


PAKISTAN

*NATIONAL TRANSFER ACCOUNTS:
AN UPDATE*

DECEMBER 3-4, 2015

BANGKOK

Where are we now?

- Obtained/gathered all the data we need
 - Resolved the biggest problem.... Age reporting!
 - Calculations completed so far include age profiles on:
 1. Private health consumption
 2. Private education consumption
 3. Private other consumption
 4. Income
-
- 

Data Being Used

- Pakistan Social and Living Measurement survey 2011-12
- Household Income and Expenditure Survey 2011-12
- National Health Accounts 2011-12
- National Accounts 2011-12

All surveys are nationally representative and conducted by the Pakistan Bureau of Statistics

Advantage: Consistent definitions and periodic rounds of the survey conducted, which would be helpful in revising/updating the NTA

Issues in Age Reporting

Severe problems of age-heaping and digit preference were identified in the Pakistani data, having serious implications for the construction of the NTA.

Several methods were used to correct the problem, including:

1. Taking mean of the reported ages in several surveys
 2. The method suggested by Feeney
 3. The Arriaga's formula
 4. The United Nations method
 5. The method suggested by Carmada, et al.
-

The paper

Statistical Modelling 2008; 8(4): 385–401

Modelling general patterns of digit preference

Carlo G. Camarda¹, Paul H.C. Eilers^{2,3} and Jutta Gampe¹

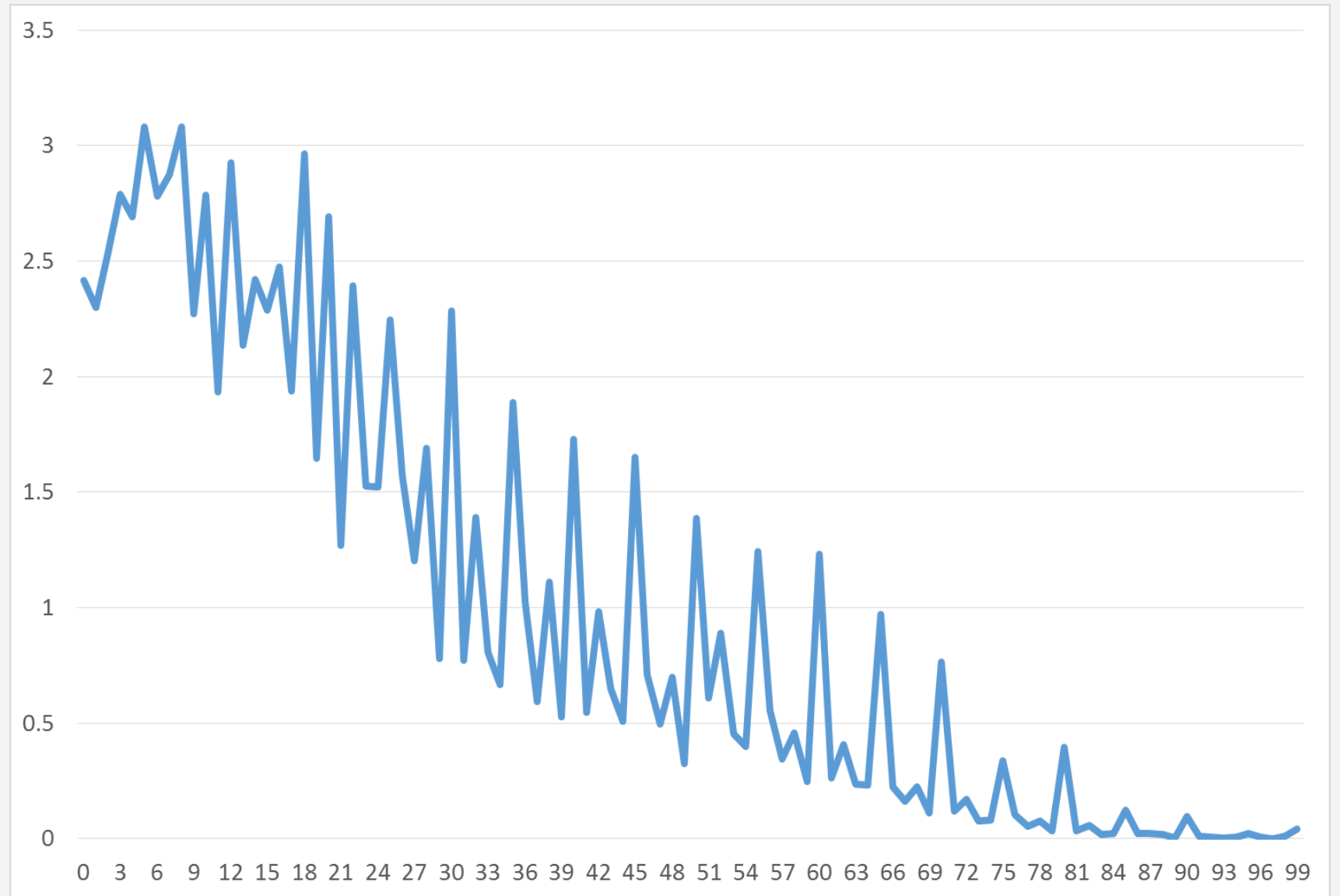
¹Max Planck Institute for Demographic Research, Rostock, Germany

²Methodology and Statistics, Faculty of Social and Behavioural Sciences, Utrecht University, The Netherlands

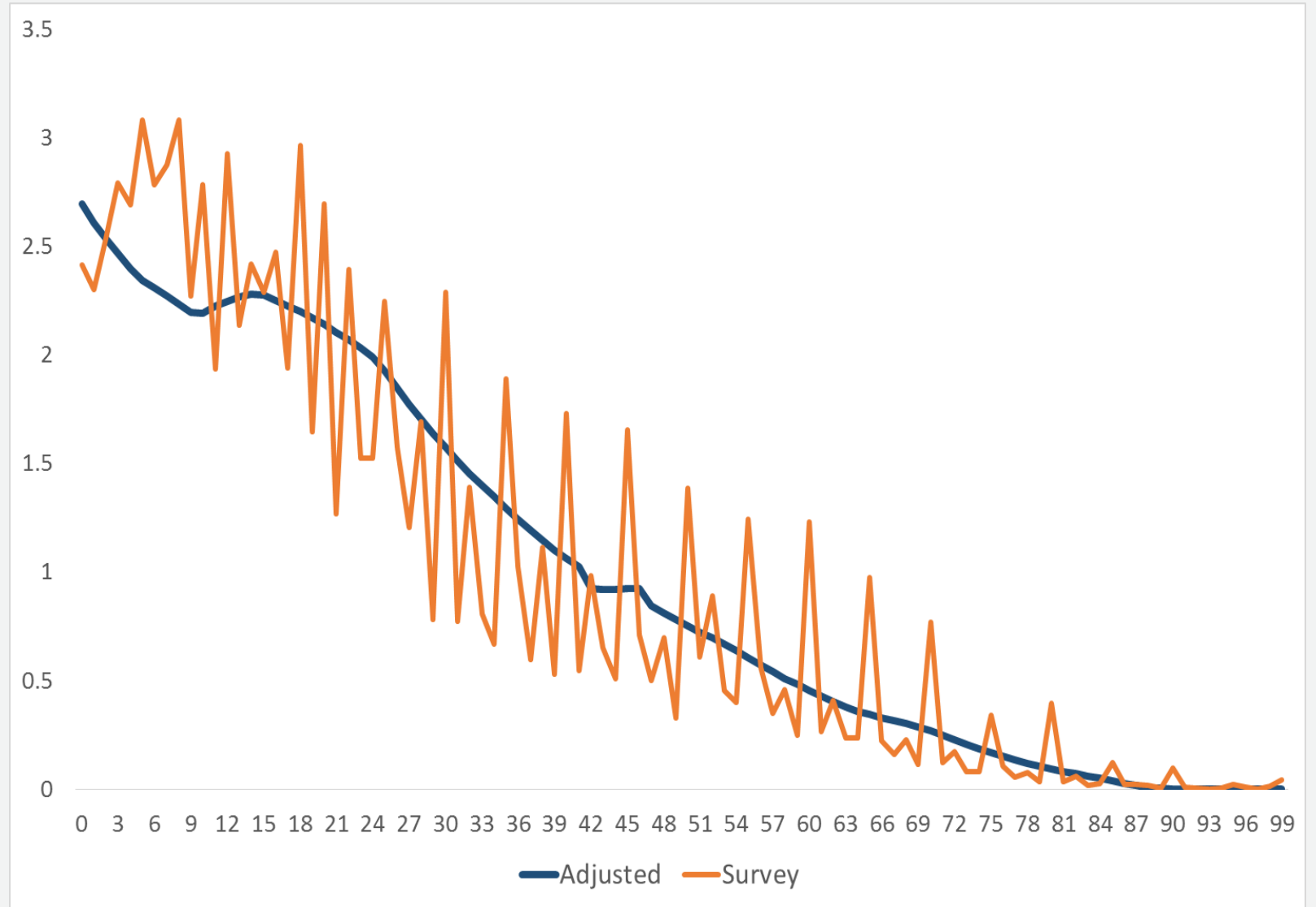
³Data Theory Group, Leiden University, The Netherlands

Abstract: In many applications data can be interpreted as indirect observations of a latent distribution. A typical example is the phenomenon known as digit preference, i.e. the tendency to round outcomes to pleasing digits. The composite link model (CLM) is a useful framework to uncover such latent distributions. Moreover, when applied to data showing digit preferences, this approach allows estimation of the proportions of counts that were transferred to neighbouring digits. As the estimating equations generally are singular or severely ill-conditioned, we impose smoothness assumptions on the latent distribution and penalize the likelihood function. To estimate the misreported proportions, we use a weighted least-squares regression with an added L_1 penalty. The optimal smoothing parameters are found by minimizing the Akaike's information Criterion (AIC). The approach is verified by a simulation study and several applications are presented.

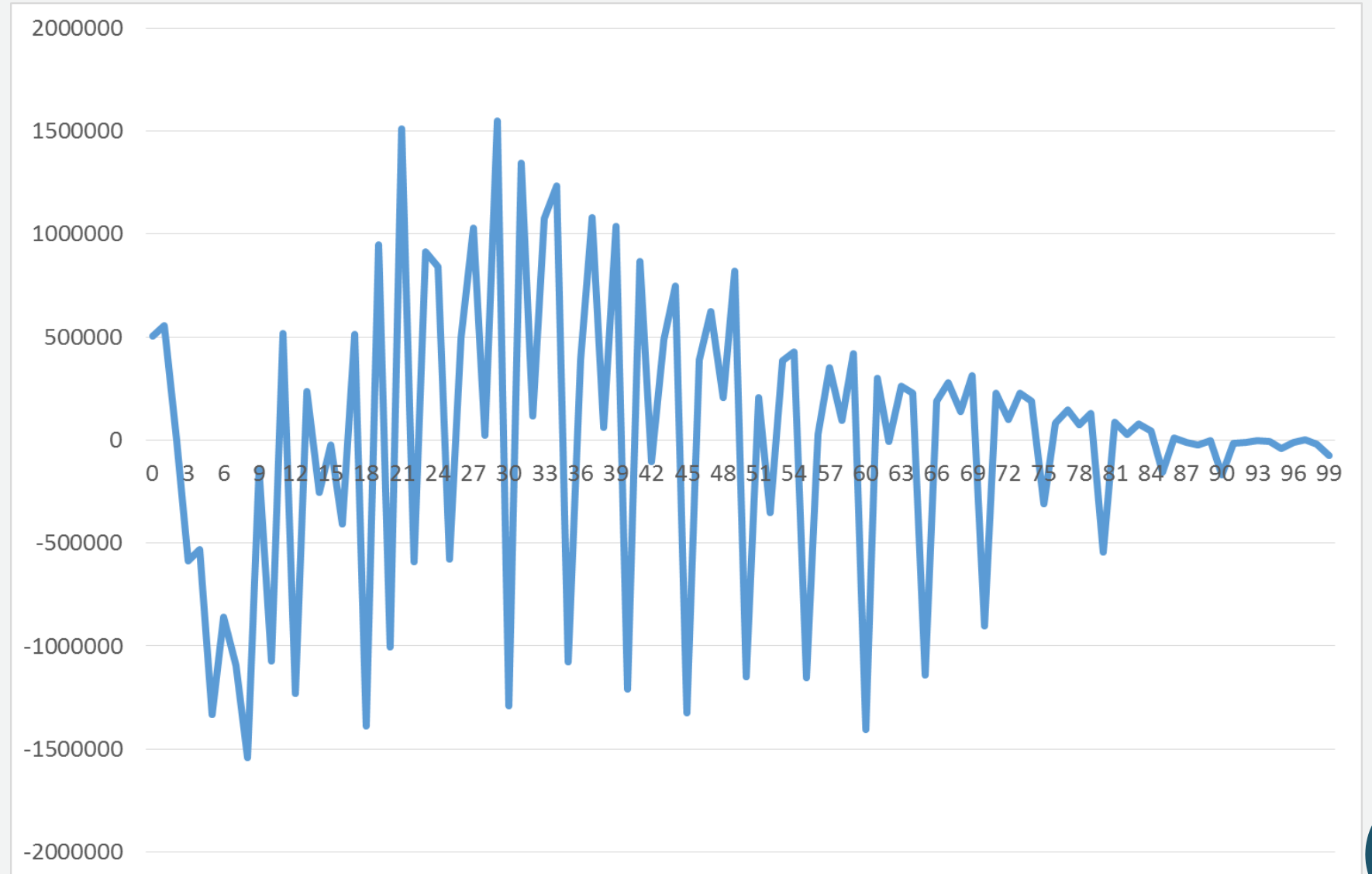
Age as Reported in Surveys



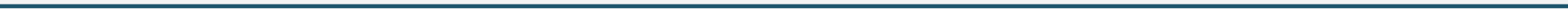
Adjusted Ages



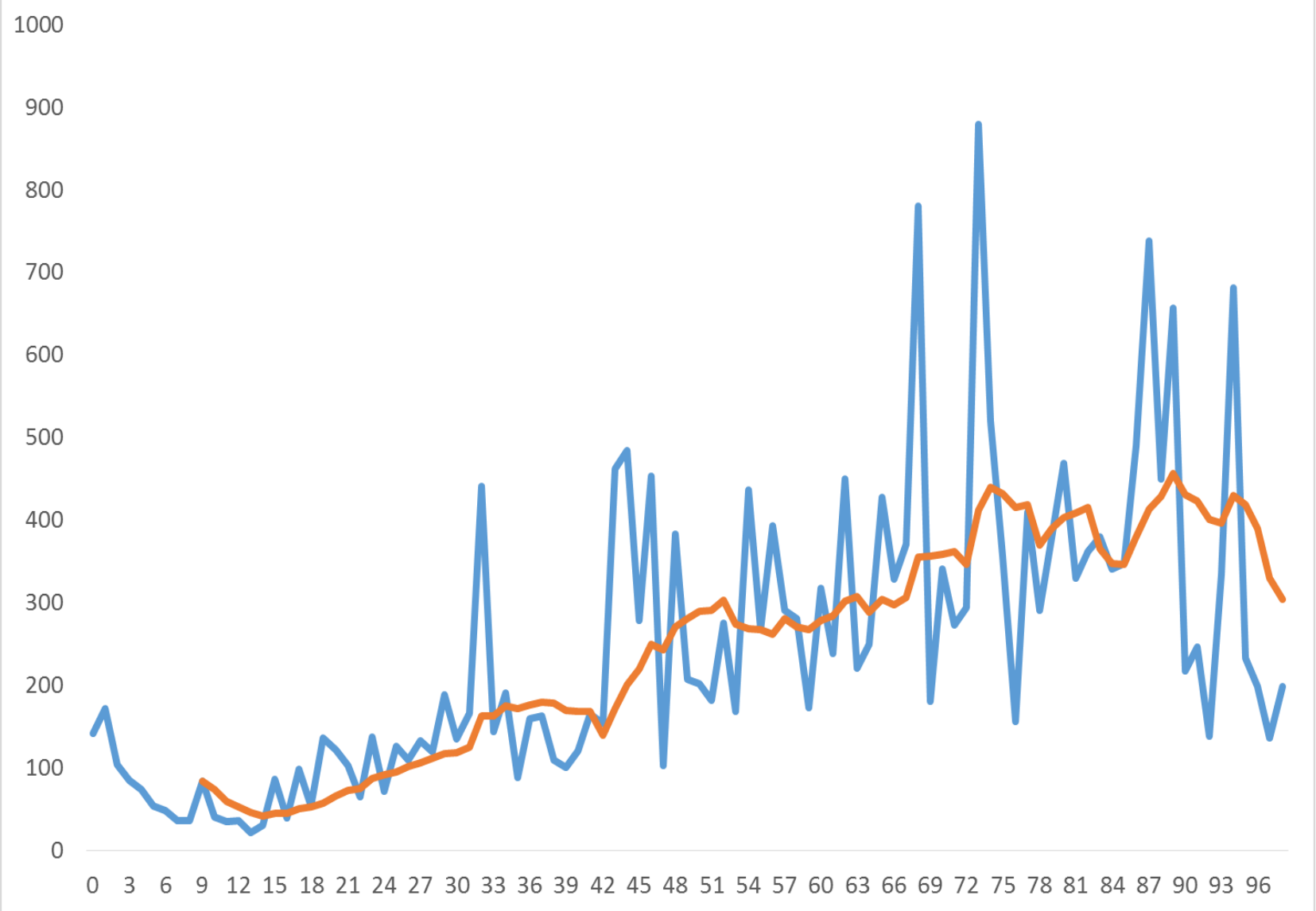
Impact on Numbers at Each Age



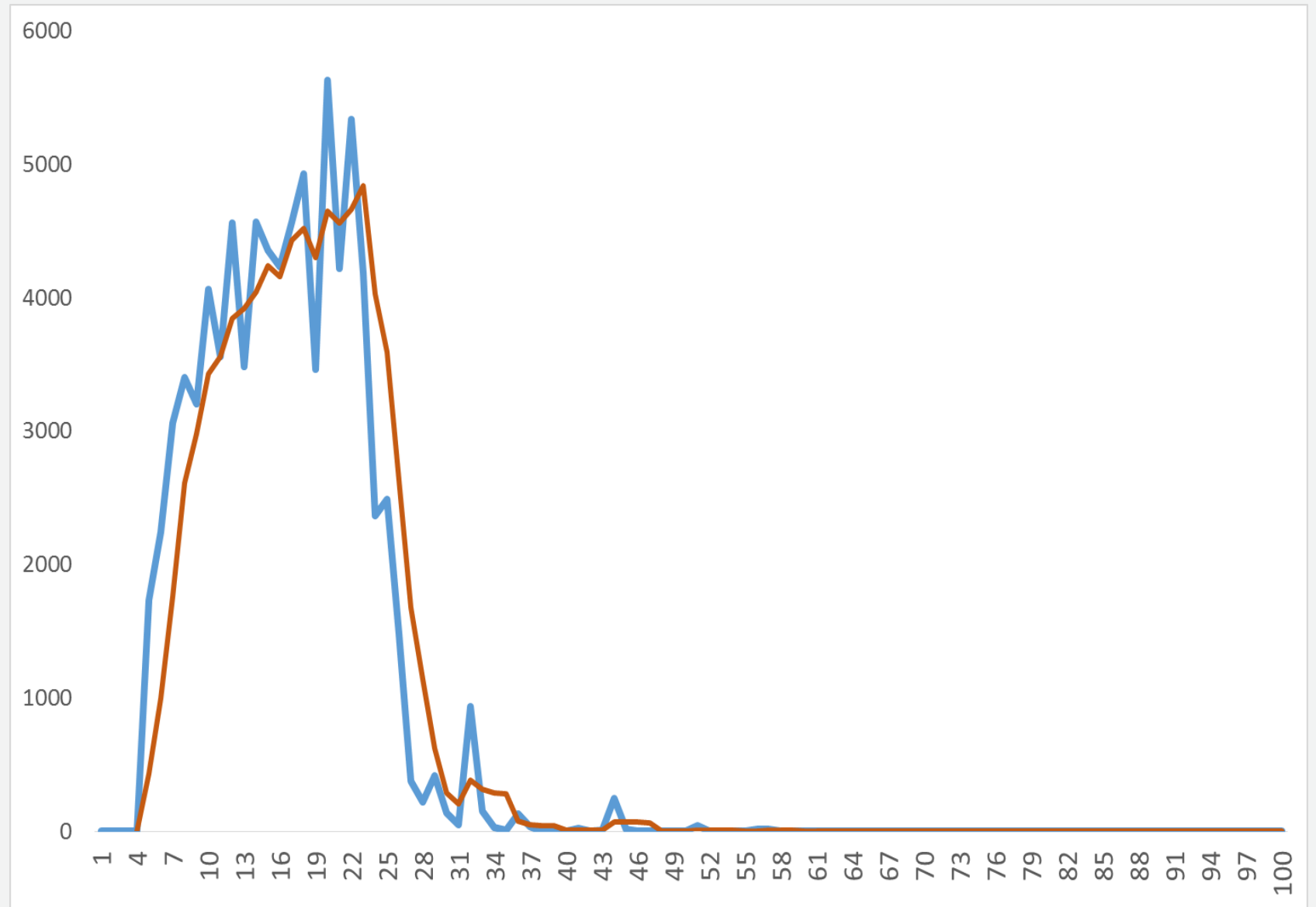
NTA PROFILES



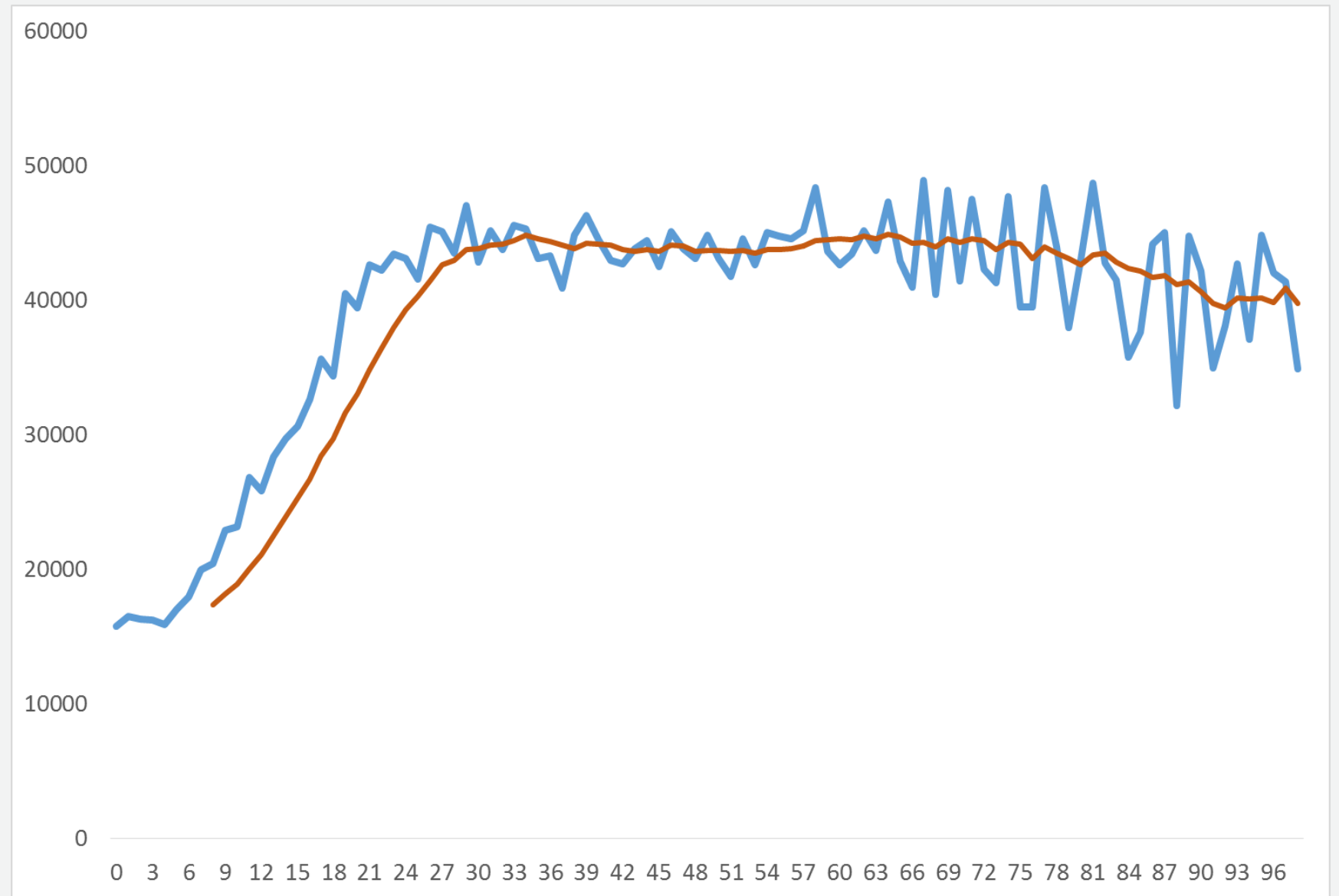
Private Health Consumption



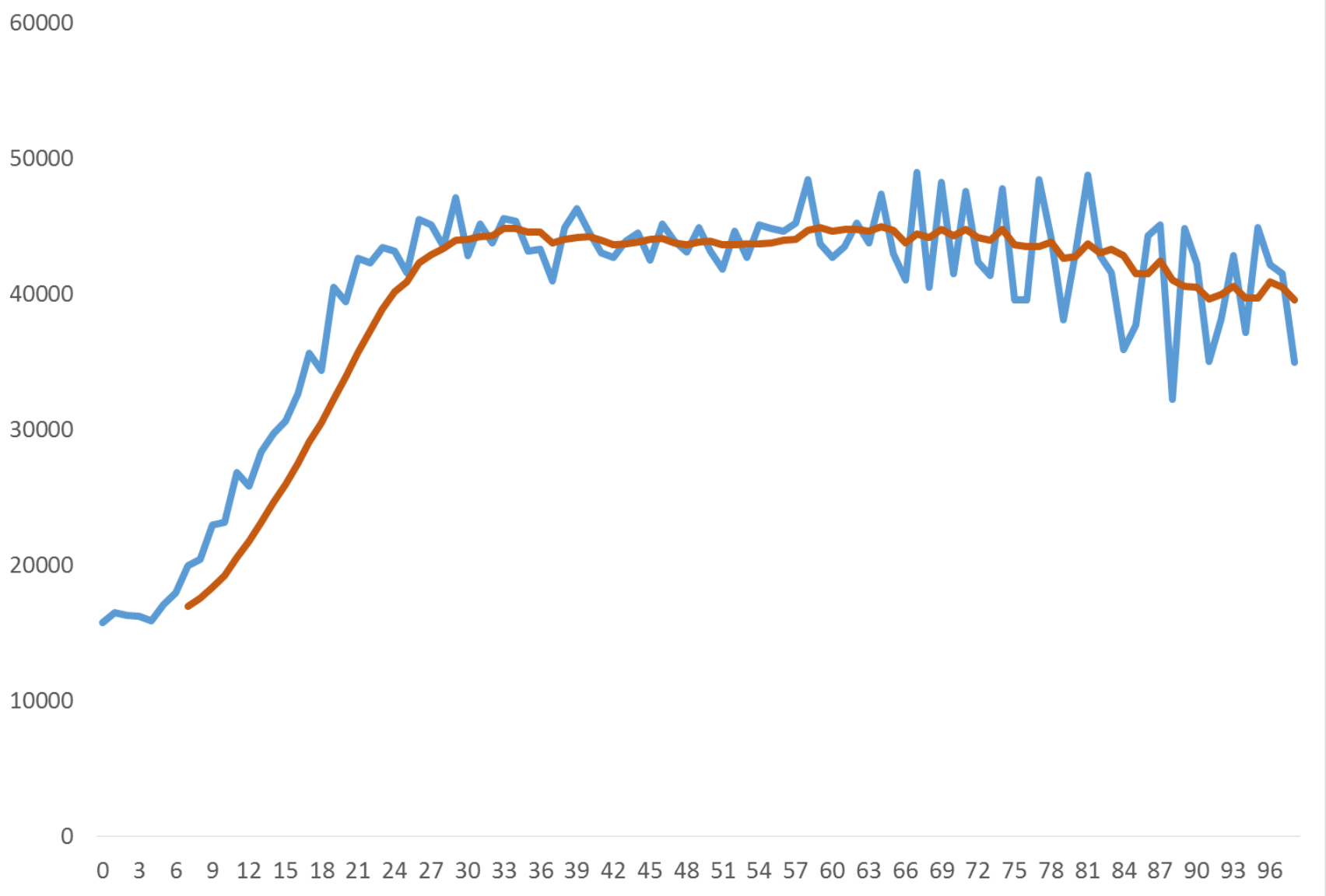
Private Education Consumption



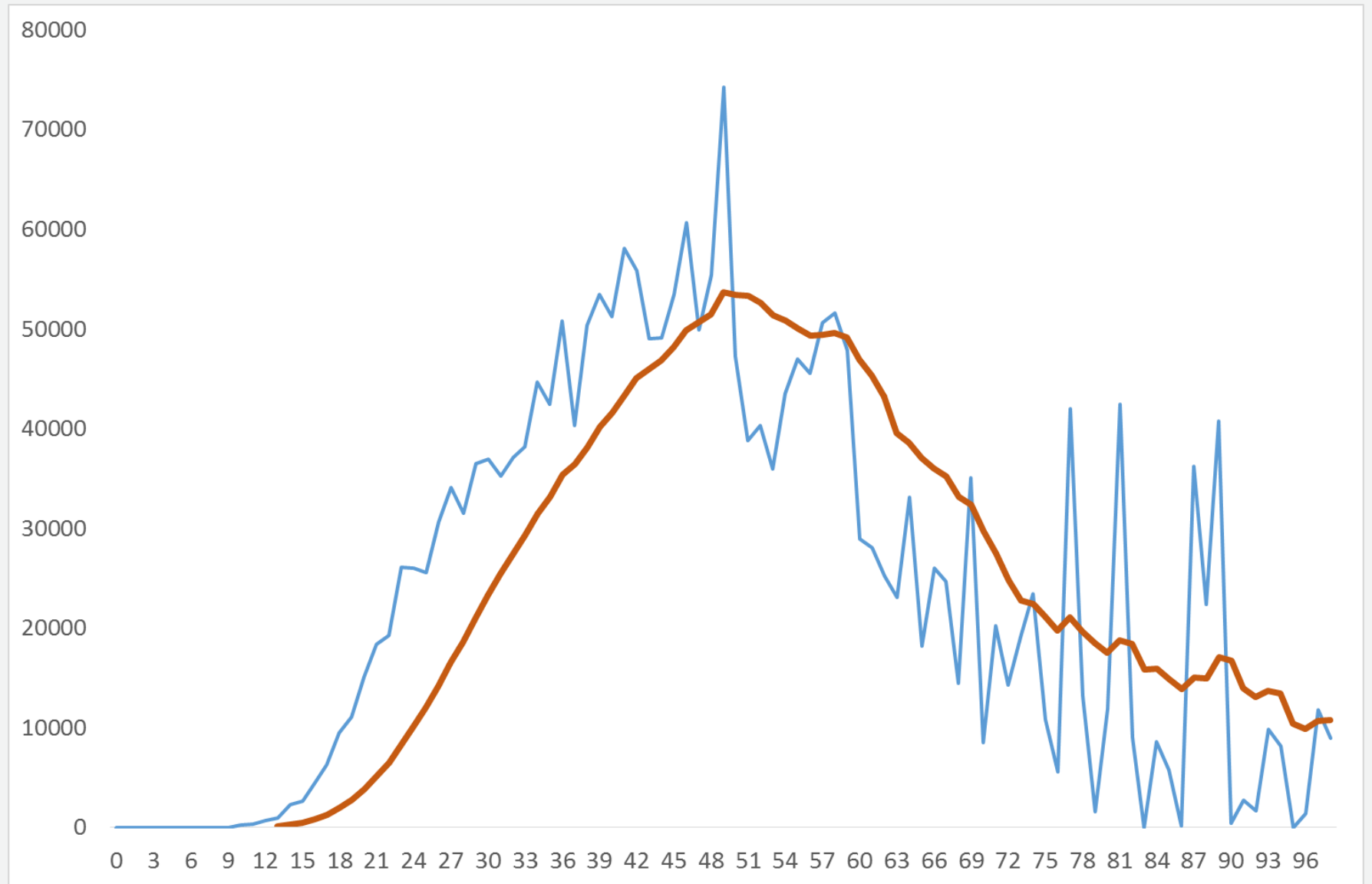
Private Other Consumption



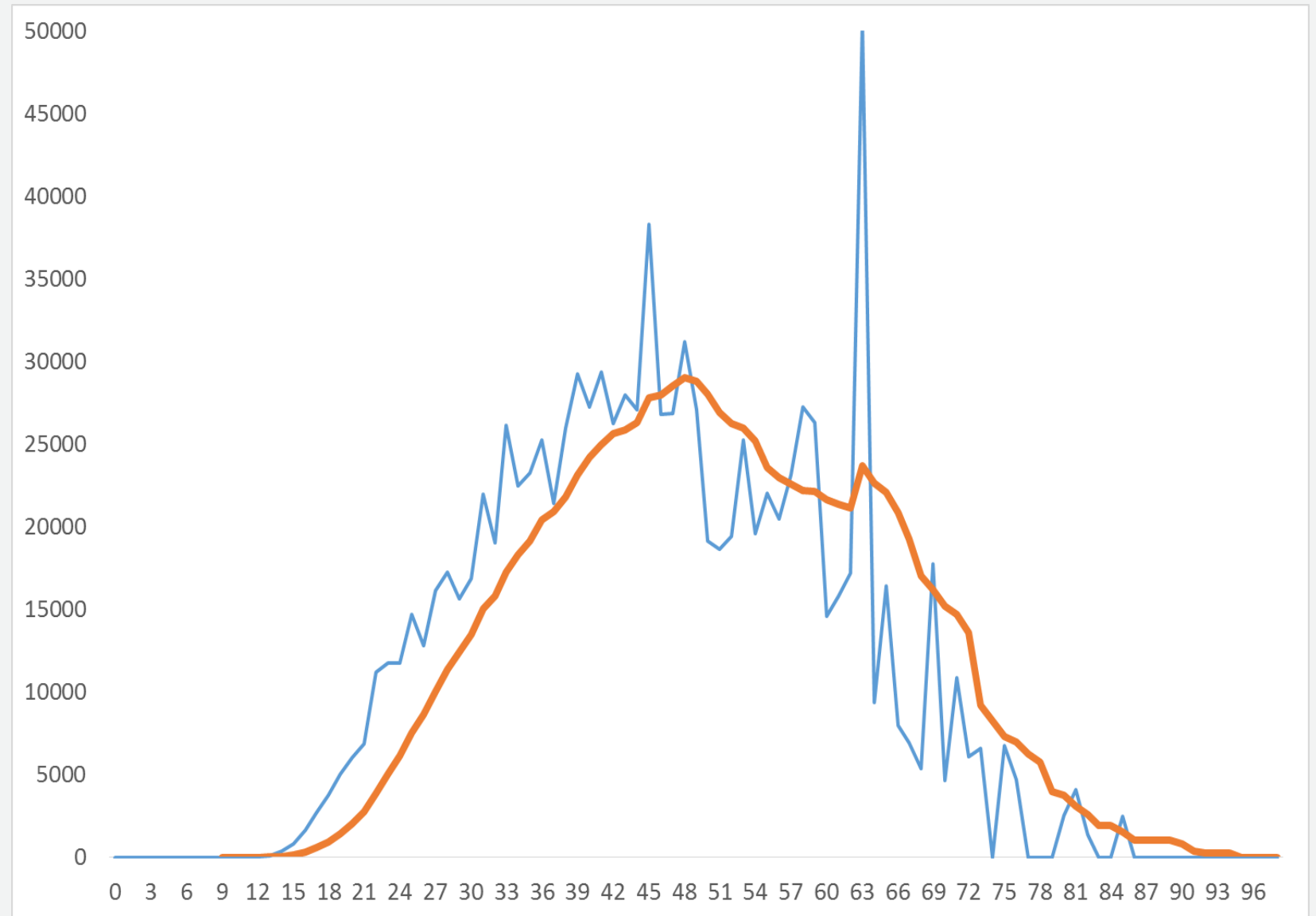
Private Total Consumption



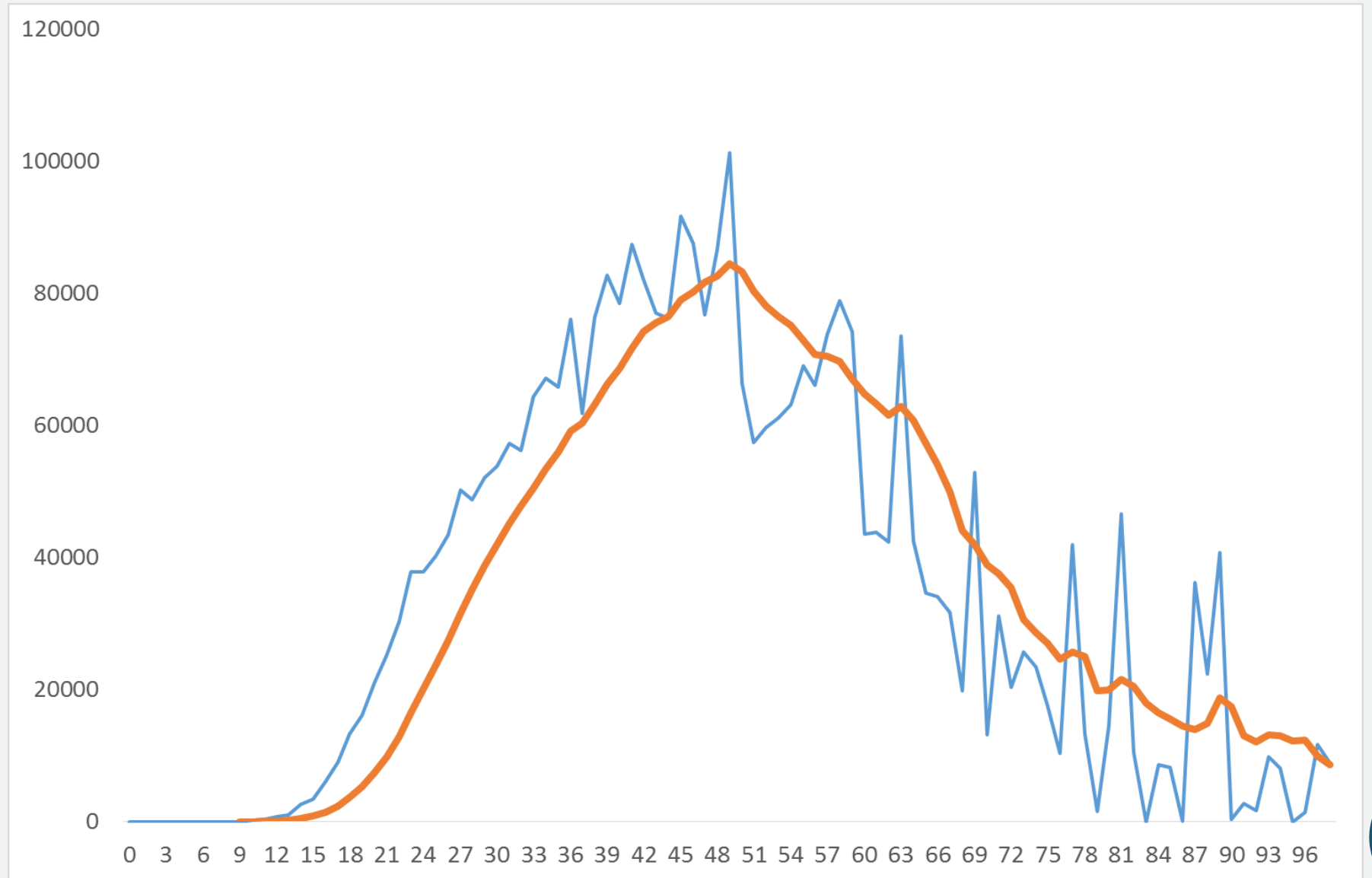
Labour Income: Employees



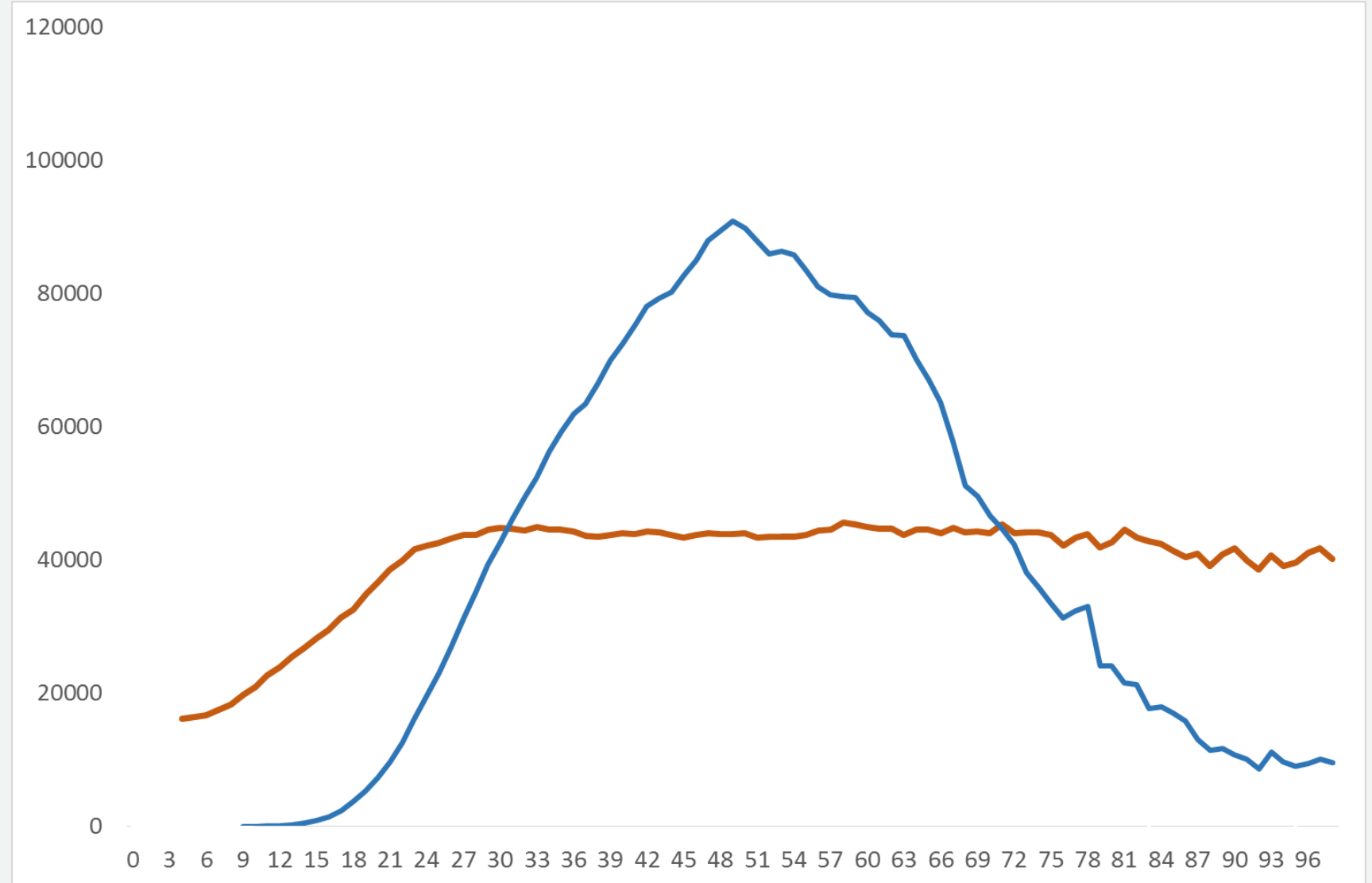
Income of Self-employed and Unpaid Labour




Total Per-capita Income



Age Profile: Private Consumption and Income



Where Do We Go From Here?

- Complete the remaining steps in the construction of the NTA for Pakistan by March 2016
 1. Work near completion on the macro-controls
 2. Currently working on the calculation of private transfers
 - Become a member of the NTA network, officially!
-
- 

THANK YOU

