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Philippines 2007 National Transfer Accounts: Financing Consumption and Lifecycle Deficit by Income Group

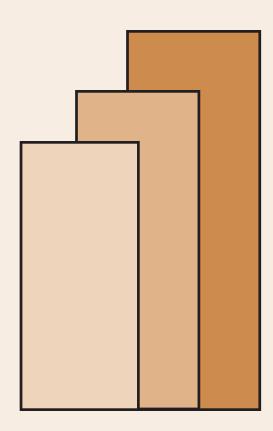
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Philippines 2007 National Transfer Accounts (NTA): Financing Consumption and Lifecycle Deficit by Income Group¹

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Abstract

The NTA flow accounts for the Philippines for the year 2007 includes not only national level estimates but also estimates by income group. Three income groups are defined, referred to as income terciles. This paper examines the financing of consumption by income group. One source of financing is own labor income. But for age groups whose labor income is not sufficient to cover their consumption, mainly the young and elderly, the difference or the lifecycle deficit is financed by resources reallocated between age groups. The income groups differ in the manner the lifecycle deficits are financed. Some key findings include: (1) for the young dependent age group deficit is financed by public alongside private transfers for the bottom tercile while it is almost entirely private transfers for the top tercile; (2) for the young elderly (under 79 years old) financing of deficit is by asset reallocation and a small proportion by public transfers for the bottom and middle terciles, and by asset reallocation and private transfers for the top tercile; and (3) for the older elderly (age 79 or older) deficit is financed by public transfers (small proportion), private transfers and asset reallocation for the bottom and middle terciles, and by private transfers and asset reallocation for the top tercile.

Keywords: National Transfer Accounts, lifecycle deficit, consumption by income group, lifecycle deficit by income group, finance of consumption by income group

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1. Introduction

NTA is a comprehensive system of accounts that measures the economic lifecycle and the associated economic support systems. Consumption and labor income age profiles, and economic flows from members of specific age groups to other age groups, referred to in NTA as age reallocation or intergenerational transfers, are measured at the aggregate level and for a prescribed period of time. The NTA reports age reallocations by type of channel or system through which these are mediated. (General references on NTA include Lee, Lee and Mason 2005, Mason et. al. 2005 and Mason, et. al. 2009).

The first set of NTA flow accounts for the Philippines was estimated for the year 1999, and methods and results are discussed in Racelis and Salas (2007) and Salas and Racelis (2008), respectively. Selected NTA components, more specifically age profiles of consumption and labor income, were also estimated for the years 1994 and 2002 (Racelis and Salas 2008a; Racelis and Salas 2011). All these previous NTA estimates are at the national level or for the entire country only.

Another round of NTA flow accounts for the Philippines was estimated for the year 2007. The 2007 NTA includes estimates not only for the entire country but also by income group. Three income groups are defined and these are referred to as income terciles: bottom tercile (lowest income group), middle tercile, and top tercile (highest income group). The national level results of the 2007 NTA are discussed in Abrigo, Racelis and Salas (2012). The results by income group are analyzed in two parts (and reported in two separate papers): first, comparing age profiles of consumption and labor income across income groups; and, second, comparing finance of consumption of the deficit age groups across income groups. This paper covers the second part.

Section 2 describes the methods and data used to estimate the 2007 Philippines NTA. Section 3 provides an overview of the economic lifecycle, and shows the deficit ages and sizes of aggregate lifecycle deficits by income group. Section 4 describes the deficit age groups and their household situation by income group. Section 5 presents the findings on consumption financing by age group for the different income groups. Section 6 concludes the paper.

2. Methods and data

The main sources of data for the estimation of components of the 2007 Philippines NTA Flow Account by income group include: the 2007 National Income

Accounts obtained from the National Statistical Coordination Board (NSCB), specifically the Income and Outlays breakdown; the most recent estimates available of National Health Accounts and National Education Expenditure Accounts (also from the NSCB); the 2006 Family Income and Expenditure Survey (FIES) and the 2007 Annual Poverty Indicator Survey (APIS) obtained from the National Statistics Office (NSO); and government finance and budget documents containing 2007 data obtained from the Department of Budget and Management (DBM) and the Commission on Audit COA).

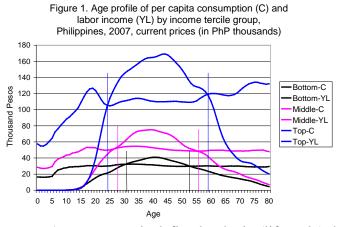
The methods used to estimate the consumption and labor income age profiles of the Philippine NTA for earlier years are described in Racelis and Salas (2007) and these were generally followed in the estimation of the 2007 NTA. But additional steps were needed to produce the age profiles by income group and these are described in Racelis, Abrigo and Salas (2012).

3. Some findings on the economic lifecycle by income group

Highlighted in this section are the differences across the income groups in the age profiles of consumption and labor income, the ages at which the young and elderly incur lifecycle deficit, and the sizes of aggregate consumption and lifecycle deficits. (Refer to Racelis, Abrigo and Salas 2012 for detail on the age profiles of each specific component of consumption and labor income).

Per capita age profiles

Per capita consumption and labor income age profiles by income group are shown in Figure 1. The age profiles generally have the expected shapes but the profiles also show the progressively lower per capita consumption and labor income at each age as one moves from the top tercile and on to the middle and bottom terciles.



An age group is defined to be in (lifecycle) deficit when their consumption exceeds their labor income. Deficit age cut-offs, the ages at which the per capita consumption and labor income age profiles intersect, differ across income groups. Compared to the top tercile, in the two lower terciles the young are in deficit much longer and the elderly go into deficit earlier (Figure 1 and Table 1). Thus, the spans of the

surplus ages are shorter for the bottom and middle terciles (22 and 29 years, respectively) compared to that for the top tercile (34 years).

Aggregate age profiles

labor income (YL) by income tercile group,
Philippines, 2007, current prices (in PhP billions)

80
70
60
99 50
40
40
Middle-C
Middle-YL
Top-C
Top-YL

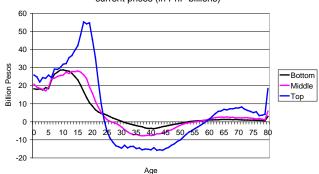
40 45 50 55 60 65 70 75 80

Figure 2. Age profile of aggregate consumption (C) and

Figure 3. Age profile of aggregate lifecycle deficit by income tercile group, Philippines, 2007, current prices (in PhP billions)

Age

10 15 20 25 30 35



The aggregate age profiles for consumption and labor income, and for lifecycle deficit (aggregate consumption minus aggregate labor income) are shown in Figures 2 and 3 and values from the aggregate age profiles are summarized in Tables 1 and 2. ³

As may be observed from Table 1, the sizes of the aggregate lifecycle deficit (aggregate consumption minus aggregate labor income) do not seem very different between the income tercile groups. But the aggregate consumption and aggregate labor income of the top tercile are more than two times and about four times of those for the middle and bottom terciles, respectively. Thus, the aggregate deficits that are nearly similar in terms of level across income groups actually represent 22, 33 and 48 percent of aggregate consumption of the top, middle and bottom terciles, respectively.

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³ For each income group, aggregate consumption and aggregate labor income at each age (referred to as aggregate age profiles) are computed by multiplying the income group's per capita mean at each age (shown in Figure 1) with the corresponding population size at each age (population size by age and by income group are shown in Figure 4).

Table 1. Aggregate consumption, labor income and lifecycle deficit by income tercile group: Philippines, 2007 (billion PhP)

	_	Income tercile group		
Item description	Total	Bottom	Middle	Тор
Lifecycle deficit	1,453	459	441	553
Consumption	4,770	959	1,341	2,469
Public	654	269	218	166
Private	4,116	690	1,123	2,303
Labor Income	3,316	501	900	1,916
Earnings	1,991	202	523	1,266
Self-employed	1,321	294	377	650
Deficit age cut-off				
Young		30	26	24
Elderly		53	56	59

The composition of consumption varies by income group with public consumption accounting for 28, 16 and 7 percent of the total for the bottom, middle and top income tercile group, respectively. The composition of labor income also differs significantly across income groups. Salaries and wages or earnings account for 40 percent and self-employment income 60 percent of total labor income of the bottom tercile. The percentage accounted for by self-employment income decreases to 42 percent and 34 percent for the middle and top terciles, respectively.

Table 2. Aggregate consumption, labor income and lifecycle deficit by age group and by income tercile group: Philippines, 2007 (billion PhP)

	_	Age group			
NTA component / income group	Total	Young deficit age group	Surplus age group	Elderly deficit age group	
Lifecycle deficit	1,453	1,802	-558	209	
Bottom tercile	459	477	-46	27	
Middle tercile	441	518	-127	50	
Top tercile	553	807	-386	132	
Consumption	4,770	2,434	1,874	461	
Bottom tercile	959	634	250	75	
Middle tercile	1,341	761	458	122	
Top tercile	2,469	1,039	1,166	264	
Labor Income	3,316	632	2,432	252	
Bottom tercile	501	157	295	48	
Middle tercile	900	243	584	73	
Top tercile	1,916	232	1,552	132	

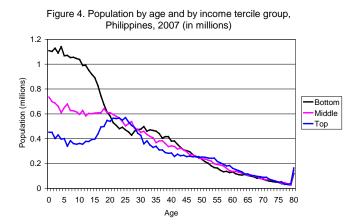
Overall aggregate lifecycle deficit for the different income groups are nearly equal across income groups but a comparison of the lifecycle deficit pattern by age group shows considerable variation. These differences include the following (Figure 3 and Table 2): (1) aggregate deficit of the young age group for the top tercile is about 50 percent and 70 percent more than that for the middle and bottom income groups, respectively, and similarly elderly group aggregate deficit for the top tercile is about 3 times and 5 times that for the middle and bottom income groups, respectively; (2) the ratio of aggregate surplus to aggregate deficit increases from 0.07 for bottom to 0.22 and

0.41 for the middle and top terciles, respectively; and (3) share of aggregate deficit accounted for by the elderly increases from 0.2 percent for bottom to 8 and 14 percent for the middle and top terciles, respectively.

4. Profile of the deficit age groups and households by income group

This section provides the number, characteristics and location of the young and elderly dependent populations by income group. The households in the different income groups are also characterized in terms of size and membership composition by dependent age groups.⁴

In 2007 the top tercile accounted for only 27 percent of total Philippine population (about 24 million), while the middle and bottom terciles accounted for about 33 percent (about 29 million) and 40 percent (about 35 million), respectively. The bottom tercile accounted for the largest share of total population because the sizes of households in this income group as shown later are generally larger. The sizes of each income group's population by age are shown in Figure 4. The sizes are similar at ages 25 or older but very different at the younger ages.



There are larger numbers of young and elderly dependents in the bottom tercile (Tables 3 and 4). In percentage terms, the bottom tercile accounts for disproportionately larger shares of young and elderly dependents at 47 and 37 percent, respectively. In contrast, the top tercile accounts for disproportionately smaller shares of young and elderly dependents at 21 and 29 percent, respectively. The young dependency ratios are 3.2, 1.7 and 1.0 for the bottom, middle and top teciles, respectively; while corresponding elderly dependency ratios are 0.35, 0.26 and 0.20 for each income group, respectively.

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⁴ Data used in the tables and figures are taken from the 2007 Annual Poverty Indicator Survey.

⁵ The grouping by income group was done at the household level and based on household income.

⁶ The dependency ratios are computed with population in the deficit age groups (young and elderly) in the numerator and the population in the surplus age groups in the denominator.

Table 3. Profile of the young deficit age groups by income tercile group: Philippines, 2007

	Income tercile group		
Item description	Bottom	Middle	Тор
Ages of young with lifecycle deficit (years)	0-30	0-26	0-24
Population size (million)	24.9	16.6	11.0
Percent attending school	61.5	64.9	69.7
Percent working	26.2	20.9	17.0
Percent by relationship to household head:			
Head	2.6	1.2	1.0
Spouse	4.3	2.0	0.8
Child/grandchild	89.1	91.1	87.4
Other	4.0	6.7	10.8

Table 4. Profile of the elderly deficit age groups by income tercile group: Philippines, 2007

	Income tercile group		
Item description	Bottom	Middle	Тор
Ages of elderly with lifecycle deficit (years)	53 or older	56 or older	59 or older
Population size (million)	2.7	2.5	2.1
Percent working	65.1	53.8	41.0
Percent by relationship to household head:			
Head	59.6	60.6	61.1
Spouse	28.7	26.1	24.0
Parent	6.3	7.0	7.7
Other	5.4	6.3	7.3

A lower proportion of the young is attending school while a higher proportion is working for the bottom tercile compared to the other income groups. Most of the young in all income groups are living in their respective households as children or grandchildren of the head. A higher proportion of the elderly in the bottom tercile is working compared to the other income groups. Most of the elderly are either heads of households or spouses of heads, and the proportions are similar across income groups. A higher proportion of the elderly in the top tercile are parents of heads.

Figure 5. Distribution of elderly deficit group population by region: by income tercile group, Philippines, 2007 (in percent)

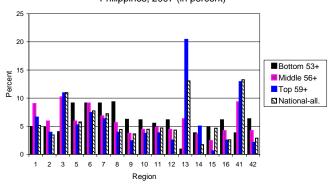
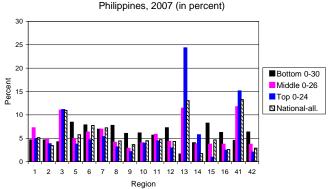


Figure 6. Distribution of young deficit group population by region: by income tercile group,



The geographic or regional distributions of the elderly and the young age groups of the different income groups are generally similar to the regional distribution of the total national population with some notable variation (Figures 5 and 6). Among the young dependent population in the bottom tercile, disproportionately larger shares (more than 50 percent higher than the national proportion) are to be found in Regions 8 (Eastern Visayas), 9 (Western Mindanao), 12 (Southern Mindanao), 14 (CAR), 15 (ARMM) and 42 (Region 4B or MIMAROPA) and disproportionately smaller shares ((less than 50 percent of the national proportion) in Regions 13 (NCR) and 41 (Region 4A or CALABARZON). Among the young dependents in the top tercile, disproportionately larger shares are in Regions 13 (NCR) and 14 (CAR), and a disproportionately smaller share in Region 15 (ARMM).

Among the elderly dependent population in the bottom tercile, disproportionately larger shares are to be found in Regions 8 (Eastern Visayas), 9 (Western Mindanao), 14 (CAR) and 42 (Region 4B or MIMAROPA) and disproportionately smaller shares in

⁷ The acronyms are as follows: Cordillera Autonomous Region for CAR; Autonomous Region for Muslim Mindanao for ARMM; Mindoro-Marinduque-Romblon-Palawan for MIMAROPA; National Capital Region for NCR; and Cavite-Laguna-Batangas-Rizal-Quezon for CALABARZON.

Region 3 (Central Luzon), Regions 13 (NCR) and 41 (Region 4A or CALABARZON) – patterns similar to the young dependent population in the bottom tercile. Among the elderly in the middle tercile, disproportionately larger shares are to be found in Regions 1 (Ilocos), 2 (Cagayan Valley) and 14 (CAR). Among the elderly in the top tercile, disproportionately larger shares are to be found in Regions 13 (NCR) and 14 (CAR) and a disproportionately smaller share in Region 15 (ARMM) – patterns similar to the young dependent population in the top tercile. The patterns in the distribution of the dependent populations by region for the different income groups generally reflect the regional distribution of households by income group; hence, the similarity in the distinctive regional patterns observed for the location of the young and elderly dependents within the same income group.

Table 5. Distribution of households by size and by number of members, by income tercile group: Philippines, 2007 (in percent)

	Income tercile group		up
Item description	Bottom	Middle	Тор
Household size			
1-2	9.3	14.5	23.6
3-5	45.5	58.2	53.0
6-8	36.4	22.6	20.0
9 or more	8.9	4.8	3.2
Average size	5.39	4.63	4.11
Number of young members in the deficit ages			
0	8.7	14.1	24.6
1-2	23.1	38.6	43.6
3-5	50.6	41.2	29.1
6 or more	17.8	6.1	2.7
Average number of members	3.59	2.54	1.87
Number of elderly members in the deficit ages			
0	62.2	64.9	66.5
1-2	37.0	34.4	33.0
3 or more	0.7	0.6	0.4
Average number of members	0.56	0.49	0.45
Number of members in the surplus ages			
0	25.7	13.9	11.5
1	26.4	23.4	26.1
2	46.3	54.7	45.2
3 or more	1.7	8.0	17.2
Average number of members	1.24	1.60	1.79

Household size in all income groups are mostly 3 to 5 persons (Table 5). However, a higher percentage of bottom tercile households are with 9 or more members while a higher percentage of top tercile households are with only 1-2 members. Average household size is 5.39 for the bottom tercile, while the average sizes for the middle and top tercile households are smaller by 14 percent and 24 percent, respectively. The top tercile households have the smallest number of young and elderly dependents on average

at 1.87 and 0.45 per household, respectively. The top tercile households expectedly have the highest percentages with no young (24.6 percent) and no elderly (66.5 percent) present. Households in all income groups mostly have about 2 members in the surplus ages. On overage, there are only 1.24 members per household in the surplus ages for the bottom tercile and the averages are 29 and 44 percent higher for the middle and top terciles.

Table 6. Distribution of households by presence of members in the deficit ages, by income tercile group: Philippines, 2007 (in percent)

_	Income tercile group		
Item description	Bottom	Middle	Тор
With both young and elderly members in the deficit ages	18.7	18.4	20.1
With young and no elderly members in the deficit ages	70.9	66.3	55.4
With elderly and no young members in the deficit ages	8.2	10.1	13.2
With no members in the deficit ages	2.2	5.2	11.3
All households	100.0	100.0	100.0

In terms of presence or absence of members in the deficit ages in households, most households have young members but no elderly member, 71 percent for the bottom tercile and 55 percent for the top tercile (Table 6). The top tercile has the highest percentage of households with the double burden of young and elderly dependents (20 percent) as well as the highest percentage with elderly dependents (13.3 percent). But the top tercile also has the highest percentage of households with no members in the deficit ages (11.3 percent).

5. Financing consumption by age group and by income group

Finance of consumption in NTA: an overview

One important source of financing of current consumption for many age groups is own earnings from work. For the age groups with (negative lifecycle deficit) surplus, their consumption is fully financed by own earnings and in addition they provide support for the consumption of other age groups. However, for the age groups with lifecycle deficits, they are either not yet earning or own earnings is not sufficient to finance their consumption. Additional resources must be received by this latter age groups from other age groups to fully cover their needs. The reallocation of resources between age groups is mediated through different channels and can take various forms.

In NTA age reallocation systems are classified along two dimensions, the governing or mediating institutions (public and private sectors) and the economic form of reallocation (asset-based and pure transfers). Public sector reallocations rely on mandates embodied in laws and other legal instruments, and are mediated by all levels of government. Private sector reallocations are governed by voluntary actions and are mediated mainly by households and to a small extent by other private institutions (e.g.,

charitable organizations.) In terms of form, assets can be used for inter-temporal resource allocation or the allocation of resources across time periods. Assets or capital are accumulated while young and dis-accumulated when old. Transfers, on the other hand, are reallocations from one age group to other age groups such as from parents to children, which involve no explicit *quid pro quo*.

Furthermore, in NTA the individual is the fundamental analytic unit. All transactions are treated as flowing to (INFLOWS) and from individuals (OUTFLOWS) and are classified on the basis of the age of those individuals. Also in NTA flow accounts the basic governing equation which must be satisfied for any individual, household, age group, or (closed) economy is as follows:

$$\underbrace{C - y^{l}}_{\text{Lifecycle deficit}} = \underbrace{rA - S}_{\text{Asset reallocations}} + \underbrace{\tau_{g}^{+} - \tau_{g}^{-}}_{\text{Net public transfers}} + \underbrace{\tau_{f}^{+} - \tau_{f}^{-}}_{\text{Net private transfers}}$$

$$\underbrace{\text{Net public transfers}}_{\text{Age reallocations}}$$

The *lifecycle deficit* (LCD) is the difference between consumption and labor income. A negative LCD indicates a surplus. The deficit or surplus must be matched by *age* reallocations consisting of asset reallocations and transfers. Asset reallocations consist of the difference between asset income (rA) and saving (S). Transfers consist of net public transfers or transfers mediated by government (public services received, y_g^+ , less taxes and other fees paid to government, y_g^-) and net private transfers or transfers mediated by households and other private entities (inflows to, y_f^+ , less outflows from, y_f^- , each age group).

Rearranging terms in the basic equation, the finance of consumption of an age group is as follows:

$$C = y^{l} + Asset \ reallocation + Net \ public \ transfers + Net \ private \ transfers$$

The Philippines NTA provides estimates of consumption, labor income and age reallocations, including net public transfers, net private transfers (both inter-household and intra-household) and asset-based reallocation, by age.

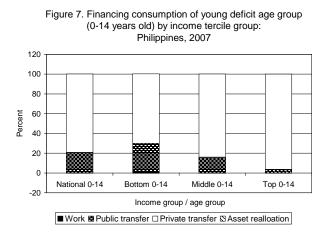
Findings from the 2007 Philippines NTA

The financing sources of consumption by age group for the different income tercile groups are shown in Figures 7 to 11. 8 Each of the deficit age group was split into smaller groups to highlight the shift in the type of financing across age. Note that the different deficit age cut-offs for the three income groups are followed and used in Figures 7 to 11.

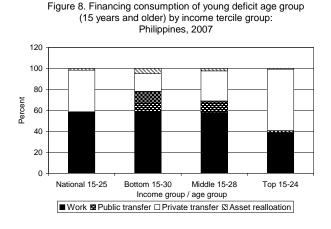
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⁸ The data used to generate Figures 7 to 11 are presented in tabular form in Appendix A.

As shown previously in Table 2, labor income of the young deficit age group is not sufficient to cover their consumption. The "younger" young deficit group ages 0-14 years in all income groups relies almost entirely on transfers to finance their consumption but differ in the sources of transfers (Figure 7). The bottom tercile children obtain about one-third of their support from public transfers. The top tercile children, on the other hand, obtain almost all of their support from private transfers.



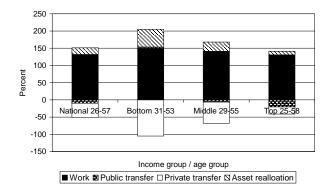
Substantial shares of the consumption of the "older" young deficit groups are still paid for by transfers, although smaller at 36 percent for the bottom tercile and 39 percent for the middle tercile compared to 61 percent for the top tercile (Figure 8). Almost half of bottom tercile transfers is public while top tercile transfers are again mostly private. In contrast to the pattern for transfers, labor income accounts for the larger shares at 59 percent and 58 percent for the bottom and middle terciles, respectively, compared to 39 percent for the top tercile.



Labor income of the "surplus" age groups for all income groups is more than sufficient to cover their own consumption and the surplus of these groups is transferred to

other age groups – appearing in Figure 9 as negative percentages. The means by which transfers are made to the deficit groups differ between income groups as follows: mostly through private transfers for the bottom and middle terciles; near equal shares through public and private transfers for the top tercile.

Figure 9. Financing consumption of surplus age group by income tercile group: Philippines, 2007



Comparing Figures 10 and 11, labor income share as a source of financing elderly consumption drops drastically in all income groups from around one-half for the "younger" elderly (under age 79 years) to less than 10 percent for the bottom and middle terciles and about 19 percent for the top tercile for the "older" elderly (age 79 years or older). For the young elderly (Figure 10) labor income accounts for a lower proportion of of consumption financing for the bottom tercile compared to the proportions for the middle and top terciles. Among the older elderly (Figure 11) labor income still accounts for a significant share for the top tercile.

Patterns of transfers also vary among the elderly groups and across income groups. The bottom and middle terciles elderly on net receive public transfers (positive percentages) while the top tercile elderly on net contribute to public transfers (negative percentages). The pattern is the same for both young and older elderly groups as may be observed from Figures 10 and 11. The young elderly in the bottom and middle terciles on net provide transfer to other age groups through private means (negative (percentages), while the young elderly in the top tercile on net are recipients of private transfers (positive percentages). The older elderly in all income groups on net receive private transfers (positive percentages).

Asset reallocation is an important financing source for the surplus and elderly deficit groups in all income groups. In general the shares of elderly consumption accounted for by asset reallocation is higher for the older group in all income groups (Figures 10 and 11).

Figure 10. Financing consumption of elderly deficit age group (under 79 years old) by income tercile group:
Philippines, 2007

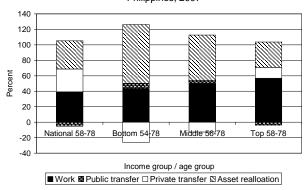
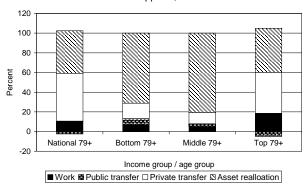


Figure 11. Financing consumption of elderly deficit age group (79 years or older) by income tercile group:
Philippines, 2007



6. Summary and conclusion

The income tercile groups differ in a number of ways from the economic lifecycle perspective, including among others: the sizes and composition of the dependent population; the sizes of the dependent population group relative to the surplus group; the sizes of aggregate labor income (and thus lifecycle deficit) relative to aggregate consumption; and the manner by which consumption and deficits are financed.

The young remain in deficit longer for the bottom and middle terciles compared to the top tercile; while at the older ages individuals go into deficit earlier for the bottom and middle terciles compared to the top tercile. As a result partly of the the economic lifecycle pattern and the larger population size of the bottom tercile, the numbers of the young and elderly dependents are largest for the bottom tercile and this is also reflected in the higher average number of dependents per household for this income group. Other implications of the lifecycle patterns of the different income groups include: the ratios of the sizes of the dependent relative to the surplus population is higher for the bottom and middle terciles; relative to the top tercile, the period of during which surplus is generated

is shorter for the bottom and middle terciles; and the proportion of aggregate consumption covered by labor income is lower for the bottom and middle terciles.

The income groups differ in the manner that consumption of the dependent populations is financed. For the top tercile: (1) higher shares of consumption financing are accounted for by private transfers both for the young and elderly deficit groups — which is to be expected since the top tercile households in general have higher mean number of working age members per household and higher aggregate surplus relative to the group's aggregate consumption; (2) lower share is accounted for by labor income for the young deficit group — reflecting the lower proportion of the group who are working; and (3) higher share is accounted for by labor income for the elderly deficit group — despite lower proportion of the group who are working. While a small percentage of the top tercile's young group consumption is financed by public transfers, the top tercile's surplus and elderly age groups on net provide public transfers to other age groups within the top tercile and presumably to age groups in other income groups as well.

In contrast, for the bottom tercile: (1) a lower share of consumption is accounted for by private transfers for the young deficit group – reflecting the lower aggregate surplus relative to the bottom tercile's aggregate consumption; (2) the elderly under 79 years old do not receive but rather provide private transfers to other ages and only become recipients starting at age 79 years; (3) higher share accounted for by labor income for the young deficit group – reflecting the higher proportion of the group who are working; and (4) lower share accounted for by labor income for the elderly deficit group – despite higher proportion of the group who are working. The bottom tercile's young group consumption show the highest percentage paid for by public transfers.

In conclusion, the bottom tercile young deficit group receives substantial public transfers but there is still very low public support to the bottom tercile elderly. This oversight needs to be addressed soon before the elderly population grows much larger. Moreover, labor income accounts for a small share of consumption financing for the bottom tervile elderly compared to the shares for the middle and top terciles. Any government program for promoting work and income-generating activities among the elderly should carefully pay attention to how the bottom tercile elderly in particular can be reached.

7. References

- Abrigo, M.R.M., R. H. Racelis and J.M.I. Salas (2012). Philippines 2007 National Transfer Accounts (NTA): Consumption, Income and Intergenerational Reallocation of Resources. Makati City: Philippine Institute for Development Studies, Discussion Paper Series No. 2012-29, March 2012.
- Lee, R., S. H. Lee and A. Mason (2005). "Charting the Economic Lifecycle." Manuscript in www.ntaccounts.org
- Mason, A., R. Lee, G. Donehower, S. H. Lee, T. Miller, A. C. Tung and A. Chawla (2009). "National Transfer AccountsManual: Draft Version 1.0". Manuscript in www.ntaccounts.org
- Mason, A., R. Lee, A. C. Tung, M. S. Lai and T. Miller. (2005) "Population aging and intergenerational transfers: Introducing age into national accounts". Manuscript in www.ntaccounts.org
- Racelis, R. H., M.R.M. Abrigo, and J.M.I. Salas (2012). Philippines 2007 National Transfer Accounts (NTA): Consumption, Labor Income and Lifecycle Deficit by Income Group. Makati City: Philippine Institute for Development Studies, Discussion Paper Series No. 2012-32, June 2012.
- Racelis, Rachel H. and J.M. Ian S. Salas (2008a). "Have Lifecycle Consumption and Income Patterns in the Philippines Changed from 1994 to 2002?" Makati City: Philippine Institute for Development Studies, Discussion Paper Series No. 2008-11, March 2008.
- Racelis, Rachel H. and J.M. Ian S. Salas (2011). "Changes in Patterns of Philippine Lifecycle Consumption and Labor Income Between 1994 and 2002 (Chapter 18)." In Ronald Lee and Andres Mason (eds.), *Population Aging and the Generational Economy*. Cheltenham, U.K. Edward Elgar Publishing Limited.
- Racelis, Rachel H. and J.M. Ian S. Salas (2007). "Measuring Economic Lifecycle and Flows Across Population Age Groups: Data and Methods in the Application of the National Transfer Accounts (NTA) in the Philippines." Makati City: Philippine Institute for Development Studies, Discussion Paper Series No. 2007-12, October 2007.
- Salas, J.M. Ian S. and Rachel H. Racelis (2008). "Consumption, Income and Intergenerational Reallocation of Resources: Application of National Transfer Accounts in the Philippines, 1999." Makati City: Philippine Institute for Development Studies, Discussion Paper Series No. 2008-12, March 2008.

Appendix A Finance of consumption by income group

Table A.1. Finance of consumption by age group and by income group: Philippines, 2007

Fillippines, 200	<u> </u>				
		Financing sources (percent distribution)			
Income group	All		Public	Private	Asset
/ age group	sources	Work	transfers	transfers	reallocation
Bottom tercile					
0-14	100	1.1	28.7	70.2	0.0
15-30	100	59.0	19.3	16.9	4.9
31-53	100	149.5	4.2	-105.1	51.4
54-78	100	44.2	6.1	-26.2	75.9
79+	100	6.7	6.4	15.7	71.2
Middle tercile					
0-14	100	0.0	16.0	84.0	0.0
15-28	100	58.4	10.7	28.7	2.2
29-55	100	141.3	-6.6	-61.3	26.6
56-78	100	50.5	3.4	-12.6	58.7
79+	100	4.7	3.5	11.2	80.6
Top tercile					
0-14	100	0.0	3.7	96.3	0.0
15-24	100	38.6	2.2	58.5	0.7
25-58	100	130.8	-20.7	-20.5	10.4
59-78	100	56.9	-3.6	13.9	32.8
79+	100	18.5	-5.0	41.6	44.9
All (national)					
0-14	100	0.0	20.8	79.2	0.0
15-25	100	58.3	0.6	39.6	1.6
26-57	100	131.7	-10.2	-40.8	19.3
58-78	100	39.3	-5.1	29.5	36.2
79+	100	10.7	-2.4	48.5	43.2