

# Who is willing to participate? Examining public participation intention concerning decommissioning of nuclear power plants in Belgium

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## Introduction

**Problem statement:** To address the social aspects of decommissioning of nuclear installations, it is recommended by international authorities and scientific studies that the public should be involved in decision-making related to decommissioning. Yet, extant research shows that there is very low motivation from the public to participate in such decision-making process.

**Research question:** Who is willing to participate in decommissioning-related decision-making procedures?

**Relevance:** Public participation in decision-making procedures, not only gives the communities a say on the matter, but also increases the social acceptance of predefined technical solutions (Hietala & Geysmans, 2020).



## Methods

**Data:** large public opinion survey (N=1028) in Belgium in 2015

**Dependent variable:** public participation intention

**Independent variables:** 1) Trust in nuclear industry's capacity to decommission; 2) Attitude towards nuclear energy; 3) Participant's political ideology; 4) Whether the participant lived in the vicinity of a nuclear installation.

**Mediating variables:** 5) Interest in nuclear energy and decommissioning; and 6) Radiological risk perception.

**Analysis:** Structural Equations Modelling (SEM), Confirmatory Factor Analysis (CFA).



## Results

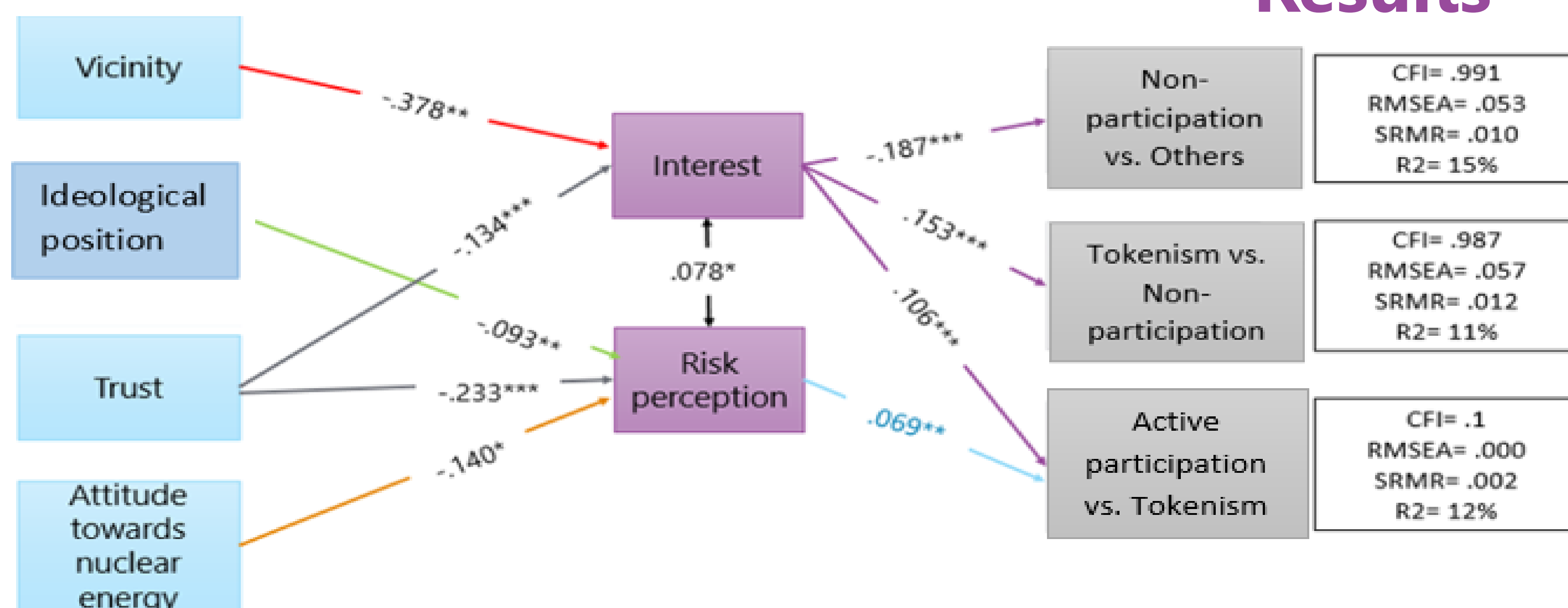


Figure 1: The final model based on SEM, including model statistics and significant standardized pathways.

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

- Interest and radiological risk perception have direct effects on participation intention.
  - people who have higher radiological risk perception and are more interested in the topic of decommissioning are more likely to participate.
- Low trust in the nuclear industry, being ideologically leftist, having more negative attitudes towards nuclear energy, and living in the vicinity of a nuclear installation influences participation intention indirectly, through interest and risk perception.



## Discussion & Conclusion

**Are we preaching to the converted?** If we include only people that have already rather negative opinions and who are easily recruited, this would result in a negative bias in terms of fair representation of all viewpoints in the end of the joint decision-making process.

**Solution:** Pay attention to potential biases in public participation and invest resources into motivating individuals that would normally not participate to take part in the decision-making process.

Apart from other inclusion and exclusion criteria, factors such as interest, risk perception, trust, attitudes and ideological position should also be considered when including people in decision-making regarding decommissioning of NPPs.

