
Tuesday 17 Mar 2015 at 14:25 (00h25')

Content:
This research aims to answer a question: in light of long history of Chinese immigration into Taiwan, to what extent are contemporary Taiwan indigenous peoples (TIPs) integrated with Taiwan population system since the onset of ethnic Han population immigration from southeastern China to Taiwan four centuries ago? Taiwan Indigenous peoples are a branch of Polynesian-Malaysian (or Austronesian) ethnic groups in genetic and linguistic context, whose ancestors have been living in Taiwan 8,000 years before the influx of Chinese immigrants in the 17th century. Similar to other countries’ ethnic minority population, contemporary TIPs in Taiwan are associated with lower SES, much shorter life expectancy, more disadvantaged labor market outcomes such as income gains and employment, etc.

Although TIPs share to total Taiwan population is of only 2.3%, the importance of research on TIPs lies in the following facts. Based on the author previous co-authored studies on the internal migration of TIPs, TIPs are characterized by four features in terms of population distribution and migration: (1) geographically segregated population distribution, (2) very migratory and mostly rural-to-urban migration, (3) periphery of metropolitan areas serving as main destination choice for TIPs rural-to-urban migrants; (4) weak ability of TIPs migrants to make onward migration and mostly choose return migration, once repeat migration occurs (see Map)
The research question is: if migration serves as an effective means in promoting individual SES and thus in enhancing integration in the long run, then how can we explain a phenomenon that TIPs have persistently been associated with much lower SES than non-TIPs which apparently counters a widely accepted wisdom by migration scholars? It is not easy to answer the above-mentioned question. The author suggests that construction of individual genealogy, which is termed as "Social DNA Sequencing" in the paper, by taking advantage of micro data sets & computing technique is the first step to answer the research question and to unveil the level of assimilation and integration.

To achieve the goal, the research at first pools the following household registration data of TIPs as a single data set: March 2007, January 2013, March 2013, May 2013, July 2013, September 2013, November 2013, February 2013, April 2013, June 2013. The pooled micro data set includes information on household ID, personal PIN, name, spouse name, parents' names, education, age, marital status, address, birth place, mobility, geographic area code of household. It serves as the basis of TIPs population data that preserve information for those were alive in 2007 but have passed away now. Constructing individual genealogy involves thousands of billions text matching of given names & family names. To overcome computing barriers, the research takes advantage of high performance in-memory computing (HPC) techniques that comprise three kernel skills of manipulating digital hardware: (1) overclocking CPUs, (2) widening I/O bus bandwidth, and (3) accelerating internal memory I/O. The expected outcomes are twofold: (1) construction of TIPS family trees & marriage structure; (2) to assess the extent of integration of TIPS and Non-TIPS.

Keywords: assimilation, genealogy, integration, migration, Taiwan indigenous peoples

**Primary authors** : Dr. LIN, Ji-Ping (RCHSS, Academia Sinica)

**Co-authors** :

**Presenter** : Dr. LIN, Ji-Ping (RCHSS, Academia Sinica)

**Session classification** : Big Data I

**Track classification** : Big Data

**Type** : Oral