Appendix

**Table 4.**

*Deviations from the Pre-Registration*

|  |  |  |
| --- | --- | --- |
| Pre-Registration | Paper | Reason |
| Terminology: “AI Systems” | Terminology: “ADM Systems” (Algorithmic Decision Making) | ADM is the more precise terminology (AlgorithmWatch, 2019) |
| Measurement of Throughput Legitimacy with six items (fair, satisfactory, just, appropriate, reliable, trustworthy) | Measurement of Throughput Legitimacy with three items (fair, satisfactory, appropriate) | Better fit of the measurement model, all latent constructs were measured with three items |
| Full final model with control variables (Acceptance of technology, political interest, perceived plausibility) | Full final model with control variables (Acceptance of technology, political interest, perceived plausibility) | Better power of the study, better fit indices of the model, control variables were not important for hypothesis testing |
| *Note.* Pre-Registration is available at OSF:  <https://osf.io/2acqu?view_only=6241cc33bb8949f3b7aa7fc2f8d4f81>a | | |

Translation of the Treatment Conditions

Condition 1 – Human Decision-Making

**The budget of the European Union**

The annual EU budget is €160 billion (2018). This is a large sum in absolute terms, but represents only 1.02% of the EU's annual economic output.

The money from the EU budget is used in areas where it makes sense to pool resources for the benefit of Europe as a whole, for example:

* the development of transport routes, energy networks and communication links between EU countries,
* the protection of the environment throughout Europe,
* increasing the global competitiveness of the European economy,
* the promotion of transnational groupings of European researchers and scientists.

**Who decides on the use of the funds?**

The decision on the budget for each year is made in two main steps:

1. In a first step, the European Commission prepares a draft budget and submits it to the governments of the member states - represented in the Council of the EU - and to the democratically elected European Parliament.
2. The Commission's budget proposal is then debated, negotiated and, if necessary, adapted in the European Council and the European Parliament. Once the proposal has been accepted by all the institutions involved, the budget for the following year is ready.

EU budget 2018 as pie chart itemized by the financial framework

Condition 2 – Algorithmic Decision-Making

**The budget of the European Union**

The annual EU budget is €160 billion (2018). This is a large sum in absolute terms, but represents only 1.02% of the EU's annual economic output.

The money from the EU budget is used in areas where it makes sense to pool resources for the benefit of Europe as a whole, for example:

* the development of transport routes, energy networks and communication links between EU countries,
* the protection of the environment throughout Europe,
* increasing the global competitiveness of the European economy,
* the promotion of transnational groupings of European researchers and scientists.

**Who decides on the use of the funds?**

The decision on the budget for each year is made in two main steps:

1. As a first step, high performance computers of the European Court of Auditors bring together all data available at EU level. Examples are available structural and administrative data from the EU and individual member states, economic and social forecasting models and other data from business and science. On the basis of large data sets, an "Artificial Intelligence" calculates the optimal distribution key of resources for the individual areas of the EU budget within a few hours with the help of so-called machine learning applications.
2. The resulting model is audited by the Court of Auditors and then presented to the President of the European Commission and the Commissioner for Financial Programming and Budget for signature. Thus the budget for the following year is ready.

EU budget 2018 as pie chart itemized by the categories the financial framework

Condition 3 – Hybrid Decision-Making

**The budget of the European Union**

The annual EU budget is €160 billion (2018). This is a large sum in absolute terms, but represents only 1.02% of the EU's annual economic output.

The money from the EU budget is used in areas where it makes sense to pool resources for the benefit of Europe as a whole, for example:

* the development of transport routes, energy networks and communication links between EU countries,
* the protection of the environment throughout Europe,
* increasing the global competitiveness of the European economy,
* the promotion of transnational groupings of European researchers and scientists.

**Who decides on the use of the funds?**

The decision on the budget for each year is made in two main steps:

1. In a first step, high performance computers of the European Court of Auditors bring together all data available at EU level. Examples are available structural and administrative data from the EU and individual Member States, economic and social forecasting models and other data from business and science. On the basis of large data sets, an "artificial intelligence" calculates the optimal distribution key of resources for the individual areas of the EU budget within a few hours with the help of so-called machine learning applications.
2. The budget proposal is then debated, negotiated and, if necessary, adapted in the European Commission, the European Council and the European Parliament. Once the proposal has been accepted by all the institutions involved, the budget for the following year is ready.

EU budget 2018 as pie chart itemized by the financial framework