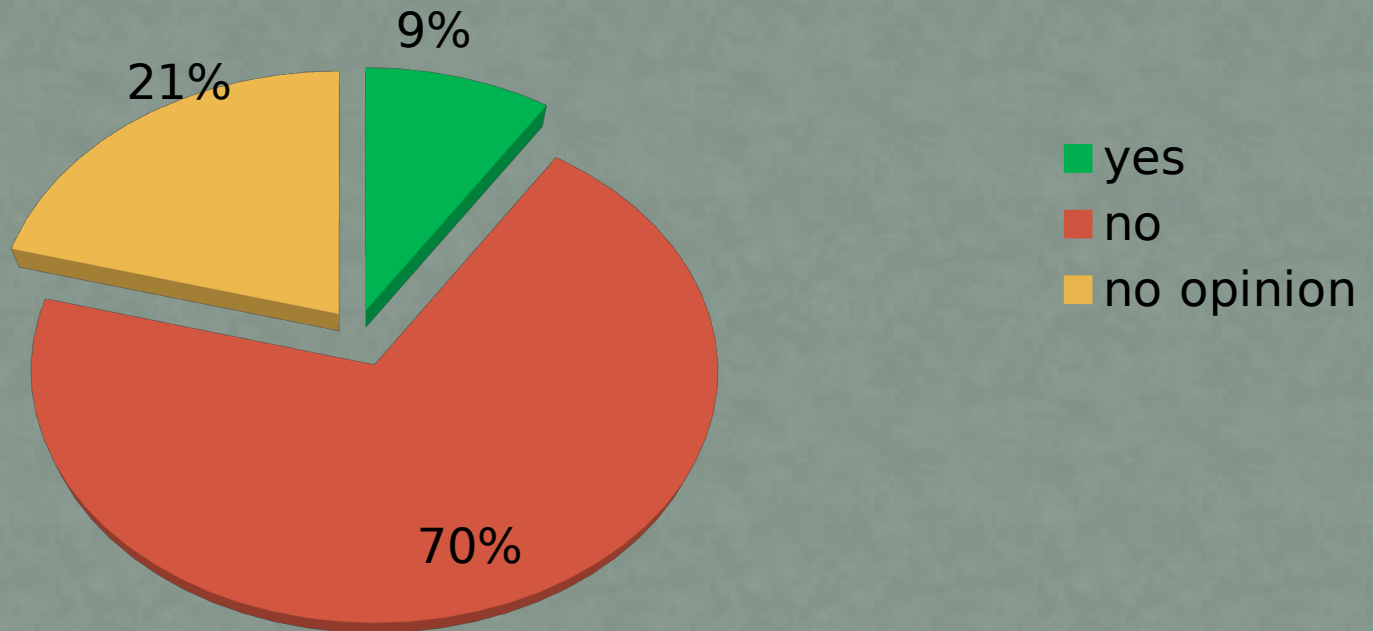
OPEN ACCESS: ADVANTAGES / DISADVANTAGES

no opinion no yes



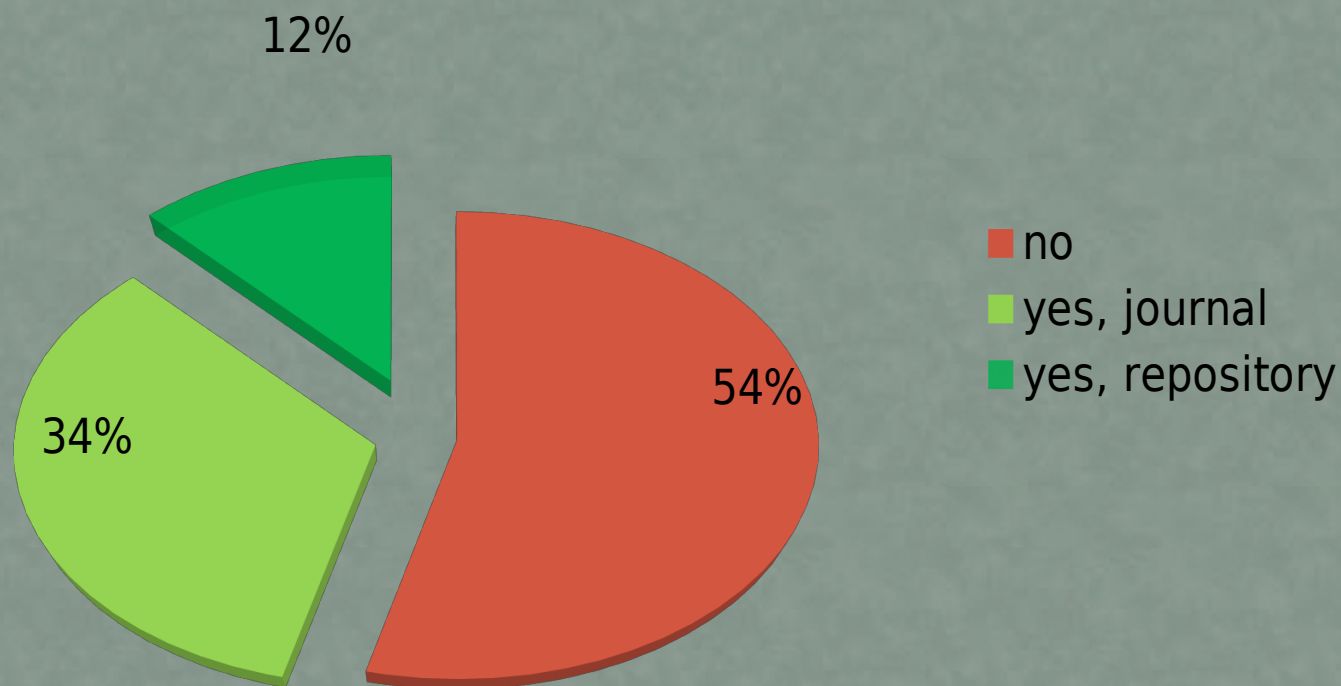
OPEN ACCESS: READINESS FOR OA

Do you think Polish scientists are ready for Open Access models?
(N=849)



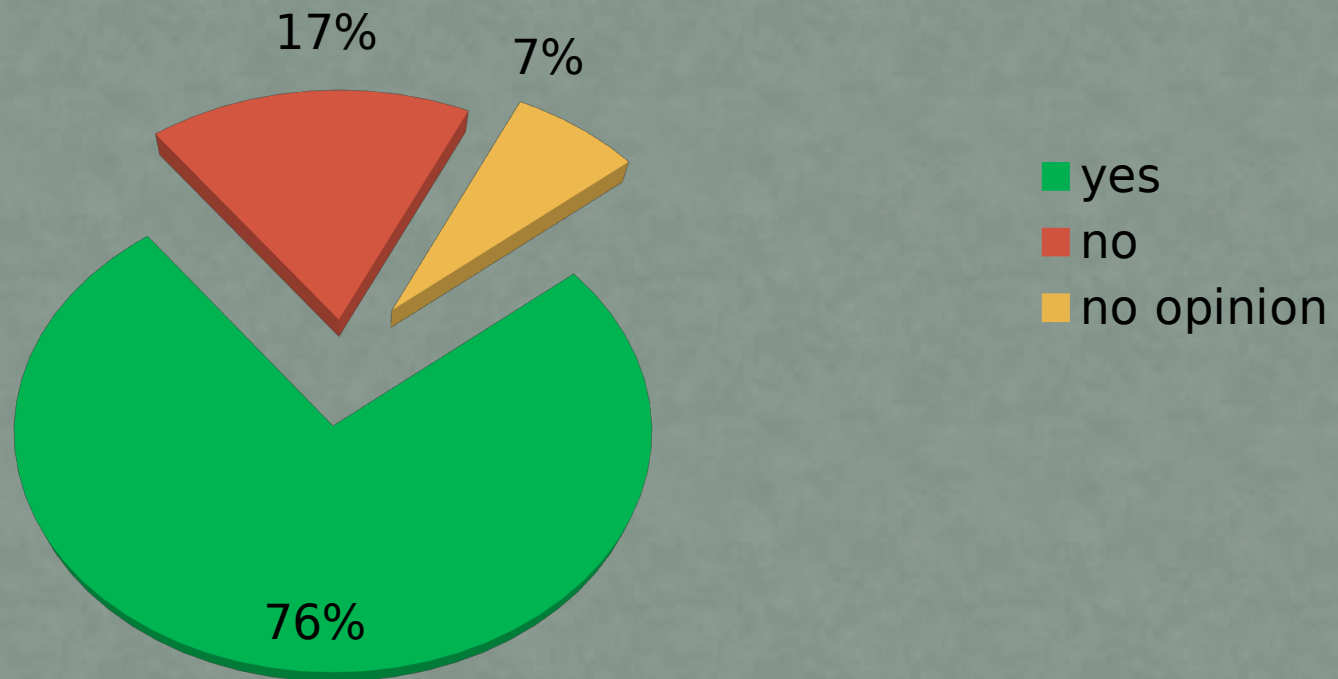
OPEN ACCESS: PUBLISHING

Have you ever published scientific work in Open Access mode? (N=849)



OPEN DATA: SHARING DATA (OBLIGATION)

Do you think scientists should obligatorily share scientific data based on publicly funded research ? (N=849)

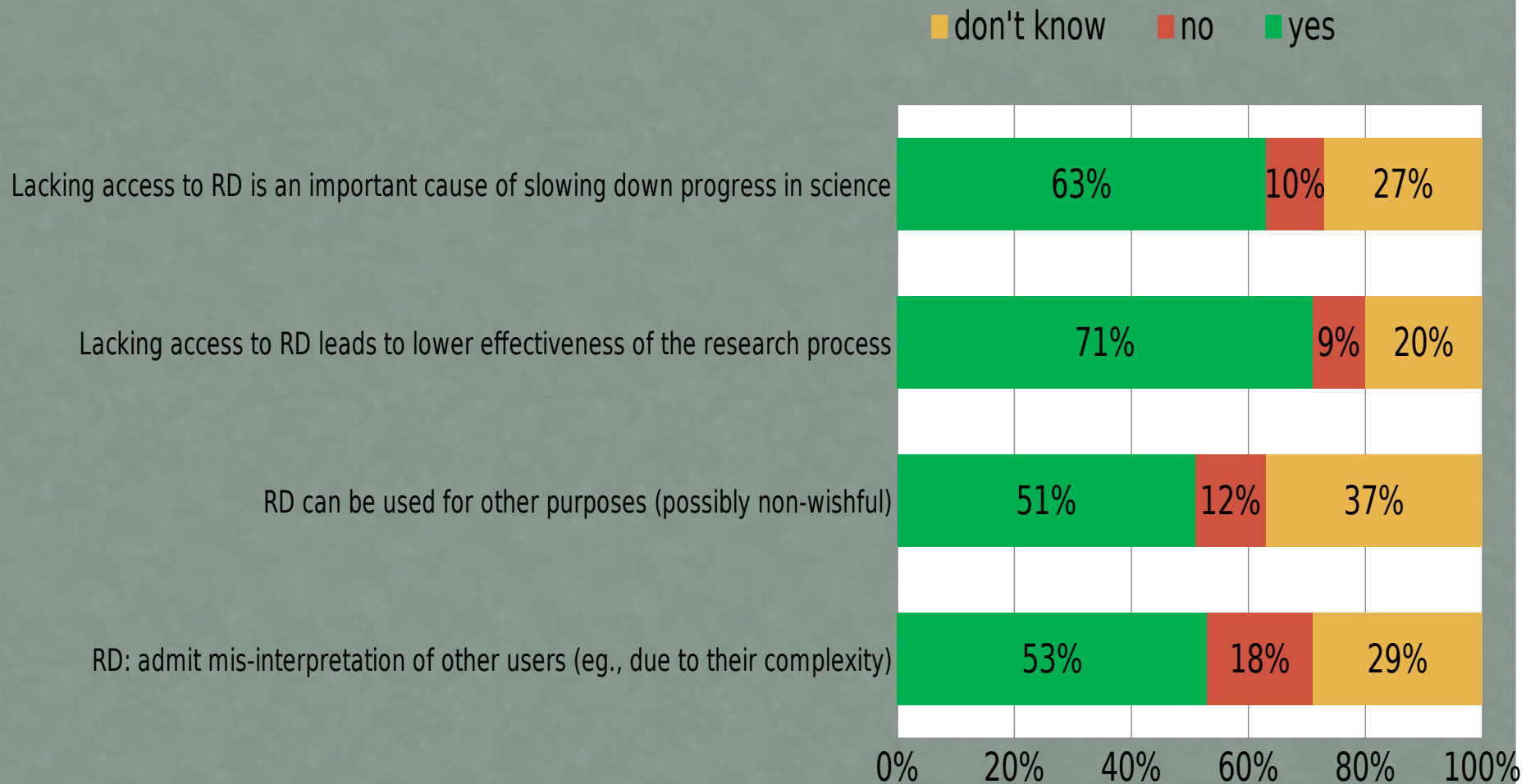


OPEN DATA: BENEFICIAL FOR DISCIPLINE

Do you think sharing data from research work is beneficial for your discipline ? (N=849)

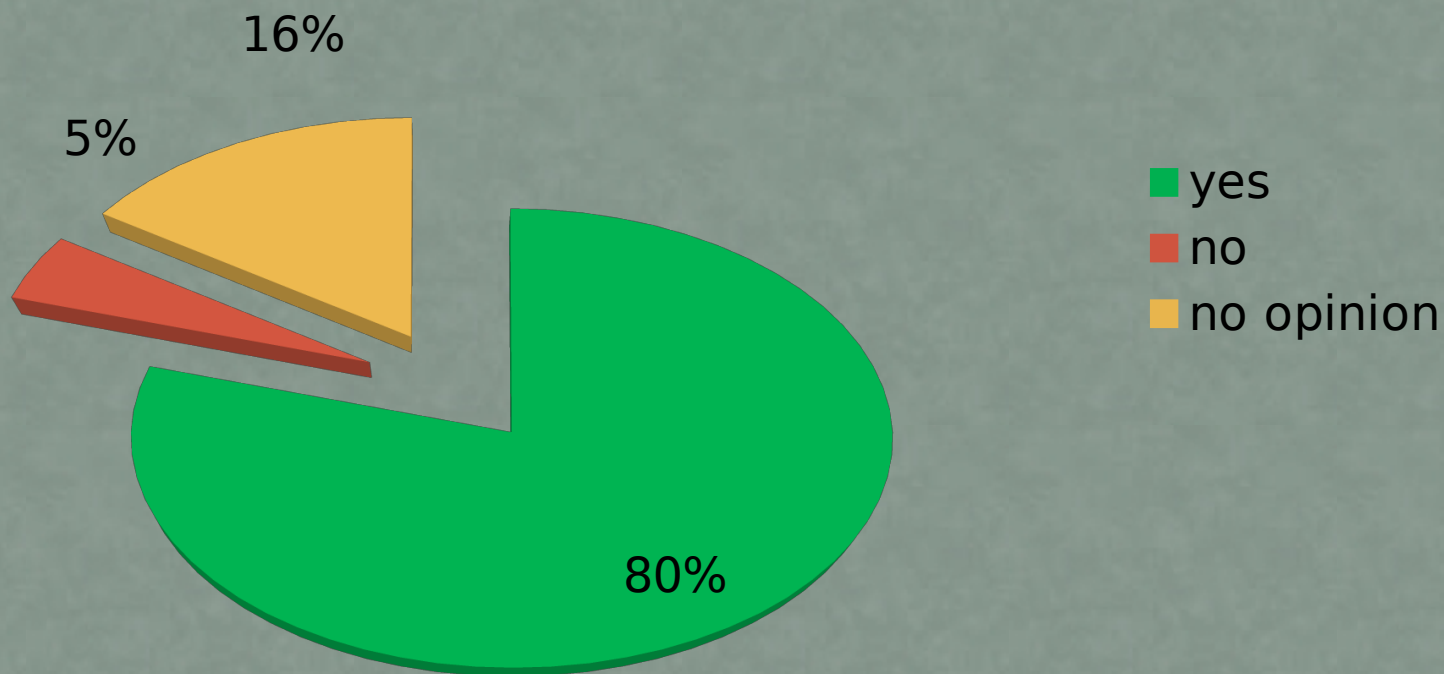


OPEN DATA: ADVANTAGES / DISADVANTAGES



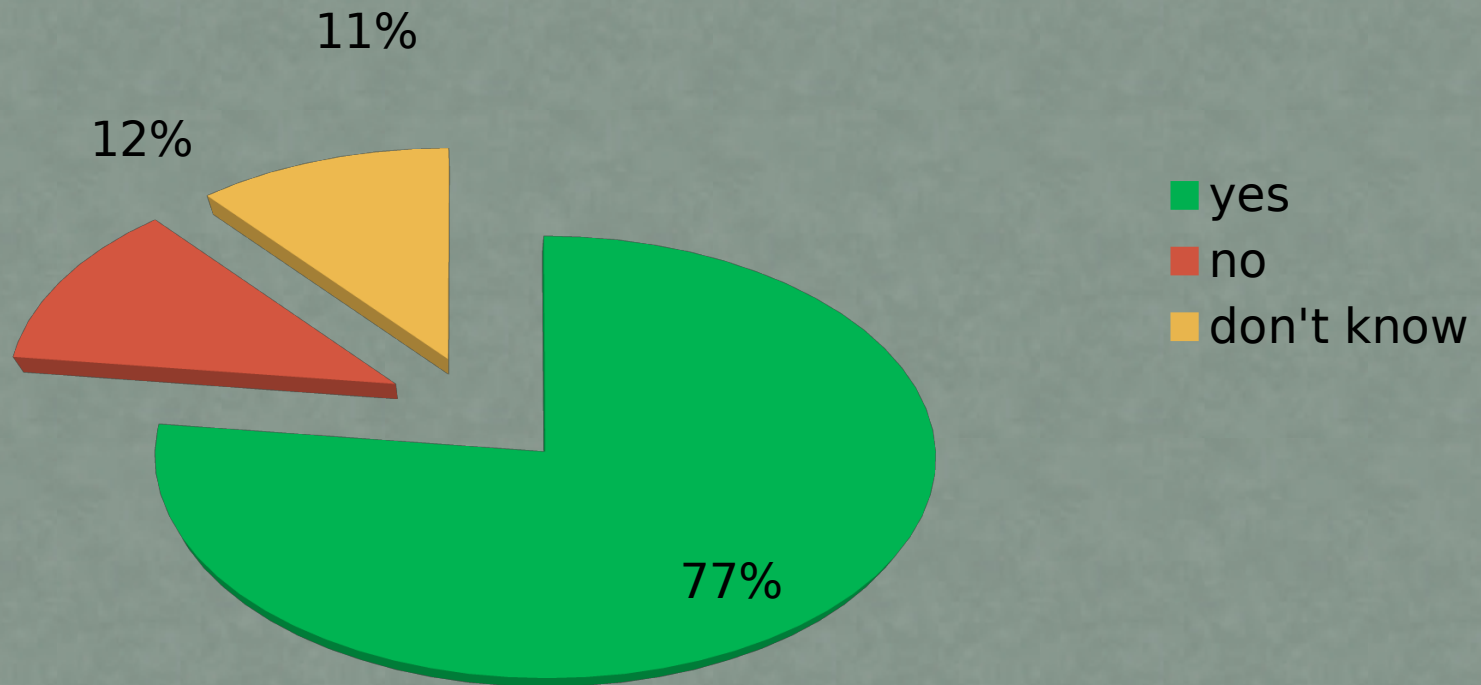
SCIENCE 2.0: BENEFICIAL FOR SCIENCE

Do you think social network platforms could be beneficial for science ?
(N=570)



SCIENCE 2.0: READINESS TO PARTICIPATE

Do you think you will join any social network platform dedicated to your research field ? (N=849)



ANALYSIS OF THE ATTITUDE: LINEAR REGRESSION MODELS

FOUR MODELS

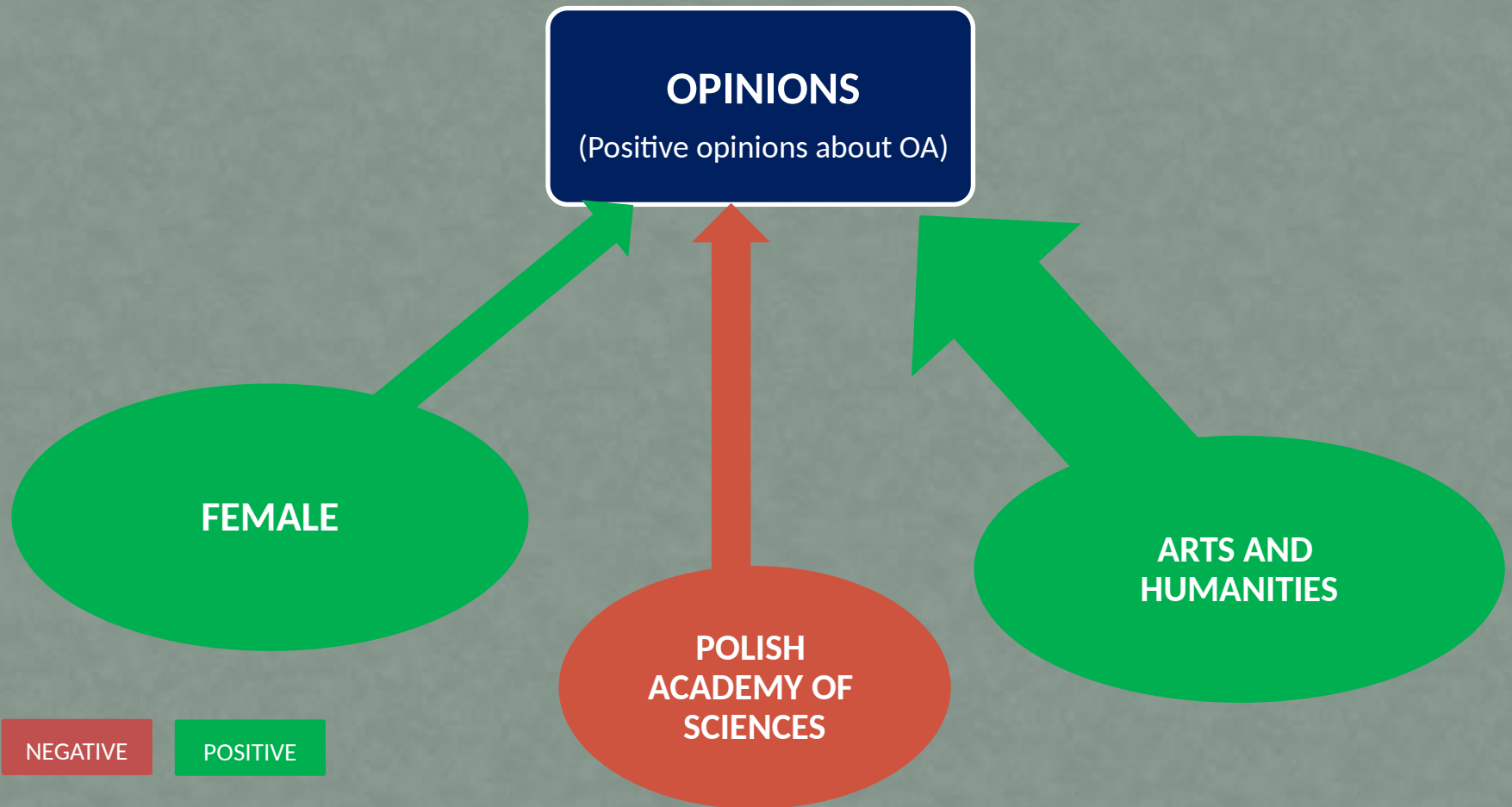
PRELIMINARIES

- Attitude toward Open Science could be discussed in three aspects:
 - Cognitive, Behavioral, Affective
- Presumptions:
 - These three aspects of the attitude would depend on independent variables (predictors): sex, age, discipline etc.
 - The aspects would also mutually interfere with each other
- Selected hypotheses:
 - Participating in international research projects will positively affect the knowledge, behaviour and opinion about Open Science
 - The higher age, the more negative tendency is observed in all the aspects
 - Scientists representing life and engineering disciplines are more positive towards Open Science models than the others

METHODS OF TESTING HYPOTHESES

- **Factor analysis:** aiming to reduce the number of variables and to detect an underlying structure of the relationships between variables:
 - Variables that cover cognitive, behavioral and affective aspects of the attitude toward Open Science
 - Three dominating factors: knowledge(about OS), behaviour(publishing in OA), opinions(positive opinions towards OA)
 - Dominant factors were used as new dependent variables
- **Four linear regression models were applied,using :**
 - **Predictors:** Age, Sex, Discipline, Participation in international projects, Academic title/degree, Experience as research team leader, Type of institutions
 - **Dependent variables :** Knowledge, Behaviour, Opinions

MODEL 1: OPINIONS



MODEL 2: KNOWLEDGE

NEGATIVE

POZITIVE

MODEL 3: **PUBLISHING**

PROFESSORS



```
graph LR; P((PROFESSORS)) --> R((RESEARCH TEAM LEADERS)); R --> P;
```

RESEARCH
TEAM
LEADERS

NEGATIVE

POZITIVE

MODEL 4 : **PUBLISHING**

CONCLUSIONS:

- Open Science adoption is still limited in Poland. Still, Polish scientists consider Open Models an important driving factor for the progress in whole science and in individual disciplines
- Strong Open Publishing promotion, the related systemic solutions and advantages for individuals contribute to the exposure of OA as the main aspect of Open Science. Other key aspects, incl. Open Data and Science 2.0, have still somewhat limited visibility
- Polish research community is splitted in their attitude towards various dimensions of Openness. Knowledge on Open Science as well as positive attitude towards Open Publishing are driven by factors whose majority is of international nature. Some local features referring to specific national research model can be observed, though.
- This report summarizes preliminary observations based on the conducted survey. More comprehensive analysis would still require some supplementary research, in particular of qualitative nature.

THANK YOU !

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