The following text provides a brief introduction to the Aschach Toll Registers as historical sources as well as to the query possibilities offered by the database. Please note that work on the database is not yet complete, and that the hitherto published data from the registers for 1728 and 1729 represent a test version for demonstration purposes. The final edited version comprising the years 1706 to 1740 will include further corrections (e.g. normalization of the names of persons, places and trade goods as well as regional assignments). An option to download search results will likewise be implemented.

1. Editing Toll Registers
2. The Aschach Toll Registers: Preservation and the Editing Project
3. Contents and Structure of the Sources
4. Challenges in Interpreting the Sources
5. Principles of Data Entry
6. Query Form: Search Options
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1. Editing Toll Registers

Toll registers1, i.e. account books listing the revenues of individual toll gates, provide valuable detailed information on the transportation of goods and persons. They represent key sources for answering questions on trade cycles and economic networks within and between regions and are particularly valuable in regard to eras that predate the statistical recording of the flow of commodities. The cargoes recorded in toll registers allow us to make inferences with respect to the development of consumer behaviour; the listing of the freight forwarders and their customers (mostly merchants) forms the basis for analysis regarding the people that organized the transportation of goods. In addition, toll registers can contain a host of other information on topics as diverse as climate history, migration history and military history (transport or supply of military units). They represent an even greater source value when they are preserved for extended and continuous periods of time, thereby providing the foundation for the creation of

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1 In the southern German-speaking area, the terms "Maut" (toll) and "Zoll" (customs) were used synonymously, that usage is likewise applied to this text.
statistical series spanning a number of years, which in turn allow us to perform synchronous and diachronous structural analyses and determine trade cycles.

Like with any editing project, strategic decisions and methodical considerations must precede the processing of serially available account books such as toll registers. The time required for comprehensive analysis of such sources and the associated costs are, of course, considerable. Many previous research projects have foregone editions for this very reason, instead limiting themselves—justified only in part by the number of preserved sources—to the analysis of the accounts of individual years. Examples within the Austrian academic sphere are the studies by Herbert Hassinger, Othmar Pickl, and Erich Landsteiner. This approach naturally entails massive losses in terms of information and confirmability of the results. Furthermore, only a very punctiform view of transport and trade can be achieved on the basis of individual volumes of toll registers and, owing to short-term factors like weather, military campaigns or epidemics, this may deviate severely from the long-term trend. This applies e.g. to the edition of the only preserved toll account for Linz, which documents the year 1627, which was created during the Bavarian occupation of Upper Austria in a phase immediately following the Peasants’ War in this province. Its analysis relies heavily on aggregated data and is divided across multiple volumes of a periodical. Hassinger’s mixture of edition and handbook on the trade and traffic history of Carinthia and Salzburg likewise fails to provide a satisfactory solution to the analysis of toll sources, as do the tables on the passages through the Sound based on the Danish Sound Toll Registers.

In contrast to the presentation of aggregated data, registers of tolls/customs duties like the Rhine tolls in Katzenelnbogen have rarely been published in full. With the rapid advances in electronic data processing, large data quantities can be handled and presented in a much more user-friendly manner online than would be possible in books. The Sound Toll Registers online

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(STR online) project⁶, for example, has been editing the Danish Sound Toll Registers, the best-known and most extensive European series of toll accounts, in the shape of an online-searchable database since 2009. The Krems Weighing and Warehouse Books, which are nowhere near as substantial, have been processed in a similar format since 2008. The recent increase in the significance of editions and editorial techniques as a result of IT and the internet is likewise reflected by a host of symposia on serial sources and editorial techniques as well as by various completed projects.⁷

2. The Aschach Toll Registers: Preservation and the Editing Project

No series of account books is preserved from any of the large princely tax and toll agencies along the Austrian Danube, i.e. Engelhartszell, Linz, Mauthausen, Ybbs, Stein or Vienna. As a result of this lack of material, the Aschach Toll Registers possess extraordinary significance. The toll station in Aschach, which had existed since the High Middle Ages, was purchased in 1622 by Count Karl von Harrach. It remained in his family's possession for one and a half centuries before being bought back by the state and abrogated in 1775/76 like the other so-called private tolls.⁸ A substantial number of records of the Aschach toll station from the time of the Harrach administration have been preserved. Known as the so-called "Depot Harrach", these records were transferred to the Upper Austrian state archive in Linz in 1954. The revenue accounts of the toll collectors, referred to as the "Protokollbücher der Maut zu Aschach" (registry books of the toll at Aschach), are the core of these records. A total of 194 volumes of these records (including 53 so-called concept versions, i.e. duplicates) exist for the period between 1627 and 1775. The source value of these books—which were initially kept on a quarterly, and then on a yearly basis—was first recognized by Georg Grüll, author of the inventory of the holding (p. 2):

"This collection of toll registers from Aschach for the time from 1627 to 1775 in particular represents a unique and—due to its completeness—extremely valuable source for the economic history of our country." The completeness of the assets emphasized by Grüll must be qualified to a degree, however: With the exception of the 1670s, the available material up to the 1680s is quite fragmentary, however at least six of the ten annual volumes created per decade have been preserved for the period from the 1690s to the 1760s. Owing to the density of preserved documents alone, the Aschach Toll Registers must be regarded as the most important sources on trade on the Austrian section of the Danube during the 17th and 18th centuries.

⁶ The project is ongoing at the University of Groningen and the center for Frisian history and literature “Tresoar” in Leeuwarden. Jan Willem Veluwenkamp, Die “Sound Toll Registers Online” als Instrument für die Erforschung des frühneuzeitlichen Ostseehandels, in: Rauscher–Serles, Wiegen (see fn. 2) 365–384, with current research literature and internet resources.
⁷ Cf. e.g. Susanna Burghartz et al. (eds.), The Annual Accounts of the City of Basel 1535 to 1610 – digital (Basel–Graz 2015): http://gams.uni-graz.at/context:srbas.
⁸ On the following, see Peter Rauscher, Die Aschacher Mautprotokolle als Quelle des Donauhandels (17./18. Jahrhundert), in: Rauscher–Serles, Wiegen (see fn. 2) 255–306, there with additional literature.
In 2013, the project “The Aschach Toll Registers: Database and Analysis”, financed by the Austrian science fund FWF, started the edition of nearly four decades worth of volumes of the Aschach Toll Registers. The goal of this project is to render the information in these registers fully searchable by places, names and goods, thereby making the sources accessible for historical research. The volumes for the years 1706–1740, scanned by the Upper Austrian state archive, can already be viewed on the project website.

3. Contents and Structure of the Sources

Each yearly volume of the Aschach Toll Registers comprises between 450 and 650 sheets, i.e. 900 to 1,300 pages. The entries are arranged chronologically and contain the following information:

1. The date followed by the name and place of origin of the skipper, the type and number of water vehicles passing the toll gate, and the corresponding fee paid. The designations of places are often problematic: On the one hand, they often obviously refer to the starting point of the shipping journey, as clearly evidenced by the frequent specifications of different places of origin for the same skippers. On the other hand, they also often refer to the actual hometown of the skipper himself, e.g. in cases where skippers from Linz or Vienna—i.e. from cities downstream of Aschach—are mentioned on downstream trips passing through Aschach. In these cases, the specified places cannot be the origins of the journeys but must instead be understood as referring to the skippers’ places of residence—or the starting point of a preceding upstream journey. In contrast to the Sound Toll Registers, the Aschach Toll Registers only rarely specify the destination of the registered journeys, the direction of passage (“herauf” or “hinab” (upwards or downwards) is likewise provided in only a fraction of the entries. Upstream journeys can be deduced from the number of towing horses required to pull the vehicles upstream, which is listed at the end of the respective entry.

2. Following the data on the vehicles, passengers riding aboard the boats are generally mentioned summarily or generically—“Leute” (people), “Wallfahrer” (pilgrims), “Geistliche” (clerics), “ein Graf” (a count)—with passengers of exceptionally high social status sometimes specified by name.

3. This is followed by entries on the shipped goods, with the name of the owner or the recipient (person or institution like bishopric, monastery etc.) listed first. In rare cases, only a profession (“dem Fleischhacker zu Aschach” [the butcher at Aschach]) or, even less specific, descriptions like “ein Mann” (a man) are provided. In a scant few cases, there is only the declaration “Mautzettel ohne Namen” (toll note without name) or “Mautzettel ohne Unterschrift” (toll note without signature). Where this information is missing and no name can be associated with a cargo, it can
be assumed that the goods belonged to the skipper himself.9

Finally (but not in every case), the type of container, e.g. "Päckel" (packs), "Kistel" (boxes) or "Fässel" (barrels), and the weight, number or value of the shipped goods are listed. The toll levied—or toll dispensation applied—for each cargo item is furthermore noted.

These entries in the Aschach Toll Registers can thus be used to determine which skipper from which town passed through Aschach on what day with which type and number of vehicles, whether he was transporting passengers, and what cargo he was ferrying. The great advantage of the Aschach documents in comparison to, for example, the Sound Toll Registers is that former also list the owners (though not their provenance) of the shipped goods. Based on this information, it is possible to obtain a detailed picture of the merchants active in the Danube area.

4. Challenges in Interpreting the Sources

Despite the immense benefits of the Aschach Toll Registers as sources on transport and trade on the Danube as the most important shipping route of the region encompassing southern Germany and Austria, the quality of the entries impose certain limitations on their edition and interpretation. The most significant problems are:

1. As a result of the garbling or truncation of place names or the existence of multiple places with the same name in the greater Danube area it is not always possible to localize places mentioned.

2. Uncertainty as to whether the specified places are the starting point of the journey or the hometown of the skipper.

3. Massive orthographical deviations in the spelling of surnames. E.g. "Wagner". Variants: "Wagner, Wägner, Magner, Wag, Wanger"; "Rugendas". Variants: "Rugenlos, Rugendos, Rugendros, Ruggenloß, Ruckenloß". With regard to the edition, there is therefore the danger of multiple persons being combined into one individual, or of individual persons being registered in the database under multiple different variants. Such mistakes cannot be avoided, and should be taken into consideration while querying the database.

4. Missing or inconsistent dimensions for the shipped goods, thereby preventing the determination of precise quantities:

   4.1 Missing dimensions, i.e. specification of container type only: e.g. "1 Fass Zucker" (1

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9 Apparent e.g. in an entry for 15 July 1736, vol. 133,[p. 488]:

"Christoph Küblöckh v. Englzehl, 1 formb [farm; type of vehicle]:
2 vas drin 157 st. rupfen, 30 st. Leinwath [2 vas in which 157 pcs. rupfen, 30 pcs. Leinwath];

idem er [also he]:
2 vas drin 143 st. rupfen, 12 st. leinwath [...];

deto Küblöckh [also Küblöckh]:
1 vas mit 51 st. rupfen, 20 st. leinwath [...]."
barrel of sugar);

4.2 Inconsistent dimensions for the goods: volume, weight, number, value;

4.3 Combination of different goods in a single container or summary measurement: e.g. “2 ½ Zentner Mandeln, Weihrauch und Kaffee” (2 ½ centners of almonds, frankincense and coffee);

5. Identification of the goods specified in the sources.

In order to minimize the impact of these challenges, normalized data on persons, places and goods are being established during the ongoing analysis of the Aschach Toll Registers, and these normalized data will be searchable online along with the database of entries themselves.

5. Principles of Data Entry

5.1 Normalization
To make utilization of the database as simple as possible, the names of persons, places and trade goods are normalized. This means that all names either follow current orthography rules (places, goods) or, in the case of persons, a notation is chosen that closely resembles current usage and conventions. If a person is known in literature, the established spelling of the name is used (e.g. "von Starhemberg", not "von Stahrnberg"). Where no similarity to current names or their notation is apparent, a spelling variant that is common in the sources is used (especially for goods and places).

5.2 Rules for the entry of persons

a) First names

Two separate entries have been created in the database of persons even when it is assumed that two persons may be identical, but their first names differ. For example, separate person data sets have been created for “Johann Sinzinger” and “Johann Georg Sinzinger”, as it cannot be excluded that these are two different individuals. The same applies when a person already identified by first name and surname is assigned a provenance by an additional entry in the sources that is not yet included in the data set for that person. In such cases, multiple person entries are also created, because the identity of the individuals cannot be verified. E.g.: Person 1: “Johann Wagner”; person 2: “Johann Georg Wagner”; person 3: “Johann Wagner, Wien”; person 4: “Johann Georg Wagner, Wien”.

With regard to research in the database, this means that various persons may be included in the database in multiple variants, and that these variants should be taken into consideration during
the course of research work.

Exception: "Han(n)ss" is always normalized as "Johann".

The following first names are considered to be identical:

- Andre – Andreas
- Jörg – Georg
- Johann – Johannes
- Johann Maria – Johann Marina / Morina
- Marx – Markus
- Matthias – Matthäus
- Wolf – Wolfgang

The following names were presumably—but not verifiably—used synonymously by the writers of the Aschach Toll Registers but are considered to be different first names for the purpose of the edition. Please note that bearers of these first names may be identical to other persons:

- Albert – Albrecht
- Christian – Christoph
- Georg – Gregor
- Gottlieb – Gotthard – Gottlob
- Leopold – Leonhard

Foreign-language first names are entered into the database in their respective foreign-language version unless the source material also contains a German variant of the name for the same person. For example, "Jean Ja(c)ques Briann", who also appears in the source material as "Johann Jakob Briann", is referred to as "Johann Jakob Briann" throughout the database.

Two separate entries are also made in the database in the case of persons for whom it is likely that the order of their first names has been reversed: e.g., "Karl Christoph Mayr" – "Christoph Karl Mayr".

b) Descriptions

The entry of persons into the database can be problematic when they are not mentioned by name, but instead designated by their function or title.
The following rules apply:

1. "Herr" is not considered a title, and is not included in the database except where "Herr" appears without any other descriptors and without specification of a first name:
   E.g.: "an Herrn Strobl" (to Mr. Strobl) – person: "Strobl, Herr"
   E.g.: "Herr General": "General"
   E.g.: "Herr Graf": "Graf" (count)

   The same applies to "Frau", "Monsieur" etc. If the same person is sometimes referred to as "Monsieur" and sometimes as "Herr", the German Version is used. Wives are always referred to as "Ehefrau" (wife). E.g.: "XY mit seiner Frau" (XY with his wife): "Ehefrau des XY" (wife of XY).

2. "Ihro Gnaden" and “Exzellenz” are not considered titles and are not included in the database.

3. The description of a person’s function precedes their title.
   E.g.: “General Graf von Starhemberg”, entry in the database: “von Starhemberg, General, Graf”.

4. "Herr", "Freiherr" and "Baron" are identical when referring to a baron (i.e. if the respective person is identified as a baron at least once). In some cases, the same name is alternatingly written with and without the titular "von". In such cases, the version including the "von" is used.

5. "Bürger": Inhabitants of Aschach who are referred to as "Bürger" (and are therefore exempt from paying toll) are entered into the database as “Bürger” even if the designation is missing in one or more entries in the sources.

6. Persons with two or more designations
   If the same person is designated with differing titles in different entries in the sources, then separate database entries are made for that person.
   E.g.: source entry 1: "an den Hofkriegsrat Kampmillner" (to Aulic War Councilor Kampmillner); source entry 2: "an Herrn Kampmillner Geheimen Referendar" (to Mr. Kampmillner Secret Referee). Person 1: "Kampmillner, [designation:] Hofkriegsrat"; Person 2: "Kampmillner, [designation:] Referendar (geheim)".

7. Adjectives
   In the case of an adjective detailing a function, the adjective is placed in parentheses following the function:
   E.g.: "bayerischer Hofrat": "Hofrat (bayerisch)"
8. Surnames (except for nobility) and designations referring to women use the suffix “-in”:
“Daucherin”, not “Daucher”
“Frau General”: “Generalin”
“Frau Pflegerin”: “Pflegerin”

9. Groups of persons are entered into the database separately on principle:
E.g.: “Graf Sinzendorf samt Frau und Bediente” (Count Sinzendorf with wife and servants):
Person 1: “von Sinzendorf, Graf” (von Sinzendorf, Count)
Person 2: “Ehefrau des Grafen von Sinzendorf” (wife of Count Sinzendorf)
Person 3: “Dienerschaft des Grafen von Sinzendorf” (servants of Count Sinzendorf)

E.g.: “Hauptbergwerksämter Hall und Schwaz in Tirol” (principal mining authorities Hall and Schwaz in Tyrol):
Person 1: “Hauptbergwerksamt, Hall, Tirol”
Person 2: “Hauptbergwerksamt, Schwaz, Tirol”

10. Regiments
Regiments are designated according to the following pattern: type of regiment (cuirassier regiment, infantry regiment, dragoon regiment, Hussar regiment, regiment etc.) followed by regiment owner. E.g. “Dragonerregiment Prinz Eugen” (dragoon regiment Prince Eugene). The regiment description is entered as a postpositive adjective in parentheses only in cases in which the owner cannot be determined.

11. Imperial court
In the case of the recipient: “zur Notdurft des ksl. Hofstaats zu Wien” (for the exigence of the imperial court in Vienna) in the sources, the term “Kaiserhof” (emperor’s court) is used in the database.

12. Non-natural recipients
If no natural person can be determined from the sources as recipient of a trade good, a “non-natural recipient” is created.
E.g. “Marmor für die Pestsäule am Graben” (marble for the Plague Column on Graben). In this case, the emperor or the imperial court as alternative recipients make no sense; however, in the case of “für den Hochaltar in Klosterneuburg” (for the high altar in Klosterneuburg), the recipient entered into the database is “Stift Klosterneuburg” (Klosterneuburg Abbey).
13. Additional information

The Aschach Toll Registers often contain additional indications regarding the senders and recipients of goods, such as “an”, “in”, “zu”, “für”, “per”, “einem”, “dem”, “der”, “Herrn” [dem Herrn], “Frauen” [der Frau], “zur Notdurft” (to, in, for etc.). This additional information is included in the respective data set and marked with “Ja” (yes) in the results list. Please note that in order to conserve space, the designations “einem/dem/Herrn” refer to the male variant as well as the female variant “einer/der/Frauen”.

5.3 Place names and regional assignment

1. Notation

All place names are normalized and appear in the database in their (German) notation in current use. Names of places that cannot be localized are used in one of the variants found in the sources.

2. Regional assignment

The editors have assigned all places to historical regions (generally to an imperial territory, sometimes also to a particular manor or imperial circle). Only very rarely do the sources themselves contain regional designations, such as “Lesenotdurfen nach Unterösterreich” (wine harvesting needs to Lower Austria) or “Leute nach Ungarn” (people to Hungary). In such cases, the mentioned regions are used as destinations for the respective shipments.

If a place cannot be localized, or if multiple places with the same name exist(ed) in different territories, no regional assignment has been made. Imperial cities (esp. Nuremberg, Augsburg, Ulm, Regensburg) are not assigned to a region.

5.4 Destination of the vehicle

A destination is entered for the vehicle(s) in cases in which it is explicitly specified in the sources. E.g.: “1 Plättel nach Wien” (1 Plättel to Vienna).

A destination is provided even if only one shipped commodity (e.g.: “mit Bier nach Linz” [with beer to Linz]) or one passenger or group of passengers (e.g.: “Leute nach Ungarn” [people to Hungary]) is listed with a destination in the sources.

5.5 Collective mention of goods with a joint toll application

Multiple collectively mentioned goods without individual measurements are usually entered into the database as a single entry with the individual goods separated by commas. The listing of the goods does not follow the order in the source but is instead alphabetical.
E.g.: “12 Pfund Würste und Käse” (12 pounds of sausages and cheese): „12 Pfund Käse, Würste”.

Please note that when searching the database for specific commodities, it is not only possible to search for individual goods (e.g. “Käse”) using the drop-down lists (“detail search”), but also to search for all combinations containing the desired commodity (“Käse, Würste” etc.) using the “simple search”.

In the case of the collective mention of goods with individual measurements, but only one toll payment (e.g.: “1 Vässl Bayrisch Rueben, 2 Dutzend Würste: 12 d.” [1 barrel of Bavarian beets, 2 dozen sausages: 12 d.]) the editors undertake to calculate the individual toll fees by hand. E.g. “1 Kalb und 1 Lämpel: 5 d.” (1 calf and 1 lamb: 5 d.): “1 Kalb 4 d.”, “1 Lamm 1 d.”. In certain cases, it is not possible to calculate the individual toll fees precisely.

6. Query Form: Search Options

The query form combines a “simple search” for any desired character string with a “detail search” using drop-down lists. This makes it possible to search for not only full names of persons, places or goods, but also for parts of names or words, e.g. to find all variants of the commodity “Seide” (silk) (silk, silk products, half-silk products etc.). The “simple search” can be restricted to only persons or only goods. Please note that the “simple search” will yield no results if the string of characters entered is not contained in the database.

The drop-down lists of the “detail search” show the entire contents of the database and guarantee results (except in cases of combined searches using multiple selection fields).

In addition to searches for places (places of origin and destinations of shipping journeys, hometowns of persons), persons (skippers, owners/ recipients of goods, passengers) and shipped goods, the query form also offers the following options:

1. Searches covering a certain period of time, e.g. all toll passages between 01 Dec. 1728 and 31 Dec. 1728.

2. Searches for days on which no shipping was possible on the Danube (due to ice, high water, or with no reason specified).

3. Searches for women and Jewish persons in the database. The purpose of this option is to facilitate use of the Aschach Toll Registers for research in the fields of gender and Jewish history. Please note that Jewish individuals are only identified as Jewish in the toll registers if they were travelling as passengers, and therefore had to pay the so-called “Leibzoll”. As

10 Cf. Peter Rauscher, Den Christen gleich sein. Diskriminierung und Verdienstmöglichkeiten von Juden an
owners/recipient of goods, they were only rarely distinguished from other persons by the toll officers using the designation “Jude” (Jew). The designation of an individual as a “Jew” is therefore largely down to interpretation by the editors (mostly based on the personal name), and it cannot be guaranteed that all Jewish persons mentioned in the toll registers were recognized as such.

4. Searches for passengers only, e.g. concerning pilgrimages or emigration to Hungary.

5. Searches for vehicle types.

6. As mentioned above, searches for vehicles travelling downstream and transporting horses for the subsequent upstream journey (“mit Rossen” [with horses]).

7. The toll registers rarely explicitly specify whether shipments were headed up- or downstream. The number of horses (“Rosse”) required to tow or control the vehicles was specified at the end of each entry, however. Sometimes the toll was paid for up- and downstream journeys at once.

7. Presentation of Results

The search results are displayed in chronological order and contain the following basic information: date of the passage – information on the source (Aschach Toll Register volume and year) – page no. (“pag.” [p.]) – internal identifier (ID) of the passage. Clicking on a date opens the individual data set for that specific passage through the Aschach toll gate (“detailed result”). Each individual data set contains:

1. The date and archival information
2. The name of the skipper and origin of the vehicle(s) or skipper, the number, type and direction of travel of the vehicle(s), and the levied toll
3. Links to scans of the respective pages in the source
4. Information on the transported goods and passengers

8. Test Version (1728 and 1729)

In order to demonstrate the potential of the sources and determine possible deficiencies in the presentation of results, we are currently offering the option of searching the database for the
Aschach Toll Registers for the years 1728 and 1729 online. We explicitly point out that the provided information represents raw data that may change over the course of future adaptations and improvements. Should you have suggestions for improvements that could be made with regard to presentation of the search or results, please contact project head Peter Rauscher. Please note that the normalized data sets for persons, places and goods to be used in the final version of the database currently remain a work in progress, and that this information is therefore not yet publicly available. Download options for search results as well as for the entire database will be provided in future.

Vienna, July 2018