

## A Data

Table A1 reports all sources of the data we digitized from various sources. All data is available at <https://almlgr.github.io/>. The quality of the pdf files available for those sources is sometimes quite poor, so mistakes are possible while digitizing by hand. We made all efforts to double check our data. The column "Volume" in Table A1 refers to the Volume number of the Census of Manufactures, and to the Chapters of the Statistical Abstracts. Average Employment refers to the columns titled "Average number of Wage earners" in the source tables while Total Output corresponds to "Value of Products".

We obtained the additional data needed to construct the controls used in the Difference-in-Differences specifications from *Social Explorer*. In particular, we downloaded the 1910 state agricultural employment and total employment, as well as state total and urban populations.

### A.1 Manufacturing data

For the earlier years 1899, 1904, 1909, and 1914 we obtain the manufacturing data from the 1910 and 1920 editions of the Census of Manufactures as reported in table A1. It is important to note that data on manufacturing employment and output by city before 1899 is not available in a directly comparable form. Page 11 of the Introduction of [6] contains a discussion of the changes to the canvassing of establishments made after 1899. In particular, the Census reduced the scope of its definition of "Factory Industry" starting from the 1904 Census of Manufactures. Fortunately the Census backward adjusted its data by city for 1899 to the 1904 criteria in order for the 1899 data to be comparable to future editions, as discussed on page 11 of [6]. Editions of the Census of Manufactures published before 1904 included in "Manufactures" data several additional categories of businesses, including some which are more alike to services than manufacturing. For instance, they included establishments serving individual clients (e.g. custom-tailoring, dress-making), neighborhood industries (e.g. blacksmithing and harness making), building sites, and retails sites incidentally manufacturing small quantities. For this reason, the city-level data in the 1900 Census of Manufactures [5] contains substantially larger values for both total output and employment compared to the backward adjusted 1899 data from the 1910 Census of Manufactures [6]. We therefore chose 1899 as the initial year for our sample.

### A.2 Population data

Our city level population data for 1910 and 1917 comes from a Census Bulletin published in June 1918 [7]. As explained on page 5 and following of this document, the 1917 estimates are computed by linearly extrapolating the growth at the city level recorded from 1900 to 1910, while 1910 estimates are based on Census enumerations conducted that year. Crucially, the 1917 estimates for are also adjusted by the

Census for incorporations of cities in that period - the redefinition of city borders. This adjustment is very important as some cities in our sample increased both in population and manufacturing capacity substantially due to the incorporation of neighboring cities and towns. For instance South Omaha (which was nicknamed "The Magic City" due to its explosive growth at the turn of the century) was annexed into the city of Omaha in 1915. The Bulletin estimate therefore takes into account the 1910 populations of South Omaha and Omaha to obtain estimates of 1917 population but keeps the 1910 population as only the Omaha estimate. This ensures calculated population growth from 1910 to 1917 is consistent with the reporting of manufacturing statistics which are not backward adjusted for incorporations.

**Table A1:** Data sources

| <b>Data Category</b> | <b>Field</b>                      | <b>Stata Variable</b>           | <b>Year</b> | <b>Source</b> | <b>Volume</b> | <b>Table</b> | <b>Pages</b> |
|----------------------|-----------------------------------|---------------------------------|-------------|---------------|---------------|--------------|--------------|
| Manufacturing        | Average Employment                | CityManuEmp                     | 1899        | [6]           | 8             | 5            | 92-115       |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1899        | [6]           | 8             | 5            | 92-115       |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1904        | [6]           | 8             | 5            | 92-115       |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1904        | [6]           | 8             | 5            | 92-115       |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1909        | [6]           | 8             | 5            | 92-115       |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1909        | [6]           | 8             | 5            | 92-115       |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1914        | [8]           | 8             | 50           | 224-238      |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1914        | [8]           | 8             | 50           | 224-238      |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1919        | [8]           | 8             | 50           | 224-238      |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1919        | [8]           | 8             | 50           | 224-238      |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1921        | [3]           | 9             | 692          | 754-755      |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1921        | [3]           | 9             | 692          | 754-755      |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1923        | [3]           | 9             | 692          | 754-755      |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1923        | [3]           | 9             | 692          | 754-755      |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1925        | [4]           | 11            | 799          | 820-821      |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1925        | [4]           | 11            | 799          | 820-821      |
| Manufacturing        | Average Employment                | CityManuEmp                     | 1927        | [4]           | 11            | 799          | 820-821      |
| Manufacturing        | Total Output                      | CityManuOutput                  | 1927        | [4]           | 11            | 799          | 820-821      |
| Population           | Total Population                  | CityPop1910                     | 1910        | [7]           |               | 5            | 14-26        |
| Population           | Estimated Population              | CityPop1917                     | 1917        | [7]           |               | 5            | 14-26        |
| Pandemic             | Days of NPI                       | DaysofNPI                       | 1918        | [2]           |               | 1            | 657          |
| Pandemic             | Speed of NPI                      | SpeedofNPI                      | 1918        | [2]           |               | 1            | 657          |
| Pandemic             | Pneumonia and Influenza Mortality | Mortality1917                   | 1917        | [9]           |               | AF           | 45-46        |
| Pandemic             | Pneumonia and Influenza Mortality | Mortality1918                   | 1918        | [9]           |               | AF           | 45-46        |
| Demographics         | Per Capita Income                 | State_personalIncomeLindert1910 | 1910        | [1]           | Appendix G    | G-3          | 386          |

## References

- [1] Peter H. Lindert. *Fertility and Scarcity in America*. Princeton University Press, 1978.
- [2] Howard Markel, Harvey B. Lipman, J. Alexander Navarro, Alexandra Sloan, Joseph R. Michalsen, Alexandra Minna Stern, and Martin S. Cetron. Nonpharmaceutical Interventions Implemented by US Cities During the 1918-1919 Influenza Pandemic. *JAMA*, 298(6):644–654, 08 2007. ISSN 0098-7484. doi: 10.1001/jama.298.6.644. URL <https://doi.org/10.1001/jama.298.6.644>.
- [3] Bureau of Foreign and Domestic Commerce. *Statistical Abstract of the United States: 1924*, volume 47. United States Government Printing Office, Washington, 1925. URL <https://www.census.gov/library/publications/1925/compendia/statab/47ed.html>.
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- [5] Bureau of the Census. *1900 Census: Volume VIII. Manufactures, Part 2. States and Territories*. Twelfth Census of the United States Taken in the Year 1900. Norman Ross Publishing, 1902. URL <https://www.census.gov/library/publications/1902/dec/vol-08-manufactures.html>.
- [6] Bureau of the Census. *Manufactures 1909: Reports for States, with Statistics for Principal Cities*. Thirteenth Census of the United States Taken in the Year 1910. Norman Ross Publishing, 1912. URL <https://www.census.gov/library/publications/1912/dec/vol-9-manufactures.html>.
- [7] Bureau of the Census. *Bulletin 138: Estimates of Population of the United States, 1910 to 1917*. United States Government Printing Office, Washington, 1918. URL <https://www2.census.gov/library/publications/decennial/1910/bulletins/demographics/138-estimates-of-population-of-us-1910-1917.pdf>.
- [8] Bureau of the Census. *Manufactures 1919: Reports for States, with Statistics for Principal Cities*. Fourteenth Census of the United States Taken in the Year 1920. Norman Ross Publishing, 1923. URL <https://www.census.gov/library/publications/1923/dec/vol-09-manufactures.html>.
- [9] Bureau of the Census. *Mortality Statistics, 1921: Twenty-Second Annual Report*. United States Government Printing Office, Washington, 1924. URL [https://www.cdc.gov/nchs/data/vsushistorical/mortstatsh\\_1921.pdf](https://www.cdc.gov/nchs/data/vsushistorical/mortstatsh_1921.pdf).