A Reconfiguration of Census Tabulations:

Maintaining Historical Consistency of

Aggregate Industrial Categories at the County-Level

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Consistent measures are imperative for conducting valid historical analyses. Collected in the long-form survey of the decennial census, employment data has traditionally been tabulated by aggregate industrial category for all counties. Starting in 2000, the industrial coding scheme drastically changed. In response, we have developed a methodology to formulate geographically-sensitive conversion factors that reconfigure NAISC-based tabulations into long-established SIC categories.

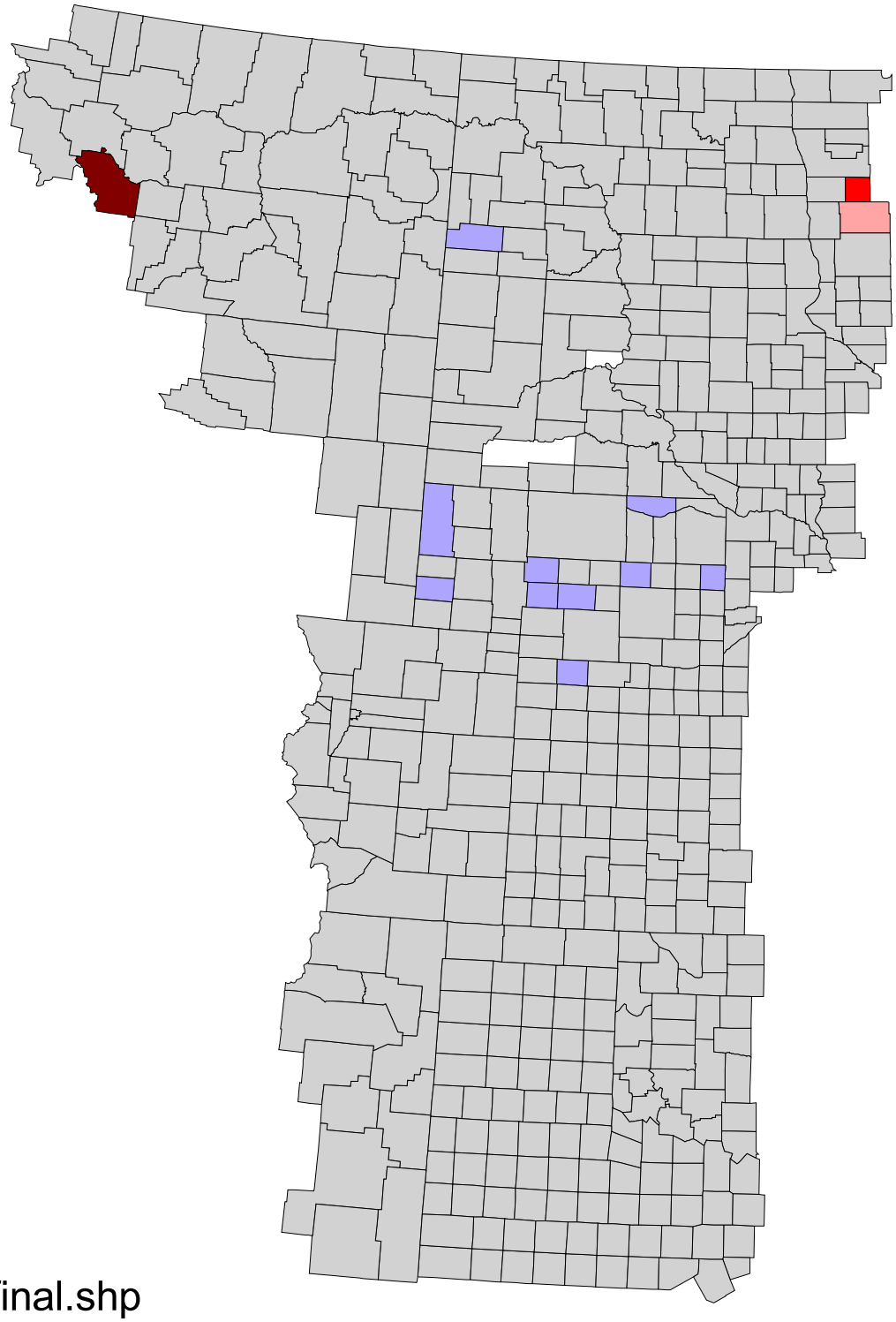
Our proposed method directly builds upon the Census' template which converts aggregate industrial categories from the SIC to the NAICS. By constructing "reverse" conversion factors and integrating sub-state 2000 employment distributions (for detailed NAICS categories), we reallocate 2000 county-level tabulations to better reflect the 1990 SIC and contemporary local labor markets. We use IPUMS data to capture local labor market variability.

Our analyses indicate that if we do not account for variation in local labor markets, the 2000 distributions would have changed relatively little in the aggregate. However there is considerable difference in estimates derived from the two sets of conversion factors when we compare them spatially. Presenting differences in these estimates in a series of maps, we see that the national conversion factors sometimes do not adequately capture the industrial composition of local labor markets. Given these spatial patterns, our method improves upon the straightforward application of published national conversion factors.

As an example, we provide one map which illustrates differences in estimates for the agriculture industries. Meagher County, Montana and neighboring counties of Mahnomen and Becker, Minnesota have agriculture industries with fewer "manufacturing" jobs, compared to the whole national labor market. If we did not account for this unique local market characteristic, up to 5% of these counties' agriculture jobs would have been erroneously assigned to manufacturing.

The accuracy and reliability of our proposed technique will be assessed by comparing results with those produced from the Quarterly Census of Employment and Wages. The QCEW provides a uniquely stringent test of our method. Four aspects of this data collection are particularly useful: (1) the comprehensive nature of its respondent population (i.e., establishments covering 98% of jobs); (2) the very short span of time

between data collections (i.e., 3-6 month observation period); (3) employment data coded into detailed industry codes based on both the SIC and the NAICS; and (4) readily available tabulations by detailed industry categories for all U.S. counties. Consequently, the QCEW has virtually "double-coded" industry data allowing for the calculation of conversion factors which best reflect county-level labor markets. This formulation is exactly what we have been trying to synthesize in our methodology using IPUMS data.



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- -5 to -4 %
- -4 to -3 %
- -3 to -2 %
- -2 to -1 %
- -1 to 1 %
- 1 to 2 %
- 2 to 3 %
- 3 to 4 %
- 4 to 5 %

Percent Difference in Estimates of

2000 Industrial Composition (National - Local):

Agriculture