DEMOGRAPHIC AND SPATIAL ANALYSIS OF THE LABOUR CAMP FOR JEWS IN SEREĎ (1941–1944): UNVEILING HISTORICAL INSIGHTS THROUGH DATA SCIENCE TECHNIOUES¹

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The systematic persecution of the Jewish population organised by the ruling regime of the Hlinka Slovak People's Party (Hlinkova slovenská ľudová strana, HSPP) on the territory of the Slovak Republic in 1939–1945, a satellite state of the Nazi Third Reich, included the forced labour deployment of Jews.

The system of forced labour of Jews in the territory of Slovakia (1939–1945) gradually created three larger labour camps for Jews (Pracovný tábor Židov) in Nováky, Sereď and Vyhne. The study focuses on the Labour Camp for Jews in Sereď, which was, in terms of size, the second largest labour camp of its kind in Slovakia between September 1941 and the end of August 1944.

The study aims to answer several partial questions concerning the demography of the prisoners of Sered' camp in the period from September 1941 to the end of August 1944, i.e. at the time when it was partially or fully functioning as a labour camp under complete control of the Slovak state authorities and the power structures of the HSPP regime. In this respect it aims to provide more information on the number of labour camp inmates of the Sered' camp in different periods, on some of their demographic characteristics (age structure of inmates and gender structure of inmates), as well as on several data not yet quantified by research (number of children born in the camp, number of deaths of inmates in the camp) based on specific previously unprocessed sources.

Another aim of the study is to provide the results of a spatial analysis of the data on labour prisoners using a geographical information system (QGIS) to clarify a question, so far unanswered by research, about the geographical origin of the labour prisoners of the labour camp in Sered',

¹ The study was prepared within the project VEGA Reg. No. 2/0106/24 Migračné vlny v 20. storočí a ich vplyv na slovenskú spoločnosť. Kontexty, aspekty a súvislosti [Migration waves in the 20th century and their impact on Slovak society. Contexts and aspects] at the Institute of History, Slovak Academy of Sciences.

both in terms of the total number of prisoners and in the different periods of the existence of this camp.

Both the demographic and spatial analysis presented in this study are based on data on the prisoners of the Sered' labour camp captured in a specific written source—the contemporary prisoners' card catalogue, which consists of a total of 1404 paper cards. After the necessary data normalisation, prisoners' data were transcribed into the dataset and subjected to data analysis using the Python programming language and data spatial analysis using the QGIS 3.38 software. The study is thus an attempt to apply digital humanities methods, which integrate computational tools and techniques with traditional humanities disciplines.

Keywords: Holocaust. Jews. Forced labour. Sered'. GIS. Spatial analysis. Data science. Digital humanities.

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Introduction

The systematic persecution of the Jewish population organised by the ruling regime of the Hlinka Slovak People's Party (*Hlinkova slovenská ľudová strana*, HSPP) on the territory of the Slovak Republic in 1939–1945, a satellite state of the Nazi Third Reich, included the forced labour deployment of Jews.

The genesis of the system of forced labour of Jews in the territory of Slovakia (1939–1945) was somewhat complicated, but in principle, it can be said that in the years 1941–1944, it gradually created three larger labour camps for Jews (*Pracovný tábor Židov*) in Nováky, Sered' and Vyhne and several smaller labour camps, for which the regime used the designation "Labour Centre for Jews" (*Pracovné stredisko Židov*) in various places in Slovakia.² Forced labour of Jews in the army was a separate chapter of the forced labour of the Jews in the Slovak Republic.³

This study focuses on the Labour Camp for Jews in Sered', which was, in terms of size, the second largest labour camp of its kind in Slovakia between September 1941 and the end of August 1944. After the occupation of Slovakia by the forces of Nazi Germany, this camp was transformed into a concentration camp under the control of the forces of Nazi Germany (September 1944 – March 1945).⁴

² Labour Centres for Jews existed in Ilava, Degeš, Nitra, Žilina, Ivánka pri Dunaji, Svätý Jur and Devínska Nová Ves. Slovenský národný archív (SNA), f. Ministerstvo vnútra (MV), carton No. 411, folder Pracovné tábory, 143-25/31/43.

³ BAKA et al. Práca-česť, robota-povinnosť. Vojensky organizované pracovné jednotky Židov na Slovensku v rokoch 1939–1943. Bratislava 2023.

⁴ HLAVINKA and NIŽŇANSKÝ. *Pracovný a koncentračný tábor v Seredi, 1941–1945*. Bratislava 2009, pp. 96-133.

The buildings of the former labour camp for Jews in Sered' have been preserved, and as of January 2016, they house the only Holocaust Museum in Slovakia

The history of the Sered' labour camp has already been elaborated. In 2009, a monograph on the history of the camp was published in Slovak by Ján Hlavinka and Eduard Nižňanský. Partial questions on the history of the Sered' camp have been addressed by several historians, such as Ivan Kamenec, Denisa Nešťáková and others. Some of the primary sources on the history of the Sered' camp have been published in the 5th volume of the edition *Holokaust na Slovensku* (Holocaust in Slovakia), which deals with the issue of Slovak labour camps and labour centres for Jews and was compiled by Eduard Nižňanský, Igor Baka and Ivan Kamenec. In addition to academic publications, several popular works on the Sered' labour camp exist.

This study aims to answer several partial questions concerning the demography of the prisoners of Sered' camp in the period from September 1941 to the end of August 1944, i.e. at the time when it was partially or fully functioning as a labour camp under complete control of the Slovak state authorities and the power structures of the HSPP regime.

We aim to provide more information on the number of labour camp inmates of the Sered' camp in different periods, on some of their demographic characteristics (age structure of inmates and gender structure of inmates), as well as on several data not yet quantified by research (number of children born in the camp, number of deaths of inmates in the camp) based on specific previously unprocessed sources.

Another aim of the study is to provide the results of a spatial analysis of the data on labour prisoners using a geographical information system (QGIS¹⁰) to clarify a question, so far unanswered by research, about the geographical origin of the labour prisoners of the labour camp in Sered', both in terms of the total number of prisoners and in the different periods of the existence of this camp.

⁵ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi.

⁶ KAMENEC. Koncentračné a pracovné tábory pre rasove prenasledovaných občanov na Slovensku v rokoch 1938–1945. In *Terezínske listy* 5. 1975, p. 12-25.

⁷ NEŠŤÁKOVÁ. "Our mother organized it all": The Role of Mothers of Sered Camp in the Memories of Their Children. In *If This is a Woman. Studies on Women and Gender in the Holocaust.* Boston 2021, pp. 83-100.

⁸ NIŽŇANSKÝ; BAKA and KAMENEC, eds. Holokaust na Slovensku 5. Židovské pracovné tábory a strediská na Slovensku 1938–1944. Dokumenty. Bratislava 2004.

⁹ BERÁNEK and KORČOK. *Holokaust na Slovensku – Seredské svedectvá*. Bratislava 2021.

¹⁰ QGIS DEVELOPMENT TEAM. QGIS Geographic Information System. Open Source Geospatial Foundation Project. http://qgis.osgeo.org. 2024

Sources and methods

Both the demographic and spatial analysis presented in this study are based on data on the prisoners of the Sered' labour camp captured in a specific written source – the contemporary prisoners' card catalogue, which consists of a total of 1404 paper cards. The basis for the analysis was digital copies of these cards stored in the archives of the United States Holocaust Memorial Museum, Washington, D.C., USA.¹¹ The prisoner cards capture basic data on each prisoner of the Sered' labour camp who was assigned to the labour process in the camp and their family members (all of whom were referred to by the contemporary term "enlisted men"). An analysis of the cards shows that they do not refer to the so-called detainees, i.e. persons who were concentrated in the Sered' camp during the period of the deportation of Jews from Slovakia (25 March 1942 – 20 October 1942) before the planned deportation (see below).

In addition to the basic identification data of the prisoner, from which it is possible to deduce gender and age on the date of arrival in the camp, the cards also contain data on the prisoner's date of arrival in the camp, as well as the date of departure from the camp, if any. In addition to these data, the prisoner's previous residence is also indicated in the file. In cases where a prisoner has escaped or died, this fact shall be indicated on the prisoner's card. The cards are filled in consistently and with no serious clerical errors. At the same time, it is necessary to point out that the card file in question is a schematic source with its interpretative limits.

Prior to the analysis, we created a dataset in CSV format by transcribing the information from the cards, which is processable by computer software. In case of isolated deficiencies in the source (missing data on a particular card), other primary sources stored mainly in the Slovak National Archives were used to supplement the emerging dataset.

Prisoners' data stored in the created dataset were then, after the necessary data normalisation, subjected to data analysis using the Python programming language, as well as data spatial analysis using the QGIS 3.38 software as mentioned above. The data processing and spatial analysis results were then interpreted based on previously published academic outputs and other sources. The study is thus our attempt to apply digital humanities methods, which integrate computational tools and techniques with traditional humanities disciplines.

¹¹ United States Holocaust Memorial Museum Archives (USHMMA), Record Group (RG)-57.021, folder 0001.

¹² Artificial Intelligence, specifically the Chat GPT, O1-preview model, was used to create the Python programming language code.

Basic periods in the history of the camp in Sered' and its functioning

Proper interpretation of the data and answers to the research questions is only possible when they are placed in their historical context and a specific stage in the history of the Sered' camp. As indicated in the introduction, the labour camp for Jews in Sered' went through several developmental stages (which reflected changes in the anti-Jewish persecutions in Slovakia in 1941–1945).

We divide the history of the Sered' camp in the period we are studying, i.e. from the beginning of its existence to the end of August 1944, into three periods:

- Period 1: from 1 September 1941 to 25 March 1942 (i.e., from the beginning of the construction to the beginning of the so-called first wave of deportations of Jews from Slovakia)
- Period 2: from 26 March 1942 to 20 October 1942 (the period of the socalled first wave of deportations of Jews from Slovakia)
- Period 3: from 21 October 1942 to the end of August 1944 (the period of the labour camp).

The first period (Period 1) was mainly occupied with the construction of the first accommodation and production capacities of the camp.

The decision to build a labour camp for Jews in Sered' was taken by the Ministry of the Interior of Slovakia (1939–1945) in the process of searching for an answer to the question of what to do with thousands of Jews who, as a result of the systematic Aryanization of their residential property had to leave Bratislava and other major cities, and lost the ability to support their families.¹³

The so-called Aryanization of enterprise property culminated in mid-1941, and the representatives of the HSPP regime saw that the mass liquidation and Aryanization of companies, together with other measures to exclude Jews from economic and social life in Slovakia, ¹⁴ had severe social consequences for the entire Jewish population of Slovakia at that time. ¹⁵ This was also one of the main reasons for the decision to build large labour camps for Jews in Slovakia, which would be used for the production of scarce goods and the sale of which would

¹³ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, pp. 17-19.

¹⁴ The Government of the Slovak Republic was empowered to exclude Jews from economic and social life in Slovakia and to transfer their property into the hands of Christians within one year by Constitutional Act No. 210/1940 Sl.z from 2 September 1940. Constitutional Act No. 210/1940, *Slovenský zákonník*, p. 343.

¹⁵ At the end of 1941, the absolute majority of Jews were in a catastrophic social situation as a result of the anti-Jewish policies of the People's regime, and in particular the Aryanization of property. As many as 16,000 Jewish households (out of a total of about 22,000) were unable to live on the proceeds of their property at the beginning of 1942. NIŽŇANSKÝ and KAMENEC, eds. *Holokaust na Slovensku 2. Prezident, vláda, Snem SR a Štátna rada o židovskej otázke (1939–1945). Dokumenty.* Bratislava 2003, pp. 180-181.

provide a livelihood for the Jewish population imprisoned in the camps. ¹⁶ The Ministry of the Interior moved from ideas to action in September 1941, when construction of the camps in Sered' and Nováky began. ¹⁷ Later, the Ministry added to the labour camps camp in Vyhne, which had a different prehistory. ¹⁸

Shortly after the beginning of the construction of the camps in Sered' and Nováky, more precisely at the end of 1941, the leading representatives of the HSPP regime decided to deport the Jewish population from Slovakia to the territory under Nazi control and thus definitively "solve" the problem of the socially deprived Jews. One of the leading representatives of the HSPP regime responsible for the anti-Jewish policy, the Minister of the Interior and Main Commander of the Hlinka Guard (*Hlavný velitel' Hlinkovej gardy*), Alexander Mach, made it clear in March 1942 that the idea of deporting the Jews from Slovakia was "raised" at a meeting with Heinrich Himmler in October 1941. Since then, it has been "impossible to sleep on it". 19 The day after the deportations began, in March 1942, the same A. Mach, at a meeting of the State Council (Štátna rada), named the specific purpose of the deportations, saying: "With the help of the Germans, we want to get rid of the Jews." 20

It can be assumed that at that time, and for some time afterwards, A. Mach (and perhaps not only him) had doubts about whether there would be any need for more labour camps. In April 1942, he asked his subordinates whether any labour camps were still necessary and whether they would be worthwhile.²¹

Meanwhile, the camp in Sered' (as well as the one in Nováky) was designated "Concentration Centre for Jews" (*Koncentračné stredisko Židov*) at the beginning of March 1942, and its main purpose for several months became the

¹⁶ Andrej Steiner, an architect, one of the officials of the Jewish Centre (Ústredňa Židov), the only permitted organisation of Jews in Slovakia, and one of the leading figures of Jewish illegality, testified before the National Court (Národný súd) after the Second World War: "The labour deployment of Jews originated in 1941, when Jews were excluded from economic life [...]. In 1941, a commission went to Poland to look into Polish labour camps [meaning Nazi labour camps on the territory of occupied Poland – note J.H., T. G.], because [Izidor] Koso and [Alexander] Mach decided to set up such camps in Slovakia as well, because the Jewish question was becoming pressing, and the more Jews were being excluded from the labour process. This was in the autumn of 1941[...] When the commission mentioned above returned from Poland, I immediately received an order from Dr. Koso to set up such camps." USHMMA, RG-57.004M, 0059, 00000925.jpg.

¹⁷ HLAVINKA and NIŽŇANSKÝ, *Pracovný a koncentračný tábor v Seredi*, p. 20.

¹⁸ NIŽŇANSKÝ; BAKA and KAMENEC. *Holokaust na Slovensku 5. Židovské pracovné tábory a strediská na Slovensku 1938–1944*, pp. 23-26.

¹⁹ SNA, fond (f.) Úrad predsedníctva vlády (ÚPV), carton No. 242, 17/ taj. 1942, Zápisnica o III. zasadnutí Štátnej rady, p. 31.

²⁰ SNA, f. ÚPV, carton No. 242, 17/ taj. 1942, Zápisnica o III. zasadnutí Štátnej rady, p. 31.

²¹ SNA, f. MV, carton No. 234, 2569/42.

concentration of thousands of Jews destined for deportation across the border to Slovakia. However, the construction of production workshops and the capacity of the intended labour camps was not stopped. Even during the deportation of Jews (25 March 1942 – 20 October 1942), the first production in a carpentry workshop was started in Sered' with the help of the Jewish Centre.²²

Thus, in this second period (from 25 March 1942 to 20 October 1942), the Sered' camp fulfilled two functions: it concentrated Jews intended for deportation from Slovakia, and at the same time, actual production (in the carpentry workshop) began there. By this dual purpose, the Jews brought to the camp were divided into two categories of prisoners: detainees (*zaistenci*) and dislocated persons (*dislokovani*), later called enrolees (*zaradenci*). While the former were detained and concentrated for deportation, the latter (dislocated persons and enrolees) were assigned by the Ministry of the Interior to work in the camp construction and workshops.²³

Life for both groups of prisoners in the camp was tough at the time. It was accompanied by daily violence on the part of members of the Hlinka Guard, who guarded the camp and who also organised the assembly of transports from the detainees. Physical assaults and beatings of prisoners, as well as various forms of psychological pressure, were a daily part of camp life. The camp commander, Jozef Vozár, showed himself to be a severe antisemite and an uncompromising organiser of transports.²⁴

The first transport of Jews as part of the deportations left Sered' on 29 March 1942 and was bound for Lublin.²⁵ It was followed by several other transports, and the total number of people deported from Sered' in the course of the deportations of Jews from Slovakia is estimated at more than 4,463.²⁶

The mass deportations of Jews from Slovakia to the territory controlled by Nazi Germany, during which the HSPP regime deported more than 57,600 Jews from Slovakia to the Auschwitz concentration and extermination camp and Nazi camps and ghettos in the Lublin district, were suspended by regime officials on 20 October 1942.²⁷ The last transport from Sered' left in mid-September 1942; however, for the sake of accuracy, the third period in the camp's history is dated 20 October 1942. From this date on, the camp concentrated on production, and this state of affairs persisted until the end of August 1944, when it was exclusively

²² HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, p. 47-48.

²³ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, p. 33.

²⁴ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, pp. 28,43,44.

²⁵ SNA, f. MV, carton No.227, Transport list, Sered'-Lublin, 29. 4. 1942.

²⁶ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, p. 148.

²⁷ NIŽŇANSKÝ ed. Holokaust na Slovensku 6. Deportácie v roku 1942. Dokumenty. Bratislava 2005, p. 6.

a labour camp for Jews. The living conditions of the prisoners in the camp gradually improved. Although the threat of renewed deportations of Jews still hung over the camp inmates (and the Minister of the Interior, A. Mach, spoke openly about the resumption in February 1943 in a radio broadcast speech), with the help of the Jewish Centre, several facilities were gradually established in the camp, which helped the Jews imprisoned there to live in slightly better conditions. Among other things, a school for children and a day nursery were opened, and the camp also provided primary medical care. With some simplification, it can be stated that the camp was a prison for hundreds, and later more than a thousand, prisoners of various ages and sexes, who were imprisoned not based on a court decision but because they fell within the regime's definition of a Jew.

Until March 1944, they continued to be guarded by members of the Hlinka Guard, whose numbers were reduced after the deportations and subsequently replaced by gendarmes.²⁹

Production in the camp was concentrated in several workshops, which grew in number, of which the carpentry workshop maintained a dominant position. In addition to the main production in the carpentry workshop and a smaller production in the concrete pipe workshop, production in the so-called subsidiary workshops, which were intended to employ the family members of the carpenters, also began in Sered' at the time of the deportations. This led to the creation of the clothing workshops, the "hat workshop" and the "net workshop". Production began in the so-called brush workshop, the production of cords and the engraving workshop.³⁰ The tailoring workshop produced trousers and aprons, etc. The "hat workshop" produced hats and caps for various merchants, and the "net workshop" worked on the production of net bags and hair nets.³¹ In addition to the workshops, an experimental silkworm breeding farm was set up in the Sered' camp during the deportation period. Later, angora rabbit breeding or toy production was established.³²

Life in the camp, however, was a life of imprisonment without end and with the constant fear of possible deportation. It is probable that if they had been reinstated, it would have been the prisoners of the labour camps who would have been deported first, as they were not exempted from deportation by any work permits from the ministries nor by early baptism (before March 14, 1939), or by mixed marriage, let alone by the so-called total presidential exemption (such persons would not have been in the camp at all).

²⁸ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, p. 62.

²⁹ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, p. 62.

³⁰ HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, p. 49.

³¹ HLAVINKA and NIŽŇANSKÝ, *Pracovný a koncentračný tábor v Seredi*, p. 49.

³² HLAVINKA and NIŽŇANSKÝ, Pracovný a koncentračný tábor v Seredi, p. 68.

Therefore, prisoner escapes were a normal part of the functioning of the camp, and illegal anti-regime activities were gradually developed in the camp.³³

The last and the longest period in the history of the labour camp under the jurisdiction of the Ministry of the Interior of Slovakia (1939–1945) ended with the occupation of Slovakia by the forces of Nazi Germany, which began on 29 August 1944 and the declaration of the Slovak National Uprising on the same day. In response to these events, the gendarmes opened the gates of the camp in Sered' and released its prisoners. After a brief period of chaos and lawlessness, during which the camp was also looted, German troops took control of the camp. They began to use it as a concentration camp for the concentration of Jews rounded up by the Operational and Special commandos (*Einsatzkommandos and Sonderkommandos*) of the Operational Group H of the Sipo and SD (*Einsatzgruppe H der Sipo und des SD*) seated in Bratislava.³⁴

From the end of September 1944 onwards, the new camp commander, Alois Brunner, and his subordinates started sending transports from Sered' to German concentration and extermination camps. However, this period is no longer the subject of our research in this study.

Total number of prisoners in the Sered' labour camp in 1943–1944

The number of labour camp inmates at Sered' during its management by the Ministry of the Interior of Slovakia has been only briefly addressed in research, and the development of the number of inmates has never been thoroughly documented. The total number of prisoners was published in the aforementioned monograph by Hlavinka and Nižňanský only for the months of 1943 and the months of January and July 1944.

Our analysis of the Sered' camp records shows that the numbers given in the cited work for the months of 1943 generally conform with the records. The differences in the counts are minimal and at the level of statistical error. This "test year 1943" also justifies further analytical use of the source.

Month	Number of camp inmates according to Hlavinka and Nižňanský (2009) ³⁵	Number of inmates based on the analysis of cards
January 1943	966	969
February 1943	992	986

³³ HLAVINKA and NIŽŇANSKÝ, *Pracovný a koncentračný tábor v Seredi*, pp. 61-62.

³⁴ ŠINDELÁŘOVÁ. Einsatzgruppe H. Púsobení operační skupiny H na Slovensku 1944/1945 a poválečné trestní stíhaní jejích příšlučníkú. Praha 2015.

³⁵ HLAVINKA and NIŽŇANSKÝ, *Pracovný a koncentračný tábor v Seredi*, p. 166.

March 1943	992	993
April 1943	992	990
May 1943	984	981
June1943	1050	1044
July1943	1049	1053
August 1943	1040	1062
September 1943	1055	1074
October 1943	1056	1080
November 1943	1059	1089
December 1943	1066	1107

Figure No.1: Total number of inmates of the labour camp for Jews in Sered' at the end of each month (year 1943)

Our data analysis of the prisoners' records provides us with data on the number of inmates of the labour camp for Jews in Sered' at the end of each month in 1944 as follows (See Figure No.2).

Month	Number of inmates
January 1944	1100
February 1944	1107
March 1944	1102
April 1944	1109
May 1944	1114
June1944	1130
July 1944	1147 ³⁶
August 1944	1148

Figure No. 2: Total number of inmates of the Labour camp for Jews in Sered' at the end of each month (year 1944)

Based on the data obtained, it is possible to produce a graph of the total number of inmates at the end of the month, which shows that the total number of inmates had a continuous upward tendency. A more significant increase in the number of prisoners assigned to work occurred in June 1943. It is known that at that time some of the Jewish young men from the disbanded VI. Labour

³⁶ Nižňanský, Baka, and Kamenec state there were 1181 prisoners at the camp in July 1944. NIŽŇANSKÝ; BAKA and KAMENEC, eds. *Holokaust na Slovensku 5*, p. 20.

Battalion were transferred to the camp.³⁷ The overall development of the number of prisoners is shown in Figure No 3.

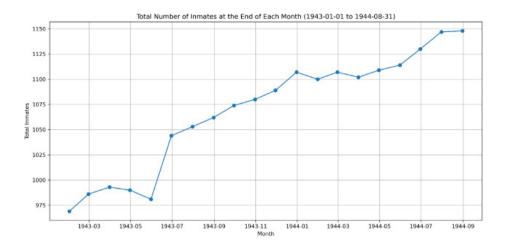


Figure No. 3: Total number of inmates of the Labour camp for Jews in Sered' at the end of each month according to the dataset (January 1943 – September 1944)

Age Distribution of Prisoners

The dataset created from the records of the prisoners of the camp in Sered' allowed us to analyse the age composition of the prisoners. Analysing the age composition of all prisoners for the entire period of labour deployment in Sered' (September 1941 – end of August 1944), the analysis shows that the average age (median age) of the prisoners was 36 years. The lowest age was 0 years (as there were children born in the camp), and the highest age of a prisoner was 92 years. If all cards are included in the analysis, then the age distribution of the camp population shows that the prisoners incarcerated in the camp as forced labourers were primarily of working age. However, children and the elderly comprise a significant proportion of the camp population. A more precise idea of the age structure of all prisoners over the entire period under review is given in Figure No. 4.

³⁷ SNA, f. MV, carton No. 581, 1483/43.

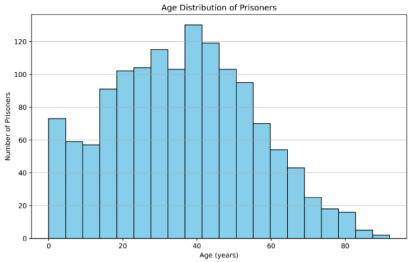


Figure No. 4: Age Distribution of Prisoners (whole dataset)

Gender structure of prisoners

Analysis of the dataset shows that during the entire period when the labour camp for Jews in Sered was under the control of the Slovak Ministry of the Interior (i.e. until September 1944), 824 male and 578 female prisoners were incarcerated in the camp as labourers. The percentage distribution of the entire prison population can be expressed as follows: 58.8% male prisoners and 41.2% female prisoners, regardless of age (See Figure No. 5).

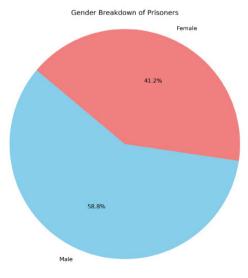


Figure No. 5: Gender Distribution of Prisoners (whole dataset)

If we observe the gender structure of the labour camp inmates in Sered' in the stages of its existence, we can see differences in the individual periods.

In the first period studied, i.e. up to the beginning of the deportation of Jews from Slovakia, males outnumbered females among the registered prisoners. This is in accordance with the sources which show that the first to be stationed in the camp were the craftsmen necessary to construct its accommodation facilities, only some of whom had their family members with them. In the second period (Period 2), i.e. the period when the deportations of Jews from Slovakia were taking place, the representation of the female sex among the registrants increased and almost levelled off. In the third period, the period of the labour camp only, the proportion of male prisoners increased again.

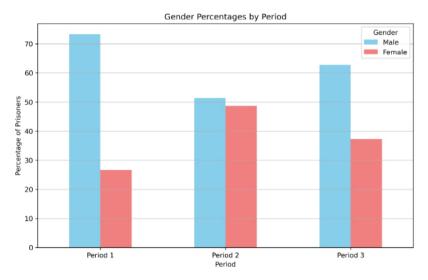


Figure No. 5b: Gender Distribution of Prisoners by Period (in percentages, whole dataset).

The card catalogue also allows us to draw conclusions in relation to the problem of children born in the labour camp for Jews in Sered'. According to the data, among the labour camp inmates, a total of 24 children were born in the period under review. The births can be traced from May 1942 until August 1944. The first inmate born in the camp (an enrolled child) was registered on May 26, 1942,³⁸ and the last on August 8, 1944.³⁹ Three of the newborns born in the camp also died there.

³⁸ Card of R. Krumholzová, USHMMA, RG-57.021, folder 0001.

³⁹ Card of T. Kohn, USHMMA, RG-57.021, folder 0001.

Just as it is possible to keep track of newborn children, it is also possible to find basic data on deaths in the camp from the data. A total of 22 inmate deaths (including the three newborns mentioned above) were recorded among the camp's inmates.

Spatial analysis: Geographical origin of the Sered' camp prisoners Before delving into the results of the spatial analysis of the dataset (derived from the camp card file), it is essential to first contextualise the historical and administrative boundaries of Slovakia during the period under study. The borders of the Slovak Republic (1939–1945) differed significantly from the current boundaries of Slovakia due to territorial changes following the Munich Agreement and the Vienna Arbitration (2 November 1938), the Hungarian occupation of parts of eastern Slovakia from the spring of 1939, and Slovakia's occupation of parts of Poland in September 1939.

The administrative divisions of Slovakia were also distinct and, for this analysis, reflected the status established on 1 January 1940. To ensure clarity and comprehensibility in interpreting the spatial data, we include a map diagram at the beginning of this section, illustrating the territorial and administrative boundaries of Slovakia during the analysed period (see Figure No.6). This map was created using a combination of sources, including the Lexicon of Municipalities of the Slovak Republic (*Lexikón obcí Slovenskej republiky*) from 1942,⁴⁰ the Atlas of the Slovak Socialist Republic⁴¹ and the cadastral boundaries of the Slovak Republic.⁴² The administrative boundaries of the districts reflect the situation before the creation of the Vyšný Svidník district.

For the analysis of the geographic origin of prisoners, we focused on the origin of prisoners according to their last place of residence before arriving at the camp. It is important to note that the term "geographic origin" could also refer to an individual's place of birth. However, this study specifically examines the place of residence before internment.

The analysis reveals that the majority of Jews interned in the Sered' camp originated from western Slovakia (See Figure No. 7), particularly the Bratislava region and its surroundings. Other significant regions included Záhorie, Považie, Ponitrie, and Turiec, with Bratislava, Trnava, and Nitra districts being the most

⁴⁰ Lexikón obcí Slovenskej republiky. Bratislava 1942.

⁴¹ MAZÚR. Atlas Slovenskej socialistickej republiky In Geografický časopis, Vol. 24, No.2, pp. 89-95. 0016-7193; MAZÚR and JÁKAL. Atlas Slovenskej socialistickej republiky. Bratislava 276 p.

⁴² Geodetický a kartografický ústav Bratislava, 2024. *Základná úroveň/ ZBGIS – Administratívne hranice*. [online] https://www.geoportal.sk/files/zbgis/na_stiahnutie/shp/ah_shp_0.zip.cc.By 4.0

prominent sources of prisoners. The dominance of prisoners from western Slovakia becomes even clearer when analysed by contemporary counties (župy).

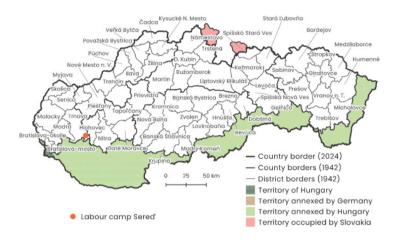


Figure No. 6: Map diagram illustrating the territorial and administrative boundaries of Slovakia (1942, before the creation of the Vyšný Svidník district)

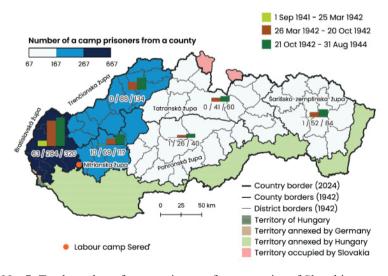


Figure No. 7: Total number of camp prisoners from counties of Slovakia

The largest numbers of prisoners came from Bratislava County (Bratislavská župa, 667), Nitra County (Nitrianska župa, 196), and Trenčín County (Trenčianska

župa, 220). In Šariš-zemplín county (Šarišsko-zemplínska župa), higher numbers of prisoners were observed only in the districts of Michalovce (52), Prešov (21), and Bardejov (18), originated from municipalities with significant Jewish communities, including localities of Michalovce, Lastomír, Prešov, Kapušany, and Bardejov (See Figure No. 8).

Conversely, there were no recorded prisoners from the districts of Považská Bystrica, Nová Baňa, and Lovinobaňa, highlighting regional variations in the places of origin of prisoners (See Figure No. 8).

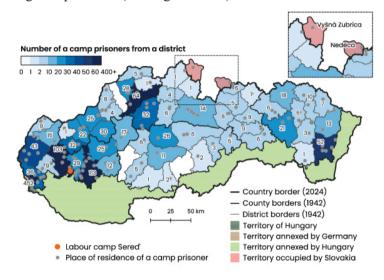


Figure No. 8: Total number of camp prisoners from districts of Slovakia

During the first period (1 September 1941 - 25 March 1942), the Sered' camp primarily housed prisoners from western Slovakia.

The most significant districts were Bratislava-mesto (55), Nitra (8), and Trnava (7), with individual prisoners coming from Hlohovec, Malacky, Zlaté Moravce, Banská Bystrica, and Bardejov. In the second period (26 March 1942 – 20 October 1942), imprisonments increased significantly, with Bratislava-mesto continuing to dominate (225 prisoners). Notably, half of all imprisonments from Bratislava occurred during this phase. Other districts with high numbers included Trnava (47), Nitra (45), Bánovce nad Bebravou (25), Topoľčany (15), Nové Mesto nad Váhom (13), and Trenčín (14). However, there were anomalously high numbers of imprisonments from Michalovce (26) and Prešov (15).

In the third period (20 October 1942 – end of August 1944), Bratislava-mesto (172), Nitra (60), and Trnava (49) remained dominant. However, imprisonments began to emerge from districts previously less affected, such as Bratislava-okolíe

(34), Malacky (33), Skalica (9), and Senica (15). Increased imprisonments were also observed in Piešťany (25) and Hlohovec (25). Significant contributions to imprisonment numbers during this period came from the Žilina and Turiec regions, particularly Žilina (57), Veľká Bytča (15), and Martin (21).

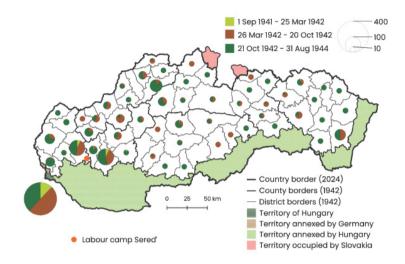


Figure No. 9: Total number of camp prisoners from counties of Slovakia divided by periods

Additionally, imprisonments of Jews from eastern Slovakia persisted, particularly from Michalovce (26), and other districts in Šariš-Zemplín County (Šarišsko-Zemplínska župa) began to appear. Those included Giraltovce, Stropkov, Medzilaborce, Humenné, Vranov nad Topl'ou, and Trebišov. These were the only prisoners from Šariš-Zemplín County during the studied period.

In connection with the origin of the prisoners of the camp in Sered', geospatial analysis led us to an important new finding: among the prisoners of the camp were two persons who originally lived in the Polish territory occupied by Slovakia after joining Nazi Germany's attack on Poland in September 1939. They are Dezider Herz from Vyšná Zubrica and Adolf Krumholz from Nedeca. Dezider Herz was registered in the camp in Sered' on 31 December 1942 and Adolf Krumholz on 26 May 1942.⁴³ Therefore, it is possible to say that in the Sered' camp, Jews from the territory of occupied Poland were also detained, which de facto modifies the narrative that has so far focused exclusively on Slovakia.

⁴³ United States Holocaust Memorial Museum Archives (USHMMA), Record Group (RG)-57.021, folder 0001. Cards of Dezider Herz (456) and Adolf Krumholz (642).

Conclusion

The card catalogue of the Labour camp for Jews in Sered' is a unique, albeit schematic source, which has its analytical and interpretive limits. After transcription and conversion into a format that can be processed by computer software, we have analysed the data (using data science techniques) and the resulting statistical and spatial data yields little known or unknown information. Some of the results may serve as a starting point for further analyses, while the overall picture may only be revealed when compared with other camps.

The spatial analysis reveals several new insights. It brings knowledge about the geographical origin of the prisoners of the Sered' camp. We know more about where the prisoners of the camp came from at different stages of its existence until September 1944. At the same time, we know that Jews from the Slovak-occupied territory of Poland were also imprisoned in the camp.

Based on this analysis, we can also raise several questions that remain open for the time being. When analysing the origins of prisoners, it is essential to go beyond absolute numbers and compare these data with the Jewish population sizes in each region to assess the proportional impact of imprisonments. Normalising prisoner origins by population sizes allows us to raise the question of why the Jewish population seemed to be disproportionately affected by the imprisonment in the Sered' labour camp. Did significant differences in prisoner origins reflect the administrative, demographic, and logistical complexities of organising their imprisonment in the Sered' camp during the studied period? Did local circumstances, such as the size and density of Jewish populations as well as previous deportations (25 March – 20 October 1942) directly influence the number of prisoners?

Comparing the origin of prisoners from the Labour Camp for Jews in Sered' with other camps could provide a broader perspective on whether Camp Sered' trends were unique or reflected a larger, systematic strategy. This comparison may reveal how the orders of the Ministry of Interior, geography, but also regional administrative structures, and transport availability influenced deportation practices differently across regions.

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