

**WORKING PAPER SERIES**

## **Metadata Schema x-econ Repository**

Dr. Dirk Betz/Dr. Claudia Biniossek/Harald Wypior/Dr. Claus-Peter Klas/  
Narges Tavakolpoursaleh

Working Paper No. 2/2022



**OTTO VON GUERICKE  
UNIVERSITÄT  
MAGDEBURG**

**FACULTY OF ECONOMICS  
AND MANAGEMENT**

Impressum (§ 5 TMG)

*Herausgeber:*

Otto-von-Guericke-Universität Magdeburg  
Fakultät für Wirtschaftswissenschaft  
Der Dekan

*Verantwortlich für diese Ausgabe:*

Dr. Dirk Betz  
Otto-von-Guericke-Universität Magdeburg  
Fakultät für Wirtschaftswissenschaft  
Postfach 4120  
39016 Magdeburg  
Germany

<http://www.fww.ovgu.de/femm>

*Bezug über den Herausgeber*  
ISSN 1615-4274

## Content

---

Content	7
1 Introduction	8
1.1 Introduction to x-econ	8
1.2 Goals and functionality	8
1.3 Technical Basis	9
1.3.1 Modular architecture	9
1.4 New metadata fields in x-econ	10
2 Metadata schema	11
2.1 x-econ metadata	11
2.2 x-econ metadata schema	12
2.3 Appendix: controlled vocabulary in x-econ	26
2.3.1 Controlled list: Resource Type	26
2.3.2 Controlled list: License	26
2.3.3 Controlled list: Scientific Discipline	28
2.3.4 Controlled list: Game classification	29
2.3.5 Controlled list: Topic specification	30
2.3.6 Controlled list: Keywords	31
2.3.7 Controlled list: Data collection mode	34
2.3.8 Controlled list: Laboratory	35
2.3.9 Controlled list: Design decisions	39
2.3.10 Controlled list: Incentives	39
2.3.11 Controlled list: Interaction	40
2.3.12 Controlled list: Professional status of participants	40
2.3.13 Controlled list: Experimental Software	40
2.3.14 Controlled list: Type of Data	41
2.3.15 Controlled list: Document Type	41
2.3.16 Controlled list: Currency	42
2.3.17 Controlled list: Research group	42
2.4 Additional controlled vocabularies to be included in the next x-econ release	42
2.4.1 Controlled list: Keywords	42
2.4.2 Laboratories	50

# 1 Introduction

---

## 1.1 Introduction to x-econ

Since May 2017, the x-hub project partners OVGU Magdeburg, University of Vienna, and GESIS dispose of a new repository, called x-econ (<https://x-econ.org>). The service is dedicated to all experimental economics research projects to disseminate user-friendly archiving and provision of experimental economics research data.

The repository x-econ contains all necessary core functionalities of a modern repository and is in a continuous optimization process aiming at functionality enhancement and improvement. x-econ is also one pillar of the multidisciplinary repository x-science (<https://x-science.org>).

The present documentation, which is primarily based on the GESIS Technical Reports on datorium 2014|03<sup>1</sup> and da|ra 4.0<sup>2 3 4 5 6</sup>, lists and explains the metadata elements, used to describe research information.

## 1.2 Goals and functionality

The following aspects were essential in the development of x-econ:

- The one-to-one adoption of metadata elements of existing metadata schemata of GESIS was not adequate for many metadata elements in x-econ because experimental economic research uses substantially other technical terms compared to empirical survey research. Even supposedly similar categories cannot be used in the same way in the context of global standardization (DDI<sup>7</sup>, Dublin core). In each of these cases, new metadata elements had been developed.
- The infrastructure should offer users low-threshold access.
- A DOI<sup>8</sup>-reference, issued by da|ra, allows the citing of the dataset immediately and represents a new, so far not yet existing quality for data of behavioral and experimental economics. The experience of many researchers towards the DOI-registration of their literature publications is built on and extended here.
- The mandatory fields required for DOI-registration, based on DDI-standards, are adopted from da|ra and supplemented by some additional metadata fields developed based on expert discussions and x-econ's mapping with Xresearch<sup>9</sup>.

---

<sup>1</sup> Zenk-Möltgen, W., & Linne, M. (2014). Metadatenchema zu datorium - Data Sharing Repositorium. GESIS - Technical Reports 2014/03. Köln: GESIS. [http://www.gesis.org/fileadmin/upload/forschung/publikationen/gesis\\_reihen/gesis\\_methodenberichte/2014/TechnicalReport\\_2014-03.pdf](http://www.gesis.org/fileadmin/upload/forschung/publikationen/gesis_reihen/gesis_methodenberichte/2014/TechnicalReport_2014-03.pdf).

<sup>2</sup> Koch, U., Akdeniz, E., Meichsner, J., Hausstein, B., & Harzenetter, K. (2017). GESIS Papers 2017|25, da|ra Metadata Schema, Documentation for the Publication and Citation of Social and Economic Data, Version 4.0, <https://doi.org/10.4232/10.mdsdoc.4.0>

<sup>3</sup> <https://www.da-ra.de>

<sup>4</sup> Hausstein, B., Zenk-Möltgen, W., Wilde, A., & Schleinstein, N. (2011). da|ra Metadatenchema Version 1.0. GESIS Working Papers 2011/14. Mannheim: GESIS. doi: <http://dx.doi.org/10.4232/10.mdsdoc.1.0>.

<sup>5</sup> Hausstein, B., Schleinstein, N., Koch, U., Meichsner, J., Becker, K., & Stahn, L.-L. (2014). da|ra Metadata Schema: Version 3.0. GESIS - Technical Reports 2014/07. doi: <http://dx.doi.org/10.4232/10.mdsdoc.3.0>.

<sup>6</sup> Helbig, K., Hausstein, B., Koch, U., Meichsner, J., & Kempf, A.O. (2014). da|ra Metadata Schema: Version 3.1. GESIS - Technical Reports 2014/17. Köln: GESIS. doi: <http://dx.doi.org/10.4232/10.mdsdoc.3.1>.

<sup>7</sup> <https://www.ddialliance.org>

<sup>8</sup> <https://www.datacite.org/does.html>

<sup>9</sup> Wypior, H., Heimke, C., & Weimann, J. (2010). xresearch.org [Computer software]. Funded by EFRE. Retrieved from [xresearch.org](http://xresearch.org)

- The x-econ metadata schema was developed based on the requirements of the research community. The minimal metadata schema of x-econ was designed for comprehensive archiving of all experimental economic research datasets (input-maximization), while the more detailed metadata schema was developed for in-depth re-use (output-maximization). The data provider herself decides on the depth of documentation of her data.

Purpose and location of x-econ:

- Within the project x-hub: x-econ is the first repository in the field of data of experimental economics and is tailored to the needs of research communities.
- x-econ meets the function of minimal- and optimum archiving standards.
- Its position within the experimental economics community is also expressed by the fact, that the German Association for Experimental Economic Research (GfeW)<sup>10</sup> homepage links directly to x-econ.

The current version of x-econ already represents the targeted minimal standard with a user-friendly interface that allows for more comprehensive documentation of the data if required. Following user requests for discipline-specific documentability, the metadata fields were extended by some metadata fields from the social sciences. Thus, users can archive sociological experimental data already in x-econ.

According to the x-hub grant proposal, data from classEx<sup>11</sup>, a software for conducting interactive surveys and classroom experiments, can be uploaded directly to the x-econ repository.

### 1.3 Technical Basis

Technically, x-econ runs on a Linux-Server with Ubuntu<sup>12</sup> as a virtual machine (VM) in the network architecture of GESIS. DSpace<sup>13</sup> and Vaadin-Framework<sup>14</sup> are used as systems. DSpace is a free software for operations of document servers, written in Java and JSP and uses a relational database.

DSpace was chosen because this software is widely used for document storage, is fully accepted in the scientific community, and GESIS already has extensive experience with DSpace. In addition, DSpace provides internal, collaborative curation workflows to communicate between curators and with the submitter of research data to foster qualitative research metadata. For the development of x-econ's server architecture on the programming side, the software Git is used for distributed version control of files. This is supported by GitLab<sup>15</sup>, a web version control application for software projects based on Git. GitLab also serves the purpose of task management between managers, developers, and testers (agile software development).

#### 1.3.1 Modular architecture

x-econ is based on a new modular architecture, which is, on the one hand, more flexible and efficient in development, operation, and maintainability, and on the other hand, it can adapt to the demands of the users in order to provide a user-friendly portal.

The modular architecture (see figure 1) is structured as follows:

The data repository is stored with a current DSpace-Version. DSpace provides decoupled access to workflows and data via a REST-interface. By using this REST-interface, the user interface can be imple-

---

<sup>10</sup> <https://gfew.de/>

<sup>11</sup> <https://classex.de/>

<sup>12</sup> <https://www.ubuntu.com>

<sup>13</sup> <http://dspace.org>

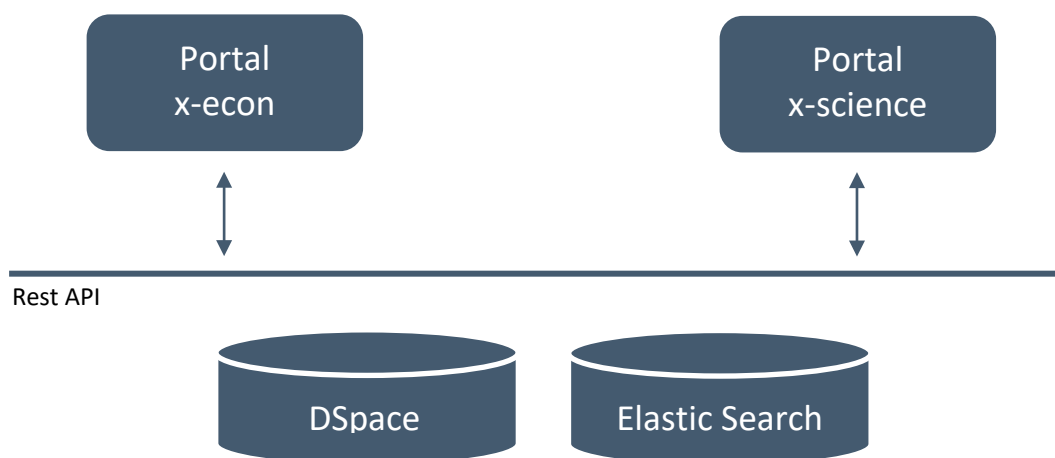
<sup>14</sup> <http://dspace.org>

<sup>15</sup> <https://gitlab.com>

mented outside DSpace with modern UI-Frameworks such as AngularJS or Vaadin. For x-hub, the Vaadin framework was selected based on an internal evaluation. Due to the modularization of data storage and UI there is the possibility to replace the DSpace previously used with other repository software, like DataVerse. This means that the service is adaptable and sustainable in the future. Another component is an ElasticSearch, which will be used for general searching. The individual portals (x-econ, x-science) differ according to three criteria:

- the underlying metadata schema
- the portal layout
- the single- or two-stage creation process.

By using the new UI-Framework and the REST-interface these criteria can now be implemented more efficiently.



**Figure 1:** Modular architecture

#### 1.4 New metadata fields in x-econ

For the x-econ metadata schema, the da|ra metadata fields of version 4.0 were adopted. Additional x-econ metadata elements were newly developed and integrated (see 2.2 x-econ metadata schema).

## 2 Metadata schema

---

The purpose of the x-econ metadata schema is to provide a meaningful description of each dataset based on structured metadata, which can be used for documentation, searchability, and citation of the archived materials.

### 2.1 x-econ metadata

Table 1 contains a detailed description of all metadata elements that must (mandatory element) or can (recommended element) be specified when uploading research information to x-econ. Mandatory elements are marked with M. However, data providers are generally advised to fill in as many fields as possible.

All metadata are provided in English only. Data providers should provide metadata information in English.

The metadata schema of x-econ follows the structure of the metadata schema of da|ra version 4.0.

The attribute Occurrence (Occ) specifies how many instances an element can have:

0-n = optional and repeatable (element may not occur at all (0), once, or several times)

0-1 = optional, but not repeatable (element may not occur at all or once)

1-n = necessary and repeatable (element must occur at least once (1) and can occur several times)

1 = required but not repeatable (element must occur exactly once)

There exist several administrative elements for quality assurance and control of each publication. If a publication is reported, the curators are informed by email. Two curators check the data publication and manually approve it. Only then the data publication is visible in x-econ.org. The visibility of the dataset itself depends on the embargo that was chosen by the data provider.

## 2.2 x-econ metadata schema<sup>16</sup>

### Legend

Container	= Contains thematically related metadata
M	= Required/Mandatory (M)
Designation	= Designation in Web-Interface of x-econ
x-econ sequence	= Newly added metadata fields; No. 0 to 99 da ra sequences; No. 100 to 199 – newly added x-econ metadata

Table 1: x-econ metadata schema

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
1	1	resourceType	Predefined terms to provide information about the type of resource being registered to differentiate between registered resources.	M	1	Only dataset allowed. See <a href="#">2.3.1 Controlled list: Resource Type</a>	
3	3	resourceIdentifier	Container element for a resource identifier, which includes a unique identifier and a version number to identify the resource.		0-1		
3.1	3.1	identifier	The identifier is a unique internal value for the registered resource provided by the publication agent to disambiguate between resources.		1	Example: database ID	
3.2	3.2	currentVersion	A version number, which is a unique sequence of numbers, can be provided for the registered resource as a reference that changes have been made between versions.		0-1	Example: Version 1.0.0	
4	4	titles	Container element to provide information about the main titles of the registered resource.		1		
4.1	4.1	title	Container element for one specific title.		1-n		
4.1.2	4.1.2	titleName	A name or title of the registered resource.	M	1	Title of this dataset	The title should describe <u>clearly</u> the contents of the dataset.
7	7	creators	Container element to provide information about a person, e.g., researchers involved in producing the registered resource or an institution responsible for the substantive and/or intellectual content of the registered resource.		1	Authors	
7.1	7.1	creator	Container element to provide information about a person (author)		1-n	Other than in da ra 4.0 only person is allowed.	
7.1.1	7.1.1	person	Container element to provide information about a person (author).		1		

<sup>16</sup> Koch, U., Akdeniz, E., Meichsner, J., Hausstein, B., & Harzenetter, K. (2017). GESIS Papers 2017|25, da|ra Metadata Schema, Documentation for the Publication and Citation of Social and Economic Data, Version 4.0, <https://doi.org/10.4232/10.mdsdoc.4.0>



x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
7.1.1.1.1	7.1.1.1.1 and 7.1.1.1.2	firstName and middleName	The first name of a person (author) and the middle name of a person (author).	M	1	First name	Enter the author's first (and middle) name.
7.1.1.3	7.1.1.3	lastName	The last name of a person (author).	M	1	Last name	Enter the author's last name. If there are more than one authors to the dataset, you may add more entry fields by clicking on the "Add author" button.
100.1		emailAddress	The e-mail address of a person (author)	M	1	E-mail	Enter the author's e-mail address. This should be the address at which the author wishes to be contacted by the x-econ team regarding inquiries about the dataset. The e-mail address will not be published!
7.1.1.4	7.1.1.4	personIDs	Container element to provide information about a unique identifier of the person and the name of the schema identifier to disambiguate individuals of similar names.		0-1		
7.1.1.4.1	7.1.1.4.1	personID	Container element to provide information about a person's unique identifier.		1-n	Several personIDs may be provided.	
7.1.1.4.1.1	7.1.1.4.1.1	identifierURI	Person ID: The value of a formally registered unique identifier.		1	<b>Persistent Identifier</b> Unique persistent identifier of the author Example: ISNI ID: 5859 1764 (Heiko Peters). (e.g., ORCID <a href="https://orcid.org">https://orcid.org</a> , ISNI <a href="http://www.isni.org">http://www.isni.org</a> )	Fill in the author's persistent digital identifier. A persistent digital identifier is a unique permanent URL. Through the use of a persistent digital identifier, every published work can be unambiguously attributed to its creator. We thus recommend you to fill in the author's persistent digital identifier to ensure the unambiguous connection between creator and dataset. Providers of a persistent digital identifier are e.g., ORCID ( <a href="http://www.orcid.org">www.orcid.org</a> ) or ISNI ( <a href="http://www.isni.org">www.isni.org</a> ). e.g., persistent digital identifier from ORCID looks like this: <a href="http://orcid.org/0000-0009-4660-9818">orcid.org/0000-0009-4660-9818</a> .
7.1.1.4.1.2	7.1.1.4.1.2	identifierSchema	The name of the schema the identifier is related to.	M if identifier URI is used	1	Examples: ORCID, VIAF, GND, etc.	
7.1.1.5	7.1.1.5	affiliation	Container element to provide information about the organizational or institutional connection of a person. The affiliation should reflect the person's current and/or primary employment.		0-1		

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
7.1.1.5.1	7.1.1.5.1	affiliationName	The name of the organization or institution a person is affiliated to.		1	<b>Institution/University</b> A list with institutions is provided after the user fills in 3 letters.	Enter the author's (main) affiliation. You can either do a separate entry or choose one from the list.
8	8	dataURLs	Container element to provide information about the URL or URN (a reference to a web resource that specifies its location) linking to the registered resource.	M	1		
8.1	8.1	dataURL	An URL or URN (a reference to a web resource that specifies its location) linking to the registered resource.		1-n	Several dataURLs may be provided.	
9	9	doiProposal	A persistent interoperable identifier (=DOI) a publication agent suggests for identification purposes of the registered resource.	M	1	<b>DOI</b> Valid DOI Syntax according the standard, see doi.org	
10	10	publicationDate	Container element to provide information about the date the registered resource was published or is going to be published.	M	1		
10.1	10.1	date	The publication day, month and year of the registered resource submitted by the publication agent.		1	You may provide a complete calendar date.	
13	13	availability	Container element to classify or describe availability conditions of the registered resource.		0-1		
13.3	13.3	embargoDate	Information about the end date of access restrictions in case an embargo period has been in effect.		0-1	<b>Embargo</b> Allowed value is a valid date expressed in the format YYYY-MM-DD	
14	14	rights	Container element to provide information about legal principles or fundamental normative rules about what is allowed of people or owed to people in regards to the registered resource.	M	1		
14.1	14.1	licenseType	Predefined terms to provide information about different types of creative commons licenses to allow creators to maintain copyrights on their works and clarify what others can do with content licensed with one of those licenses.		1	<b>License</b> See <a href="#">2.3.2 Controlled list: License</a>	Licenses allow you to establish the terms of use for the intellectual property that you make publicly available. For instance, you may want your content to be used exclusively for non-commercial purposes or perhaps you have an interest in prohibiting the distribution or publication of modified materials from your data. Whichever your particular needs, a license protects your content from improper usage and protects you legally from the usage of your content by third parties.

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
17	17	classifications	Container element to provide information about a multidisciplinary or discipline-specific system for hierarchically classifications. At the same time, classifications branch out into the special knowledge areas out of a few main compartments.		0-1		
17.1	17.1	classification	Container element for internal and external classifications.		1-n		
17.1.1	17.1.1	classificationInternal	Container element for the internal classification system provided by da ra (Classifications: Journal of Economic Literature (JEL), ZA, GESIS).		0-1		
17.1.1.1	17.1.1.1	schema	The name of the internal schema used to differentiate between classification systems describing the topical coverage of the registered resource.		1	Here only JEL (Journal of Economic Literature) Classification	
17.1.1.2	17.1.1.2	identifiers	Container element to provide information about the unique identifier of the internal schema.		1		
17.1.1.2.1	17.1.1.2.1	identifier	The identifier is a unique internal value of the internal schema to disambiguate classification systems.		1-n	JEL code (Journal of Economic Literature) Example: C92, D44	Enter up to 6 JEL codes that best describe the content of the dataset. The different JEL Codes and a JEL Code application guideline can be found here: <a href="https://www.aea-web.org/jel/guide/jel.php">https://www.aea-web.org/jel/guide/jel.php</a> You can either enter the JEL code seriatim by using the enter key after each entry or you can enter several codes at once separated by a comma and then press the enter key to confirm (e.g., C, L, D4, F6, H41). Remove a selected item by clicking on it.
17.1.2	17.1.2	classificationExternal	Container element to provide language-dependent information about a classification system provided by the publication agent.		0-1		
17.1.2.2	17.1.2.2	classificationSchema	The name of the external schema used to differentiate between classification systems a publication agent provides to describe the topical coverage.		1		
17.1.2.3	17.1.2.3	terms	Container element to provide information about the subject class.		1		

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
17.1.2.3.1	17.1.2.3.1	term	The subject class from the external classification system a publication agent uses to describe the topical coverage.	M if classificationSchema is used	1-n	<a href="#">Game classification</a> See <a href="#">2.3.4 Controlled list: Game classification</a>	Specify the game-theoretic classification of the experiment that generated the dataset. Choose up to 6 terms by selecting them from the dropdown menu. Remove a selected item by clicking on it.
101.1		classification- Others	Free-text field to provide further classification information.		0-n	Further classification information that is not included in the controlled list.	
101.2		scientificDiscipline	Main scientific discipline to which the content/topic of the dataset relates to.		0-1	<a href="#">Scientific discipline</a> See <a href="#">2.3.3 Controlled list: Scientific Discipline</a>	Define the main scientific discipline to which the content/topic of the dataset relates to. You can either do a separate entry or choose one from the list.
101.3		topicSpecification	Topic specification of research data and the area of application.		0-n	<a href="#">Topic specification</a> See <a href="#">2.3.5 Controlled list: Topic specification</a>	Define the general topic(s) that best describe the dataset. Choose up to 6 terms by selecting them from the dropdown menu. Remove a selected item by clicking on it.
102.1		designDecisions	Information about the experimental design.		0-n	<a href="#">Design decisions</a> See <a href="#">2.3.9 Controlled list: Design decisions</a>	State all relevant elements of your experimental design by choosing them from the dropdown menu. Remove a selected item by clicking on it.
102.2		Incentive	Information about the incentives used in the experiment.		0-n	<a href="#">Incentives</a> See <a href="#">2.3.10 Controlled list: Incentives</a>	Specify whether and which kind of monetary or non-monetary incentives were offered to participants for participating in the experiment. You may choose one or more options from the dropdown menu. Remove a selected item by clicking on it.
102.3		Interaction	Information about the interaction type in the experiment.		0-n	<a href="#">Interactions</a> See <a href="#">2.3.11 Controlled list: Interactions</a>	State the kind of interactions that participants were faced with in the experiment by choosing an option from the dropdown menu. Remove a selected item by clicking on it.
102.4		professional- StatusParti- cipients	General classification of participants professional status (e.g., students)		0-n	<a href="#">Professional status of participants</a> See <a href="#">2.3.12 Controlled list: Professional status of participants</a>	State the participants occupation (e.g., students, unemployed) by choosing an option from the dropdown menu. You may choose several options if applicable. Remove a selected item by clicking on it.

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
102.5		rounds	Number of rounds played in the experiment.		0-1	<b>Rounds</b>	State the maximum number of rounds played by the participants in the experiment independent of whether different games were played in the experiment. For instance: all participants play a repeated public goods game with 10 rounds and subsequently half of them play an ultimatum game with 5 rounds. Hence, the right maximum number of rounds played by the participants in the experiment would be 15.
102.6		experimentalSoftware	Software used in experiment.		0-n	<b>Experimental Software</b> Example: z-Tree, classEx See <a href="#">2.3.13 Controlled list: Experimental Software</a>	State the software(s) used to conduct the experiment(s) by choosing one or more options from the dropdown menu or typing it in, should it not be on the list. Remove a selected item by clicking on it.
102.6.1		experimentalSoftware-Freetext	A free-text field to describe the software used in the experiment.		0-n		
102.7		earningsRange	Container element to provide information about the earnings range in the experiment.		0-1	<b>Earnings range in the experiment</b>	Specify the participants earnings range in the experiment from lowest to highest. Select the payoff currency by choosing an option from the dropdown menu. Should your currency not be listed, please convert the amounts into one of the listed currencies.
102.7.1		minimum	The lowest income in the experiment.		0-1	<b>Minimum</b>	
102.7.2		maximum	The highest income in the experiment.		0-1	<b>Maximum</b>	
102.7.3		mean	The mean income in the experiment.		0-1	<b>Mean</b>	
102.8		currency	The currency used to describe the earnings range.	M if minimum, maximum or mean is used	0-1	<b>Currency</b> Example: Euro, US Dollar See <a href="#">2.3.16 Controlled list: Currency</a>	

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
102.9		showUpFee	Container element to provide information about the show-up fee of the participants in the experiment.		0-1	Show-up fee	Specify the participants' unconditional payment for showing up to participate in the experiment; that is, the fee the participants received just for coming to the experiment. Select the payoff currency by choosing an option from the dropdown menu. Should your currency not be listed, please convert the amount into one of the listed currencies.
102.9.1		amount	The amount of the show-up fee.		0-1	Amount	
102.10		ageRange	Container element to provide information about the age range of participants.		0-1	Age range of participants	
102.10.1		minimum	Age of the youngest participant in the experiment.		0-1	Minimum Value >= 1 and <= 140	State the age of the youngest participant in the experiment. Minimal age must be between 1 and 140 and smaller or equal to maximal age.
102.10.2		maximum	Age of the oldest participant in the experiment.		0-1	Maximum Value >= 1 and <= 140	State the age of the oldest participant in the experiment. Maximal Age must be between 1 and 140 and greater or equal to Minimal Age.
102.10.3		mean	The mean age of the participants in the experiment.		0-1	Mean Value >= 1 and <= 140	State the mean age of the participants in the experiment. Mean Age must be between 1 and 140 and between Maximal Age and Minimal Age.
18	18	controlledKeywords	Container element to provide information about a classification of the terminology to classify or index the registered resource.		0-1		
18.1	18.1	controlledKeyword	Container element for controlled keywords.		1-n		
18.1.1	18.1.1	keywordSchemaType	The name of the internal schema used to differentiate between keywords to describe the topical coverage.		1	Content: x-econ keywords of experimental economics	
18.1.2	18.1.2	identifiers	Container element to provide information on a unique identifier of the internal schema.		1		
18.1.2.1	18.1.2.1	identifier	Keywords of experimental economics related to the data.		1-n	Keywords See <a href="#">2.3.6 Controlled list Keywords</a>	Choose up to 8 keywords that best describe the content of the dataset. You can either do separate entries or choose them from the list. Remove a selected item by clicking on it.

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
19	19	freeKeywords	Container element to provide language-dependent information about the content of the registered resource if the controlled list of classifications cannot provide enough information.		1-n		
19.1.3.1	19.1.3.1	keyword	A textual description or terminology to describe the content of the registered resource.		1-n		
20	20	descriptions	Container element to provide language-dependent information, statements or passages that give additional details about someone or something.		0-1		
20.1	20.1	description	Container element for language-dependent descriptions.		1-n		
20.1.2	20.1.2	freetext	All additional information about the registered resource that does not fit in any of the other categories. May be used for technical information.		1	Description of this dataset	Describe your dataset as accurately as possible. You may address any matter that you consider important in order for others to understand your dataset. This may include matters concerning experimental procedure, variables of interest, structure of the data, econometric applications, etc.
20.1.3	20.1.3	descriptionType	Predefined terms to provide information about different types of descriptions used to describe the registered resource.	M if freetext is used.	1	See da ra controlled list descriptionType appendix 4.1.4 for definitions <sup>17</sup> . Here only "5. Others".	
20.1	20.1	description	Container element for language-dependent descriptions.		1-n		
103.20.1.2	20.1.2	theoreticalFramework-Freetext	All additional information about the registered resource that does not fit in any of the other categories. May be used for technical information.		1	Theoretical framework Example: Research from previous literature used to derive and test the hypotheses in the experiment.	Describe the theoretical framework your experiment is based on (i.e., research from previous literature used to derive and test your hypotheses in the experiment). Please make reference to original sources as well as any relevant extensions/variations/applications found in the literature.
20.1.3	20.1.3	descriptionType	Predefined terms to provide information about different types of descriptions used to describe the registered resource.	M if freetext is used.	1	See da ra controlled list descriptionType appendix 4.1.4 for definitions <sup>18</sup> . Here only "5. Others".	

<sup>17</sup> Koch, U., Akdeniz, E., Meichsner, J., Hausstein, B., & Harzenetter, K. (2017). GESIS Papers 2017|25, da|ra Meta-data Schema, Documentation for the Publication and Citation of Social and Economic Data, Version 4.0, <https://doi.org/10.4232/10.mdsdoc.4.0>

<sup>18</sup> Koch, U., Akdeniz, E., Meichsner, J., Hausstein, B., Harzenetter, K. (2017). GESIS Papers 2017|25, da|ra Meta-data Schema,

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
21	21	geographicCoverages	Container element to provide geographical information of the data collection including a controlled vocabulary and a free-text field.		0-1		
21.1	21.1	geographicCoverage	Container element to provide information about the geographic coverage of the registered resource.		1-n		
21.1.1	21.1.1	geographic-CoverageControlled	Predefined terms to provide geographical information to differentiate between different locations the experiment was conducted.		0-1	<b>Country</b> Countries in format ISO 3166-2/3. Example: "DE" for Germany	State all countries where the experiment(s) was conducted by choosing them from the dropdown menu. Remove a selected item by clicking on it.
21.1	21.1	geographicCoverage	Container element to provide information about the geographic coverage of the registered resource.		1-n		
21.1.1	21.1.1	geographic-CoverageControlled	Predefined terms to provide geographical information to differentiate between different locations the experiment was conducted.		0-1	<b>Laboratory of experiment(s)</b> See <a href="#">2.3.8 Controlled list: Laboratory</a>	State all experimental laboratories where the experiment was conducted. Note that this also applies to experimental studies conducted outside of a laboratory but which were organized, financed or were otherwise related to a given laboratory (or laboratories). You can either do separate entries or choose them from the list. Remove a selected item by clicking on it.
104.21.1.2.1.2	21.1.2.1.2	LaboratoryOfExperimentsFreeText	A free text field to describe the location of the laboratory in case it cannot be found in the controlled vocabulary list.			Further information on Laboratory of experiments that is not included in the controlled list.	
22	22	universes	Container element to provide language-dependent information about statistical entities about which inferences are to be drawn and to which analytic results refer.		0-1	For example, a population could consist of all the persons in the country, or those in a particular geographical location, or a special ethnic group, depending on the purpose and coverage of the study.	
22.1	22.1	universe	Container element for one specific description about the universe to which analytic results refer.		1-n		



x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
22.1.2	22.1.2	sampled	Description of the statistical entities of the survey.		1	<b>Participant pool</b> Description of the population, from which the participants in the experiment were drawn. Example: All persons in the laboratory participant pool.	Describe the population, from which the participants in the experiment were drawn, as accurately as possible. Ask yourself: who is my population (e.g., all students of a certain lecture, all students who are registered in the database of the laboratory, all inhabitants of a certain region or country, etc.) and what are the relevant properties and characteristics of this population (e.g., all students were economics students or most of the inhabitants of the region do not have any access to flowing water etc.).
23	23	samplings	Container element to provide language-dependent information about the sample and sample design used to select the experiment participants to represent the population.		0-1		
23.1	23.1	sampling	Container element for one specific sampling method.		1-n		
23.1.2	23.1.2	method	The type of sample and sample design used to select the participants to represent the population.		1	<b>Sampling method</b>	Describe the requirements the participants of the participant pool had to fulfil to participate in the experiment. Such requirements can be a certain sex, age, education, annual income, etc.
24	24	temporalCoverages	Container element to provide information about the time frame of the data collection.		0-1		
24.1	24.1	temporalCoverage	Container element to provide structured or unstructured information about the time frame of the data collection.		1-n		
24.1.1	24.1.1	temporalCoverage-Formal	Container element to provide information about the structured temporal time frame of the data collection.		0-1		
105.1.24.1.1	24.1.1.1	startDate	Container element that provides information about the start date of the data collection.				
105.1.1.24.1.1.1	24.1.1.1.1	date	The date the experiments started.		1	<b>Period of experiments from</b> "From" as date: DD-MM-YYYY	
105.2.24.1.1.2	24.1.1.2	endDate	Container element that provides information about the end date of the experiments.		0-1		
105.2.1.24.1.1.2.1	24.1.1.2.1	date	The date the experiments ended.		1	<b>Period of experiments to</b> "To" as date: DD-MM-YYYY	

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
28	28	collectionModes	Container element to provide information about the mode of data collection used to collect information from a sample in an experiment.		0-1		
28.1	28.1	collectionMode	Container element to provide structured or unstructured information about the mode of data collection used to collect information from a sample in an experiment.		1-n		
28.1.1	28.1.1	collectionModeType	Predefined terms to provide information about different types of methods that are used to collect information from a sample in a survey.		1	See da ra controlled list appendix 4.1.7 for definitions. Here only "22: Experiment"	
28.1.2	28.1.2	collectionModesFree	Container element to provide language-dependent information to classify or describe methods that are used to collect information in an experiment.		0-1		
106.28.1.2.1	28.1.2.1	collectionModeFree	Container element for descriptions about the mode of data collection.		1-n		
106.1.28.1.2.1.2	28.1.2.1.2	collectionMode-FreeExp	An additional field to describe the methods that are used to collect information in an experiment.		1-n	<a href="#">Data collection mode</a> See <a href="#">2.3.7 controlled list</a> : <a href="#">Data collection mode</a>	Specify the procedure(s) by which the data in the dataset was collected. You may pick one or more options from the dropdown menu as well as type in an option, should it not be on the list. Remove a selected item by clicking on it.
106.1.1.28.1.2.1.2		collectionMode-FreeExpOthers	Further data collection mode information that is not included in the controlled list.		1-n		
29	29	dataSets	Container element to provide information about the dataset, which is a collection of data, where every column of the statistical data matrix represents a particular variable, and each row corresponds to a given member of the dataset in question.		0-1		
29.1	29.1	dataSet	Container element to provide information about a specific data set.		1-n		
29.1.2	29.1.2	unitType	Describes the entity being analyzed or observed in the resource.		0-1	See da ra controlled list appendix 4.1.8 for definitions. Here only „1: Individual“ or „11: Group“. Use only together with numberUnits!	

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
29.1.3	29.1.3	numberUnits	The number of units being analyzed or observed in the resource.		0-1	<b>Total number of independent observations</b> unitType has a contextual relationship with numberUnits. When a unitType is being selected, it is mandatory to provide a number of units and vice versa. Finally, it means that both together are mandatory; otherwise, none of them should be used.	State the total number of statistical units analyzed in the dataset. Two observations are independent if the value of one observation does not affect the value of another observation. For instance: in the experiment are 20 participants and each of them plays with another participant a coordination game with (without) interaction. Consequently, the total number of independent observations in the experiment is 10 (20) since the outcome of each participant is (not) affected by the outcome of another participant.
107		totalNumber-Participants	The total number of participants being analyzed or observed in the resource.		0-1	<b>Total number of participants</b>	State the total number of participants in your experiment.
108		largestGroup-Size	The largest group size of one relevant analyzed observation in resource.		0-1	<b>Largest group size</b> Example: A public goods experiment with a largest group size of 10 participants in one single observation => 10	State the number of participants in the largest statistical unit of the experiment. For example: you have 20 participants and each of them plays with another participant a coordination game. Hence, the largest group size is 2. In the event that all 20 participants play a public goods game together in one group, the largest group size is 20.
29.1.6	29.1.6	files	Container element to provide specific information of the data file.	M	0-1		
29.1.6.1	29.1.6.1	file	Container element to provide specific information of the data file such as name, format, size, and fingerprint of the file.		1-n		
29.1.6.1.1	29.1.6.1.1	name	The name of the data file.		0-1	<b>Upload files</b>	Upload the dataset, as well as further relevant files that complement your dataset (e.g., codebook (explanation of variables), instructions, program code, screenshots, characteristics of the participants, statistics, Do-files.). At least one file, whose type of data is a dataset, is required to continue.

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
109.1		fileType	The type of the data file.	M for Dataset	0-1	<b>Type of data</b> Example: Codebook, Dataset See <a href="#">2.3.14 Controlled list: Type of Data</a>	Type of data
109.1.1		fileTag	Tag to provide specific information of the data file.		0-n	<b>Add tags</b> Example: Treatment x, Instruction, STATA 10.0	Add tag(s) that best describe the content of the uploaded file
109.1.2		fileDescription	Description to provide specific information of the data file.		0-1	<b>Description of this dataset</b>	Add description that best describe the content of the uploaded file
29.1.6.1.2	29.1.6.1.2	format	A textual description of the technical format of the data file.		0-1	Use file extension or MIME type where possible. Examples: application/x-stata, application/pdf	
29.1.6.1.3	29.1.6.1.3	size	The size of a data file or resource.		0-1	Example: KB, MB	
29.1.6.1.4	29.1.6.1.4	fingerprint	Checksum which confirms the authenticity of the data or data file by assigning a hash value (digital fingerprint).		0-1		
29.1.6.1.5	29.1.6.1.5	fingerprint-Method	The technical procedure generating a data fingerprint.		0-1	Example: MD5, SHA1	
30	30	notes	Container element to provide language-dependent remarks or other information about the registered resource.		0-1		
110.30.1	30.1	note	Container element for one specific language dependent further remark about the registered resource.		1-n		
110.1.30.1.2	30.1.2	text Leading question and object of data collection	Textual description of the leading research question and the object of data collection		1	<b>Leading question and object of data collection</b>	State your main research question and the academic goal you pursue through the collection and analyses of this dataset.
32	32	publications	Container element to provide information about an article, a document, etc. that has been made available to the public.		0-1		
32.1	32.1	publication	Container element to provide information about a structured or/and unstructured information about a publication.		1-n		
32.1.1	32.1.1	structuredPublication	Container element to provide structured information about an article, a document or another resource that has been made available to the public.		1		
32.1.1.1	32.1.1.1	documentType	The type of publication that has been made available to the public to differentiate between document types.		0-1	<b>Document type of publication</b> See <a href="#">2.3.15 Controlled list: Document Type</a>	State the type of your published document by selecting an option from the dropdown menu.

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
32.1.1.2	32.1.1.2	authorsEditors	Container element to provide information about a person, who wrote and originated (author) and/or edited and modified (editor) the publication.		1		
32.1.1.2.1	32.1.1.2.1	authorEditor	Container element to provide information about an author and/or an editor of a publication.		1-n		
32.1.1.2.1.1	32.1.1.2.1.1	author	Container element to provide information about an author.		0-1		
32.1.1.2.1.1.3	32.1.1.2.1.1.1; 32.1.1.2.1.1.2; 32.1.1.2.1.1.3	name	The full name of the author.		1	<b>Author</b> Includes firstName, middleName and lastName.	State the complete name of the publication's author(s) using the following format: last name, first name and middle name. Separate authors using a semicolon (;).
32.1.1.3	32.1.1.3	title	The title or name of the publication.		1	<b>Title of publication</b>	Enter the title of the publication related to this dataset. If there are more than one publication related to this dataset, you may add more entry fields by clicking on the "Add Publication" button.
32.1.1.4	32.1.1.4	year	The year on which the publication has been or is planned to be published.		0-1	<b>Year of publication</b>	Enter the year of the document's publication.
32.1.1.14	32.1.1.14	PIDs	Container element to provide information about the Persistent Identifier (PID) that has been generated to uniquely and permanently identify the structured publication.		0-1	It is used to be able to reference and retrieve data permanently. PIDs link data with the data producer or with research objects based on them.	
32.1.1.14.1	32.1.1.14.1	PID	Container element for the value of a formally registered unique and persistent identifier of the structured information of publication.		1-n		
32.1.1.14.1.1	32.1.1.14.1.1	ID	The value of a formally registered unique and persistent identifier of the structured information of a publication.		1	<b>Link (URL)</b>	The resolver URL of the publication, e.g., DOI Please add the complete resolver URL incl. http or https, e.g., <a href="http://doi.org/10.2307/1914185">http://doi.org/10.2307/1914185</a>
32.1.2	32.1.2	unstructured-Publication	Container element to provide unstructured information about an article, a document or another resource that has been made available to the public.		1		
32.1.2.1	32.1.2.1	freetext	Unstructured bibliographic information related to the publication.		1	<b>Abstract</b>	Enter the abstract of the publication.

x-econ sequence	da ra sequence	Property	Definition	Function of element	Occ	Usage notes	Help text
111		Research group	Name of a research group providing the data.		0-1	<b>Research group</b> See <a href="#">2.3.17 Controlled list: Research group</a>	Enter the name of your research group if the data is related to other data from the same research group. In this way, all datasets of the same research group can be linked. You can either do a separate entry or choose one from the list.
30	30	notes	Container element to provide remarks or other information about the registered resource.		0-1		
30.1	30.1	note	Container element for further remarks about the registered resource.		1-n		
30.1.2	30.1.2	text	Textual description of the contents of the dataset.		1	<b>Further relevant information on the dataset (e.g., steps to reproduce or more information about your lab and the process of data collection)</b>	Enter any further information that you wish to make available concerning your dataset.

## 2.3 Appendix: controlled vocabulary in x-econ

Shown below are the controlled lists, which are used in x-econ. This includes the adopted lists from da|ra 4.0 and the newly developed controlled vocabulary lists for data of the experimental economic research.

In contrast to x-econ, previous vocabulary and taxonomy do not include the categories commonly used in experimental economic research.

### 2.3.1 Controlled list: Resource Type<sup>19</sup>

Identifier	Type (en)	Definition
2	Dataset	Data encoded in a defined structure.

### 2.3.2 Controlled list: License

Identifier	Type	Usage notes; Help text
1	Creative Commons Universal - CC0 - Public domain "no Copyright"	Corresponds to licenseType: 1 in da ra 4.0; The content underlies no restrictions; the licensor (you) give permission to copy, modify and (re)distribute the data for any purpose, even for commercial purposes.

<sup>19</sup> Koch, U., Akdeniz, E., Meichsner, J., Hausstein, B., & Harzenetter, K. (2017). GESIS Papers 2017|25, da|ra Metadata Schema, Documentation for the Publication and Citation of Social and Economic Data, Version 4.0, <https://doi.org/10.4232/10.mdsdoc.4.0>

2	Creative Commons 4.0 International - by - Attribution	Corresponds to licenseType: 6 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data for any purpose, even for commercial purposes. However, the user must give appropriate credit, provide a link to the license, and indicate if changes were made.
3	Creative Commons 4.0 International - by-sa - Attribution ShareAlike	Corresponds to licenseType: 7 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data for any purpose, even for commercial purposes. However, the user must give appropriate credit, provide a link to the license, and indicate if changes were made. Furthermore, if you modify the material, you must distribute your contributions under the same license as the original.
4	Creative Commons 4.0 International - by-nd - Attribution NoDerivatives	Corresponds to licenseType: 5 in da ra 4.0; The licensor (you) give permission to copy and (re)distribute the data for any purpose in its original form, even for commercial purposes. Distribution of modified material is thus prohibited. Furthermore, you must give appropriate credit, provide a link to the license, and indicate if changes were made.
5	Creative Commons 4.0 International - by-nc - Attribution NonCommercial	Corresponds to licenseType: 3 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data only for non-commercial purposes. Furthermore, the user must give appropriate credit, provide a link to the license, and indicate if changes were made.
6	Creative Commons 4.0 International - by-nc-sa -Attribution NonCommercial ShareAlike	Corresponds to licenseType: 4 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data only for non-commercial purposes. However, the user must give appropriate credit, provide a link to the license, and indicate if changes were made. Furthermore, if you modify the material, you must distribute your contributions under the same license as the original.
7	Creative Commons 4.0 International - by-nc-nd - Attribution NonCommercial-NoDerivatives	Corresponds to licenseType: 2 in da ra 4.0; The licensor (you) give permission to copy and (re)distribute the data only for non-commercial purposes and only in its original form. However, the user must give appropriate credit, provide a link to the license, and indicate if changes were made.
8	MIT License	Corresponds to licenseType: 8 in da ra 4.0; The licensor (you) give permission to copy, modify and (re) distribute the data, even for commercial purposes. However attribution must be made to copyright holders and a legal disclaimer must be included in all copies.

9	Apache License 2.0	Corresponds to licenseType: 8 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data, even for commercial purposes. If someone redistributes the data, (s)he must clearly indicate, which part is used under the Apache License 2.0. Furthermore, attribution must be made to copyright holders, modifications must be clearly marked as such and a legal disclaimer must be included in all copies.
10	BSD License 3-clause	Corresponds to licenseType: 8 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data, even for commercial purposes. However, attribution must be made to copyright holders, a legal disclaimer must be included in all copies and a usage of the authors' names for endorsement of derivative works is not permitted.
11	BSD License 2-clause	Corresponds to licenseType: 8 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data, even for commercial purposes. However, attribution must be made to copyright holders and a legal disclaimer must be included in all copies.
12	General Public License GNU GPL Version 3	Corresponds to licenseType: 8 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute the data, even for commercial purposes. However, if you modify the material, you must distribute your contributions under the same license as the original.
13	CERN Open Hardware Licence (OHL)	Corresponds to licenseType: 8 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute hardware design documentation. However, if you modify the material, you must distribute your contributions under the same license as the original.
14	TAPR Open Hardware License (OHL)	Corresponds to licenseType: 8 in da ra 4.0; The licensor (you) give permission to copy, modify and (re)distribute hardware design documentation. However, if you modify the material, you must distribute your contributions under the same license as the original and modifications must be clearly marked as such.

### 2.3.3 Controlled list: Scientific Discipline

Identifier	Type
1	Experimental economics
2	Experimental finance
3	Experimental public finance
4	Experimental macro economics
5	Experimental political science
6	Experimental sociology



7	Behavioral economics
8	Behavioral finance
9	Behavioral public finance

### 2.3.4 Controlled list: Game classification

The starting point for the controlled term list for the field of *game classification* was the controlled vocabulary of the Xresearch repository, which is based on the classification of the Economic Science Association (ESA)<sup>20</sup>. The existing controlled lists (classifications of ESA, Xresearch, Thesaurus Wirtschaft etc.) proved to be too unstructured for the field of *game classification* for the subsequent use of economic experiments in other contexts. An alternative option was to waive a controlled list for the *game classification* field or allowing a free input. However, this seemed too confusing for a (interdisciplinary) re-use and would have unnecessarily complicated a systemic data search. Therefore, a new controlled list of Game classification has been developed, which converts the existing categorizations (ESA, Thesaurus Wirtschaft, ISPS Yale<sup>21</sup> etc.) with the help of courses, current publications and conference programme in a consistent order. The list was then presented to researchers in experimental economic research and adapted on the basis of their comments and corrections.

Identifier	Descriptor
1	Auctions
2	Bargaining game
3	Battle of the sexes
4	Beauty contest
5	Centipede game
6	Chicken game
7	Combinatorial auction
8	Common-pool resource game
9	Coordination game
10	Dictator game
11	Dilemma game
12	Dollar auction dilemma
13	Double auction
14	Dutch auction
15	English auction
16	First-price auction
17	Güth-van Damme game
18	Markets

<sup>20</sup> <https://www.economicsscience.org>

<sup>21</sup> <http://isps.yale.edu/research/data#.VYhfgWM08ik>

19	Minimum effort game
20	Multi-unit auction
21	Posted offer markets
22	Prisoners' dilemma
23	Private-value auction
24	Public goods game
25	Second-price auction
26	Stag hunt
27	Trust game
28	Ultimatum game
29	Other

### 2.3.5 Controlled list: Topic specification

As illustrated above in 2.3.4 Controlled vocabulary: *Game classification* the controlled lists of content and scope was also compiled on the basis of existing categorization (ESA, Thesaurus Wirtschaft, ISPS Yale etc.). The list was then presented to researchers and adapted based on their recommendations.

Identifier	Descriptor
1	Altruism
2	Ambiguity
3	Animals
4	Backwards induction / Level k reasoning
5	Beliefs
6	Biology
7	Bounded rationality
8	Charitable giving
9	Communication
10	Competition
11	Cooperation
12	Efficiency
13	Emotions
14	Fairness
15	Finance
16	Framing
17	Gender
18	Group behavior
19	Industrial organization

20	Inequity aversion
21	Institutional design
22	Labor economics / Labor market
23	Learning
24	Macroeconomics
25	Market design
26	Morals
27	Nastyness
28	Neuroeconomics
29	Norms
30	Psychology
31	Public Choice
32	Risk
33	Social preferences
34	Other

### 2.3.6 Controlled list: Keywords

The controlled list of keywords was compiled on the basis of existing current international publications in the field of experimental economic research. The list consists of the published keywords of the following journals:

1. Experimental Economics Vol. 17-19 (2014-2016)
2. Games and Economic Behavior Vol. 91-100 (2015-2016)
3. Game Theory Vol. 44-45 (2014-2016)

The use of keywords supports the data provider by finding words for his individual keywords on the one hand and prevents incorrect spelling on the other hand.

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
1	Abilities	105	First-order assessment	209	Performance feedback
2	Adjacent strategy-proofness	106	Formal bargaining	210	Persuasion
3	Adverse selection	107	Free riding	211	Pigou–Dalton transfers
4	Advocacy	108	Fundraising	212	Plurality correspondence
5	Affirmative action	109	Gambling	213	Polarization
6	Agenda manipulation	110	Generalized cognitive hierarchy	214	Political representation
7	Aggregation rule	111	Generosity	215	Polynomials in Bernstein form
8	All-pay auction	112	Gift-responsiveness	216	Population monotonicity
9	Altruism	113	Global games	217	Preference aggregation
10	Ambiguity aversion	114	Group contest	218	Preference evolution
11	Anonymous random matching	115	Guilt aversion	219	Price controls
12	Assortativity	116	Hard leverage	220	Price of anarchy
13	Asymmetric information	117	Hierarchy	221	Principal agent
14	Auctions	118	Homo moralis	222	Principal-agent

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
15	Award rules	119	Image scoring	223	Principal–agent problem
16	Awareness	120	Imitative dynamics	224	Prisoners' dilemma
17	Bandit problem	121	Impartiality	225	Private information
18	Bargaining	122	Impossibility theorems	226	Probabilistic assignment
19	Bargaining theory	123	Incentive compatibility	227	Procrastination
20	Bayesian game with infinite type spaces	124	Indirect reciprocity	228	Project selection
21	Behavior strategy	125	Indivisible objects allocation	229	Prospect theory
22	Behavioral game theory	126	Inefficiency of equilibria	230	Psychological games
23	Behavioral mechanism design	127	Influence	231	Punishment
24	Behavioral models	128	Informal bargaining	232	QRE
25	Best shot	129	Information acquisition	233	Quantal response equilibrium
26	Best-response equivalence	130	Information revelation	234	R&D
27	Blackwell's theorem	131	Information search and aggregation	235	Random assignment
28	Bounded perception	132	Institutions	236	Random serial dictatorship
29	Bounded rationality	133	Institutional design	237	Reciprocity
30	Budget balance	134	Interdependent values	238	Reduced-form implementation
31	Centipede games	135	Investment game	239	Rent seeking
32	Characterization theorems	136	Judgment aggregation	240	Repeated games
33	Charitable giving	137	Kalai–Smorodinsky	241	Replicator dynamic
34	Cheap talk	138	Kemeny distance	242	Resale
35	Choice-based welfare analysis	139	Kemeny sets	243	Resource dilemma
36	Closed-graph property	140	Knowledge	244	Resource-monotonicity
37	Cognitive hierarchy	141	Lab experiments	245	Return policies
38	Cognitive hierarchy models	142	Laboratory experiment	246	Risk aversion
39	Collective action	143	Laboratory experiments	247	Risk heterogeneity
40	Collusion	144	Large game with traits (LGT)	248	Risk-sharing
41	Commitment	145	Lead by example	249	Robust mechanism design
42	Common value	146	Leadership	250	Saddles
43	Common pool resource	147	Lebesgue unit interval	251	Saturated probability space
44	Common-value	148	Legislative bargaining	252	School choice
45	Competence	149	Level-k	253	Search
46	Competition	150	Level-k model	254	Second-order beliefs
47	Competitive equilibrium	151	Level-k models	255	Second-price auction with incomplete information
48	Conditional cooperation	152	Level-m model	256	Self-serving biases
49	Condorcet Jury model	153	Limited liability	257	Sender
50	Conflict	154	Linear values	258	Sender–receiver games
51	Conflict of interest	155	Logarithmic game	259	Sequential screening
52	Contests	156	Logit equilibrium	260	Shapley
53	Continuous strategy space	157	Long-term advisory relationship	261	Social choice
54	Contract	158	Lorenz dominance	262	Social preferences

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
55	Contract design	159	Loss aversion	263	Social pressure
56	Convex analysis	160	Lying	264	Soft leverage
57	Convex set	161	Many-to-many matching	265	Sophisticated players
58	Cooperation	162	Many-to-one matching with wages	266	Spanning trees
59	Cooperative games	163	Market	267	Spatial bargaining
60	Coordination	164	Markov perfect equilibrium	268	Specialization
61	Coordination games	165	Marriage problems	269	Spiteful preferences
62	Core	166	Matching	270	Stability
63	Costly voting	167	Matching with contracts	271	Stable systems
64	Credibility	168	Mechanism design	272	Status quo rules
65	Cutsets	169	Median stable matchings	273	Strategic communication
66	Cyclic partition	170	Median voter	274	Strategic information transmission
67	Deadlines	171	Menu choice	275	Strategic learning
68	Deal-responsiveness	172	Minimax theorem	276	Strategyproofness
69	Decentralized matching	173	Misrepresentations	277	Strategy-proofness
70	Decision theory	174	Mistake monotonicity	278	Strong substitutability
71	Deferred acceptance	175	Mixed strategy equilibrium	279	Subgame perfect $\epsilon$ -equilibria
72	Deferred-acceptance-algorithm	176	Morality	280	Subjective states
73	Description-sensitivity	177	Multi-dimensional screening	281	Submodularity
74	Desirability relation	178	Multidistrict elections	282	Supermodularity
75	Dictator game	179	Multilateral sanctions	283	Support function
76	Disclosure	180	Multi-period delegation	284	Target
77	Discrete cheap talk	181	Multiple audiences	285	Team production
78	Discrimination	182	Multiple equilibria	286	The law of aggregate demand
79	Diversity	183	Multiple issues	287	Time-inconsistent preferences
80	Divide-and-choose	184	Multiple senders	288	Tragedy of the commons
81	Divide-and-Transpose	185	Multitasking	289	Trembling hand perfect equilibrium
82	Dominant strategy	186	Multi-unit auction	290	Truncation strategies
83	Donation game	187	Naive players	291	Trust
84	Duplication	188	Nash equilibrium	292	Trust game
85	Dynamic decision-making	189	Nash equilibrium distribution	293	Trustworthiness
86	Dynamic games	190	Nash implementation	294	Two-dimensional values
87	Dynamic mechanism design	191	Networks	295	Two-sided matching
88	Dynamic signaling	192	No-envy	296	Unawareness
89	Economic development	193	Noisy reputation	297	Uncertainty
90	Efficiency	194	Non-equilibrium structural models	298	Uncovered set
91	Electoral control	195	Non-segregation	299	Uniform equilibria
92	Endogenous evaluations	196	Non-wastefulness	300	Uniform-price auctions
93	Endogenous status-quo	197	Norm compliance	301	Upper semi-continuous functions
94	Entrepreneurship	198	Observable payoff	302	Value of information

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
95	Equilibrium selection	199	Ordinal efficiency	303	Vickrey auctions
96	Estimation	200	Ordinal mechanism	304	Voluntary and compulsory voting
97	Evolutionary stability	201	Organization design	305	Voting behavior
98	Experiment	202	Other-regarding preferences	306	Vulnerability-responsiveness
99	Experimental auctions	203	Participation constraint	307	Weakly linear games
100	Experimental economics	204	Participation games	308	Wealth effects
101	Experimentation	205	Partitional equilibria	309	Welfare dominance under preference replacement
102	Experiments	206	Partnerships	310	Welfare loss
103	Externalities	207	Payoff identification	311	Winner's-bid auction
104	Fairness	208	Payoff monotonicity	312	Zero-sum games

### 2.3.7 Controlled list: Data collection mode

Identifier	Descriptor
1	Artefactual Field Experiment
2	Classroom experiment
3	Computer Assisted
4	eEg (Electroencephalogram)
5	Electrocardiography (ECG)
6	Electrodermal Activity
7	Electromyography (EMG)
8	Eye Tracking
9	Factorial Survey
10	Field Experiments
11	fMRI
12	Framed Field Experiment
13	Internet
14	Interview, qualitative
15	Interview, quantitative
16	Laboratory Experiment
17	Mechanical Turk by Amazon
18	Mechanical Turk by ClickWorker
19	Mechanical Turk by MicroWorkers
20	Mechanical Turk, Other
21	Mechanical Turk by RapidWorkers
22	Mechanical Turk by Samasource
23	Mechanical Turk by ShortTask
24	Meta study

25	Natural Field Experiment
26	Pen and Paper
27	Photoplethysmography (PPG)
28	Randomized-Response Technique
29	Split Ballot
30	Other

### 2.3.8 Controlled list: Laboratory

No.	Name	Institution	Acronym	Country
1	Adelaide Laboratory for Experimental Economics	University of Adelaide	ADLab	Australia
2	Aton Experimental Economics Laboratory		AEE Lab	Australia
3	Behavioural Business Lab	RMIT University		Australia
4	Behavioural Research Laboratory	University of Sydney		Australia
5	Experimental Economics Laboratory	University of Melbourne	E <sup>2</sup> MU Lab	Australia
6	Innsbruck EconLab	University of Innsbruck		Austria
7	Max Jung Lab for Experimental Economics	University of Graz		Austria
8	MGSM Vernon L. Smith Experimental Economics Laboratory	Macquarie University Graduate School of Management		Australia
9	Monash Laboratory for Experimental Economics	Monash University/Monash Business School	MonLEE	Australia
10	Queensland Behavioural Economics lab	Queensland University of Technology	QuBE Lab	Australia
11	UNSW Business School Experimental Research Laboratory	University of New South Wales	BIZLab	Australia
12	UTS Behavioural Laboratory	University of Technology Sydney		Australia
13	Vienna Center for Experimental Economics	University of Vienna	VCEE	Austria
14	Behavioral Research Lab of the Department of Marketing, Business Economics and Law	University of Alberta		Canada
15	Calgary Behavioural & Experimental Economics Lab	University of Calgary	CBEEL	Canada
16	Experimental Lab at the Vancouver School of Economics	University of British Columbia	ELVSE	Canada
17	Experimental Lab of the Centre for Research in Adaptive Behaviour in Economics	Simon Fraser University/Centre for Research in Adaptive Behaviour in Economics	CRABE Lab	Canada
18	Experimental Lab of the Center for Interuniversity Research and Analysis of Organizations	Center for Interuniversity Research and Analysis of Organizations	CIRANO Lab	Canada
19	Laval Experimental Economics Laboratory	Laval University	LEEL	Canada
20	McMaster Experimental Economics Laboratory	McMaster University	McEEL	Canada
21	Experimental Social Science Laboratory	Zhejiang University		China
22	Finance and Economics Experimental Laboratory	Xiamen University	FEEL	China
23	Smith Experimental Economics Research Center	Shanghai Jiaotong University		China
24	Centre for Experimental Economics	University of Copenhagen	CEE	Denmark
25	Cognition and Behavior Lab	Aarhus University	COBELab	Denmark
24	Laboratory for Experimental Economics	University of Economics in Prague	LEE	Czech Republic
26	PCRC Decision Making Laboratory	University of Turku		Finland
28	Alfred-Weber-Institute Experimental Laboratory	University of Heidelberg	AWI-Lab	Germany
29	Bonn Laboratory for Experimental Economics	University of Bonn	BonnE-conLab	Germany
30	Business and Economic Research Laboratory	University of Paderborn	BaER-Lab	Germany

No.	Name	Institution	Acronym	Country
31	Cologne Laboratory of Economic Research	University of Cologne	CLER	Germany
32	Düsseldorf Institute for Competition Economics Lab for Experimental Economics	University of Düsseldorf/Düsseldorf Institute for Competition Economics	DICELab	Germany
33	Essen Laboratory for Experimental Economics	University of Duisburg-Essen	ELFE	Germany
34	EXperimental Economics at Clausthal University of Technology	Clausthal University of Technology	EXECUTE	Germany
35	Experimental Lab of the Center for Social Sciences Research Methods	University of Oldenburg	MSW-Lab	Germany
36	Experimental Lab of the Chair for Empirical and Experimental Economics	University of Jena		Germany
37	Experimental Lab of the Chair of Innovation, Competition Policy and New Institutional Economics	University of Kiel		Germany
38	Experimental Lab of the Institute of Entrepreneurial and Behavioral Decision Making	Humboldt University Berlin		Germany
39	Karlsruhe Decision & Design Lab	Karlsruhe Institute of Technology	KD2-Lab	Germany
40	Lab for Economic Experiments	Technical University Berlin		Germany
41	Lab for Experimental Economics	Ruhr University Bochum	RUBex	Germany
42	Laboratory for Economic Research	University of Osnabrück	LaER	Germany
43	Laboratory for Experimental Economics	University of Erfurt	eLab	Germany
44	Lakelab ( <i>des Thurgauer Wirtschaftsinstituts an der Universität Konstanz</i> )	University of Konstanz/Thurgau Institute of Economics		Germany
45	Magdeburg Experimental Laboratory of Economic Research	University of Magdeburg	MaXLab	Germany
46	Mannheim Laboratory for Experimental Economics	University of Mannheim	mLab	Germany
47	Munich Experimental Laboratory for Economic and Social Sciences	University of Munich	MELESSA	Germany
48	PAULA Experimental Laboratory	University of Passau	PAULA	Germany
49	Potsdam Laboratory for Economic Experiments	University of Potsdam	PLEx	Germany
50	WISO-Research Lab	University of Hamburg		Germany
51	Experimental Economics Laboratory	City University of Hong Kong		Hong Kong
52	Behavioural and Experimental Economics Lab	University of Florence	BEELab	Italy
53	Behavioral and Experimental Economics Research Group	University of Milano Bicocca		Italy
54	Bocconi Experimental Laboratory for the Social Sciences	Bocconi University	BELSS	Italy
55	Bologna Laboratory for Experiments in Social Science	University of Bologna	BLESS	Italy
56	Center for Experimental Research in Management and Economics	Ca' Foscari University of Venice	CERME	Italy
57	Centro di Economia Sperimentale a Roma Est	LUISS Guido Carli	CESARE	Italy
58	Cognitive and Experimental Economics Laboratory	University of Trento	CEEL	Italy
59	Experimental and Simulative Economics Laboratory	University of Eastern Piedmont	AL.EX	Italy
60	Laboratorio di Ricerca in Economia Sperimentale di Salerno	University of Salerno	LabESS	Italy
61	Laboratory of Experimental Economics	University of Siena / Interuniversity Center for Experimental Economics	LabSi	Italy
62	Leipziger Experimentallabors für Sozialwissenschaften	University of Leipzig	LEx	Germany
63	Research Unit in Behavioural Economics and Neuroeconomics	University of Cape Town	RUBEN	South Africa
64	Sogang Experimental Economics Laboratory	Sogang University	SEE Lab	South Korea
65	Behavioral Sciences Laboratory	Pompeu Fabra University Barcelona	BESLab/LEE X	Spain
66	Bilbao Laboratory of Experimental Analysis	University of the Basque Country	Bilbao LABEAN	Spain
67	Experimental Economics Laboratory	Autonomous University of Barcelona/Institute of Economic Analysis		Spain



No.	Name	Institution	Acronym	Country
68	Granada Lab of Behavioral Economics	University of Granada	GLOBE	Spain
69	Laboratory of Experimental Economics	Jaume I University	LEE	Spain
70	Laboratory for Experimental Business and Economics	Pablo Olavide University of Seville	LEXBE	Spain
71	Laboratory for Research in Experimental and Behavioural Economics	University of Valencia	LINEEX	Spain
72	Laboratory for Theoretical and Experimental Economics	University of Alicante	LaTeX	Spain
73	Madrid Laboratory of Experimental Economics	Autonomous University of Madrid	MADLEE	Spain
74	Laboratory for Experimental and Behavioral Economics	University of Zurich		Switzerland
75	Behavioral ResearchLab	London School of Economics and Political Science		UK
76	Centre for Behavioural and Experimental Social Science	University of East Anglia	CBESS	UK
77	Centre for Decision Research and Experimental Economics	University of Nottingham	CeDEx	UK
78	Centre for Economic Learning and Social Evolution	University College London / Economic and Social Research Council	ELSE	UK
79	Centre for Experimental Economics	University of York	EXEC Lab	UK
80	Decision Research at Warwick	University of Warwick	DR@W	UK
81	ExpPreSS Laboratory of Experimental Research in Social Sciences	Royal Holloway University of London		UK
82	Finance and Economics Experimental Laboratory at Exeter	University of Exeter	FEELE	UK
83	Lancaster Experimental Economics Laboratory	Lancaster University	LEXEL	UK
84	Nuttfield Centre for Experimental Social Science	University of Oxford / Nuttfield College	CESS	UK
85	Oxford Experimental Lab	University of Oxford / Saïd Business School	OXlab	UK
86	Scottish Experimental Economics Laboratory	University of Aberdeen	SEEL	UK
87	Social Sciences Experimental Laboratory	University of Southampton		UK
88	Social Science Experimental Laboratory	New York University of Abu Dhabi	SSEL	United Arab Emirates
89	Appalachian Experimental Economics Laboratory	Appalachian State University	AppEEL	USA
90	Behavioral Business Research Lab	University of Arkansas	BBRL	USA
91	Behavioral Research Lab	University of California Riverside	AGSM Lab	USA
92	Behavioral Research Lab	University of Central Florida		USA
93	Behavioral Research Lab	University of Kentucky / Gatton College of Business and Economics		USA
94	Behavioral Research Laboratory	Rice University		USA
95	Brown University Social Science Experimental Laboratory	Brown University	BUSSEL	USA
96	California Social Science Experimental Laboratory	University of California Los Angeles	CASSEL	USA
97	Center For Behavioral And Experimental Economic Science	University of Texas at Dallas	CBEES	USA
98	Center for Behavioral Political Economy's Decision Experiment Lab	Stony Brook University		USA
99	Center for Experimental and Applied Economics	University of Delaware		USA
100	Center for Experimental Social Science	New York University	CESS	USA
101	Center for Neuroeconomic Studies	Claremont Graduate University	CNS	USA
102	Cleve E. Willis Experimental Economics Laboratory and Endowment	University of Massachusetts Amherst		USA
103	Columbia Experimental Laboratory in the Social Sciences	Columbia University	CELSS	USA
104	Computer Lab for Experimental Research	Harvard University/Harvard Business School	CLER	USA

No.	Name	Institution	Acronym	Country
105	Consumer Decision Making Lab	Yale School of Management	SOM Lab	USA
106	Dean's Behavioral Economics Laboratory	Georgia State University	DBEL	USA
107	Debra Paget and Jeffrey Berg Business Simulation Lab	Cornell University		USA
108	Decision Behavior Laboratory / Economic Science Lab	University of Arizona	DBL / ESL	USA
109	Dynamic Decision Making Laboratory	Carnegie Mellon University	DDMLab	USA
110	Economic Research Lab	Texas A&M University	ERL	USA
111	Economic Science Institute's Laboratory for Experimental Economics	Chapman University		USA
112	Economics Lab	Williams College		USA
113	Economics Laboratory	University of California San Diego		USA
114	Experimental and Behavioral Economics Laboratory	University of California Santa Barbara	EBEL	USA
115	Experimental Economics Center	Georgia State University	ExcEN	USA
116	Experimental Economics Lab	University of Alaska Anchorage		USA
117	Experimental Economics Laboratory	Loyola Marymount University	EconLab	USA
118	Experimental Economics Laboratory	University of Maryland	EEL-UMD	USA
119	Experimental Economics Laboratory	Ohio State University		USA
120	Experimental Laboratory for Economics and Business Research	Virginia Commonwealth University		USA
121	Experimental Social Science Laboratory	University of California Irvine	ESSL	USA
122	Experimental Social Science Laboratory	University of California Berkley	XLab	USA
123	Gregory Wachtler Experimental Economics Laboratory of the Center for Economic Behavior, Institutions and Design	Rutgers University		USA
124	Harvard Decision Science Laboratory	Harvard University		USA
125	Interdisciplinary Experimental Laboratory	Indiana University Bloomington	IELab	USA
126	Judith A. and Robert E. Griffin Experimental Economics Laboratory	University of Southern Indiana		USA
127	Lab for Experimental Economics and Decision Research	Cornell University	LEEDR	USA
128	Laboratory for Computer-Mediated Experiments and the Study of Culture	University of Hawaii		USA
129	Laboratory for Economics, Management and Auctions	Pennsylvania State University		USA
130	Laboratory for Experimental Economics	St. Lawrence University		USA
131	Laboratory for Research in Experimental Economics	Southern Methodist University	LREE	USA
132	Learning and Experimental Economics Projects	University of California Santa Cruz	LEEPS	USA
133	Mississippi Experimental Research Laboratory	University of Mississippi	MERL	USA
134	Missouri Social Science Experimental Lab	University of Washington in St. Louis	MISSEL	USA
135	Pittsburgh Experimental Economics Lab	University of Pittsburgh	PEEL	USA
136	Policy Simulation Lab	University of Rhode Island		USA
137	Princeton Laboratory for Experimental Social Science	Princeton University	PLESS	USA
138	Social and Behavioral Sciences Laboratory	University of Minnesota		USA
139	Social Science Experimental Laboratory / Laboratory for Experimental Economics and Political Science	California Institute of Technology	SSEL / EEPS (Plott Lab)	USA
140	The Interdisciplinary Center for Economic Science	George Mason University	ICES	USA
141	Vernon Smith Experimental Economics Laboratory	Purdue University	VSEEL	USA
143	Wharton Behavioral Lab	University of Pennsylvania		USA
144	XS/FS Lab	Florida State University		USA

### 2.3.9 Controlled list: Design decisions

Id.	Descriptor
1	Matching Method: Partners design
2	Matching Method: Strangers design
3	Matching Method: Perfect strangers design
4	Anonymity: No anonymity
5	Anonymity: Single-blind
6	Anonymity: Double-blind
7	Anonymity: Triple-blind
8	Deception
9	One shot game / single play
10	Repeated game / repeat play
11	Stage game
12	Restart
13	Finitely long games / fixed end round
14	Infinitely long games
15	Simultaneous
16	Sequential
17	Single stage game
18	Multi-stage game
19	Perfect information
20	Imperfect information
21	Feedback
22	No-feedback
23	Direct response method / straight mode
24	Strategy method / level playing field mode
25	Between subjects
26	Within subjects
27	Other

### 2.3.10 Controlled list: Incentives

Identifier	Descriptor
1	Nothing
2	Cash payment immediately after experiment
3	Payment with delay

4	Course credit
5	Others

### 2.3.11 Controlled list: Interaction

Identifier	Descriptor
1	Human - Human
2	Human - Computer
3	Animal - Human
4	Others

### 2.3.12 Controlled list: Professional status of participants

Identifier	Descriptor
1	Artificial intelligence (AI)
2	Animal subjects
3	Children: Kindergarten age
4	Employees
5	Managers / Employees in managerial position
6	Pensioners
7	School children
8	Self-employed
9	Students
10	Students: Economics
11	Students: Humanities
12	Students: Law
13	Students: Psychology
14	Students: Social Sciences
15	Students: STEM / MINT
16	Unemployed
17	Others

### 2.3.13 Controlled list: Experimental Software

Identifier	Type
1	classEx
2	LIONESS Lab
3	oTree

4	Qualtrics
5	Veconlab
6	z-Tree

### 2.3.14 Controlled list: Type of Data

Identifier	Type
1	Characteristics of the participants
2	Codebook
3	Dataset*
4	Instructions
5	Program code (and export of the experiment)
6	Screenshots
7	Statistics
8	Other

### 2.3.15 Controlled list: Document Type<sup>22</sup>

Identifier	Type	Definition
1	Working Paper	A preliminary scientific or technical paper released for input and critique (most often grey literature).
2	Article	A nonfictional literary composition that forms an independent part of a publication e. g. in a journal or magazine.
3	Report	A written account of something that one has observed, heard, done, or investigated and that is prepared on ad hoc, periodic, recurring, regular, or as required basis.
4	Book / Monograph	A set of written, printed, illustrated or blank sheets that conjoin into one literary work. A monograph is a non-serial publication on a single subject or an aspect of a subject, usually by a single author.
5	Manuscript	A book, document, or other composition written by hand as well as text submitted to the publisher or printer in preparation for publication, regardless of the format.
6	Reference Book	A book, such as a dictionary or encyclopedia, to which one can refer for authoritative information and intended primarily for consultation rather than for consecutive reading.
7	Review	An evaluation of e. g. a publication, theory or synthesis of research on a topic at that moment in time.
8	Series	A (regularly) sequence of publications like books or journal articles that have (roughly) the same subject.
9	Journal	Newspaper or magazine that deals with a particular subject or professional activity and that is issued in a regular cycle.
10	Newspaper	A printed publication (usually issued daily or weekly) consisting of folded unstapled sheets and containing news, articles, advertisements and correspondence.

<sup>22</sup> Koch, U., Akdeniz, E., Meichsner, J., Hausstein, B., & Harzenetter, K. (2017). GESIS Papers 2017 | 25, da|ra Metadata Schema, Documentation for the Publication and Citation of Social and Economic Data, Version 4.0, <https://doi.org/10.4232/10.mdsdoc.4.0>, Appendix 4.1.13

### 2.3.16 Controlled list: Currency

Identifier	Type	Definition
1	Euro	Euro (€)
2	US Dollar	US Dollar (\$)

### 2.3.17 Controlled list: Research group

Identifier	Type
1	FOR2104
2	FOR2104 „Bedarfsgerechtigkeit“

## 2.4 Additional controlled vocabularies to be included in the next x-econ release

### 2.4.1 Controlled list: Keywords<sup>23</sup>

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
1	A stochastic variation of Ramsey's Theorem	265	Flows over time	529	Prior
2	Absence-proofness	266	Focal point	530	Prior-independence
3	Absentmindedness	267	Folk solution	531	Privacy
4	Acquiring a company problem	268	Folk theorem	532	Private monitoring
5	Action commitment game	269	Forgiveness	533	Private uncertain values
6	Acyclicity	270	Forward induction	534	Private values
7	Adaptive play	271	Framing effects	535	Privatization
8	Addition invariance	272	Fully revealing equilibrium	536	Probabilistic beliefs
9	Adolescents	273	Fundamental value	537	Probabilistic serial
10	Afriat	274	Game with precedence constraints	538	Problem separability
11	Agenda setting	275	Games with incomplete information	539	Procurement
12	Agent types	276	Games with strategic complementarities	540	Product complexity
13	Aggregate payoff shocks	277	Garbling	541	Productivity
14	Aggregative game	278	Gender differences	542	Promises
15	Agreeing to disagree	279	Gender gap	543	Proper Shapley value
16	Agreement theorem	280	General solution	544	Proportional and deterministic prizes
17	Algorithmic mechanism design	281	Generalized aggregative games	545	Proportional representation

<sup>23</sup> The following keywords were removed from the list: No. 75 Bargaining set; No. 245 Derandomization.

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
18	Algorithmic randomness	282	Generalized median voter scheme	546	Proportionality
19	Algorithms	283	Generalized prisoners' dilemma	547	Proposer power
20	Allocation by force	284	Geometric median	548	Prosocial motivation
21	Allocative efficiency	285	Gift-exchange game	549	Proxy
22	All-small	286	Giving	550	Pseudo-endowment effect
23	Ambiguity	287	Gradualism	551	Pseudo-randomness
24	An approximate subgame perfect equilibrium	288	Gratitude	552	Public good
25	Analytic sets	289	Group affiliation	553	Public goods experiment
26	Announcement proofness	290	Group composition	554	Public information
27	Anonymity	291	Group formation	555	Punishment spillovers
28	Anticore	292	Group identity	556	Pure-strategy Nash equilibrium
29	Appointment problem	293	Group interaction	557	Purification
30	Approximate equilibrium	294	Group size	558	Quarrel
31	Approximate mechanisms without money	295	Group strategy-proofness	559	Quasiconcave game
32	Approximation	296	Groups	560	Quasi-perfect equilibrium
33	Approximation algorithms	297	Guilt	561	Random graphs
34	Aspiration core	298	Hackenbush	562	Random matching
35	Asset market	299	Hamilton–Jacobi	563	Random priority
36	Assignment	300	Hannan set	564	Random proposer
37	Assignment game	301	Harsanyi dividends	565	Randomness
38	Association	302	Harsanyi set	566	Ranking
39	Assortative mating	303	Hedonic games	567	Ranking auctions
40	Asymmetric auctions	304	Heterogeneity	568	Rationality
41	Asymptotic budget balance	305	Heterogeneous preferences	569	Rationalizability
42	Asymptotic nucleolus	306	Heterogeneous productivity	570	Real effort
43	Asymptotic Shapley value	307	Hex	571	Recruitment
44	Asymptotic value	308	Hidden information	572	Recursive game
45	Asynchronous repeated game	309	Hierarchical game	573	Redistribution mechanisms
46	Atomless probability space	310	Hierarchies of beliefs	574	Refinement
47	Auction fever	311	House-money effect	575	Regret-matching
48	Automata	312	Housing prices	576	Reinforcement learning
49	Automaton	313	Identity	577	Relational incentive contracts
50	Average reward	314	Identity change	578	Relative payoff
51	Axiomatization	315	Imitation	579	Relative wages
52	Backward induction	316	Immobile hider	580	Repeated games with incomplete information
53	Balanced collections	317	Impartial games	581	Repeated Prisoner's Dilemma
54	Balancedness	318	Imperfect monitoring	582	Repression
55	Banzhaf index	319	Imperfect recall	583	Repression backlash
56	Banzhaf value	320	Implementation	584	Reputation
57	Basins of attraction	321	Implementation of Walrasian	585	Request for proposal

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
			equilibria		
58	Bayesian equilibrium	322	Impression management	586	Restricted cooperation
59	Bayesian expected utility	323	Improper priors	587	Revealed preference
60	Bayesian games	324	Impure altruism	588	Revelation principle
61	Bayesian learning	325	Incentives	589	Revenue
62	Bayesian mechanism design	326	Incomplete information	590	Revenue equivalence
63	Bayes–Nash equilibrium	327	Indifference	591	Revenue-maximization
64	Beauty contest	328	Indirect dominance	592	Revenue-maximizing auction design
65	Behavioral economics	329	Indirect mechanism	593	Revision protocols
66	Belief elicitation	330	Individual behavior	594	Revolution
67	Belief-based learning	331	Individual characteristics	595	Revolutionary entrepreneurs
68	Bertrand equilibrium	332	Individual decision-making	596	Reward
69	Best response	333	Individual rationality	597	Rich support on a partition
70	Best-response correspondence	334	Individually rational strategies	598	Risk attitudes
71	Bid caps	335	Indivisible good	599	Risk dominance
72	Bidding behavior	336	Inequality	600	Risk preferences
73	Bilateral bargaining	337	Inequality aversion	601	Risky choice
74	Bilateral trade	338	Infinite games	602	Robust equilibrium
75	Bounded core	339	Infinite horizon	603	Robustness
76	Bounded memory	340	Information	604	Roommate problems
77	Bribing	341	Information advantage	605	Roughly weighted game
78	Bubble	342	Information disclosure	606	Rounding
79	Budget	343	Information gathering	607	Routing games
80	Budget constraint	344	Information sharing	608	Saliency
81	Buyer confusion	345	In-group favoritism	609	Sameness
82	Calibration test	346	In-group punishment	610	Samuelson's Colleague
83	Candidate neutrality	347	Ingroup-outgroup	611	Sanction
84	Cash flow diversion	348	Initial wealth	612	Scheduling
85	Characterization	349	Innovation	613	School choice matching
86	Charity game	350	Insider	614	School tracking
87	Chess	351	Integer programming	615	Scoring games
88	Children	352	Intellectual property	616	Scoring rule
89	Choking	353	Interactive epistemology	617	Screening
90	Citation	354	Interdependent payoffs	618	Sd-efficiency
91	Clearing house mechanism	355	Intermediaries	619	Sd-no-envy
92	Coalition formation	356	Internet experiment	620	Search game on a network
93	Coalition production economy	357	Internet vs. laboratory experiment	621	Second-price auctions
94	Coalitional game	358	Intertemporal consumption	622	Selection
95	Coalition-proof Nash equilibrium	359	Intrinsic motivation	623	Selectope
96	Coalitions	360	Invariance	624	Self-assessment



Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
97	Cognitive load	361	Invariant selection	625	Self-confirming equilibrium
98	Cohesion	362	IQ	626	Self-control
99	Coincidence	363	Irreducible core	627	Selfish bias
100	Coincidence of allocation rules	364	Job protection	628	Selfishness
101	College admission	365	Joint plan equilibrium	629	Semialgebraic geometry
102	Combinatorial auctions	366	Kar solution	630	Semi-Markov games
103	Combinatorial game theory	367	Keynes Plan	631	Separable preference
104	Common belief	368	Kidney exchange	632	Separation oracle
105	Common knowledge	369	Knowledge and beliefs	633	Sequential ascending auctions
106	Common prior	370	Labels	634	Sequential equilibrium
107	Common-value all-pay auctions	371	Large auctions	635	Series-parallel
108	Communication	372	Large elections	636	Severance compensation
109	Communication equilibrium	373	Large games	637	Shannon's number
110	Competition for funds	374	Learning	638	Shapley operator
111	Competitive prices	375	Learning in games	639	Shapley value
112	Competitiveness	376	Licensing	640	Shapley-Shubik index
113	Complementarity	377	Lobbying	641	Shocks
114	Complete and incomplete information	378	Local imitation	642	Signaling
115	Complete simple game	379	Local interaction	643	Simple game
116	Complexity	380	Logit dynamic	644	Simulated annealing
117	Computation of equilibrium	381	Long-term interactions	645	Single crossing
118	Computational complexity	382	Loose change effects	646	Single-dipped preferences
119	Conformity	383	Loser	647	Single-peaked preference profiles with rich support on a partition
120	Congestion	384	Lotteries	648	Social choice rules
121	Congestion game	385	Lower-hemicontinuity	649	Social comparisons
122	Consistency	386	Lying aversion	650	Social dilemma
123	Constant absolute risk aversion (CARA)	387	Majoritarian rule	651	Social image
124	Constant relative risk aversion (CRRA)	388	Mandate	652	Social interaction
125	Constructive methods	389	Manipulation	653	Social learning
126	Consumer targeting	390	Many-to-one matching	654	Social networks
127	Consumption smoothing	391	Marginal contribution	655	Social norms
128	Contagion	392	Market design	656	Social preference types
129	Contest design	393	Market efficiency	657	Socially concave games
130	Contestant	394	Market for lemons	658	Software for laboratory experiments
131	Continuous time	395	Market games	659	Solution concepts
132	Continuum hypothesis	396	Markov decision processes	660	Solvable game
133	Contribution game	397	Markov equilibria	661	Sprague-Grundy theory
134	Convex game	398	Maskin monotonicity	662	Stable set
135	Convex TU games	399	Matching markets	663	Stackelberg equilibrium

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
136	Cooperative equilibrium	400	Matching with colleagues	664	Stage duration
137	Cooperative solution	401	Maximal variation of martin-gales	665	Stake size
138	Coordination failure	402	Maximizing expected Nash welfare	666	Standard debt contract
139	Coordination mechanisms	403	Maximum matching	667	Star-based number
140	Core extension	404	Maxmin	668	State manipulation
141	Core stability	405	Mental state	669	State space
142	Corporate Social Responsibility	406	Meritocracy	670	Stated effort
143	Correlated equilibrium	407	Meta-analysis	671	Status
144	Correlated information	408	Methodology	672	Stereotypes
145	Correlated priors	409	Milnor games	673	Stochastic dominance
146	Corruption	410	Minimum cost spanning tree problems	674	Stochastic entry
147	Cost monotonicity	411	Minimum effort coordination game	675	Stochastic Eventual Perfect Monitoring
148	Cost sharing	412	Minority representation	676	Stochastic game
149	Costly disclosure	413	Min-prenucleolus	677	Stochastic signals
150	Cottle-Dantzig's algorithm	414	Misdirected letter technique	678	Stochastic stability
151	Count	415	Misère	679	Stopping game
152	Cournot equilibrium	416	Mispricing	680	Strategic complements
153	Cournot oligopoly	417	Mistakes	681	Strategic risk
154	Cournot tatonnement	418	Mixed games	682	Strategic stability
155	Creativity	419	Mixed markets	683	Strategic substitutes
156	Credible deviation	420	Mixed strategy	684	Strategic uncertainty
157	Credit Choice	421	Monetary incentives	685	Strategically stable set
158	Criminals	422	Monetary transfer	686	Strength of preference
159	Critical cost efficiency index	423	Monetised trading	687	Strict and weak dominance
160	Current account imbalance	424	Money	688	Strict equilibria
161	Cycle	425	Monotone equilibrium	689	Strong acyclicity
162	De Bruijn sequences	426	Monotone games	690	Strong equilibrium
163	Debt aversion	427	Monotonicity	691	Structure theorem
164	Deception	428	Moral cost	692	Subgame-perfect equilibrium
165	Decision rules	429	Moral hazard	693	Subjective beliefs
166	Deference	430	Motives	694	Subjective probability assessment
167	Deflationary bias	431	Multibattle	695	Subjectivism
168	Delay	432	Multi-contest tournaments	696	Submodular valuations
169	Delegated decision making	433	Multi-dimensional cheap talk	697	Sucker's payoff
170	Delegation	434	Multi-dimensional mechanism	698	Sunspot equilibrium
171	Demand fluctuations	435	Multi-dimensional preferences	699	Supermajority
172	Determinacy	436	Multi-dimensional pricing	700	Supermodular game
173	Deterministic regret-matching dynamics	437	Multi-dimensional types	701	Survey response
174	Dicot	438	Multi-item auction	702	Sustainability

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
175	Differential–difference games	439	Multilateral bargaining	703	Symmetric game
176	Differentiation	440	Multilateral legislative bargaining	704	Symmetry
177	Diffusion	441	Multimarket contact	705	Take-option
178	Digraph	442	Multi-product pricing	706	Taking
179	Direct and indirect reciprocity	443	Mutual control structure	707	Target adjustment
180	Direct dominance	444	Myerson–Satterthwaite theorem	708	Tauberian theorem
181	Directed graph	445	Name independence	709	Taxation
182	Directed search	446	Nash bargaining	710	Taxation principle
183	Discontinuous game	447	Nash bargaining solution	711	Team incentive
184	Dishonesty	448	Nash equilibrium refinements	712	Teams versus individuals
185	Distributional equilibria	449	Natural field experiment	713	Temptation
186	Distrust	450	Negative semidefinite games	714	Termination
187	Double auction mechanism	451	Neologism proofness	715	Testing forecasters
188	Downs-Thomson Paradox	452	Network formation	716	The dynamic pivot mechanism
189	Dutch book	453	Network games	717	The extended serial correspondence
190	Dynamic arrivals	454	NIM	718	The Method of Resolving Functions
191	Dynamic auction	455	No betting and no trade	719	The Steiner point
192	Dynamic inconsistency	456	No trade theorem	720	The value of other's perceptions
193	Dynamic markets	457	Non expansive map	721	Thinking steps
194	Dynamic moral hazard	458	Nonatomic games	722	Third party
195	Dynamics	459	Non-cooperative bargaining	723	Third-party punishment
196	Economic experiment	460	Non-existence	724	Three-person game
197	Economy-based ranking	461	Nonlinear returns	725	Tiebout
198	Edgeworth equilibrium	462	Non-monetised trading	726	Tie-breaking
199	Education	463	Non-monotonic contract	727	Time
200	Egalitarianism	464	Non-monotonic payoffs	728	Time consistency
201	Elicitation effects	465	Non-zero-sum game	729	Tit-for-tat
202	Elicitation methods	466	No-regret dynamics	730	Top trading cycles
203	Ellipsoid method	467	Norm enforcement	731	Topological dynamics
204	Emotion	468	Normalized citation count	732	Totally positive TU-game
205	Empathy wage	469	Normalized giving	733	Tournament
206	Endogeneity	470	NTU games	734	Trading behavior
207	Endogenous ascending	471	Nucleolus	735	Transfer invariance
208	Endogenous descending	472	Objection	736	Transferable utility game
209	Endogenous entry	473	Observable effort	737	Traveler's dilemma
210	Endogenous timing	474	Oligopoly	738	Traveling and search costs
211	Entitlements	475	One-shot games	739	Truth wins
212	Entropy	476	Online dating	740	Turnout
213	Entry cost	477	Opinion formation	741	Two player repeated games
214	Epistemic game theory	478	Optimal contracting	742	Two-person sum game

Id.	Descriptor	Id.	Descriptor	Id.	Descriptor
215	Equal (Surplus) Division rule	479	Orthogonality	743	Two-point strategy
216	Equilibrium	480	Out-group punishment	744	Type spaces
217	Equilibrium existence	481	Output-sharing	745	Ulam–Warburton cellular automaton
218	Equilibrium non-existence	482	Outside opportunities	746	Ultimatum game
219	Equilibrium refinement	483	Outside options	747	Undominated strategies
220	Equity	484	Overconfidence	748	Uniform price
221	Error term	485	Overlapping generations	749	Uniform value
222	Escalation	486	PageRank	750	Uninformative equilibria
223	Euclidean preferences	487	Pareto dominance	751	Uniqueness
224	Eurozone	488	Partially or fully informative equilibria	752	Universal type space
225	Evolution equation	489	Partitioning equilibrium	753	Universally measurable
226	Evolution of behavior	490	Partnership solution	754	Universally nonmeasurable
227	Evolutionary dynamics	491	Patents	755	Upper-hemicontinuity
228	Evolutionary game theory	492	Paternalism	756	Utility proportional beliefs
229	Exact potential games	493	Pay to conceal	757	VCG mechanism
230	Exactness	494	Pay to reveal	758	Veto mechanism
231	Exchange economy	495	Payoff asymmetry	759	Veto power
232	Existence of pure-strategy equilibrium	496	Peer pressure	760	Voluntary contribution mechanism
233	Expectation	497	Peer-to-peer fundraising	761	Voluntary provision
234	Experience	498	Perception	762	Voluntary work
235	Experiential punishment	499	Perfect equilibrium	763	Volunteer’s dilemma
236	Experimental design	500	Perfect information	764	Vote of confidence procedure
237	Experimental methodology	501	Perfect information game	765	Voter anonymity
238	Experimental methods	502	Perfection	766	Voting by committees
239	Experimental political science	503	Persistent equilibria	767	Voting experiments
240	Expertise	504	Personality traits	768	Voting power
241	Extendibility	505	Persuasion games	769	Voting rules
242	Extensive-form rationalizability	506	Perturbation analysis	770	Voting systems
243	External angle	507	Pessimism	771	Voting theory
244	External validity	508	Piece-rate equivalents	772	Waiting times
245	Extortion	509	Pillage games	773	Walrasian equilibrium
246	Extreme value theory	510	Polish space	774	Weak Addition Invariance
247	Extremism	511	Polluted river games	775	Weak topology on probability measures
248	Extrinsic motivation	512	Poor convexity	776	Weakly dominated strategy
249	Eye-tracking	513	Population monotonic allocation scheme	777	Weakly unilaterally competitive game
250	Fairness norms	514	Positive core	778	Weighted game
251	False-name-proofness	515	Positive prekernel	779	Weighted majority game
252	Family background	516	Posterior	780	Weighted payoffs
253	Feature-based choice	517	Potential games	781	Weighted Shapley value
254	Feedback	518	Power index	782	White Plan

<b>Id.</b>	<b>Descriptor</b>	<b>Id.</b>	<b>Descriptor</b>	<b>Id.</b>	<b>Descriptor</b>
255	Fibonacci numbers	519	Power of asking	783	Willingness-to-compete
256	Fictitious play	520	Predictability	784	Willpower
257	Field experiment	521	Preference change	785	Winner
258	Finite game	522	Preference for experimentation	786	Winner's curse
259	Finite improvement property	523	Preference signaling	787	Worst-case analysis
260	Finite payoff security	524	Prenucleolus	788	Zeckendorf's theorem
261	Firing threats	525	Price advertising	789	Zero-determinant strategies
262	First price auction	526	Price complexity	790	Zero-sum stochastic games
263	Fixed point	527	Price dispersion		
264	Fixed-route traveling salesman problem	528	Price efficiency		

## 2.4.2 Laboratories

<b>Id.</b>	<b>Name</b>	<b>Institution</b>	<b>Acronym</b>	<b>Country</b>
28	Laboratory for Experimentation in Social Sciences and Behavioral Analysis	Burgundy School of Business	LESSAC	France
29	Behavioral Lab	INSEAD-Sorbonne University		France
30	Behavioral and Experimental Economics Research Unit	Toulouse School of Economics / IAST		France
31	Grenoble Applied Economics Lab	University Grenoble Alpes / Grenoble INP / CNRS / INRA	GAEL	France
32	GATE Lab	University Lyon 2		France
33	Montpellier Laboratory for Theoretic and Applied Economics	University of Montpellier 1	LAMETA / LEEM	France
34	Parisian Experimental Economics Laboratory	University of Paris 1	LEEP	France
35	Social Sciences Experimental Laboratory	University of Rennes 1	LABEX-EM	France
36	Bureau for Economic Theory and Applications	University of Strasbourg / University of Lorraine / CNRS	BETA Lab	France
61	Energy and Environmental Policy Laboratory	University of Piraeus		Greece
62	Vernon Smith Center for Experimental Economics	Francisco Marroquin University		Guatemala
64	Experimental Economics Laboratory	Ben-Gurion University of the Negev		Israel
65	RatioLab - Interactive Decision Laboratory	Hebrew University of Jerusalem		Israel
66	Laboratory of Behavioral Research	Technion - Israel Institute of Technology		Israel
77	Economics Laboratory of the Research Center for Behavioral Economics	Osaka University / MEXT		Japan
78	Busara Center for Behavioral Economics			Kenya
79	ESE EconLab	Erasmus School of Economics		Netherlands
80	Behavioral and Experimental Economics Lab	Maastricht University	BEElab	Netherlands
81	Decision Lab / VISA Skills Lab	Radboud University		Netherlands
82	CentERlab	Tilburg University		Netherlands
83	Center for Research in Experimental Economics and Political Decision Making	University of Amsterdam	CREED	Netherlands
84	Experimental Laboratory for Sociology and Economics	Utrecht University	ELSE	Netherlands
85	New Zealand Experimental Economics Laboratory	University of Canterbury	NZEEL	New Zealand
86	Centre for Experimental Studies and Research	Norwegian Business School	CESAR	Norway
87	The Choice Lab	Norwegian School of Economics		Norway
88	Oslo Economics Laboratory	University of Oslo	OEconLab	Norway
89	Experimental Economics Laboratory	University of Warsaw		Poland
101	JEDI Lab	Linköping University		Sweden
102	Experimental Economics Laboratory	University of Gothenburg		Sweden
104	Taiwan Social Science Experimental Laboratory	National Taiwan University	TASSEL	Taiwan
105	Bilgi Economics Lab of Istanbul	Istanbul Bilgi University	BELIS	Turkey
106	Behavioral and Experimental Lab	Middle East Technical University		Turkey



**Otto von Guericke University Magdeburg**  
Faculty of Economics and Management  
P.O. Box 4120 | 39016 Magdeburg | Germany

Tel.: +49 (0) 3 91/67-1 85 84  
Fax: +49 (0) 3 91/67-1 21 20

**[www.fww.ovgu.de/femm](http://www.fww.ovgu.de/femm)**

ISSN 1615-4274