

JOURNAL DATA ARCHIVE METADATA SCHEMA

A Documentation of the JDA-Metadata properties

Version 1.0

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1) INTRODUCTION

1.1 The ZBW Journal Data Archive

The Journal Data Archive (JDA) operates as a data repository for journals in economics and social sciences. It is a web based tool which is free of charge for scholarly journals. Editorial offices can use the tool to manage data and software code to foster replicable research and research integrity.

Journals participating in the JDA can register authors of papers that contain empirical work, simulations, or experimental work to the data archive. Afterwards, authors are instructed how to deposit their data files in the JDA. All data stored in the JDA receives a DOI and a link is established between a research article published in a journal participating in the JDA and the data stored within the application.

The JDA aims to support the open science paradigm. In particular the JDA serves to improve the reproducibility of published economic research by making data and software code publicly available and retrievable.

The application is run by ZBW-Leibniz Information Centre for Economics (<http://www.zbw.eu>) in Kiel and Hamburg (Germany).

1.2 The JDA metadata schema

The JDA metadata schema is built on the specifications of the schema of the German registration agency for social and economic data, da|ra (<http://www.da-ra.de/en/home/>). In cooperation with da|ra, the JDA offers the opportunity to make the files of a data submission uniformly citable by creating DOIs (digital object identifiers).

da|ra (a collaboration of GESIS and ZBW) pursues the goal of long-term, persistent identification and availability of research data via minting DOIs. In keeping with the ideals of good scientific practice, there is a need for open access to existing primary data. For instance, this could be due to a researchers' intention to check the robustness of published research or funder mandates, which demand published research to be replicable. GESIS and ZBW, therefore, offer a registration service for social and economic research data in cooperation with DataCite (<https://www.datacite.org>), an international consortium pursuing the goal of supporting the acceptance of research data as independent citable scientific objects. This infrastructure lays the foundation for long-term, persistent identification, storage, localization and reliable citation of research data.

Benefits of DOIs comprise, but are not limited to:

- Permanent, persistent identification: Each DOI uniquely, unequivocally and permanently identifies the assigned object.
- Availability of information on the web: Via the Handle System, each DOI refers to one or more web pages assigned by the publication agent.
- Semantic interoperability: The metadata associated with a DOI enable direct, precise communication – with each user, from every location, and at every point in the

production/ distribution chain – with regard to every detail of the objects related with one another.

Ensuring that metadata is persistent does not exclude its modifiability: data producers and editorial offices have the opportunity to amend the metadata whenever and as often as is necessary. The JDA offers a function to update the metadata with just one click.

We are grateful to our colleagues from GESIS - Leibniz Institute for the Social Sciences, who developed the da|ra schema version 4.0 (DOI: 10.4232/10.mdsdoc.4.0). The metadata schema of the ZBW Journal Data Archive can be regarded as a subset of the da|ra schema. Notwithstanding, with JDA's focus on linking data and publications some fields and properties of the da|ra metadata schema are considered more important than in the original da|ra schema. In particular, this covers all fields which contain information on the publication / research article. Likewise, we believe that the JDA serves a different population of users. All of them are primarily researchers. That is why we did not incorporate many specialised fields. Our primary goal is, that researchers can easily deposit their replication files in the data archive, without spending too much of their valuable time creating and entering metadata. The aim to store and to archive the data must not interfere with researchers work. Following this introduction, we tried to reduce the amount of metadata fields to a core of what we believe are the most important properties of such files. In addition, we tried to fill as many fields as possible by automated processes and by adding information provided by authority data. Also, we paid attention to not ask a researcher to fill in a field, where already information has been provided earlier in the process.

2) JDA METADATA PROPERTIES

2.1 Mandatory properties

Only a few metadata information are mandatory. Information is required for the following fields:

- 'resourceType', specifying the general resource type, e.g. 'Dataset', 'Text', etc.
- 'title' of the resource
- details on 'creators'; at least the name
- 'publicationDate'
- 'availability' of the resource by giving 'availabilityType' information

2.2 The Metadata Schema with all properties explained in detail

Table 1 contains a detailed description of all properties the JDA Metadata Schema includes.

1 = required, but not repeatable

1-n = required and repeatable

0-1 = optional, but not repeatable

0-n = optional and repeatable

Blue = mandatory field/container element

Sequence JDA	property	occ	definition	Usage notes
1	resourceType	1	Predefined terms to provide information about the type of resource being registered to differentiate between registered resources.	See JDA controlled list appendix A-1
2	resourceIdentifier	1	Container element for a resource identifier, which includes a unique identifier and a version number to identify the resource	Automatically generated
2.1	identifier	1	Identifier of the resource	Automatically generated
2.2	currentVersion	1	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.	Automatically generated
3	titles	1	Container element	
3.1	title	1-n	Container Element	
3.1.1	language	1	Language of the metadata information (i.e.the title)	Auto-Value: en (ISO 639-1)
3.1.2	titleName	1	Title / name of the resource. The title should be unambiguous and specific (thus serve as a distinguishing characteristic)	
4	creators	1	Container element	
4.1	creator	1-n	Container element	Selection: person or an institution
4.1.1	person	1	Container element	Mandatory if 'institution (see 4.1.2) is not used
4.1.1.1	firstName	1	The first name of a person	
4.1.1.2	lastName	1	The last name of a person	
4.1.1.3	personIDs	0-1	Container element to provide information about a unique identifier of the person and the name of the schema identifier to disambiguate individuals of	Recommended for use.

			similar names.	
4.1.1.3.1	personID	1-n	Container element to provide information about a person's unique identifier.	
4.1.1.3.1.1	identifierURI	1	A URI uniquely identifying the term or controlled value from a vocabulary, as assigned by the body responsible for the maintenance of the vocabulary.	Always use the complete valid URI Example: https://orcid.org/000-0002-7905-4209 or http://d-nb.info/gnd/1019110333
4.1.1.3.1.2	identifierSchema	1	The name of the schema the identifier is related to.	If identifierURI is used, identifier mandatory Examples: GND ¹ , ORCID ²
4.1.1.4	affiliation	0-1	Container element to provide information about the organisational or institutional connection of a person. The affiliation should reflect the person's current and/or primary employment.	
4.1.1.4.1	affiliationName	1	The name of the organisation or institution a person is affiliated to.	
4.1.1.4.2	affiliationIDs	0-1	Container element to provide information about a unique identifier of the organisation or institution a person is affiliated to in order to disambiguate affiliations of similar names.	
4.1.1.4.2.1	affiliationID	1-n	Container element for the unique identifier and the related identifier schema of the URI	
4.1.1.4.2.1.1	identifierURI	1	The name of the schema the identifier is related to.	
4.1.1.4.2.1.2	identifierSchema	1		If identifierURI is used, identifierSchema is mandatory Examples: GND ³ ...-

¹ http://www.dnb.de/EN/Standardisierung/GND/gnd_node.html (last retrieved on 13.11.2018)

² <https://orcid.org/> (last retrieved on 13.11.2018)

³ http://www.dnb.de/EN/Standardisierung/GND/gnd_node.html (last retrieved on 13.11.2018)

4.1.2	institution	1	Container element to provide information about an organisation or institution involved in producing the registered resource.	Mandatory if 'person' (see 4.1.1) is not used
4.1.2.1	institutionName	1	A name of the organisation or institution involved in producing the data or responsible for the registered resource.	
4.1.2.2	institutionIDs	0-1	Container element to provide information about a unique identifier of the organisation or institution and the name of the schema identifier to disambiguate institutions or organisations.	
4.1.2.2.1	institutionID	1-n	Container element to provide information about an institution's unique identifier.	
4.1.2.2.1.1	identifierURI	1	The value of a formally registered unique identifier.	
4.1.2.2.1.2	identifierSchema	1	The name of the schema the identifier is related to.	
5	dataURLs	1	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.	
5.1	dataURL	1-n	An URL or URN (a reference to a web resource that specifies its location) linking to the registered resource.	Several dataURLs may be provided.
6	doiProposal	1	A persistent interoperable identifier (=DOI) a publication agent suggests for identification purposes of the registered resource.	Valid DOI Syntax according the standard, see doi.org Only the DOI is provided, not the resolved URL (i.e. contains NOT http://doi.org/10. ...)
7	publicationDate	1	Container element to provide information about the date the registered resource was published or is going to be published.	
7.1	Date monthyear year	1	The publication day, month and/or year of the registered resource submitted by the publication agent.	You may provide a complete calendar date, month and year

				or year only (use ISO 8601): YYYY-MM-DD or YYYY-MM or YYYY
8	publisher	0-1	Container element to provide information about a person, an affiliation and/or an institution responsible for the publication of the registered resource.	ZBW-Leibniz Information Centre for Economics is the publisher of the data, therefore we automatically provide this information on the level of each collection
8.1	institution	1	Container element to provide information about an organization or institution involved in publishing the registered resource.	
8.1.1	institutionName	1	A name of the organization or institution involved in publishing the registered resource.	Auto-value: 'ZBW - Leibniz Information Centre for Economics'
8.1.2	institutionIDs	0-1	Container element to provide information about a unique identifier of the organization or institution and the name of the schema identifier to disambiguate institutions or organizations.	
8.1.2.1	institutionID	1-n	Container element to provide information about an institution's unique identifier.	Several institutionIDs may be provided.
8.1.2.1.1	identifierURI	1	The value of a formally registered unique identifier.	To be consistent always the complete valid URI may be submitted, regardless of the used system. For the JDA these URIs will be part of the metadata: http://d-nb.info/gnd/10158795-8 and https://viaf.org/viaf/157505890
8.1.2.1.2	identifierSchema	1	The name of the schema	If identifier is

			the identifier is related to.	used, identifierSchema is mandatory. Examples: GND, etc.
9	availability	1	Container element to classify the availability conditions of the registered resource.	
9.1	availabilityType	1	Predefined terms to provide information about different types of availability conditions of the registered resource.	The following values may be used: 'download' or 'onsite'. See JDA controlled list appendix A-2
10	rights	0-1	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	
10.1	right	0-n	Container element for one specific language-dependent legal text about the registered resource	
10.1.1	language	1	See sequence number 2.1.1	Auto-Value: en (ISO 639-1)
10.1.2	freetext	1	A free-text field to describe if and how others might use or download the registered resource	
11	resourceLanguage	0-1	Language of the registered resource itself, using ISO 639-3	Auto-Value: eng (ISO 639-3)
12	classifications	0-1	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	
12.1	classification	1-n	Container element for internal and external classifications	
12.1.1	classificationInternal	0-1	Container element for the internal classification system provided by da ra (Classifications: Journal of Economic Literature (JEL),	
12.1.1.1	classificationScheme	1	The name of the internal schema	Auto-Value: JEL ⁴

⁴ <https://www.aeaweb.org/econlit/jelCodes.php?view=jel> (last retrieved on 16.11.2018)

	aType		used to differentiate between classification systems describing the topical coverage of the registered resource.	
12.1.1.2	identifiers	1	Container element to provide information about the unique identifier of the internal schema.	
12.1.1.2.1	identifier	1-n	The identifier is a unique internal value of the internal schema to disambiguate classification systems	
13	freeKeywords	0-1	Container element to provide language-dependent information about the content of the registered resource if the controlled list of classifications cannot provide enough information	
13.1	freeKeyword	1-n	Container element for one specific languagedependent free keyword of the external schema used to differentiate between keywords to describe the topical coverage.	
13.1.1	language	1	See sequence number 2.1.1	Auto-Value: en (ISO 639-1)
13.1.2	keywords	1	Container element for the keywords.	
13.1.2.1	keyword	1-n	A textual description or terminology to describe the content of the registered resource.	
14	descriptions	0-1	Container element to provide language-dependent information, statements or passages that give additional details about someone or something.	
14.1	description	1-n	Container element for language-dependent descriptions	
14.1.1	language	1	See sequence number 2.1.1	Auto-Value: en (ISO 639-1)
14.1.2	freetext	1	All additional information about the registered resource that does not fit in any of the other categories. May be used for technical information.	
14.1.3	descriptionType	1	Predefined terms to provide information about different types of descriptions used to describe the registered resource.	Predefined term is always 'abstract'

15	geographicCoverages	0-1	Container element to provide geographical information of the data collection including a controlled vocabulary, a languageattribute, a free-text-field, a location point, a location box and a location polygon.	
15.1	geographicCoverage	1-n	Container element to provide information about the geographic coverage of the registered resource.	
15.1.1	geographicCoverageControlled	0-1	Predefined terms to provide geographical information to differentiate between different locations the survey was conducted.	Predefined terms to provide information about different types of locations or spatial regions covered by the data collection. Information about the Geographic Coverage has been standardized according to ISO3166-1.
15.1.2	geographicCoverageFree	0-1	Container element to provide language-dependent information about the geographic coverage.	
15.1.2.1	geographicCoverageFree	0-1	Container element for a language-dependent freetext field to provide geographical information.	
15.1.2.1.1	language	1	See sequence number 2.1.1	Auto-Value: en (ISO 639-1)
15.1.2.1.2	freetext	1	An additional free-text field to describe the locations or spatial regions covered by the data collection in case it cannot be found in the controlled vocabulary list	
16	relations	0-1	Container element to provide information about resources that are related to the registered resource such as the type of the identifier, the relation or information about the schema (metadata, type, URI).	
16.1	relation	1-n	Container element to provide information about resources that are related to the registered resource.	

16.1.1	identifier	1	The value of a formally registered unique identifier of the related resource to disambiguate resources.	
16.1.2	identifierType	1	Predefined terms to provide information about different types of unique identifiers for the related resource.	Predefined term for Collection is URL, the term 'DOI' is used for single resources within a collection.
16.1.3	relationType	1	Predefined terms to provide information about different types of relations between the resource being registered and a related resource, e.g. the registered resource is a new version of the related resource.	'hasPart' used for collection, 'isPartOf' for single resources of a collection.
17	publications	0-1	Container element to provide information about an article, a document, etc. that has been made available to the public.	
17.1	publication	1-n	Container element to provide information about a unstructured information about a publication	
17.1.1	unstructuredPublication	1	Container element to provide unstructured information about an article, a document or another resource that has been made available to the public.	
17.1.1.1	freetext	1	Unstructured bibliographic information related to the publication.	
17.1.1.2	PIDs	0-1	Container element to provide information about Persistent Identifiers (PIDs) that have been generated to uniquely and permanently identify unstructured publications.	
17.1.1.2.1	PID	1-n	Container element for the value of a formally registered unique and persistent identifier of the unstructured information of publication.	
17.1.1.2.1.1	ID	1	The value of a formally registered unique and persistent identifier of the unstructured information of a publication.	

17.1.1.2.1.2	pidType	1	Predefined terms to provide information about different types of Persistent Identifiers of the unstructured information of the publication to differentiate between identifier types.	See JDA controlled list appendix A-4
18	temporalCoverages	0-1	Container element to provide information about the time frame of the data collection.	
18.1	temporalCoverage	1-n	Container element to provide structured or unstructured information about the time frame of the data collection.	
18.1.1	temporalCoverageFormal	0-1	Container element to provide information about the structured temporal time frame of the data collection.	
18.1.1.1	startDate	1	Container element that provides information about the start date of the data collection.	
18.1.1.1.1	Date monthyear year	1	The date a survey started.	
18.1.1.2	endDate	0-1	Container element that provides information about the end date of the survey	
18.1.1.2.1	Date monthyear year	1	The date a survey ended	
18.1.2	temporalCoveragesFree	0-1	Container element to provide language-dependent information about the temporal coverage	
18.1.2.1	temporalCoverageFree	1-n	Container element for language-dependent information about the temporal coverage.	
18.1.2.1.1	language	1	See sequence number 2.1.1	Auto-Value: en (ISO 639-1)
18.1.2.1.2	freetext	1	Provides the possibility to indicate the temporal coverage, if the calendar mode cannot be applied or as a supplement to 24.1.1	
19	universes	0-1	Container element to provide language-dependent information about statistical entities about which inferences are to be drawn and to which analytic results refer.	

19.1	universe	1-n	Container element for one specific language dependent description about the universe to which analytic results refer	
19.1.1	language	1	See sequence number 2.1.1	Auto-Value: en (ISO 639-1)
19.1.2	sampled	1	Description of the statistical entities of the survey.	
20	dataSets	0-1	Container element to provide information about the data set, 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 data set in question.	
20.1	dataSet	1-n	Container element to provide information about a specific data set.	
20.1.1	unitType	0-1	Describes the entity being analyzed or observed in the resource	See JDA controlled list appendix A-3
20.1.2	numberUnits	0-1	The number of units being analyzed or observed in the resource.	
20.1.3	numberVariables	0-1	This metadata describes the number of variables within a registered dataset.	
20.1.4	files	0-1	Container element to provide specific information of the data file.	
20.1.4.1	file	1-n	Container element to provide specific information of the data file such as name, format, size, and fingerprint of the file.	
20.1.4.1.1	name	0-1	The name of the data file	
20.1.4.1.2	format	0-1	A textual description of the technical format of the data file.	
20.1.4.1.3	size	0-1	The size of a data file or resource	

APPENDICES

Appendix A Controlled Vocabulary Definition

No. A-1 resourceType (XSD: <http://www.da-ra.de/fileadmin/media/da-ra.de/Technik/4.0/include/dara-resourceType-v4.1.xsd>)

resourceType	definition
Collection	An aggregation of resources, which may encompass collections of one resourceType as well as those of mixed types. A collection is described as a group; its parts may also be separately described.
Dataset	Data encoded in a defined structure.
Text	A resource consisting primarily of words for reading.
Software	A computer program in source code (text) or compiled form.
Other	If selected, supply a value for resourceTypeFree.

No. A-2 availabilityType (XSD: <http://www.da-ra.de/fileadmin/media/da-ra.de/Technik/4.0/include/dara-availabilityType-v4.xsd>)

availabilityType	definition
on-site	Can be used on-site only.
download	Released for everybody.

No. A-3 unitType (<http://www.da-ra.de/fileadmin/media/da-ra.de/Technik/4.0/include/dara-unitType-v4.xsd>)

unitType	definition
Individual	Any individual person, irrespective of demographic characteristics, professional, social or legal status, or affiliation.
Organisation	Any kind of formal administrative and functional structure - includes associations, institutions, agencies, businesses, political parties, schools, etc.
Family	Two or more people related by blood, marriage (including step relations), adoption or fostering and who may or may not live together (National Community Services Data Dictionary, Vers 3, AIHW, 2004). For example, used when researching the extent to which people provide support and assistance for their relatives.
Family.HouseholdFamily	A more specific term, refers only to related people who live in the same household at a point in time. If not known whether the analysis unit is "Family" or "Household family", use "Family".

Household	A person or a group of persons who share the same dwelling unit and common living arrangements. These common living arrangements may include pooling some, or all, of their income and wealth, and consuming certain types of goods and services collectively, mainly housing and food (Eurostat).
HousingUnit	U.S. Census: A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters. Separate living quarters are those in which the occupants live and eat separately from any other persons in the building and which have direct access from the outside of the building or through a common hall.
EventOrProcess	Any type of incident, occurrence, or activity. Events are usually one-time, individual occurrences, with a limited or short duration. Examples: criminal offenses, riots, meetings, elections, sports competitions, terrorist attacks, natural disasters like floods, etc. Processes typically take place over time, and may include multiple "events" or gradual changes that ultimately lead, or are projected to lead, to a particular result. Examples: court trials, criminal investigations, political campaigns, medical treatments, education, athletes' training, etc.
GeographicUnit	Any entity that can be spatially defined as a geographic area, with either natural (physical) or administrative boundaries.
TimeUnit	Any period of time: year, week, month, day, or bimonthly or quarterly periods, etc.
TextUnit	Books, articles, any written piece/entity.
Group	Two or more individuals assembled together or having some unifying relationship.
Object	Anything material, but inanimate, that has an independent existence and may be perceived by the senses. Examples: objects of art (paintings, sculptures, etc.) or weapons, or vehicles, etc.
Other	Use if the unit of analysis is known, but not found in the list.

No. A-4 pidType (<http://www.da-ra.de/fileadmin/media/da-ra.de/Technik/4.0/include/dara-pidType-v4.xsd>)

pidType	definition
ARK	Archival Resource Key; URL designed to support long-term access to information objects. In general, ARK syntax is of the form (brackets indicate [optional] elements: [http://NMA/]ark:/NAAN/Name[Qualifier])
arXiv	arXiv identifier; arXiv.org is a repository of preprints of scientific papers in the fields of

	mathematics, physics, astronomy, computer science, quantitative biology, statistics, and quantitative finance.
bibcode	Astrophysics Data System bibliographic codes; a standardized 19 character identifier according to the syntax yyyyjjjjvvvmppppa. See http://infouri.info/registry/OAIHandler?verb=GetRecord&metadataPrefix=eg&identifier=info:bibcode/
DOI	Digital Object Identifier; a character string used to uniquely identify an object. A DOI name is divided into two parts, a prefix and a suffix, separated by a slash.
EAN13	European Article Number, now renamed International Article Number, but retaining the original acronym, is a 13-digit barcoding standard which is a superset of the original 12-digit Universal Product Code (UPC) system.
EISSN	Electronic International Standard Serial Number; ISSN used to identify periodicals in electronic form (eISSN or e-ISSN).
Handle	Handle System Handle (The handle system is a technical development of the Cooperation for National Research Initiatives) Used to uniquely identify an object; consist of a prefix and a suffix: the prefix is a numeric code that identifies a 'naming authority' (e.g. an institution), the suffix is the 'local name' of a resource (e.g. character string).
IGSN	International Geo Sample Number; a 9-digit alphanumeric code that uniquely identifies samples from our natural environment and related sampling features.
ISBN	International Standard Book Number; a unique numeric book identifier. There are 2 formats: a 10-digit ISBN format and a 13-digit ISBN.
ISSN	International Standard Serial Number; a unique 8- digit number used to identify a print or electronic periodical publication.
ISTC	International Standard Text Code; a unique "number" assigned to a textual work. An ISTC consists of 16 numbers and/or letters.
LISSN	The linking ISSN or ISSN-L enables collocation or linking among different media versions of a continuing resource.
LISD	Life Science Identifiers; a unique identifier for data in the Life Science domain. Format: urn:lsid:authority:namespace:identifier:revision
PMID	PubMed identifier; a unique number assigned to each PubMed record.
PURL	Persistent Uniform Resource Locator;

	A PURL has three parts: (1) a protocol, (2) a resolver address, and (3) a name.
UPC	Universal Product Code is a barcode symbology used for tracking trade items in stores. Its most common form, the UPC-A, consists of 12 numerical digits.
URL	Uniform Resource Locator; also known as web address, is a specific character string that constitutes a reference to a resource. The syntax is: scheme://domain:port/path?query_string#fragment_id.
URN	Uniform Resource Name; is a unique and persistent identifier of an electronic document. The syntax is: urn:< NID>:<NSS> The leading urn: sequence is caseinsensitive, <NID> is the namespace identifier, <NSS> is the namespace-specific string.

Appendix B: JDA Version 1.0 to da|ra Version 4.0

Sequence JDA	sequence dara 4.0	property
1	1	resourceType
2	3	resourceIdentifier
2.1	3.1	identifier
2.2	3.2	currentVersion
3	4	titles
3.1	4.1	title
3.1.1	4.1.1	language
3.1.2	4.1.2	titleName
4	7	creators
4.1	7.1	creator
4.1.1	7.1.1	person

4.1.1.1	7.1.1.1	firstName
4.1.1.2	7.1.1.2	middleName
4.1.1.3	7.1.1.3	lastName
4.1.1.4	7.1.1.4	personIDs
4.1.1.4.1	7.1.1.4.1	personID
4.1.1.4.1.1	7.1.1.4.1.1	identifierURI
4.1.1.4.1.2	7.1.1.4.1.2	identifierSchema
4.1.1.5	7.1.1.5	affiliation
4.1.1.5.1	7.1.1.5.1	affiliationName
4.1.1.5.2	7.1.1.5.2	affiliationIDs
4.1.1.5.2.1	7.1.1.5.2.1	affiliationID
4.1.1.5.2.1.1	7.1.1.5.2.1.1	identifierURI
4.1.1.5.2.1.2	7.1.1.5.2.1.2	identifierSchema
4.1.2	7.1.2	institution
4.1.2.1	7.1.2.1	institutionName
4.1.2.2	7.1.2.2	institutionIDs
4.1.2.2.1	7.1.2.2.1	institutionID
4.1.2.2.1.1	7.1.2.2.1.1	identifierURI
4.1.2.2.1.2	7.1.2.2.1.2	identifierSchema
5	8	dataURLs
5.1	8.1	dataURL

6	9	doiProposal
7	10	publicationDate
7.1	10.1	Date monthyear year
8	12	publisher
8.1	12.2	institution
8.1.1	12.2.1	institutionName
8.1.2	12.2.2	institutionIDs
8.1.2.1	12.2.2.1	institutionID
8.1.2.1.1	12.2.2.1.1	identifierURI
8.1.2.1.2	12.2.2.1.2	identifierSchema
9	13	availability
9.1	13.1	availabilityType
10	14	rights
10.1	14.2	right
10.1.1	14.2.1	language
10.1.2	14.2.2	freetext
11	15	resourceLanguage
12	17	classifications
12.1	17.1	classification
12.1.1	17.1.1	classificationInternal
12.1.1.1	17.1.1.1	classificationSchemaType

12.1.1.2	17.1.1.2	identifiers
12.1.1.2.1	17.1.1.2.1	identifier
13	19	freeKeywords
13.1	19.1	freeKeyword
13.1.1	19.1.1	language
13.1.2	^{1919.1.3} 19.1.3	keywords
13.1.2.1	19.1.3.1	keyword
14	20	descriptions
14.1	20.1	description
14.1.1	20.1.1	language
14.1.2	20.1.2	freetext
14.1.3	20.1.3	descriptionType
15	21	geographicCoverages
15.1	21.1	geographicCoverage
15.1.1	21.1.1	geographicCoverageControlled
15.1.2	21.1.2	geographicCoveragesFree
15.1.2.1	21.1.2.1	geographicCoverageFree
15.1.2.1.1	21.1.2.1.1	language
15.1.2.1.2	21.1.2.1.2	freetext
16	31	relations

16.1	31.1	relation
16.1.1	31.1.1	identifier
16.1.2	31.1.2	identifierType
16.1.3	31.1.3	relationType
17	32	publications
17.1	32.1	publication
17.1.1	32.1.2	unstructuredPublication
17.1.1.1	32.1.2.1	freetext
17.1.1.2	32.1.2.2	PIDs
17.1.1.2.1	32.1.2.2.1	PID
17.1.1.2.1.1	32.1.2.2.1.1	ID
17.1.1.2.1.2	32.1.2.2.1.2	pidType
18	24	temporalCoverages
18.1	24.1	temporalCoverage
18.1.1	24.1.1	temporalCoverageFormal
18.1.1.1	24.1.1.1	startDate
18.1.1.1.1	24.1.1.1.1	Date monthyear year
18.1.1.2	24.1.1.2	endDate
18.1.1.2.1	24.1.1.2.1	Date monthyear year
18.1.2	24.1.2	temporalCoveragesFree
18.1.2.1	24.1.2.1	temporalCoverageFree

18.1.2.1.1	24.1.2.1.1	language
18.1.2.1.2	24.1.2.1.2	freetext
19	22	universes
19.1	22.1	universe
19.1.1	22.1.1	language
19.1.2	22.1.2	sampled
20	29	dataSets
20.1	29.1	dataSet
20.1.1	29.1.2	unitType
20.1.2	29.1.3	numberUnits
20.1.3	29.1.4	numberVariables
20.1.4	29.1.6	files
20.1.4.1	29.1.6.1	file
20.1.4.1.1	29.1.6.1.1	name
20.1.4.1.2	29.1.6.1.2	format
20.1.4.1.3	29.1.6.1.3	size

3) RECOMMENDED CITATION

Data available within the Journal Data Archive should be cited as follows:

Creator(s) (publication year): Title, Version, Publication Agency, ResourceType, Identifier

The JDA offers a citation proposal for each data collection. It is available on the landing page of each data submission.

Some examples:

Citation

Wagner, Joachim (2017): Productivity premia for many modes of internationalization. A replication study of Békés and Muraközy (Economics Letters, 2016) (replication study). Version: 1. IREE. Dataset. <http://dx.doi.org/10.15456/iree.2017220.122350>

Citation

Heinisch, Katja; Scheufele, Rolf (2018): Should forecasters use real-time data to evaluate leading indicator models for GDP prediction? German evidence. Version: 1. GER. Dataset. <http://dx.doi.org/10.15456/ger.2018033.131351>

4) JDA'S METADATA LICENSE

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In contrast, all the other files (e.g. datasets, readme files, pdfs and software code) stored in the JDA are published under a Creative Commons Attribution 4.0 International License ([CC BY 4.0 International](https://creativecommons.org/licenses/by/4.0/)).

5) HOW TO OBTAIN THE METADATA OF THE RECORDS WITHIN THE JDA

The metadata (in xml-format) for each collection and single file ('resource') is available by simply adding a '/dara_xml' to the landing page of the collection or of one of its resources.

The JDA is built using CKAN which provides an API to access the information programmatically. Details of the API can be found in the [official CKAN documentation](#). In addition to the default API calls that are available the JDA has an additional endpoint 'xml_show' that can be used to get the XML version of a record.

The following are useful DOI endpoints to help navigate:

- package_list : returns a list of all currently published datasets in the JDA
 - http://www.journdata.zbw.eu/api/3/action/package_list
- package_show?id=<name from previous command> : will return the details for a specific published dataset
 - http://www.journdata.zbw.eu/api/3/action/package_show?id=<package_name>
 - Within the results is a field called "resources" which has an "id."
- resource_show?id=<resource id> : return the details for a specific resource
 - http://www.journdata.zbw.eu/api/3/action/resource_show?id=<resource_id>
- xml_show?id=<record id>
 - Passing the package name/id or the resource id to this endpoint will produce the record's XML.
 - http://www.journdata.zbw.eu/api/3/action/xml_show?id=<package_name/resource_id>