

January 28, 2004

Hi Fellow Members of the NTA-Core-Variables-Committee (Nicole, Andy, and Carl),

Here is my first attempt at listing the core variables for the NTA project. I thought it useful to have some sort of classification scheme in which to place the core variables. Below I report on the framework Ron and I developed as we looked at transfers between households. There are likely many questions about how to classify things, whether the framework is too broad (maybe should just 8 flows: government, family, market) or too narrow, and how Taiwan data would fit into this. Anyway, below is a starting point for our conversation. Best wishes, Tim

Overview

What should be the core variables? When Ron and I puzzled this out for our 1995 paper on transfers between households, we found it useful to think in terms of 10 flows of resources into households and 10 flows out of households. So, we start with the fundamental accounting identity: **The total inflow of resources to a household must equal the total outflow of resources from that household.** We then track these 20 flows as outlined in the table below. So at a minimum we need 20 variables for each age group. In practice, we have many more than 20 variables since we need to keep track of the composition of these 20 flows. For example, one of the 20 flows is defined as resource flows from the government (**Gin**). For this one major flow, we keep track of 25 individual programs funded by the federal and state and local governments which include both cash benefits and estimates of services received (such as public education and health care).

	INFLOWS	OUTFLOWS
1. Labor Earnings, Consumption	<p>Lin1 – labor earnings. Lin2 – employer provided benefits. Examples of employer-provided benefits: taxes paid to government on behalf of employees such as social security and unemployment insurance, contributions to private pensions and health-care. Lin3 – earnings from self-employment. We might also consider estimating this by assigning 2/3rds of own business income as self-employed earnings. We ignored the non-wage benefit of paid leave (vacation and sick leave), since we do not count leisure as an outflow. We need to be careful that in adjusting to labor earnings to NIPA totals we use a wage bill which excludes paid leave (in 1992 paid leave was about 7% of total compensation in the US).</p>	<p>Consumption does not equal expenditure. There are many expenditures which are not consumed by the household: purchase of a house (Oout2), purchase of a consumer durable (Dout2), purchase of financial instruments (stocks, bonds, etc) (Mout1), and purchase of gifts for someone outside the household (Fout1). Relying mainly on consumer expenditure surveys, we will want to keep track of these different types of expenditures. Likewise, there is consumption which is not counted as expenditure: services derived from housing (Oin1) and consumer durables (Din1), gifts received (Fin1), services received such as medical care, education, roads/highways, police protection, fire protection (Gin1). So, there are 3 types of consumption. Cout1 – expenditures on current consumption. Cout2 – services received from owned housing (Oin1) and durables (Din1), and privately-funded health care</p>

		(Hin1) and gifts (Fin1). Cout3 – services received from publicly funded sources (Gin1).
2. Owned Housing	Oin1 - value of services received from owned home which is usually the rental equivalent of the home. Oin2 – cash received from sale of the home.	Oout1 – amounts paid for maintenance, home repair, and improvement. Oout2 – cash paid for purchase of a home.
3. Credit Market for Housing	OMin1 – amount borrow for financing the purchase of a home. OMin2 –amount borrowed in home equity loans.	OMout1 - repayment of home mortgage (both the interest and principal). OMout2 – repayment of home equity loan (both interest and principal).
4. Consumer Durables	Din1 – services received from owned durables such as household goods and cars. (If we assume depreciation rate varies, then we will want to keep track of the different types of durable goods. We assume that durables depreciate at a rate such that they lose half their value in a 4 year period ($r = -.17$). Present value of services received from durables equals the initial purchase price, meaning that the annual value of services received equals the value of the durables times the sum of the interest rate and the depreciation rate. Din2 – cash received from sale of durables (household goods and cars).	Dout1 – cash paid for purchase of durables.
5. Credit Market for Durables	DMin1 – amount borrowed for financing the purchase of durables.	DMout1 – repayment of consumer durable loans (in US mainly car loans).
6. Private Pensions	Pin1 – amount received from private pensions	Pout1 – contributions to private pensions by household. Pout2 - contributions made by employers to private pensions
7. Family transfers	Fin1 – gifts received. Fin2 - regular contributions for support such as alimony payments. Fin3 – receipt of life insurance payout. Fin4 – bequests.	Fout1 – purchase of gifts. Fout2 -- regular contributions of support. Fout3 – purchase of life insurance. Fout4 – bequest.
8. Private health transfers	Hin1 – services received from private health insurance (own or company provided). This is usually not observed and we have assumed it equals Hout at each age, so that there is no age transfers of resources. But, one might imagine a redistribution from young workers to older	Hout1 – contributions to health insurance by household. Hout2 - employer contributions to private health insurance.

	workers, or those without children to those with children.	
9. Government transfers	<p>Gin1 – cash transfers received by households, for example social security, welfare payments, etc.</p> <p>Gin2 – in-kind services provided by government. This includes age-targeted services such as public education, public housing, health care and non-age-targeted services such as road construction, fire protection, etc. Includes all congestibles and public goods. The only part of the budget not accounted for are (1) debt payments and (2) services provided to businesses by state and local governments. Based on conversations with Alan Auerbach, we decided that taxes collected from businesses by state and local governments would exactly equal services those businesses receive from the state and local governments. The idea is that if this were not the case, businesses would just move to another state.</p>	<p>Gout – taxes collected from individuals. We keep track of different types of taxes: income tax, property tax, property tax, sales tax, etc. This is important if we want to track Federal vs State/local finances. Or if the government program has specific taxes earmarked for it (for example, in the US social security is mainly funded from payroll taxes).</p>
10. Market transfers	<p>Min1 – dividends, interest income, sale of stocks and bonds</p>	<p>Mout1 – purchase of stocks and bonds, investment in saving accounts. In the US, we did not have direct data on this and so estimated this a residual. This did not work well!</p>

In addition to the data set for households, we must develop a data set for individuals. Here we face the question of how to assign household flows to individuals. I think the Hawaii group should take the lead here based on their presentations at the first NTA conference.

Technical issues

1. We will have two data sets: Household and Individual data.
2. Classified by age, sex, and year of observation.
3. Important to record the number of observations in the sample and in the population.
4. Entries report the average value of the observation per household or per individual.
5. As Andy suggested, we should encourage uniform entry of the data in which each line represents one observation. I suggest there should be 6 identification characteristics for each entry. The first 6 elements of each entry should be: H or I (representing Household or Individual data), age of household head or of individual, sex of head or individual, year of observation, number of sample observations, number of population observations. These 6 entries are then followed by the average values per household or per individual. Note that average should be defined across all households or all individuals. For example, the average labor earnings should include those who have zero labor earnings.