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Social Estates, Occupation, and HISCO: A New Study of Odesa in 1897

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Odesa's Many Frontiers

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Article abstract

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Social Estates, Occupation, and HISCO: A New Study of Odesa in 1897

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Abstract: Odesa was one of the largest and most important cities in the Russian Empire. Numerous studies have addressed the economic development and social structure of Odesa, but there are some gaps in the knowledge of the social stratification during the nineteenth century. Although most studies of the social and economic histories of Ukraine provide qualitative or highly aggregated quantitative data, micro-data at the level of individuals and households in Ukraine are rare. This paper provides new micro-data from the 1897 census in Odesa. It is the first attempt to code occupations of Odesa workers according to the Historical International Standard Classification of Occupations (HISCO). Of the 2,435 individuals in the 457 sampled households analyzed, 1,443 individuals demonstrate 86 of the unique occupations coded with the international HISCO scheme. The analysis compares these HISCO occupations by the social estates, the gender, and the language of the surveyed individuals. The study confirms several old hypotheses but also unearths new findings regarding the number of urban females involved in service and sales occupations.[1]

Keywords: occupations, social stratification, HISCO, Ukraine, Odesa.

INTRODUCTION

Odesa was one of the largest and most complex cities in the Russian Empire; its growth and expansion have been compared to that of Chicago in the US (Herlihy). Commerce and trade became central pillars of its development in the nineteenth century (Hilton 63–65). In spite of much scholarly attention devoted to its importance and fast commercial development, very little is known about the occupational structure of Odesa. This issue goes beyond Odesa. Most of the existing research of the Russian

[1] The author is indebted to the volunteers who helped to collect and code these data. The names are listed alphabetically as they were written in the final database of the volunteers: Gutsa, Klepnikova, Kostiv, Londar, Moshenska, Podgornova, Rimihanova, Supriuniuk, Vincent. I also acknowledge the input of Dr. Ihor Serdiuk from the Poltava V. H. Korolenko National Pedagogical University and the Ukrainian Leadership Academy.

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Empire focuses on the social estates of inhabitants, omitting their occupations (see Vladimirov for a discussion of this issue). In contrast, most of the international scholarship pertaining to socio-economic developments in the eighteenth-nineteenth centuries is focused on citizens' occupations (Leeuwen and Maas).

What were citizens' occupations in Odesa in the nineteenth century? What can citizens' occupations tell us about nineteenth century Odesa? Historians use occupations to study social status (Bottero and Prandy), social class (Putte and Miles; Leeuwen and Maas), careers (Mitch et al.), living standards and wages (Allen et al.; Humphries and Weisdorf), female labour participation (Boter), and social mobility between generations (Maas and Leeuwen). Although such studies of the Russian Empire are surprisingly scarce, they can provide a global comparative perspective and address questions of gender inequality and living standards.

Detailed data regarding citizens' occupations can shed light on the social stratification of Odesa in the nineteenth century. Most historians consider the Russian Empire to be socially divided into nobility, clergy, urban dwellers, peasantry, and military (Mironov). However, this classification is not always efficient when demographic or economic data are analyzed. For instance, both low-skilled workers (factory workers, drivers, waiters) and skilled workers (engineers, artists, clerks, accountants, shopkeepers) who lived in large cities in the Russian Empire were likely to be classified as "urban dwellers." International scholarship has now shown that such amalgamation is problematic. High-skilled workers were not likely to have profound social interactions with low-skilled workers (Bottero and Prandy; Lambert et al.). Another issue is that social estates were often misclassified. Particularly in the 1897 census, industrial workers in Odesa were often classified as peasants (Herlihy). Although peasant communes restricted migration, there was still significant labour migration from rural areas to urban industrial areas of the Russian Empire in the late nineteenth century (Borodkin et al.; Burds; Markevich and Zhuravskaya). Many peasants arrived in Odesa to find urban occupations. Many factory workers were classified as peasants because that was their inherited legal status, although the inherited legal status did not reflect what they did for a living or what kind of social networks they had. Therefore, a more refined top-down framework is needed, with the creation of small micro-groups based on occupation.

Scholars of Odesa have made attempts to differentiate worker groups. For example, Herlihy and Vassilikou describe the occupational structure of Odesa in 1897 using arbitrary categories such as "private work and service," "high-status occupation," "low-status occupation," "middle class." Some studies go beyond Odesa and address the Ukrainian part of the Russian Empire. Such studies focus on specific occupations (sometimes specific social groups) that were pivotal in the industrialization and modernization

of Ukraine in the nineteenth and early twentieth centuries; for instance, new large business firms (Kulikov; Kulikov and Kragh), merchants (Vassilikou), and entrepreneurs (Vodotyka). However, such studies were not focused on micro-level occupational data. They focused exclusively on new industrial or business activities, avoiding peasant and low-skilled labour. Currently, no studies of occupations in Odesa are based on internationally validated methodology or classification.

Although studies of occupations in the Russian Empire are scarce, international historical studies have relied on the Historical International Standard of Classification of Occupations (HISCO), which was adopted in many countries (Lambert et al.; Leeuwen et al.; Leeuwen and Maas). Only a few studies of occupations in the Russian Empire have used HISCO; most were executed by small groups of historians from Altai University (Vladimirov; Briukhanova and Vladimirov). These studies analyzed data from the 1897 census (the cities of Tobolsk and Iaroslavl), metric books (the cities of Barnaul, Saint Petersburg), and a list of voters at the Russian Constituent Assembly election (the city of Tambov). A collective monograph from this group featured a study of Sevastopil (Khabarova); it is possibly the only existing study using HISCO in nineteenth century Ukraine. A single study applied HISCO to eighteenth century Poltava (Brik).

There are no empirical studies of Odesa using HISCO (or any other contemporary classification). Moreover, studies using HISCO are extremely rare in the Russian Empire. Therefore, our knowledge of the social stratification of Odesa is incomplete and cannot be situated in a global comparative perspective. The present study collects and codes occupations in Odesa using micro-data and HISCO, and contributes to Ukrainian and Russian studies of occupational and social structures in Odesa during modernization. The sample (N=2,435) collected for this study accounts for about 1% of the total population of Odesa in 1897. Thus, it provides preliminary information rather than a definite conclusion.

This paper investigates 2,435 individuals from 457 sampled households; 1,443 of these individuals were involved in 86 unique occupations. These occupations were coded with the HISCO scheme to address three research questions: (1) How does the HISCO occupational structure correlate with the social estates of surveyed individuals? (2) What was the gender distribution of HISCO occupations among surveyed individuals? (3) How does the HISCO occupational structure correlate with the language of surveyed individuals? The new micro-data replicate existing knowledge, but by testing hypotheses from existing scholarship the data provide new insights into female labour participation in nineteenth-century Odesa.

Literature Review: Studies of Occupations, Odesa 1897

Social Stratification during Industrialization

An occupation can help to define a person's position in the social hierarchy. Sociologists, economists, and historians frequently link individuals' status to their occupation (Leeuwen and Maas). In premodern societies, children were likely to inherit their place in the social hierarchy from their parents and were often trapped there. With industrialization, children became able to attain occupations (and status) different from that of their parents (Maas and van Leeuwen). Industrialization and urbanization created a demand for new occupations that had to be filled. As a result, children of peasants became factory workers. New occupations required new skills; thus, standardized education and in-work training increased. All this stimulated meritocratic selection based on standardized credentials and experience rather than social origin (for details, see Miles). This knowledge is primarily based on the empirical analysis of micro-data of occupations (Putte and Miles; Leeuwen et al.; Leeuwen and Maas).

Variables Important for the Analysis of Social Stratification

Industrialization created new opportunities for economic activities. However, industrialization also created new forms of poverty, wage inequality, and social inequality. Social ties, cultural capital, and access to education became increasingly important in finding a good job. Moreover, social inertia frequently discouraged individuals from the new era's innovations. As Poppel and others put it: "Social norms—the second factor—operate as taxes and subsidies of individual choice and appear in many guises, such as laws, rules of conduct, wage discrimination and subsidies, working conditions, dismissal of women who become pregnant or pregnancy leave without pay, stereotyping, etc." ("Diffusion of a Social Norm" 100). Many historians acknowledge that social inequalities were rooted in gender, religion, ethnicity, and linguistic practice (Klüsener et al.; Schellekens and van Poppel; Bavel and Kok; Kok and van Bavel; Poppel et al., "Religion and Social Mobility"). Therefore, studies of occupational stratification in the nineteenth century should be mindful of such lines to understand the context of potential inequalities.

In sum, scholars of economic and social history have employed the Historical International Standard of Classification of Occupations (HISCO) to study nineteenth-century societies worldwide. Therefore, a new study of occupational structure of Odesa using HISCO is relevant. Such investigation will bring Odesa closer to the global context and shed new light on social stratification of this society in the nineteenth century. Moreover, it is

important to study occupations in the context of the existing social landscape. Odesa was a very diverse society in 1897 by any variable: language, religion, the origin of individuals (Herliy). A study of occupational variation by different groups might reveal nuanced patterns of how this society was organized.

From Occupations to Big Narratives: Economy on the Eve of the Russian Revolution

Most of the abovementioned scholarship was concerned with specific issues of economic and social development: occupation and status, social mobility, quality of life. Moving beyond these issues to ask broader questions about the social and economic development in the Russian Empire, the HISCO classification can be used to determine how particular individuals were integrated into the economic system through their occupations. Such a study can shed light on the social status of different groups of citizens on the eve of the Russian revolution.

In recent decades, economic historians have challenged the pessimistic view that the Russian Empire was economically disadvantaged (such view was particularly silent for explanations of the 1917 revolution) (Borodkin et al.; Dempster; Goodwin and Grennes; Markevich and Zhuravskaya). Researchers emphasize that agricultural productivity was growing after stagnating at least since the beginning of the nineteenth century. The abolition of serfdom contributed significantly to this growth (Markevich and Zhuravskaya). At the same time, empirical evidence suggests that the chronic budget deficit was handled by introducing the Gold Standard in 1897 (Dempster). Furthermore, researchers observed a rise of productivity in the rural sector of the Russian Empire in 1884–1910 (Borodkin et al.). When rural productivity increased, it no longer required an excessive workforce, so workers in the Russian Empire migrated to cities (Burds). This trend was particularly salient in Odesa (Herlihy).

These migrations inevitably shaped the occupational structure and the socio-economic inequalities in Odesa. Who were affected by the new inequalities? Which groups were more likely to suffer or to benefit from them? The answer to these questions can help us understand the economic hardships and grievances of individuals on the eve of the Russian Revolution in 1917. Although I do not address all of these questions here, my data will benefit researchers interested in the social and political histories of this period.

Odesa in 1897: A Brief Context for the Analysis

Before presenting new data, I review the existing social and economic variables (e.g., occupations, language, gender, origins of individuals) pertinent to Odesa in the nineteenth century. Most of the information presented here was retrieved from a review by Herlihy that has remarkably withstood the test of time.

According to Herlihy, Odesa grew rapidly from 1856 to 1897, with an annual growth rate of 3.42% (compared to 2.34% in Saint Petersburg and 2.56% in Moscow). Only 58% of Odesa dwellers were able to read (compared to 63% in Saint Petersburg and 56% in Moscow). The deficit in ability to read in Odesa is often attributed to the growing migration from rural areas and the growing demand for low-skilled labour in warehouses and ports. In terms of religion, Orthodoxy claimed 56% of Odesa dwellers (compared to 85% in Saint Petersburg and 93% in Moscow). This unique diversity was a trademark of Odesa.

According to the census of 1897, the Odesa population was 380,541. When suburbs are considered, this number increases to 403,815; 44.3% of the Odesa population was born in other parts of the Russian Empire, thus, an intense migration was underway. Whereas literacy in Moscow and Saint Petersburg was linear with respect to age—with older individuals less likely to be literate than younger individuals—in Odesa the most literate individuals were 15–19 years old and 30–39 years old (Herlihy). Herlihy hypothesizes that industrialization in Odesa created a demand for new occupations in the service sector, and younger, literate people were attracted to migrate to Odesa to fill these occupations.

In the late 1800s, the ethnic composition of Odesa was diverse. It is not a trivial task to categorize specific ethnic groups using census data. Variables used for this task could be language, religion, and social estate that also included foreign citizens (*poddannyi*). Herlihy notes that about half of the Odesa population were Russians if language is used to categorize the ethnic composition of Odesa. However, as other ethnicities were likely to state Russian as their native tongue, this percentage might be inflated. About 9% of the total population in Odesa was Ukrainian (6% in the city alone). Jews comprised about 28% of the total population of Odesa if decided by language (Yiddish). However, 35% of Odesa inhabitants stated that their religion was Jewish, and some of the Jews claimed other languages (most likely Russian) as their native tongue. Greeks, Poles, Bulgarians, Italians, and Germans comprised other notable ethnic groups in Odesa (Prousis).

When analyzing the occupational structure of Odesa in 1897, it is important to be very cautious when working with historical documents. Herlihy warns that "industrial workers" were often classified as "peasants"

rather than as "urban dwellers" (*meshchanin*). At the same time, she is also concerned with the inflated number of urban dwellers. Herlihy states:

> The fact that Odesa had comparatively fewer 'peasants' among its inhabitants does not imply, as one might think, a greater degree of industrialization, but the contrary. The inflated number of those classified as 'meschanin'—petty-bourgeois—in Odesa, in comparison with the other two cities [Saint Petersburg and Moscow], indicates the vitality of trade and small crafts in the southern port and the large Jewish population. (61)

This observation is critical considering the hypothetical industrialization discussed in the literature review.

Cleavages between different social groups were persistent, but Vassilikou points out that some ethnic groups fostered and maintained their identities. For instance, the Jewish community paid significant attention to the education and religious socialization of its members. By 1855, there were 4 synagogues, 34 prayer houses, and a Jewish hospital in a list of Odesa's public institutions. According to Hilton, Jews constituted half of all traders in Odesa by the 1850s. Moreover, Jews were allowed to participate in municipal affairs, and they were allowed to hold positions in the duma (Hilton 65). The Greek community invested in public institutions as well. In 1817, a group of wealthy Greek businessmen opened the Greco-Commercial School of Odesa, and more schools (including one for Greek girls) were opened in the nineteenth century (Vassilikou; Prousis). The most extreme cases of cleavage between social groups were the anti-Semitic pogroms in Odesa (Herlihy; Vassilikou).

Nevertheless, during peaceful times, some social groups crossed ethnic boundaries. For example, Vassilikou mentions occasional trade unions between Greeks and Jewish merchants, while affluent urban dwellers of all ethnic origins enjoyed similar lifestyles, attending restaurants or the Opera House. With respect to geographical segregation, the wealthy neighbourhoods of Aleksandrovskii and Bul'varnyi were homes to the more affluent people of different ethnic origin, whereas less affluent working-class individuals occupied the Petropavlovskii and Mikhailovskii neighbourhoods.

Herlihy states that ethnic Russians (as decided by language) dominated in "private work and service" (62). This category rarely included managers and employers; it was comprised mostly of unskilled labour (e.g., servants and day labourers). Herlihy also mentions that Russians worked in the armed forces, in construction, and in low-status occupations, such as carrier trade postmen, food processing, carpentry and wood products, and clothing industries. Some Russians were represented in government service, and some lived from stocks and savings or land rents.

Most ethnic Ukrainians were poor and had low-status occupations. Of the 11,172 Ukrainian men living in Odesa in 1897, only 224 were supported

from interest on savings or stocks and only 100 were supported with land rents. According to Herlihy, Ukrainians were predominantly engaged in military occupations. Fourteen percent of Ukrainian males (compared to 1.5% of Russian males) worked in local quarries and mines. Herlihy notes that many Ukrainians (8% of the men) worked in transport. Ox-drawn wagons that carted grain from the hinterland to the port remained despite the building of a railroad. About 12% of Ukrainian men worked in manufacturing (64).

According to Herlihy, Jews could be classified as a "middle class" group. They dominated trade and shopkeeping (e.g., trade in agricultural products, grain, clothing, and general trade). Out of 37,000 Jewish males, over 5,000 were engaged in the making of clothes; 3,000 were servants or day labourers, and about 1,500 served in the armed forces. Vassilikou notes that Jews worked as shoemakers, tailors, sawyers, glaziers, peddlers, and woolen cloth manufacturers (see 158–59 in particular).

Information regarding female labour participation is scarce. Herlihy briefly mentions that girls in Odesa had high labour participation (58). She calculates that out of 100 working men, only 2 were under 14 years of age. However, out of 100 working women, 6 were under 14 years of age.

New Micro-data: HISCO in Odesa, 1867

Data and Caveats

The census of 1897 was carried out in the Russian Empire after a very long period of preparation (Vladimirov). The idea to perform this census emerged in the late nineteenth century and was approved by Nicholas II in 1895. The census was executed by trained teachers, priests, and literate soldiers who visited all households and filled in the questionnaires. Existing data about the 1897 census are presented in aggregated tables.[2] However, recent scholarship in economic history and demography suggests that micro-data are more suitable than aggregated data for the statistical analysis of social stratification (Leeuwen and Maas). Micro-data, where individual observations are placed in rows and social attributes are placed in columns, allow researchers to execute more flexible descriptive statistics and to run statistical models that test relations between variables.

[2] See, for example, available statistical books such as *Pervaia vseobshchaia perepis' naseleniia rossiiskoi imperii 1897 g.* (*First General Census of the Russian Empire in 1897*), edited [and with prelude] by N. A. Troinitskii, published by the Central Statistical Committee of the Ministry of the Interior, 1899–1905.

Micro-data from the 1897 Odesa census are publicly available on the Family Search website.[3] These photocopies include records of each household and each person and comprise the following variables: *Name, gender, household role* (*head of household, spouse, age, marital status, social estate, place of birth, place of registration, religion, language, literacy, education, main occupation, secondary occupation*). The 1,084 folders on the Family Search website contain records of about 40 thousand people. The 62 (6%) folders randomly selected for analysis in the present study include information about 2,435 individuals and provide about 10% of the information available regarding the Odesa population in 1897. The online archive has about 10% of the data, and the present analysis uses only 6% of this sample. Considering the total population of Odesa in that period, 2,435 individuals comprise about 1% of all Odesa city dwellers. Thus, there is a risk that some social groups are over-represented in the online archives.

Nevertheless, a small sample can be useful for a preliminary analysis, as long as one is conscious about the limitations of the data. As the folders were selected using a random number generator, there is no research-driven bias in the selection of streets or households. The data include information about major religious and linguistic groups, age groups, and various occupations; people living in wealthy (Aleksandrovskii) and poor (Petropavlovskii) neighbourhoods are included, and the size of the data is sufficient for the analysis. The sample size of 2,435 is larger than the size of most national representative samples conducted by contemporary pollsters.[4] The data size is sufficient to split the data into groups and to run comparative statistical analyses.

Data Verification

The final dataset includes 2,435 individuals from 423 households. The households were located mainly in three neighbourhoods (Table 1): Aleksandrovskii, a wealthy neighbourhood, and Petropavlovskii and Mikhailovskii, poor neighbourhoods (see Vassilikou). According to this classification, 15% of the households analyzed were located in a wealthy neighbourhood and 75% of the households analyzed were located in a poor neighbourhood.

[3] The list of census books with each household being recorded can be accessed via https://www.familysearch.org/ under "Ukraine, Odessa Census Records 1897."

[4] Considering other studies of micro–data in the Russian Empire, in 2008 Khabarova analyzed 1,463 metric lists in 1897 Sevastopil. Significantly more data were analyzed in Tobolsk, yielding 11,768 occupational titles (Briukhanova and Vladimirov).

Table 1. Household Distribution by Neighbourhood (N=427 Neighbourhoods) in Odesa, 1897.

Type	Neighbourhoods	N	Percentage
Wealthy	Aleksandrovskii	64	15
Poor	Petropavlovskii	136	32
Poor	Mikhailovskii	184	43
	No data	43	10

The sample included 1,296 (53%) men and 1,138 (47%) women. Table 2 shows the distribution of women across the largest ethnic groups (decided by language) in the data. Herlihy points out that, due to high labour migration, the Ukrainians in Odesa in 1897 were mostly men (63–64). My sample contains more Ukrainian men than women. This indicates that the surveyed neighbourhoods might be biased. This issue can be investigated further with the variable "was born in Odesa." Only 41% of the individuals in the sample were born in Odesa; others were migrants. In line with Herlihy, migrants were much older than locals (median ages were 30 and 11, respectively). Moreover, as Herlihy suggests, most of the migrants were men (56%).

Table 2. Percentage of Females by the Largest Language Groups (N=2,415) in Odesa, 1897.

	Women, %
Russian	47
Ukrainian	47
Yiddish	50
Other	36

In the Odesa households surveyed, most of the individuals were children who lived with adults (N=972; 40% of the sample). Other household members included heads of the household (N=481; 20%), spouses of household heads (N=351; 15%), lodgers (N=253; 10%), servants (N=212; 9%), and relatives (N=149; 6%).

The minimum age of surveyed individuals was one month and the maximum age was 92 years. Table 3 shows the age distribution across the largest ethnic groups in the data (as decided by language).

Table 3. Distribution of Age by Largest Language Groups (N=2,415) in Odesa, 1897.

	Mean	Median	Min	Max
Russian	27	26	1 month	92
Ukrainian	27	25	2 months	89
Yiddish	24	20	1 month	86
Other	27	25	1 month	80

Considering language, the main groups in the sample are Russians (54%), Yiddish (25%), Ukrainian (12%), Polish (5%), Greek (2%), and small groups of English, German, Italian, Czech, and Lithuanian speaking people. The data for the first three groups are similar to the distributions in the total population, as described by Herlihy. Considering religion, 65% were Orthodox, 27% were Jewish, 7% were Roman Catholic, and there were small numbers of Armenian Orthodox and Magometian. These percentages are different from the total population. As mentioned above, in Odesa, 56% of the population were Orthodox and 35% were Jewish. Thus, I observe some inflation of Orthodox and deflation of Jewish in my data. As mentioned above, this can be connected with the inflation of Ukrainian women in the data and the specific neighbourhoods that were selected for the analysis.

Considering the major language groups and the occupations of the surveyed individuals, Herlihy reported that about 2,224 Russian males (about 3% of a total of 75,983 Russian males) were in government service (62). My current micro-data has the comparable figure of 5% Russians in HISCO-2 (i.e., administrative and managerial occupations related to the government service). Herlihy reports that 15,743 Russian men (about 21%) worked in "private work and service" (62). The closest equivalent in my data is HISCO-5 (service workers), with 24% of Russians in this category. Thus, the data under analysis here compares well with what we already know about the total population in Odesa in 1897 (Table 4).

Table 4. Comparison between the New Data and Previous Findings in Scholarship.

Available information in the scholarship (Herlihy)	Respective data in my sources
3% of Russian men in governmental service	5% of Russian men in HISCO-2 administrative and managerial occupations
21% of Russian men in private work and service	24% of Russian men in HISCO-5 service workers

Table 5 provides the proportion of literate individuals in each major linguistic group in the micro-data from the 1897 census in Odesa. Table 4 shows that in the age group of 20–24, 65% of Russian speakers, 67% of Ukrainian speakers, and 58% of Yiddish speakers were literate. In 1897 Ukrainian speakers tended to be less literate than Russian and Yiddish speakers, except in two spikes (20–24 years old and 45–49 years old). This correlates with their migration status from rural regions.

Table 5. Proportion of Literate Individuals by Major Linguistic Group in Odesa, 1897.

	Russian speaking	Ukrainian speaking	Yiddish speaking
Below 6 years	3%	3%	2%
7–10 years	38%	38%	39%
11–14 years	74%	85%	75%
15–19 years	73%	56%	57%
20–24 years	65%	67%	58%
25–29 years	54%	43%	58%
30–34 years	54%	33%	53%
35–39 years	44%	38%	62%
40–44 years	42%	35%	67%
45–49 years	32%	46%	46%
50–54 years	40%	29%	65%
55–60 years	39%	20%	44%
60 and older	39%	29%	26%

Most of the data trends are in line with the scholarly knowledge about Odesa in 1897. An exception is the inflation of Orthodox Ukrainian women in the data. This can be corrected with further data collection.

Analysis of Estates and Occupations

How does the occupational structure correlate with social estates of surveyed individuals? What was the gender distribution in HISCO occupations? How does the HISCO occupational structure correlate with the languages of surveyed individuals? The new micro-data I collected included information about social estate. 2,404 individuals were categorized as urban dwellers (N=1,304, 54%), peasants (N=691, 29%), foreign citizens (N=169, 7%), nobles (N=143, 6%), military (N=42, 2%), and clergy (10 individuals); the information for 31 individuals was missing. "Cossack origin" and "merchant" were indicated as the social status for 32 and 13 individuals, respectively. In what follows, I discuss occupations and HISCO groups common for these social estates.

Of the two largest groups (urban dwellers and peasants), only peasants stood out in terms of gender and place of origin: 57% of the peasants were male, and 72% of the peasants were migrants (i.e., not born in Odesa). As in previous studies, it is considered here that most of the peasants who had moved to Odesa for work were males. In sharp contrast to peasants, 50% of the urban dwellers were men, while only 53% of urban citizens were migrants. What was their occupation? Only 1,433 individuals (58 % of the original sample) had occupations. The analysis of occupations excludes people who live from the capital (i.e., renting land or houses). Twelve individuals, 14 housekeepers and two landowners, lived on their own savings. These individuals are excluded from the analysis below. Further exclusions included students and retired individuals, children, and adult individuals whose costs were covered by parents or other relatives (1,382 cases). Only employed individuals, mostly men (81% of employed individuals) were considered in the analysis. The minimum age of working individuals was eight years (27 children were younger than 15 years in the dataset). The dataset included 86 unique occupations classified according to the HISCO. Table 6 describes the HISCO groups, provides examples of occupations, and states the number of groups included in the dataset.

In Table 6, most (37%) of the observed occupations belong to low skilled production workers (day labourers). Service workers were the second highest category (21%); this would be expected as Odesa was a growing city. Still, the very low number of agricultural and farm workers (0.6%) is unlikely, even for a large city. As a port city, Odesa had more fishermen than the number apparent in the sample. This bias will be corrected with more data collection and expansion to other neighbourhoods.

Table 6. HISCO Groups in the Final Set of Employed Individuals (N=1,435).

HISCO groups	Examples of occupations in the data	N	Percentage
0–1. Professionals	Teachers, seminary rectors, artists (painters, opera singers)	60	4
2. Administrative and managerial workers	Butlers, directors of factories, foremen	96	7
3. Clerical and related workers	Accountants, clerks	48	3
4. Sales workers	Clothiers and milliners, grocers, meat salesmen, salesmen	84	6
5. Service workers	Soldiers, firemen, guards, laundresses, barbers, household chefs, house servants, hand maids	302	21
6. Agricultural, animal husbandry and forestry workers, fishermen and hunters	Cow feeders, fishermen	10	0.6
7. Production and related workers, transport equipment operators and labourers	Tailors, sugar boilers, sawyers, millers, cork cutters	96	7
8. Production and related workers, transport equipment operators and labourers (manufacture)	Machinists, blacksmiths, coopers, locksmiths, turners, tinkers, mechanics	211	15
9. Production and related workers, transport equipment operators and labourer (lower skilled workers)	Labourers, packers, drivers, yardmen	528	37

HISCO Distribution by Social Estates

Urban dwellers and peasants (and foreign citizens) are very broad categories. They were likely to overlap in some occupations. Moreover, people of rural origin migrated to large cities to find new jobs that were likely to be low-skilled production occupations. Table 7 shows that most urban dwellers and peasants overlapped in production (bottom groups of HISCO). However, there were some differences between groups. There were many more clerks (3) and sales workers (4) among urban dwellers than among peasants (but not among foreigners). Also, the proportion of peasants in the least skilled production group was much higher than the proportion of peasants in urban dwellers. It is interesting that a lot of peasants had servant occupations (the share of peasants in this category was much higher than in any other strata—33%). House servants, cooks, and military service comprised most of the occupations in the data. Foreign citizens were significantly dispersed across HISCO groups. For instance, Odesa hosted a few Italian opera singers and Greek merchants along with a lot of low-skilled workers.

Table 7. HISCO Groups by Social Estates (N=1,367).

HISCO	Urban dwellers	Peasants	Foreigners	Nobles
1	17 (3%)	4 (1%)	6 (5%)	31 (44%)
2	51 (8%)	16 (3%)	17 (14%)	8 (11%)
3	30 (4%)	1 (0%)	5 (4%)	10 (14%)
4	64 (10%)	3 (1%)	12 (10%)	2 (3%)
5	97 (14%)	168 (33%)	4 (3%)	11 (16%)
6	5 (1%)	3 (1%)	0 (0%)	2 (3%)
7	65 (10%)	27 (5%)	2 (2%)	0 (0%)
8	121 (18%)	78 (15%)	4 (3%)	2 (3%)
9	223 (33%)	206 (41%)	68 (58%)	4 (6%)
Total	673 (100%)	506 (100%)	118 (100%)	70 (100%)

Table 8 summarizes the data concerning female labour participation in the two largest groups in the HISCO sample—urban dwellers and peasants. Most of the women worked in service occupations as maids and servants (HISCO 5). A Chi squared test for Table 7 is presented in the Appendix (Table A1). To save space and improve clarity, the data are summarized in bullet points (also see Appendix, Figure A1):

- Urban males and urban females were more likely to work in sales than males and females of peasant origin. It appears that sales occupations were open to urban dwellers regardless of their gender, but were closed to peasants.
- Clerical occupations and high skilled working-class occupations (tailors, machinists) were apparently open to urban males only, whereas low skilled working-class occupations were open to male peasants. Both urban and peasant female workers were excluded from these occupations.
- Urban and peasant women and male peasants were employed in services (urban males were underrepresented dramatically in this group).

Table 8. HISCO Groups by Two Largest Social Estates.

	Urban males	Peasant males	Urban females	Peasant females
HISCO 1–3 (high status administration and clerical work)	More likely	Less likely	Less likely	Less likely
HISCO 4 (sales)	More likely	Less likely	More likely	Less likely
HISCO 5 (service)	Less likely	More likely	More likely	More likely
HISCO 6 (agriculture)	–	–	–	–
HISCO 7–8 (production)	More likely	Less likely	Less likely	Less likely
HISCO 9 (production, lower skilled workers)	Less likely	More likely	Less likely	Less likely

Table 9 shows that Russian and Ukrainian speakers were almost equally represented in HISCO-5 (service) and HISCO-9 (low skilled production). As expected, a significant share of Yiddish individuals were managers (shop owners and shop keepers, HISCO-2) and sales workers (HISCO-4).

Table 9. HISCO Groups by Main Language Groups (N=1,433).

HISCO	Russian	Yiddish	Ukrainian	Other
1	35 (4%)	11 (5%)	3 (2%)	11 (6%)
2	43 (5%)	30 (14%)	10 (5%)	13 (7%)
3	28 (3%)	10 (5%)	1 (1%)	7 (4%)
4	25 (3%)	46 (21%)	1 (1%)	12 (6%)
5	199 (24%)	16 (7%)	54 (28%)	33 (18%)
6	7 (1%)	0 (0%)	3 (2%)	0 (0%)
7	45 (5%)	22 (10%)	23 (12%)	6 (3%)
8	143 (17%)	21 (10%)	22 (12%)	25 (13%)
9	316 (38%)	58 (27%)	73 (38%)	81 (43%)
Total	841 (100%)	214 (100%)	190 (100%)	188 (100%)

The main language groups in Odesa of 1897 are compared with respect to gender (see Appendix Figure A2). To summarize the language group-gender comparison:

- Females from all four groups were likely to be employed in services, whereas Yiddish females were also employed in sales.
- Males from all four groups were likely to have working class occupations, whereas Russian males and Yiddish males were also involved in sales and clerical occupations.

Summary of Findings

This article is the first attempt to collect and code the micro-data of occupations from the census lists in Odesa in 1897. The data cover 2,435 individuals from the 457 sampled households—less than 1% of the total population in Odesa in 1897. Most of the aggregated trends are in line with what we know about Odesa in 1897 from existing scholarship (the one exception is the inflation of Orthodox Ukrainian women in the sample).

This analysis addressed three questions: (1) How does the HISCO occupational structure correlate with social estates of surveyed individuals? (2) What was the gender distribution in HISCO occupations among surveyed individuals? (3) How does the HISCO occupational structure correlate with the language of surveyed individuals?

The answer to the first question regarding the correlation between occupational structure and social estates of surveyed individuals is that there was a higher percentage of clerks (HISCO-3) and sales workers

(HISCO-4) among urban dwellers, whereas service occupations were dominated by peasants (HISCO-5). At the same time, both urban dwellers and peasants took part in working class occupations (i.e., three bottom groups of HISCO). The answer to the second question regarding the gender distribution in HISCO occupations is that urban males were more privileged than other groups. Urban males had access to occupations in sales, production, and administration and were almost absent from service occupations. At the same time, less privileged female peasants had a very narrow range of occupations (mostly service); urban females had a slightly better position in the labour market (service and sales occupation); male peasants were able to get jobs in service and working-class occupations. Russian and Yiddish speakers (male and female) had better occupations than Ukrainian speakers.

Conclusions

While analyzing micro-data is appealing for statistical reasons, did it provide new knowledge about Odesa in 1897? The answer to this question is threefold. The analysis provides: (1) replication of common knowledge; (2) new statistical tests of previous hypotheses; and (3) new findings.

According to my data, the distribution of Russians and Jews in administrative and service occupations in Odesa in the nineteenth century is almost identical to Herlihy's calculations. Thus, the new data source is validated. Herlihy claimed the following:

- Two age groups were the most literate in Odesa: 15–19 years and 30–39 years. Herlihy hypothesized that industrialization created a demand for new occupations in the service sector; thus, younger literate people were attracted to Odesa to fill these occupations.
- An inflated number of "*meshchanin*"—petty bourgeois—in Odesa, compared with Saint Petersburg and Moscow indicated the vitality of trade and small crafts, suggesting a large Jewish population.

Although such claims cannot be tested with the aggregated data of the census, they can be tested with micro-data. My micro-data confirms that migrants from rural areas indeed filled service occupations (HISCO-5). The micro-data analysis also confirmed that the Jewish population was involved in both trade and small crafts (HISCO-4 and HISCO-7, respectively). Thus, my new data test previous hypotheses empirically.

Finally, previous studies largely omitted female labour participation. My micro-data analysis shows nuanced cleavages between gender and the social

position of individuals in Odesa. While less privileged female peasants had a narrow range of occupations (mostly service), urban females were slightly better positioned on the labour market (service and sales occupations).

What are the broader conceptual implications of these findings? Previous scholars (e.g., Herlihy; Vassilikou) discussed the occupational structure of Odesa in 1897 at great length using arbitrary language and categories (e.g., "private work and service," "high-status occupation," "low-status occupation," "middle class"). At the same time, contemporary comparative scholarship on social stratification in the seventeenth-twentieth centuries has transitioned to standardized occupational titles (Leeuwen and Maas). The use of HISCO to analyze the 1897 census in the Russian Empire opens a new door to position Ukraine in comparative economic history and demography.

In debates about the nature of the economy in the Russian Empire, recent scholarship has become more optimistic about growing agricultural productivity, market integration, and reasonable fiscal policies in the country during the second half of the nineteenth century (Borodkin et al.; Dempster; Markevich and Zhuravskaya). Although this scholarship paints a positive macro-economic picture, data concerning quality of life, economic chances, and economic inequalities of individual citizens are scarce. These issues are important given that the growing inequality mobilized the masses for the revolution (Finkel et al.). Current data show a significant gap between the occupations of urban dwellers and the occupations of peasants in Odesa in 1897. Future studies of labour market inequalities could shed new light on how poverty affected lives in the urban population on the eve of the revolution.

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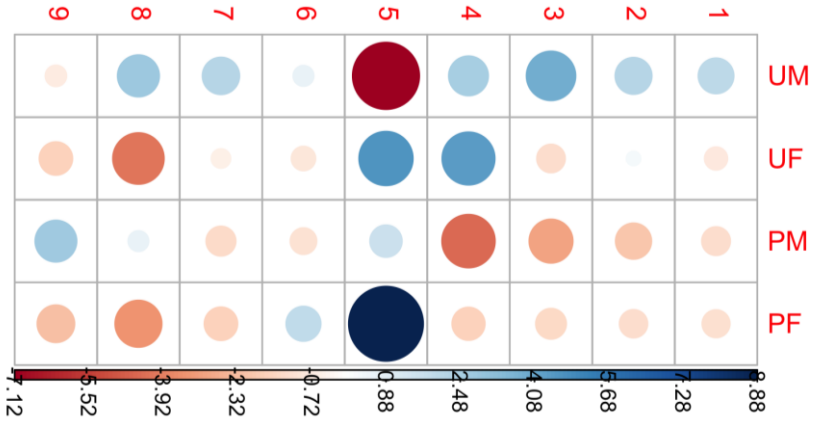
Appendix

Table A1. HISCO Groups by Social Estates and Gender (N=1,176).

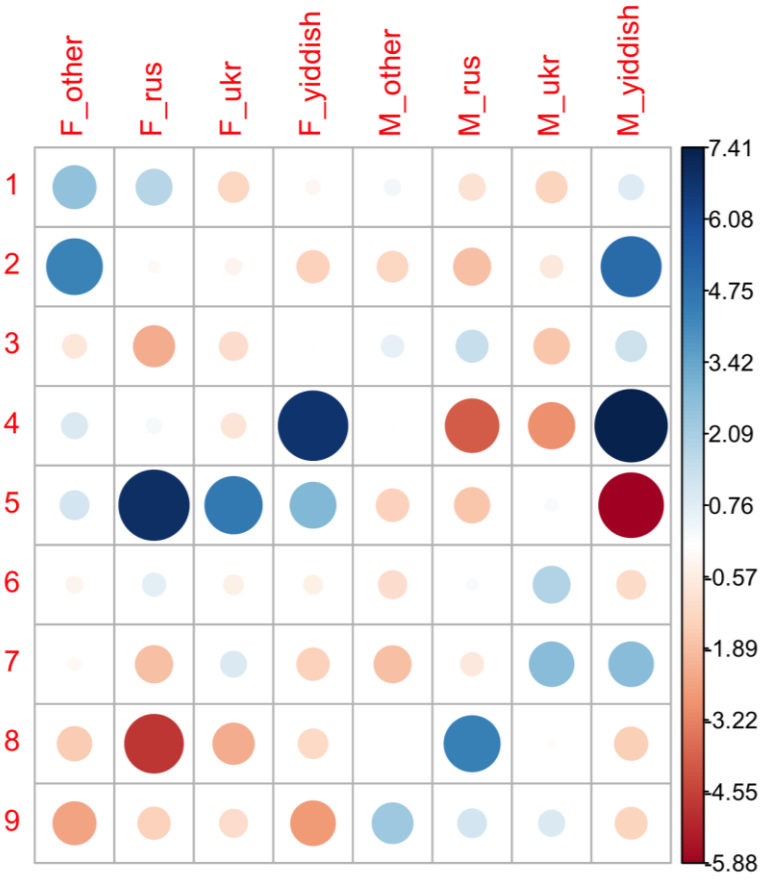
HISCO	Urban dwellers		Peasants	
	Male	Female	Male	Female
1	16 (2,9%)	1 (0,8%)	4 (0,2%)	0
2	43 (7,9%)	8 (6,3%)	14 (3,3%)	2 (2,4%)
3	29 (5,3%)	1 (0,8%)	1 (0,2%)	0
4	45 (8,2%)	19 (15,1%)	2 (0,5%)	1 (1,2%)
5	44 (8,0%)	53 (42,1%)	111 (26,4%)	57 (68,7%)
6	5 (0,9%)	0	1 (0,2%)	2 (2,4%)
7	57 (10,4%)	8 (6,3%)	25 (6,0%)	2 (2,4%)
8	119 (21,8%)	2 (1,6%)	77 (18,3%)	1 (1,2%)
9	189 (34,6%)	34 (27,0%)	188 (44,8%)	18 (21,7%)
Total	547 (100%)	126 (100%)	420 (100%)	83 (100%)

Figure A1. Pearson residuals. HISCO groups by social estates and gender: urban dweller male (UM), urban dweller female (UF), peasant male (PM), peasant female (PF) (N=1,176).



Pearson's Chi–squared test: X^2 (df = 24, N = 1,176) = 318.84, p < .001

Figure A2. Pearson residuals. HISCO groups by major language groups and gender (N=1,432).



Pearson's Chi–squared test: X^2 (df = 56, N = 1,432) = 444.41, p < .001.