Chapter 11
Data in the Wild:
A KM Approach to Collecting Census Data Without Surveying the Population and the Issue of Data Privacy

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ABSTRACT

Knowledge Societies strive to better their citizens by maximizing services while minimizing costs. One of the more expensive activities is conducting a census. This chapter explores the feasibility of conducting a smart census by using a knowledge management strategy of focusing on actionable intelligence and the use of open source data sources to conduct a national census that collects data to answer the issues the census is designed to address. Both technical and data privacy feasibility is discussed.

INTRODUCTION

The federal government collects data on the population of the United States to fulfill its constitutional requirement to count and analyze the population every ten years in order to determine the number of seats each state has in the U.S. House of Representatives, distribute billions in federal funds to local communities, and other statistical purposes. As the amount of data collected grows it fuels advances in technology with respect to counting and processing the census data. Unfortunately, new technology for identifying, collecting, and then sharing the census data has yet to be adopted (United States Census Bureau, n.d.a), forcing some data to be collected numerous times at varying levels of accuracy. Gromme (2018) discusses Europe's attempts at utilizing Facebook as a source for generating a census but recognizes there are many problems with Facebook. This paper agrees with Gromme (2018) and so proposes to use existing web-based sources, including social computing sources, instead of paper surveys. To show that this is a feasible approach, we analyze current government data collection and analysis efforts, suggest alternate data sources and propose a strategy for an open source system of population statistics. Our study indicates that a strategy that is based on open source data could generate better focused and actionable intelligence as well as improve the cost, accuracy, efficiency, timeliness, and collaborative efforts of the census. Specifically, we show how an actionable intelligence strategy is created using current and proposed data sources that can help answer complex questions such as what poverty is, and a new way to analyze income by using take home pay instead of gross dollar amounts. Lastly, this study proposes a set of data standards for supporting development of an open source census system that also addresses data privacy.

RESEARCH MOTIVATION

Why do we need a new approach to census data collection? First, the census is expensive. The reported cost of the 2010 census was approximately $13 Billion (United States Government Accountability Office,.2011). The 2020 Census, if administered the same way, will cost approximately $17.5 Billion (House Oversight Committee, 2017; Scherer and Bahrampour, 2017). Along with the census costs, the American Community Survey (ACS) (a newer development discussed later) costs as much as $204 million per year to administer (Griffin, 2011). The proposed strategy would drastically cut costs by using existing open source data sets as well as existing government raw data to reduce or eliminate collecting similar or identical information through Census surveys or the ACS. The US Census Bureau would also begin to utilize state information databases to cut down on its data collection

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