

NTA WORKSHOP II

Philippines: Background and Work Progress

Rachel H. Racelis and J. M. Ian S. Salas
Philippine Institute for Development Studies

Nihon University Population Research Institute
Tokyo, Japan
August 16, 2006

Outline of presentation

- ▲ **Background: Philippine population**
- ▲ **Background: sector policies, facts and figures**
 - ▲ education
 - ▲ health
 - ▲ social sector
 - ▲ social security
- ▲ **Philippines NTA: work progress**
- ▲ **Philippines NTA: next steps**

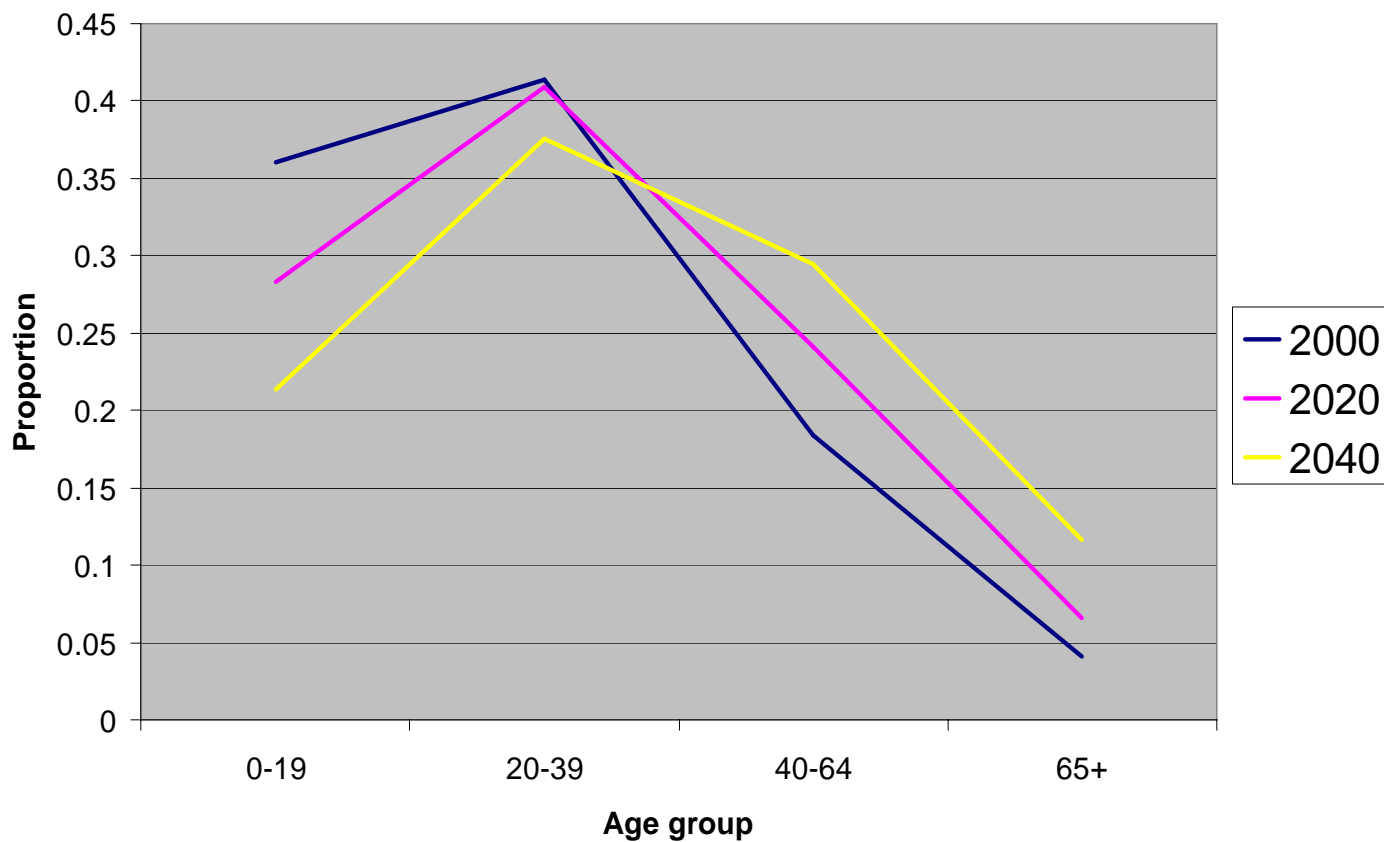
**Background:
Philippine population structure**

Population size by age group

Year	Young (<15)	Working age (15-64)	Elderly (64 or older)
2000	28.5	47.2	3.3
2020	32.0	73.5	7.5
2040	29.9	93.6	16.2

Population structure

Population distribution by age:
Philippines



**Background:
sector policies, facts and figures**

Background: education

Education: policy and structure

- ▲ basic education was decreed a right of every Filipino in the 1935 Constitution
- ▲ basic education was redefined to include up to the high school level in the amended 1987 Constitution
- ▲ formal education system:
 - ▲ pre-elementary - at 5 or 6 years old
 - ▲ elementary - 6 or 7 to 12
 - ▲ high school - 13 to 16
 - ▲ college - age 17 or older
- ▲ technical or vocational track secondary education and non-formal modes of delivery complement the formal schooling system

Education: facilities

- ▲ about 90%, 60% and 20% of elementary, high schools and colleges, respectively, are government-operated institutions
- ▲ unlike health, public provision of education was not devolved and remains to be the responsibility of the national government
- ▲ the Catholic church is a major private sector provider of education especially at the tertiary level

Education: financing

- ▲ education in private institutions are paid for mostly from household resources
- ▲ public elementary and high school education are for free
- ▲ the Free High School Law of 1989 authorized private school tuition subsidies for students who could not be accommodated in public high schools

Education: financing

- ▲ in 2000, education spending was --
 - ▲ 4% of total household spending
 - ▲ 17% of national government spending
- ▲ the National Education Accounts show households and government paying for about 46% each of total education expenditures, and the rest by private corporations and non-profit institutions

Background: health

Health: providers

- ▲ the country's health care system consists of public and private sectors
- ▲ public sector providers are operated by national government (hospitals), and provincial and municipal governments (hospitals and health centers)
- ▲ private sector providers include: pharmacies; physicians in solo or group practice; diagnostic centers; all sizes of hospitals; traditional birth attendants; and indigenous healers

Health: financing

- ▲ in 2000, health spending was
 - ▲ 2% of total household spending
 - ▲ 3% of national government spending
 - ▲ 15% of local government spending
- ▲ the 2000 National Health Accounts show who paid for health care as follows:

▲ households	41%
▲ national government	22%
▲ local governments	20%
▲ PhilHealth	7%
▲ other	10%

Health: policy

- ▲ **several national policies had significant impact on the structure and financing of health care**
- ▲ **Local Government Code of 1991: decentralized public provision of health services**
- ▲ **operation of most government hospitals and all rural health units/health centers were turned over to LGUs**
- ▲ **health expenditure share of --**
 - ▲ **national government went down from 34% in 1991 to 22% in 2000**
 - ▲ **local government increased from 4% in 1991 to 20% in 2000**

Health: policy

- ▲ National Health Insurance Act of 1995: instituted an integrated National Health Insurance Program popularly referred to as PhilHealth
- ▲ originally consisted of two Medicare programs --
 - ▲ private formal sector workers Medicare managed by Social Security System (SSS)
 - ▲ government workers Medicare managed by the Government Service Insurance system (GSIS)
- ▲ the new PhilHealth coverage has expanded to include those who are not SSS or GSIS members and now has an Indigent Program
- ▲ the NHA shows share of PhilHealth to be increasing very slowly -- from 4.5% in 1995 to 7% in 2000

Background: social sector

Social sector: policy

- ▲ social protection programs and interventions target “vulnerable groups”
- ▲ the vulnerable include:
 - ▲ poor
 - ▲ children
 - ▲ senior citizens
 - ▲ persons with disabilities

Social sector: policy and programs

- ▲ **forms of interventions are as follows:**
- ▲ **(1) social assistance or welfare programs -- regular government programs that involve direct resource transfers**
- ▲ **(2) social safety nets -- short-term mechanisms meant to protect vulnerable groups from effects of disasters, calamities and economic dislocation**
- ▲ **(3) social security -- social insurance programs that pool resources for use in the future for old-age support, work-related injuries and other financial needs of members**

Social sector: policy and programs

▲ social assistance for the poor:

- ▲ livelihood assistance program of the Dept. Social Welfare (DSWD), Dept. of Labor (DOLE) and the National Youth Commission
- ▲ Caring for the Poor Program -- delivers various services (socialized houseing, potable water, food subsidy and more)

▲ social assistance for children:

- ▲ Early Childhood Care and Development Act institutionalized a national ECD program
- ▲ Solo Parents Welfare Act authorized provision of government support for solo parents the their children

Social sector: policy and programs

▲ social assistance for the elderly:

- ▲ Senior citizens Act of 1992 grants persons age 60 years or older discounts, free services in public health facilities, and more
- ▲ Philippine Plan for Older Persons present strategies to protect welfare of elderly

▲ social assistance for persons with disabilities (PWD):

- ▲ AO 101 authorizes government construction of access facilities for mobility and safety of PWDs
- ▲ Assistance Package for Disabled Persons Program

Background: social security

Social security: policy and programs

- ▲ **two types of formal programs: government sponsored, mandatory systems; and private pension schemes, with the latter still very insignificant**
- ▲ **two government sponsored programs:**
 - ▲ **Social Security System for private sector workers**
 - ▲ **Government Service Insurance system for government workers**
- ▲ **the Philippine Armed Forces and the Judiciary each have separate pension schemes**

Social security: programs

- ▲ **SSS and GSIS administer all types of social security programs including:**
 - ▲ **retirement, death, disability, maternity and employment compensation for work-related illness or injury**
- ▲ **the Medicare or health insurance programs of these systems have been transferred to PhilHealth**

Social security: retirement programs

- ▲ **the old-age social security or retirement programs of SSS and GSIS were “fully-funded” by design at the start, but had become “partially-funded”**
 - △ **with a relatively young population, contributions collected had generally exceeded benefit payments over the more than 40 years of operation leading to accumulation of large reserve funds**
- ▲ **thus, the retirement programs are now funded partly by member contributions (and employer counterpart), and partly by earnings from investments**

Social security: coverage

- ▲ **as of 2000, the two systems covered about 75% of employed workers**
 - ▲ 18.9 million private formal sector employed and 3.7 self-employed covered by SSS
 - ▲ 1.4 million government workers covered by GSIS
- ▲ **SSS is working towards universal coverage of non-government workers**
 - ▲ ultimate objective: to have all elderly covered by old-age pension schemes in the future
 - ▲ in 1999 only 15 percent of elderly indicated receiving pension income

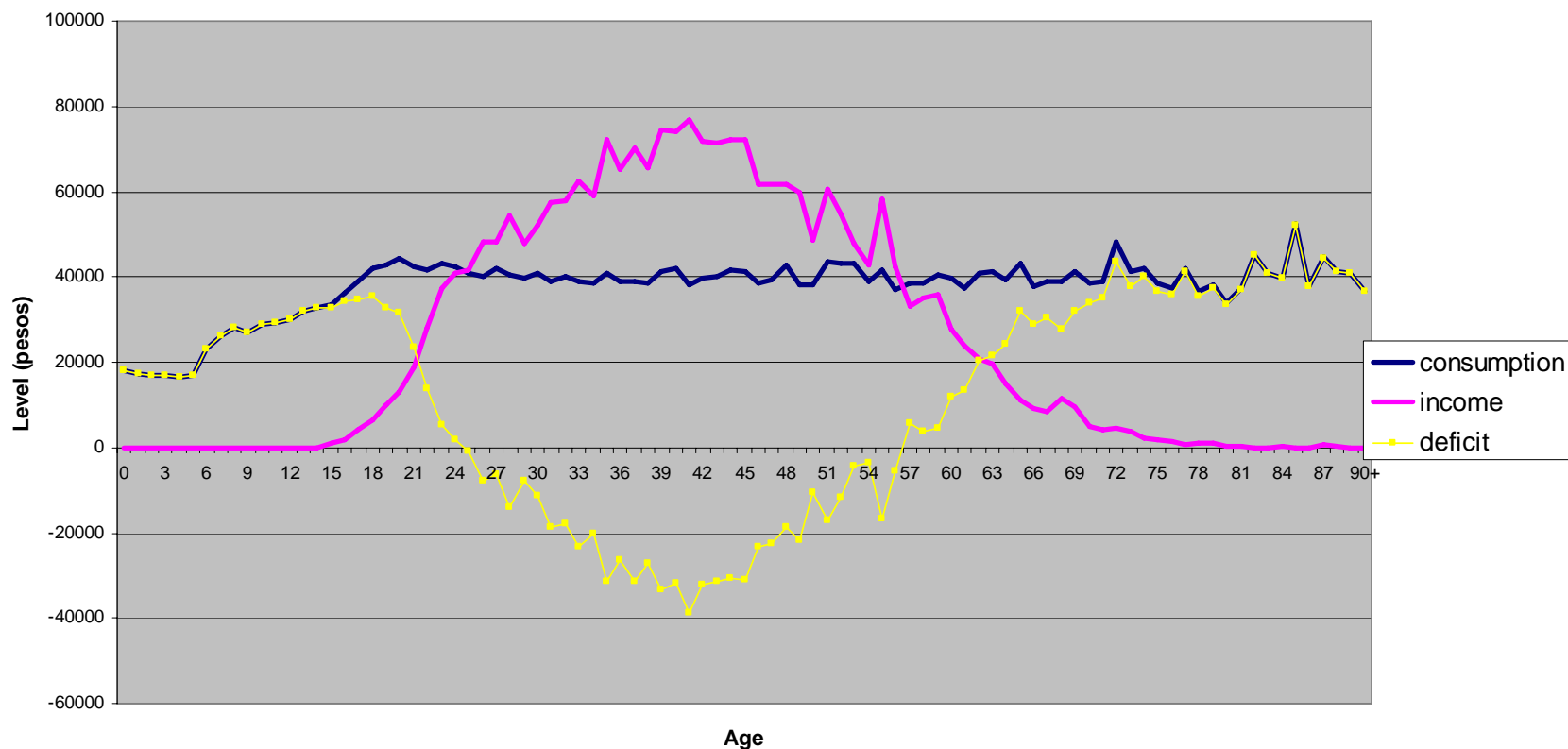
Philippines NTA: Work Progress

1999 for pilot NTA estimation

- ▲ initial NTA estimation was carried out for the year 2000 because FIES was available; FIES is used in NIPA estimation
- ▲ however, the allocation methods for public and private components required the use of data from the 1999 APIS
- ▲ while the APIS does not contain as much detailed data as the FIES, it does have the basic information for NTA estimation
- ▲ we decided to shift from 2000 to 1999 for pilot estimation of NTA

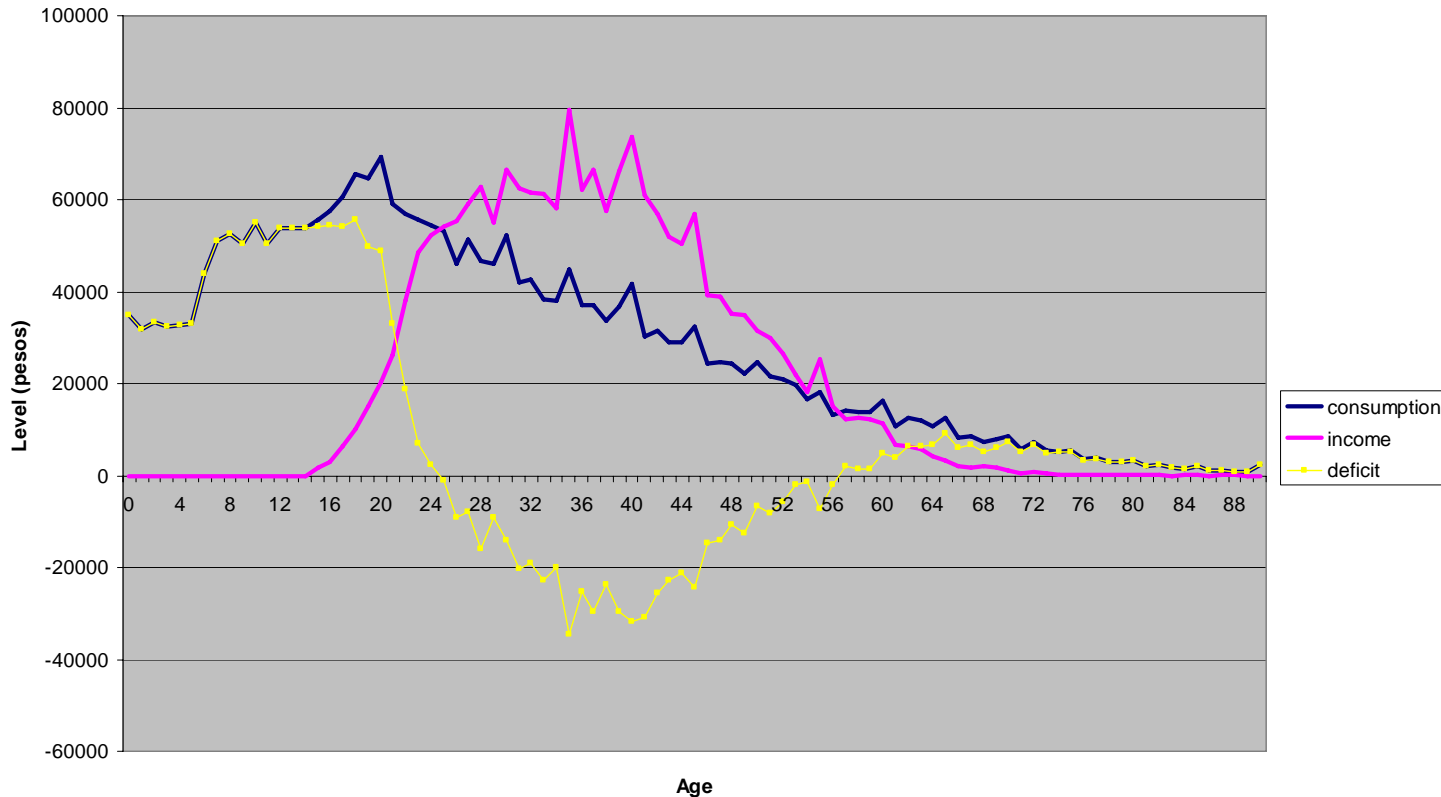
Preliminary estimates: 1999 life-cycle deficit – MIG1

Per Capita Labor Income, Expenditures and Deficit: Philippines, 1999



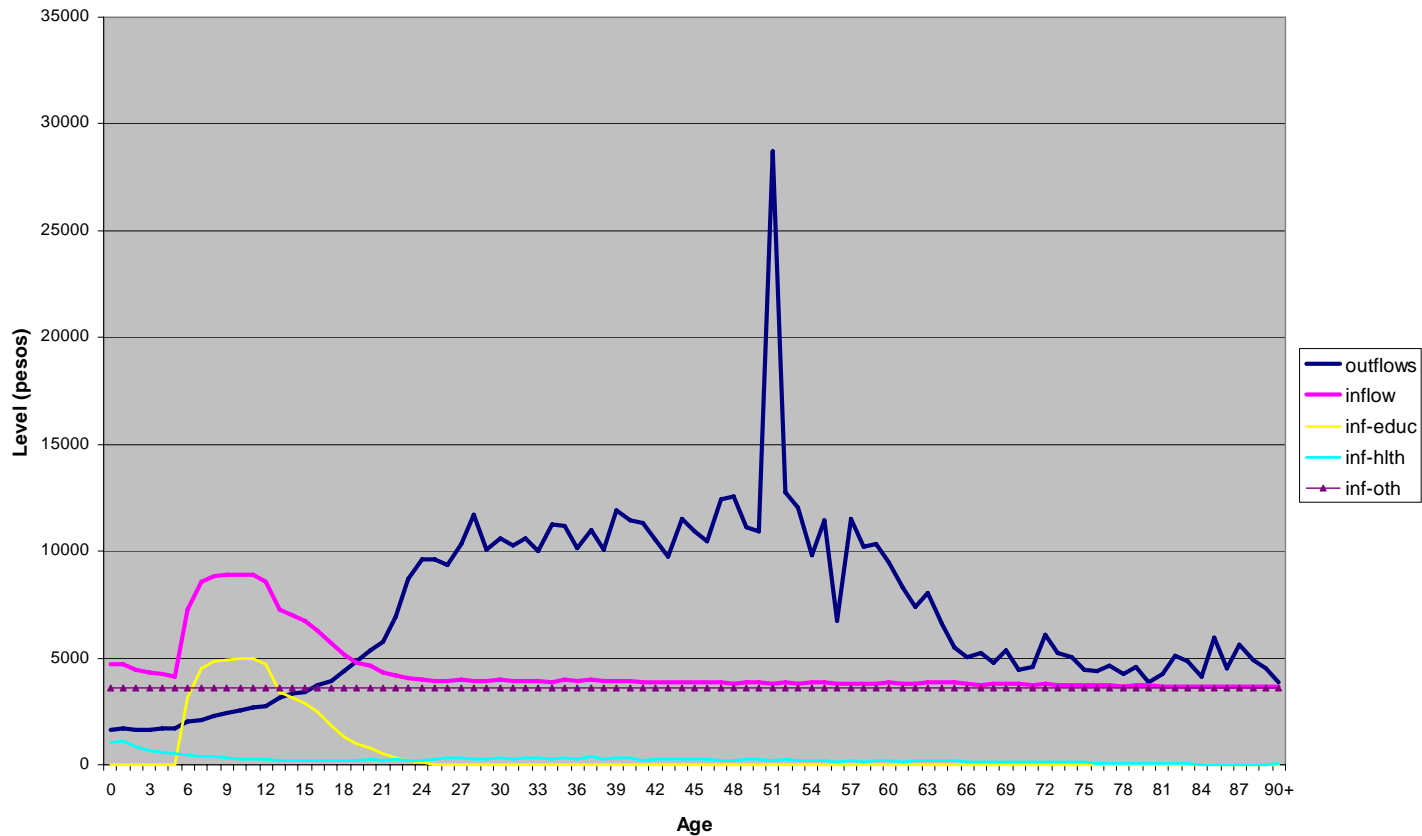
Preliminary estimates: 1999 life-cycle deficit – MIG2

Aggregate Labor Income, Expenditures and Deficit
(million PhP): Philippines, 1999



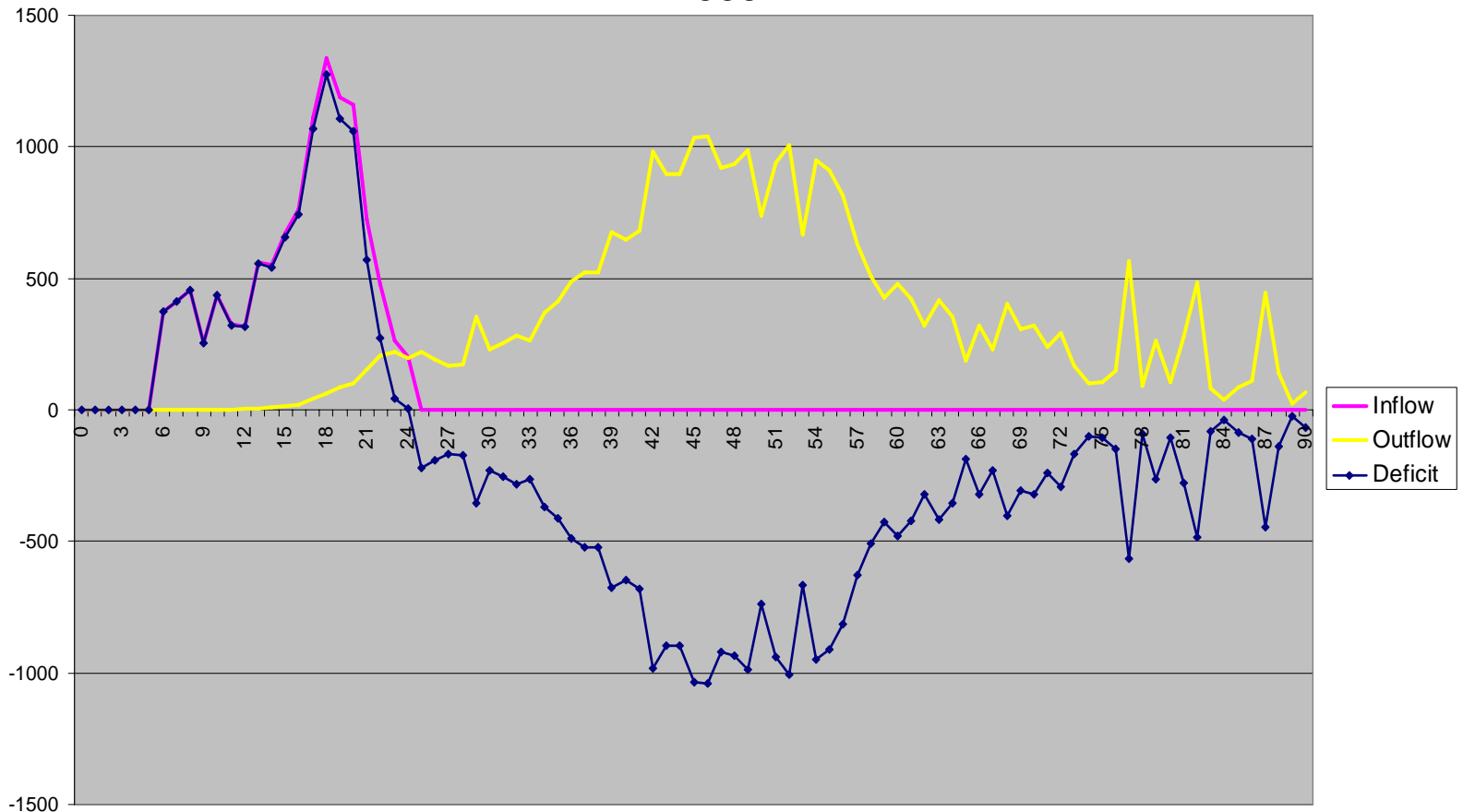
Preliminary estimates: 1999 public transfers (Tab1.3) - totals

Public Transfers - Total Inflows and Outflows Per Capita:
Philippines, 1999



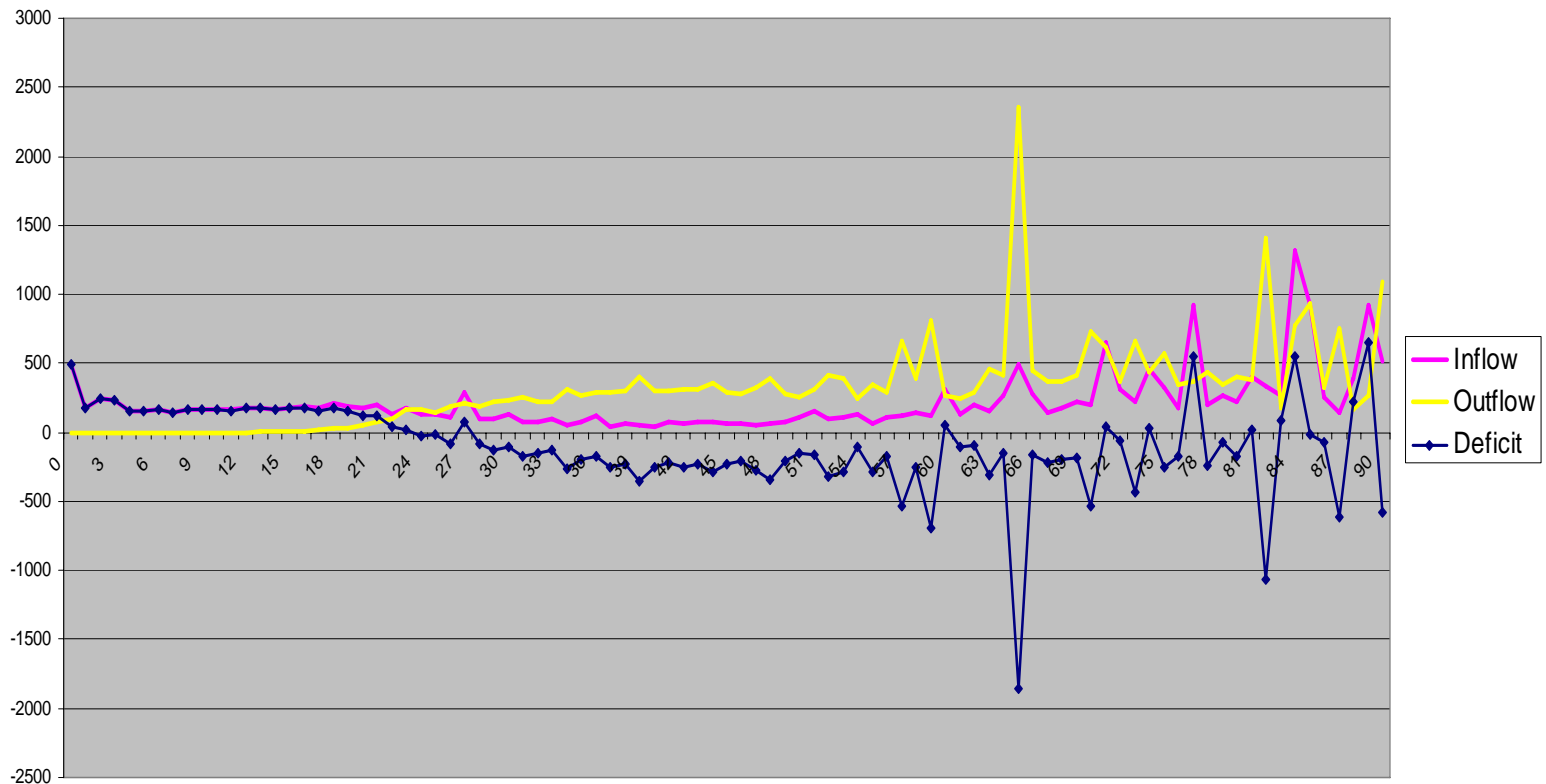
Preliminary estimates: 1999 private transfers (Tab1.4) - education

Intra-household transfers per capita: Education, Philippines
1999



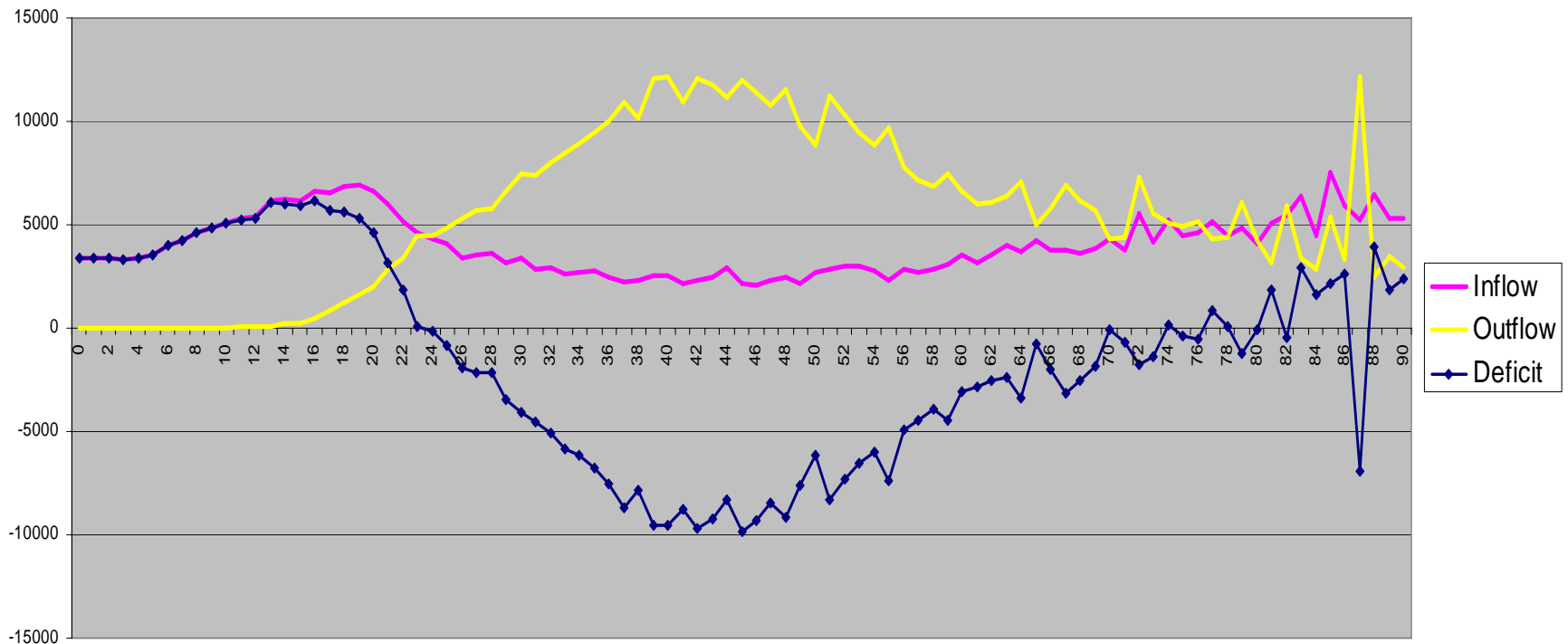
Preliminary estimates: 1999 private transfers (Tab1.4) - health

Intra-household transfers per capita: Health, Philippines 1999



Preliminary estimates: 1999 private transfers (Tab1.4) – other

Intra-household transfers per capita: Other Consumption, Philippines 1999



NTA work: data constraint

- ▲ the main constraint facing NTA estimation in the Philippines is lack of individual level data not only for private expenditures but also for income
- ▲ the main data source, the Family Income and Expenditure Survey or FIES, report these data aggregated at the household level
- ▲ the Annual Poverty Indicator Survey or APIS contains salaries and wages data by worker but these surveys are available only starting 1998

NTA work: focus of recent work

- ▲ to identify methods for allocating (assigning) household income and expenditures to population age groups that work consistently across different data sets

NTA work: allocation methods tested

▲ regression (main method)

- ▲ initial specification: dependent variable is regressed against number of household members by age in single ages (no constant)
- ▲ other specification: additional RHS variables like income; redefine dependent variable

▲ other methods

- ▲ (household) per capita approach
- ▲ unit cost and utilization approach

NTA work: salaries and wages

- ▲ **initial regression runs for wages done using 1999 APIS**
 - ▲ regression-derived estimates of wages by age generally compares well with actual mean wages for prime working ages
 - ▲ some negative results at the extreme ages
- ▲ **household per capita approach seems to work well for allocating (total) household wages to working members -- at all ages**

NTA work: salaries and wages

Average monthly wage by age: 1999 APIS

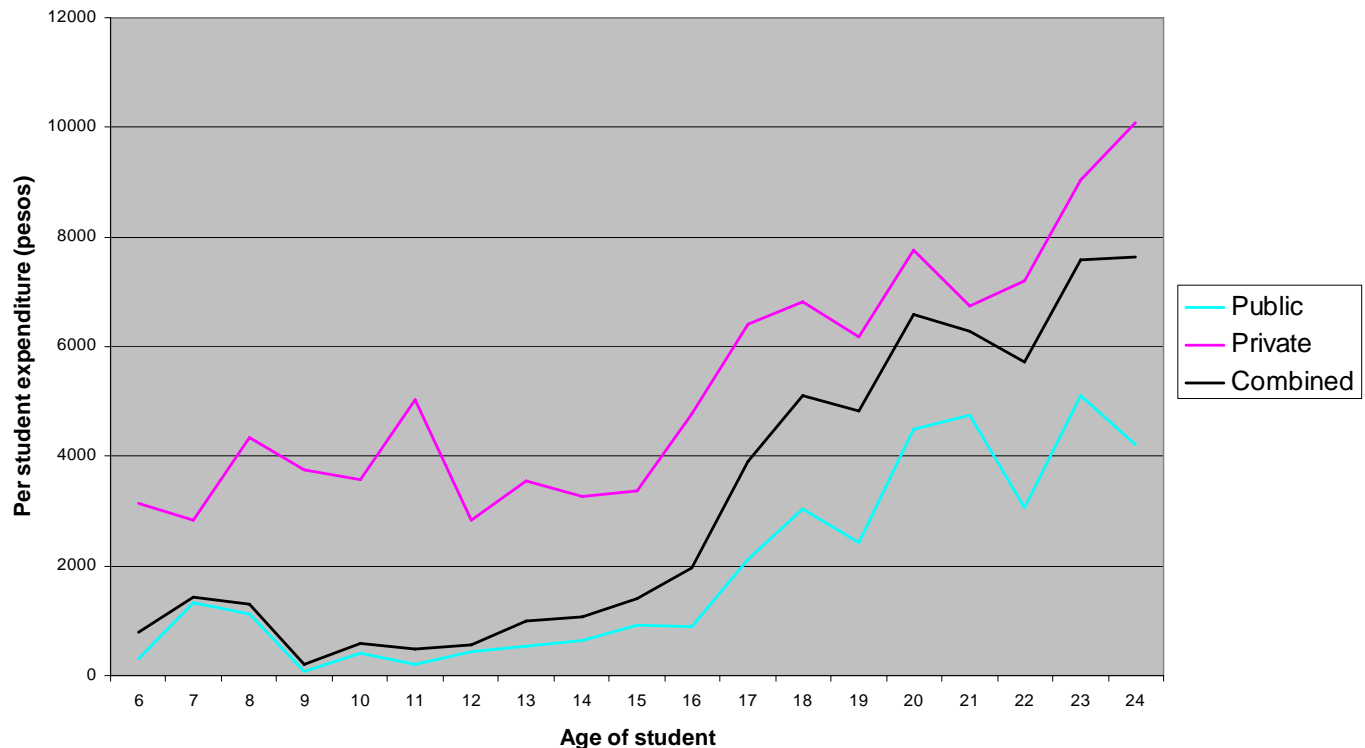


NTA work: education out-of-pocket spending

- ▲ initial regression run for out-of-pocket (OOP) education expenditures done using the 1999 APIS
- ▲ numbers of members attending school by age were used on the RHS
- ▲ yielded “reasonable” estimates
 - ▲ trends as expected - education cost increasing with age and generally higher cost for private schools at all ages
 - ▲ no negative per capita cost (all regression coefficients positive)

NTA work: education out-of-pocket spending

Per student education expenditure
by type of school, by age:
1999 APIS and regression method

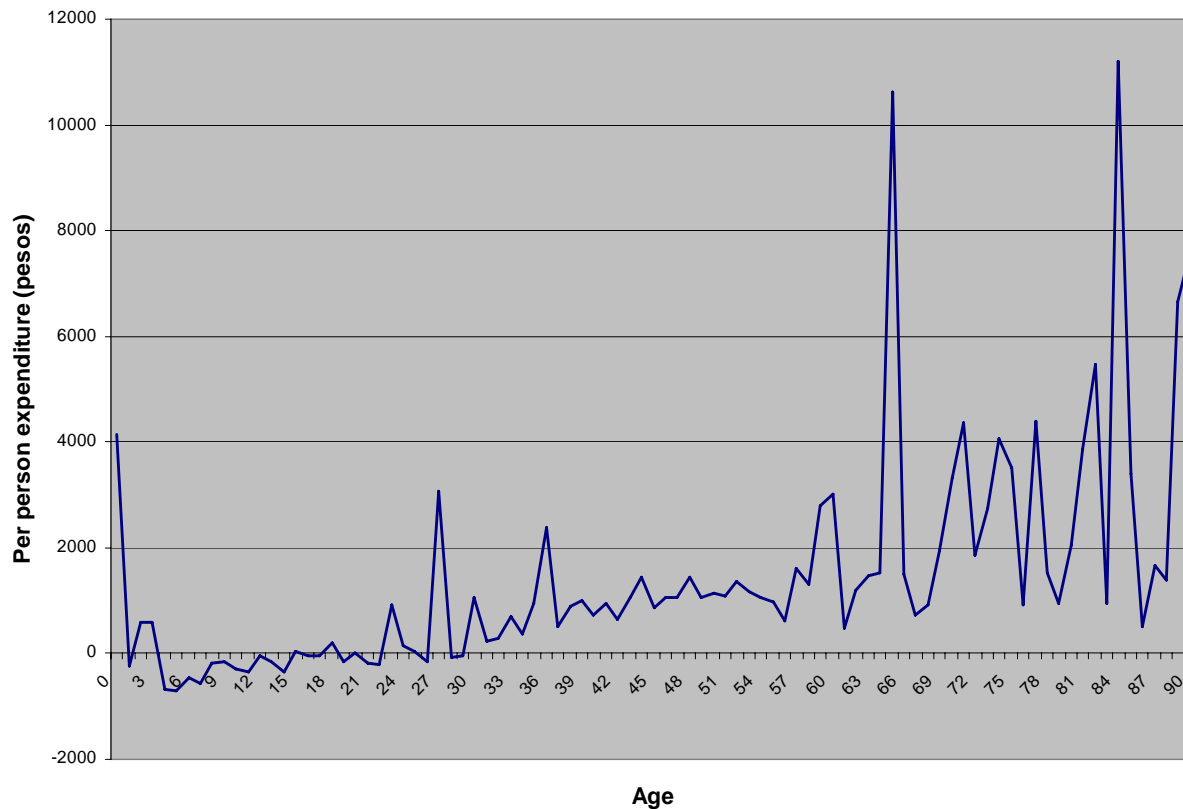


NTA work: health out-of-pocket spending - regression

- ▲ initial regression runs for OOP health expenditures used the 1999 APIS and 2000 FIES
- ▲ other regressions: by type; adding additional RHS (income, health status); testing for indirect effects; “one-child” regressions
- ▲ regression coefficients at young ages were consistently negative in all regressions

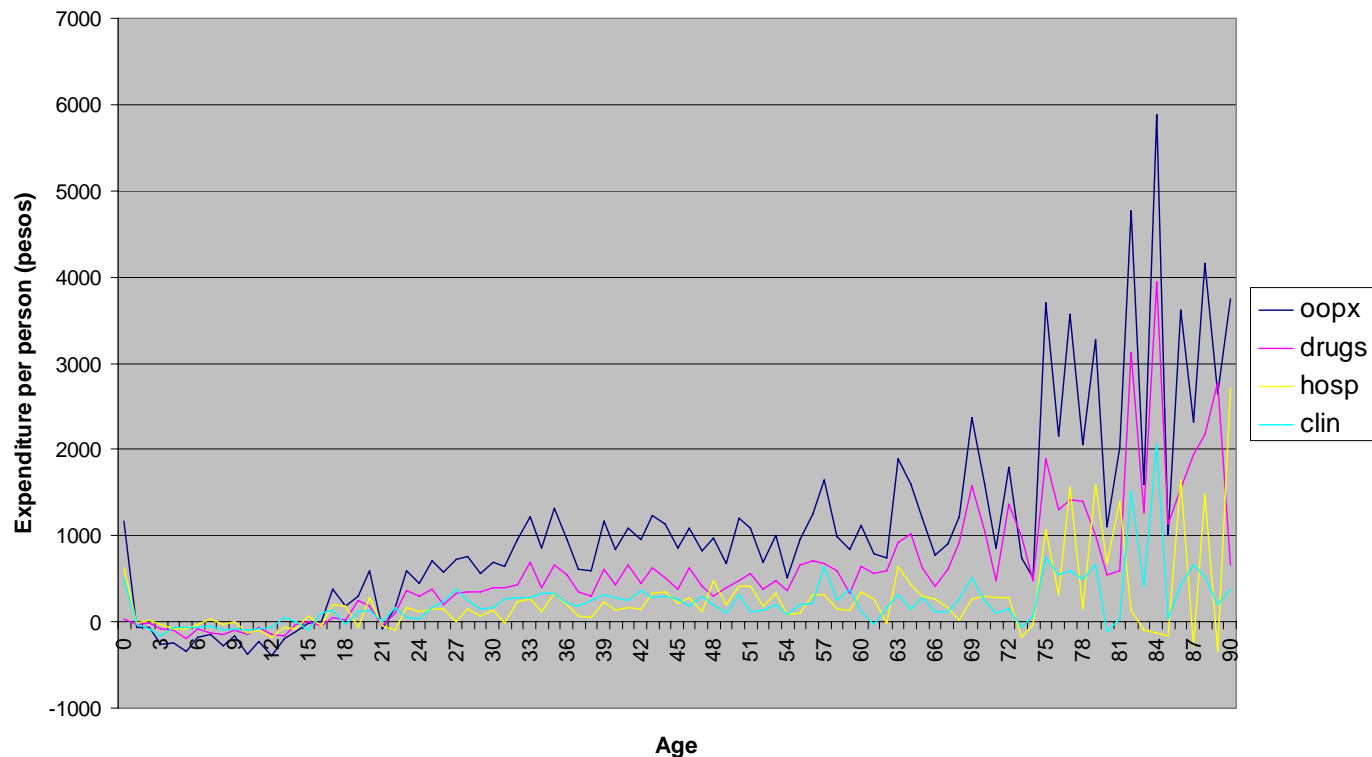
Health out-of-pocket spending (total): OLS

Health expenditures per person, by age:
1999 APIS and basic OLS



Health out-of-pocket spending by type: OLS

Expenditure for drugs, hospital and outpatient care per person, by age:
2000 FIES and regression method

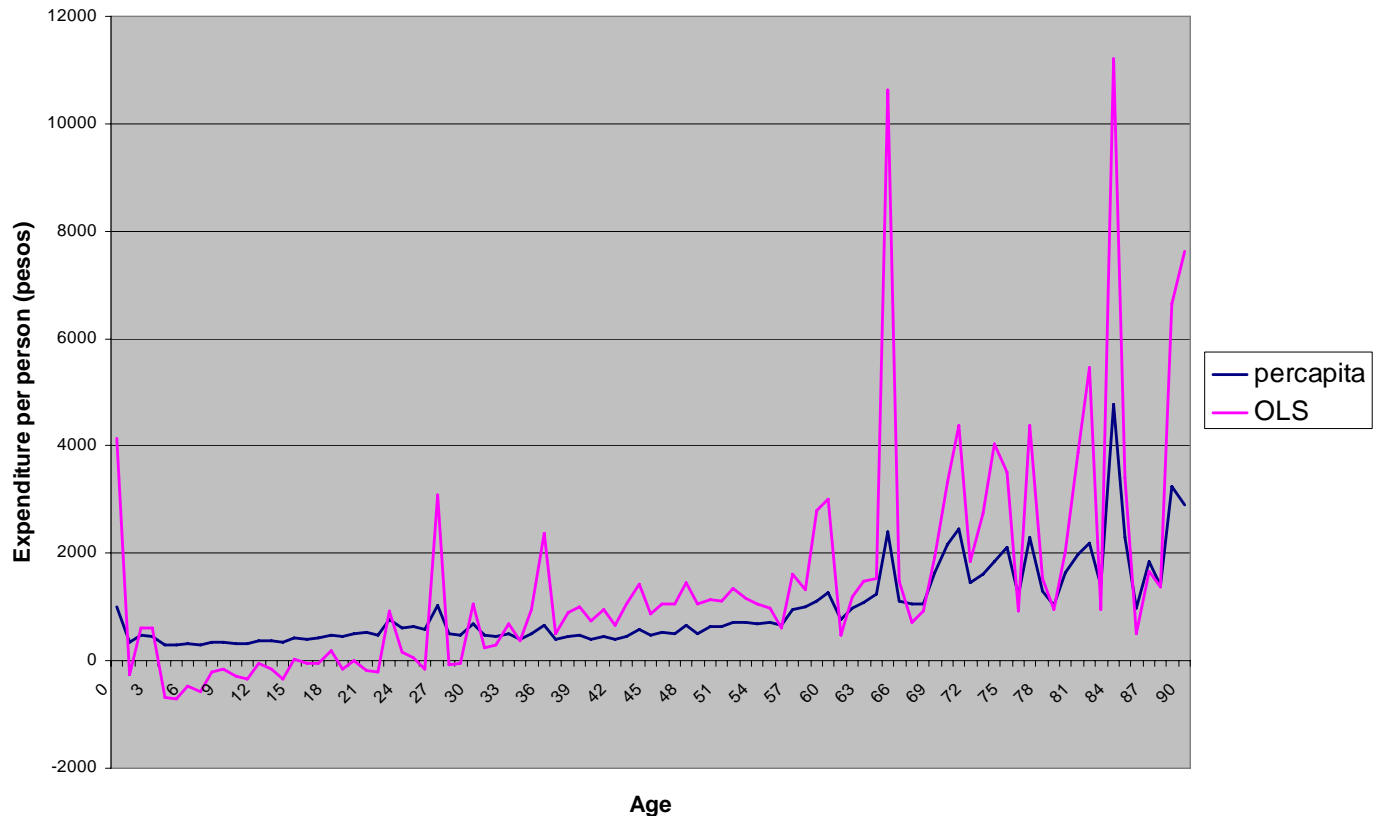


NTA work: health out-of-pocket spending - “two-step” per capita approach

- ▲ **mean health expenditures by age is derived using household survey data in two steps:**
 - ▲ **assign per capita household health spending to each member**
 - ▲ **compute for mean health expenditures by age across all individuals (i.e., across members from all households)**
- ▲ **this method generates the expected U-shaped, but somewhat “flatter” mean health expenditure profile**

Health out-of-pocket spending (total): two-step per capita approach

Health expenditure per person, by age:
1999 APIS and two methods

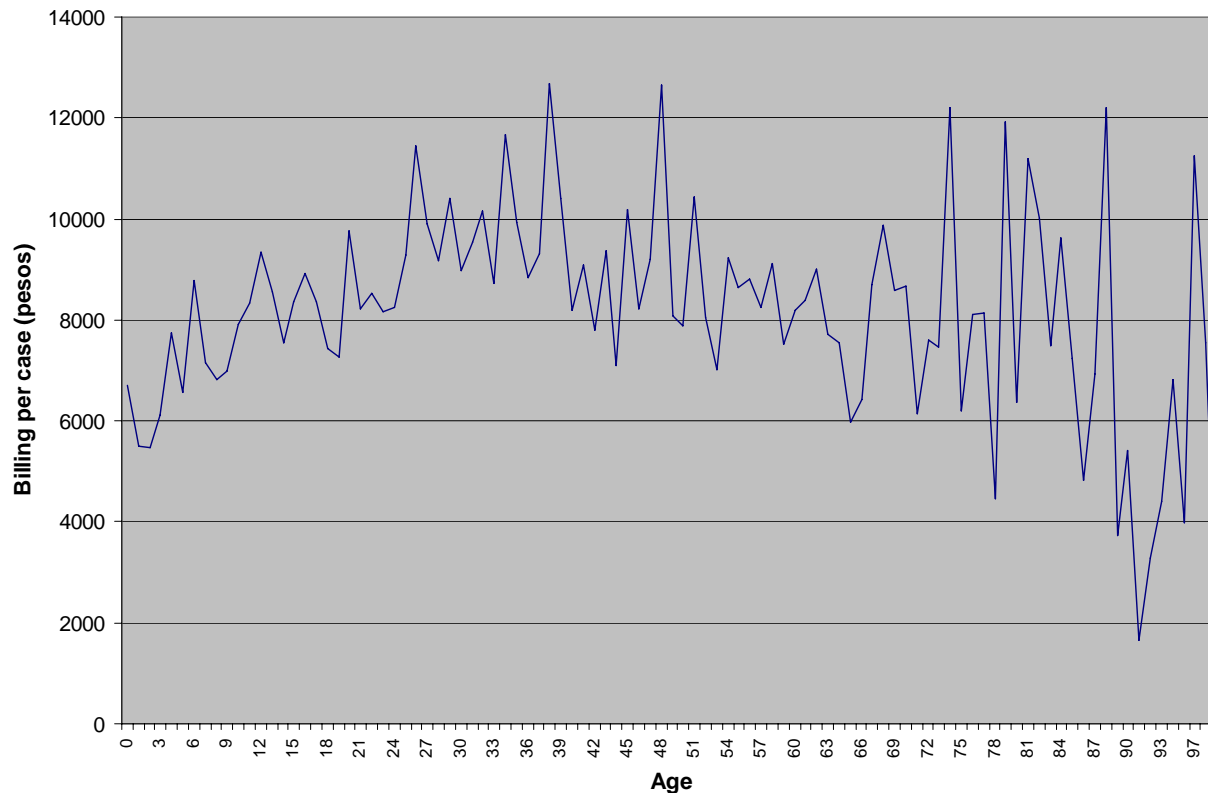


NTA work: health out-of-pocket spending - utilization and unit cost approach

- ▲ find other data sources (facility billing records, surveys) to estimate mean cost per visit or treatment (or mean cost per hospital stay) by age of patient**
- ▲ use unit cost together with health facility (service) utilization and population data to compute for total expenditures for each age group**

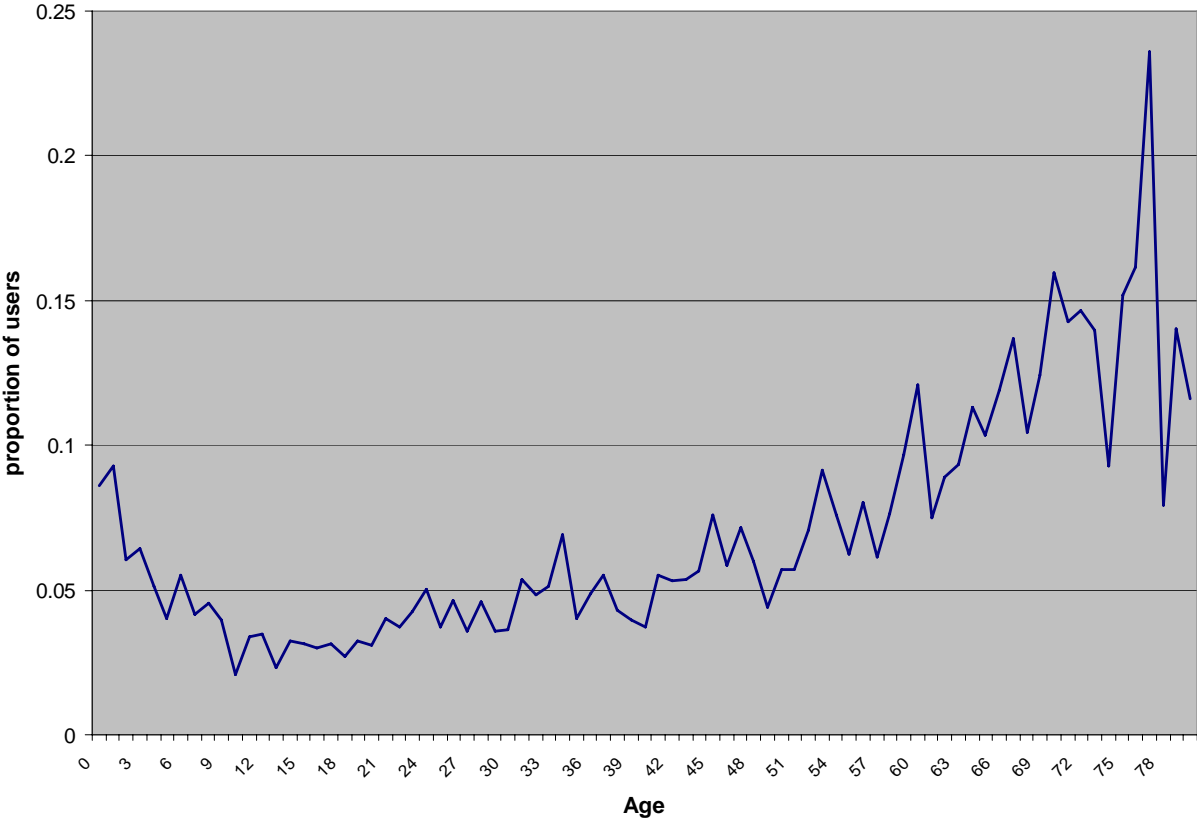
Government hospital billing

**Average government hospital bill
by age of patient: Davao Regional Hospital, Billing
Records Division, January to June 2004**



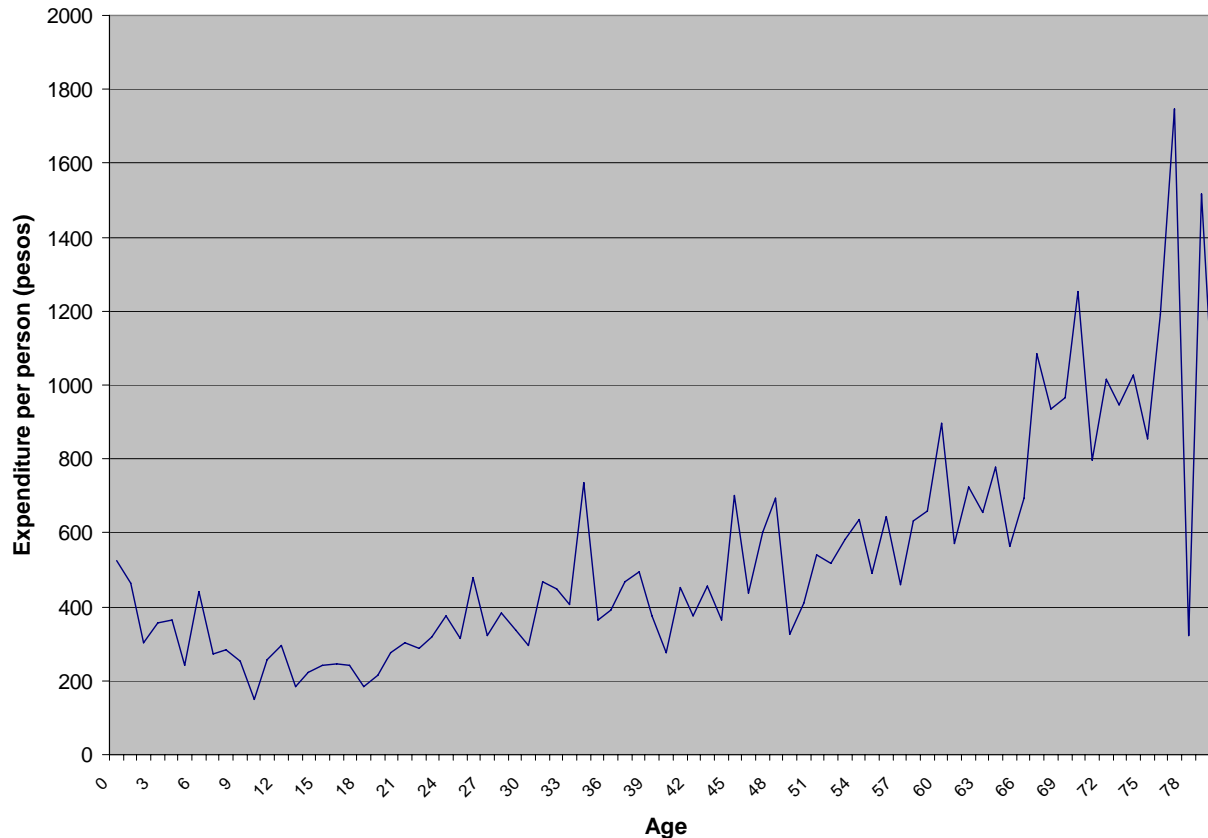
Hospital utilization

Hospital utilization rates by age:
1999 APIS



Estimated per capita hospital expenditures by age

Hospital expenditure per person, by age:
utilization and unit cost approach



Philippines NTA: Next Steps

Which methods?

- ▲ so far we have been using the 1999 APIS to try out the various allocation methods
- ▲ next, we need to try out the methods using data for other years
- ▲ based on test runs, we adopt the methods that yield “reasonable” results and which do so consistently across different data sets

What years?

- ▲ the years for which NTA can be estimated depends on the availability of survey data sets with household income and expenditure data, and individual school enrollment, health facility use and employment data (for allocation)
- ▲ the possibilities include:
 - ▲ 2002 APIS
 - ▲ 1999 APIS
 - ▲ 1998 APIS
 - ▲ 1991 FIES/LFS (with PIDS Health Surveys)

Thank you!