

Methodology for the Estimation of Transfers in Mexico, 2004
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Relevant details and main results are presented in this document regarding the estimation of public and private transfers in Mexico.

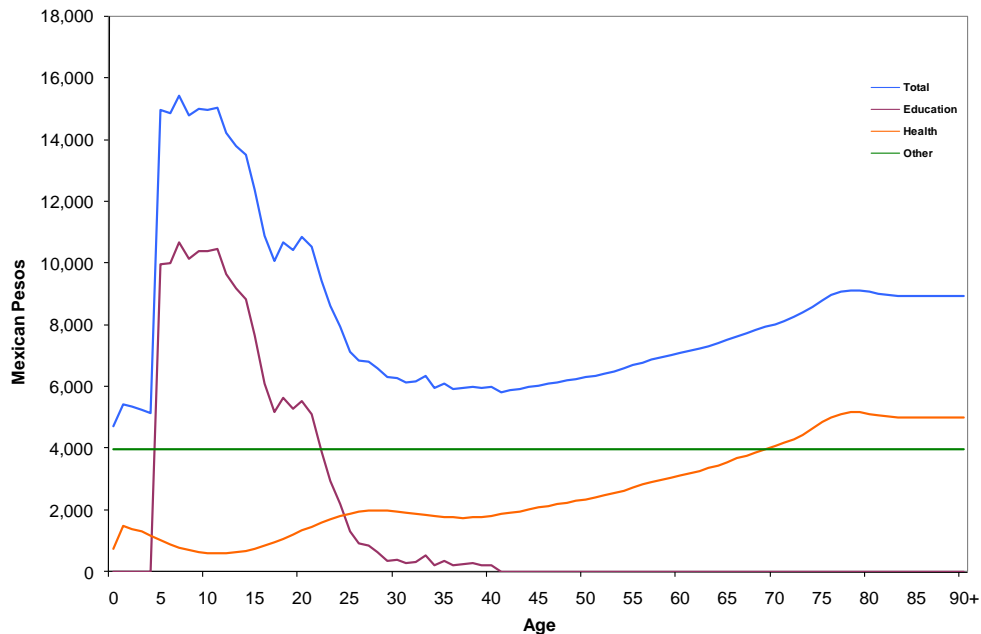
Public Transfers

According to NTA methodology, we divide public transfers as inflows and outflows, where this distinction is due to the perspective of individuals. Therefore, we considered in-kind and cash transfers as inflows; but taxes and social security contributions as outflows. The profiles estimated for the case of Mexico are as follows:

A. Inflows.

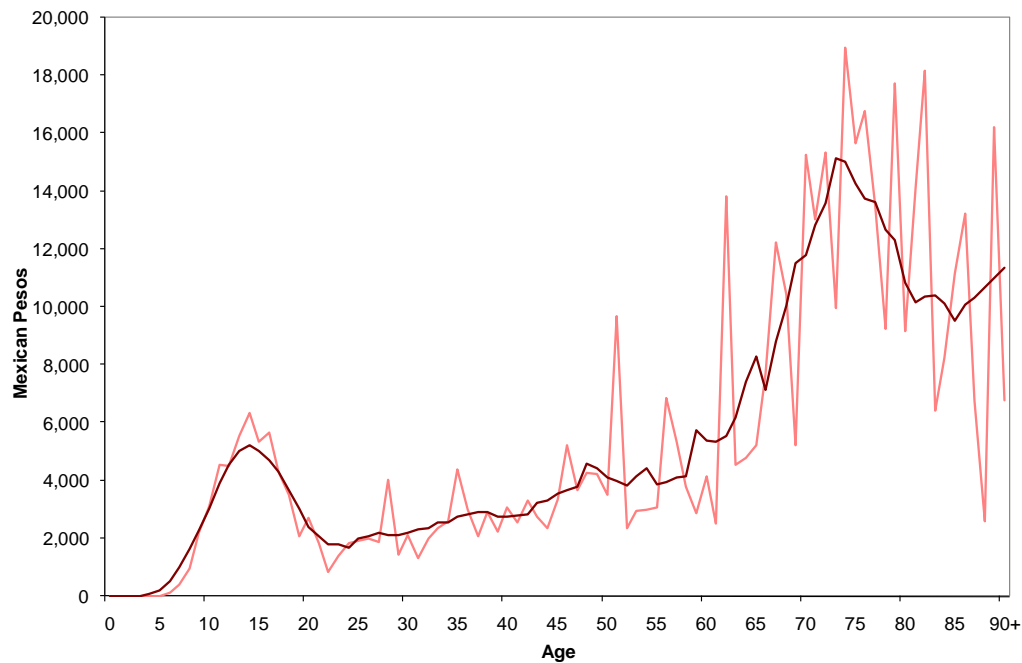
1. In-kind Transfers. These transfers correspond to the public consumption profiles previously estimated for the Life Cycle Deficit (LCD). Those estimations were considered without changes (see Figure 1).

Figure 1. Per capita Public In-kind Transfers, Mexico 2004



2. Other cash transfers. Some information about public transfers from the Government to individuals is considered here, which includes some public programs designed for the reduction of poverty in Mexico, like the so-called *Oportunidades* and *Procampo* from the Ministry of Social Development (SEDESOL). The age allocation was made using information from the Family Income and Expenditure Survey 2004 (ENIGH-2004) from the Ministry of Statistics (INEGI), which includes the amount received by families from this kind of programs. This profile is displayed in Figure 2.

Figure 2. Per capita Cash Public Transfers, Mexico 2004



B. Outflows. Taxes and Social Security Contributions. The tributary rules established by Mexican Law in 2004 were used here to construct these profiles. The estimated profiles are as follows:

1. **Income Taxes (ISR).** This was the most important tax in 2004 because the Mexican Government got around 45% of the total fiscal revenues from this tax [7]. The specific details and rules for the application of this tax are specified in the Income Tax Law in Mexico [1]. This profile was divided depending on subjects who pay this tax in: a) individuals and, b) corporations (which include income from people who work by their own, interests and taxes to Assets [2] – levied to assets from individuals and corporations). The age allocation was implemented by using information from the Ministry of Finance (SHCP) [8] where income deciles were taken into account for this specific tax and the corresponding income distribution from ENIGH-2004. Aggregate control for this profile was obtained from Public Records published by SHCP for 2004 [7]. A second approach for age allocation of this tax was taking the income distribution for those concepts where this tax is implied. This second approach was kept for the moment and it is displayed in Figure A1.
2. **Value Added Tax (VAT).** This is the second most important tax in Mexico since the Government gets about 37% of the total tributary income for 2004 from this concept [7]. The age allocation is obtained separating the specific items for which this tax is applied, according to the specific Law for this tax in Mexico (LIVA) [3]. Therefore, the same allocation methods used for the private consumption profiles were used here for this tax. This estimation includes the consideration of fiscal elution and different rates structure (zero rate, border rate of 10% and general rate of 15%), according to LIVA (see Figure A1).
3. **Excise Taxes (IEPS).** This tax is levied to some specific items: tobacco, alcohol and gasoline. The specific rules for the application of this tax can be found in the IEPS Law (LIEPS) [4]. This tax, ISR and VAT concentrate about 90% of the total fiscal revenue of the Government [7]. The age allocation was made by considering the distribution of the consumption of these items in the survey ENIGH-2004 (Figure A1).

4. Tax to the imports. Because lack of information for this tax in the survey, the per capita value computed directly from the aggregate value of this tax was assigned to people older than 11 years old (Figure A1).
5. Other taxes. Some local taxes in Mexico are considered here, like taxes to new cars (ISAN), a tax for the use of automobile (*Tenencia*), taxes to house's owners (*Predial*) and others. The age allocation was performed using the sample information where people report expenditure of this kind. The total amount for this tax is about 10% of the total fiscal revenues (Figure A1).
6. Social Security Contributions. The distribution of income obtained from wages specified in ENIGH-2004 was used here, which was used for ISR as well. We also used information provided from SHCP concerning the mandatory regime for social security contributions [5]. A second approach was used here for the age allocation of this tax, where the income distribution was also used in this case. This same approach was implemented for ISR and it was also kept for the moment. The profile is also shown in Figure A1.

It is important to point out that direct taxes in Figure 3 correspond to taxes to income (ISR), while indirect taxes include VAT, IEPS and Import taxes.

Total inflows and outflows are displayed in Figure 4, where we can appreciate that, on average, children and old people received similar amounts of public transfers. However, we should take into account that there are more young people than older, which mean that the amount of resources transfer to this age group is substantially higher than the amount older people receive.

Figure 3. Per capita Public Outflows, Mexico 2004

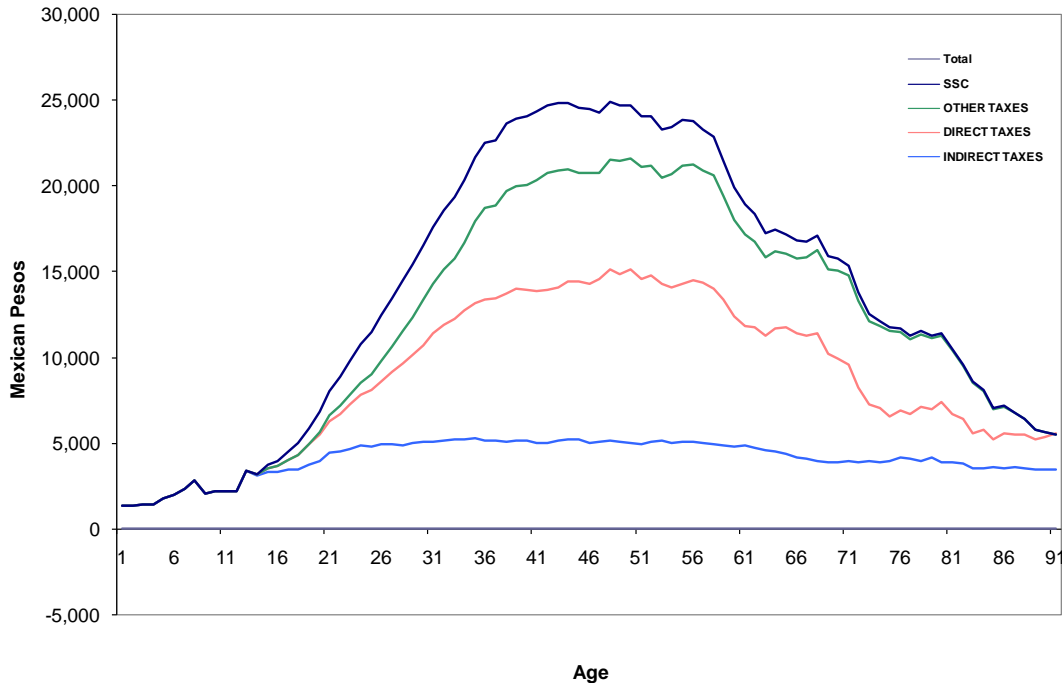
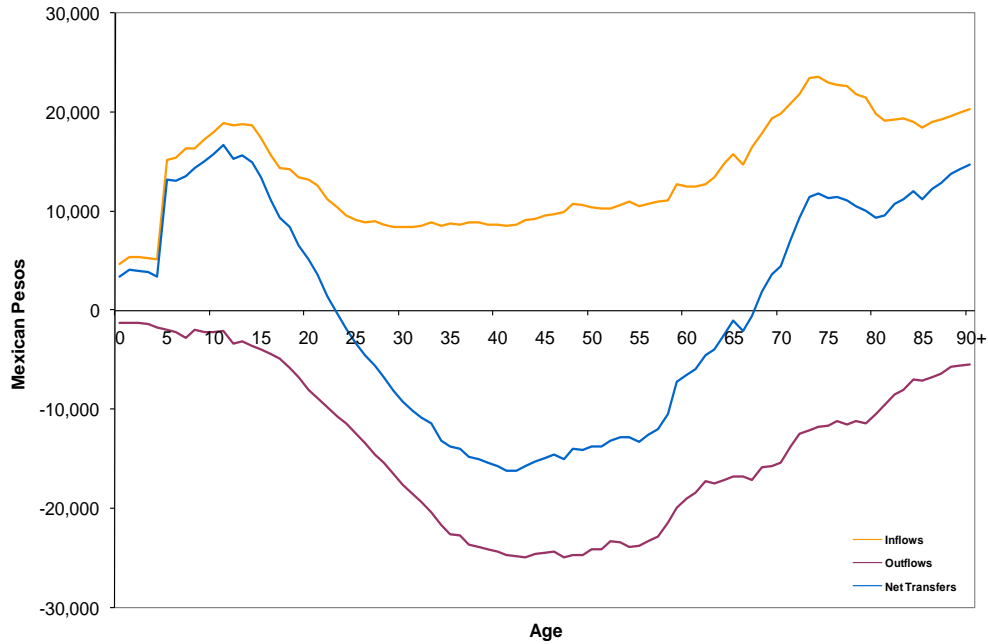


Figure 4. Per capita Net Public Transfers, Mexico 2004



Private Transfers.

These transfers are divided in Inter-household and Intra-household, where people from different households receive and send resources among each other in the former case; whereas, in last case, individuals from the same household transfer resources among each other:

A. Inter-household Transfers. Some information taken from ENIGH-2004 was used to construct these profiles, where people report gifts or transfers given or received from other households. The age allocation is given between household heads, where the definition of household head is self-reported in the survey. In the case of Mexico, remittances are included here since people who send and received these resources are not considered as members of the same household. These resources can be identified from the survey as money received from the rest of the world (ROW). A special treatment should also be considered for aggregate controls in this case since the amount of remittances people received from abroad is very high in comparison with the amount they send. This imbalance implies some difficulties when the methods for adjusting aggregate controls proposed in NTA are difficult to apply. Therefore, two approaches were proposed in the case of Mexico in order to deal with this problem and to take advantage of the methods already developed for this purpose. In the first approach, net current transfers from ROW, where remittances are included, are considered as aggregate control and sum them up as part of the inflows; then, net inter-household transfers exactly correspond to this amount, which is consistent with what is established in NTA methodology. The second approach was used since the previous approach does not consider that net domestic transfers should be zero and the net transfers from ROW represent the only difference between inflows and outflows. In order to deal with this issue, in this approach net domestic flows are first adjusted to be zero, where aggregate controls taken from National System Accounts (SNA) are used either from domestic inflows and outflows. This adjustment is done by using the methods proposed in NTA methodology. Remittances are treated apart where a specific profile is constructed from them and adjusted to the respective aggregate control, which are the net current transfers from ROW also taken from NSA. At the end, this profile is added to the inflows profiles and it is used to compute net inter-household transfers. In

Figure 5, inflows, remittances and outflows profiles from inter-household transfers are displayed, whereas in Figure 6, net inter-household transfers are depicted, where remittances are included in the inflows profile. Details and a template to adjust this profiles using both methods can be found in the following NTA link:

<http://www.schemearts.com/proj/nta/web/nta/show/Documents/Private%20Transfers>

Figure 5. Inter-household Transfers, Mexico 2004

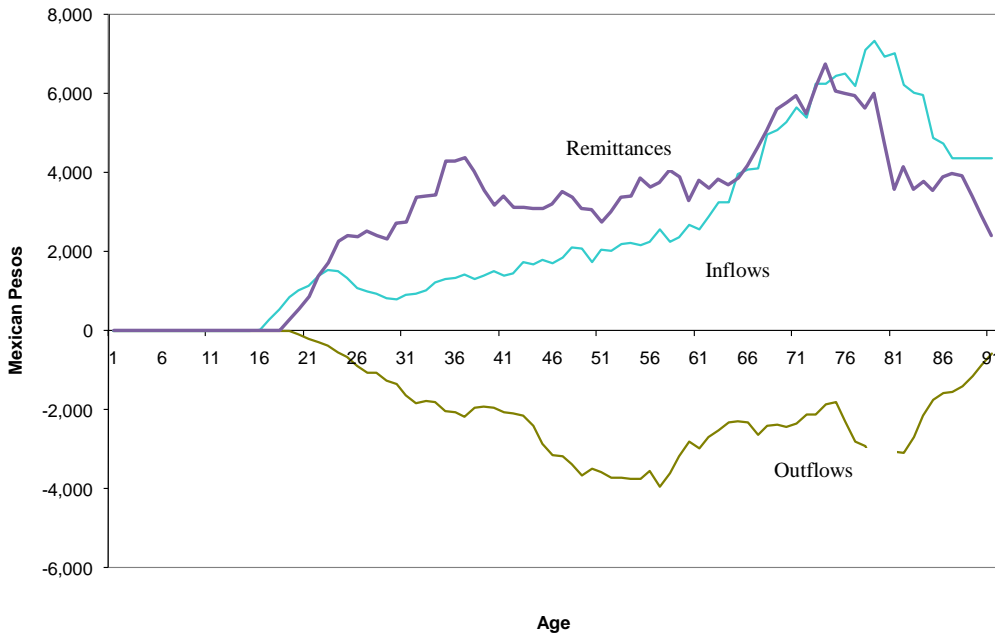
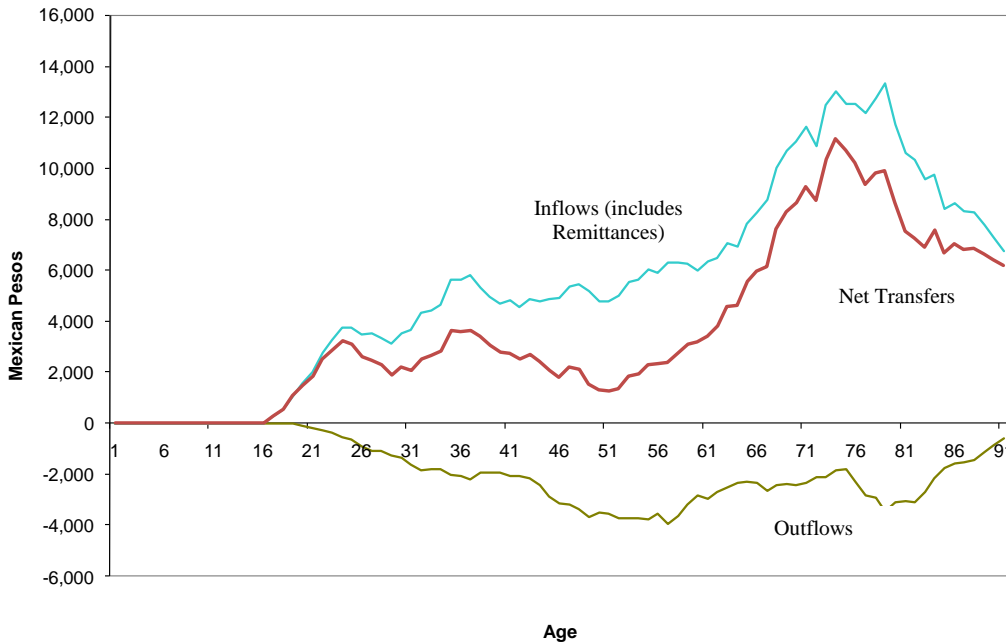
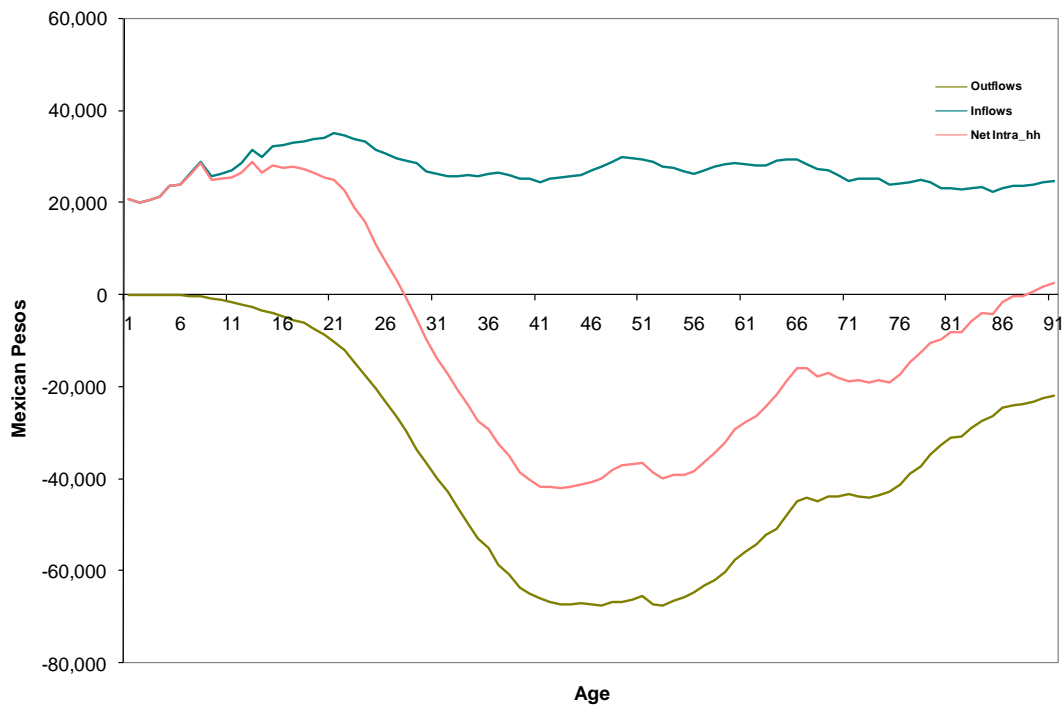


Figure 6. Net Inter-household Transfers, Mexico 2004



B. Intra-household Transfers. The methodology proposed in NTA was used to construct these transfers. The profiles used here should be consistent with the information at a micro level, where the following profiles, adjusted using macro controls are considered as inputs: labor income (yl), net public cash transfers (tgcash), general tax profile (tgtax) –which includes social security contributions, net inter-household transfers (tfb), private education consumption (cce), health (cch), other nondurable consumption (ccx), housing (cdr) and other durable consumption (cdd). Therefore, total transfers were obtained using the NTA methodology and the software which was designed for this purpose, which is available in the NTA website. In Figure 7 per capita inflows, outflows and net intra-household transfers are displayed, whereas in Figure A2 all the components for the construction of intra-household transfers are depicted.

Figure 7. Net Intra-household Transfers, Mexico 2004



We may appreciate in Figure 8 the per capita total net private transfer's profile, where it is clear that the amount of net intra-household transfers resulted substantially higher than inter-household transfers. Therefore, the total transfers profile is very close to the one former one.

In Figure 9, total public and private transfers are displayed, where we can appreciate that more resources are allocated to young people from private transfers, but the contrary happens for old people, where public transfers are superior for this age group.

A comparison between LCD profile and total transfers profile is shown in Figure 10, where we can see how transfers are used to support deficits for young and old people. It is very clear that almost all the deficit for young people is covered through transfers, whereas just a fraction of older age's groups is supported via transfers and the majority of them are sustained via Asset-based Reallocations.

Finally, in Figure 11, the composition of Old-Age Lifecycle Deficit (Triangle Graph) is shown where we can appreciate the position of Mexico in comparison with other NTA members. According to this graph, a high level of assets is used to sustain this Old-Age Deficit, a small fraction from public transfers and a negative fraction of private transfers, which means in Mexico older people used to transfers resources to younger groups.

Figure 8. Per Capita Net Private Transfers, Mexico 2004

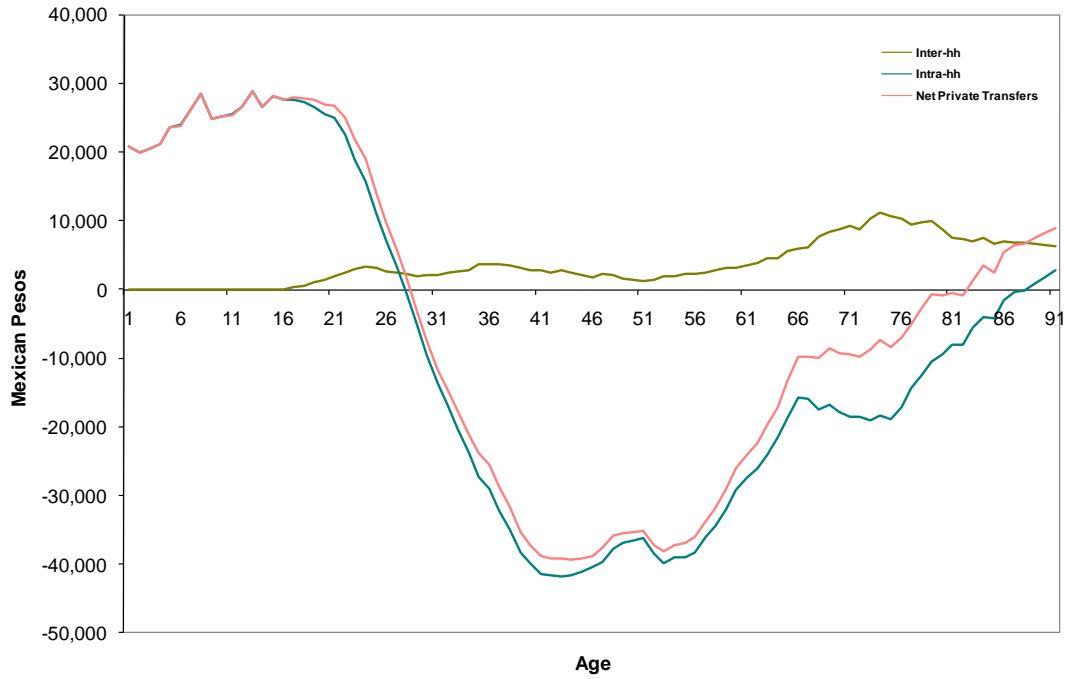


Figure 9. Per Capita Net Total Transfers, Mexico 2004

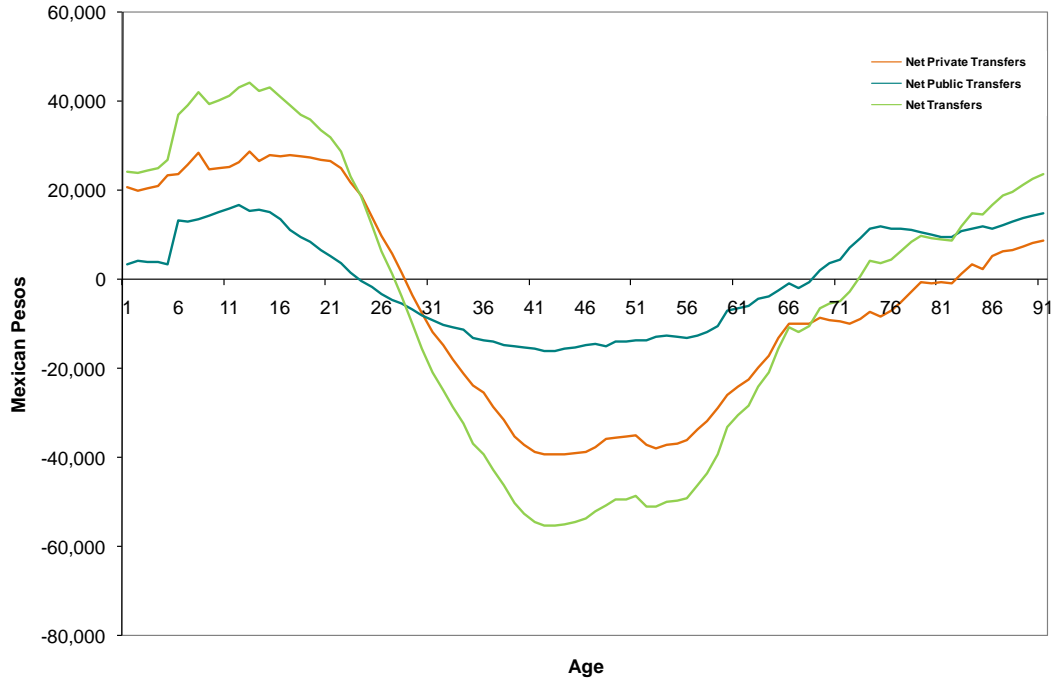


Figure 10. Per Capita Net Total Transfers and Life Cycle Deficit, Mexico 2004

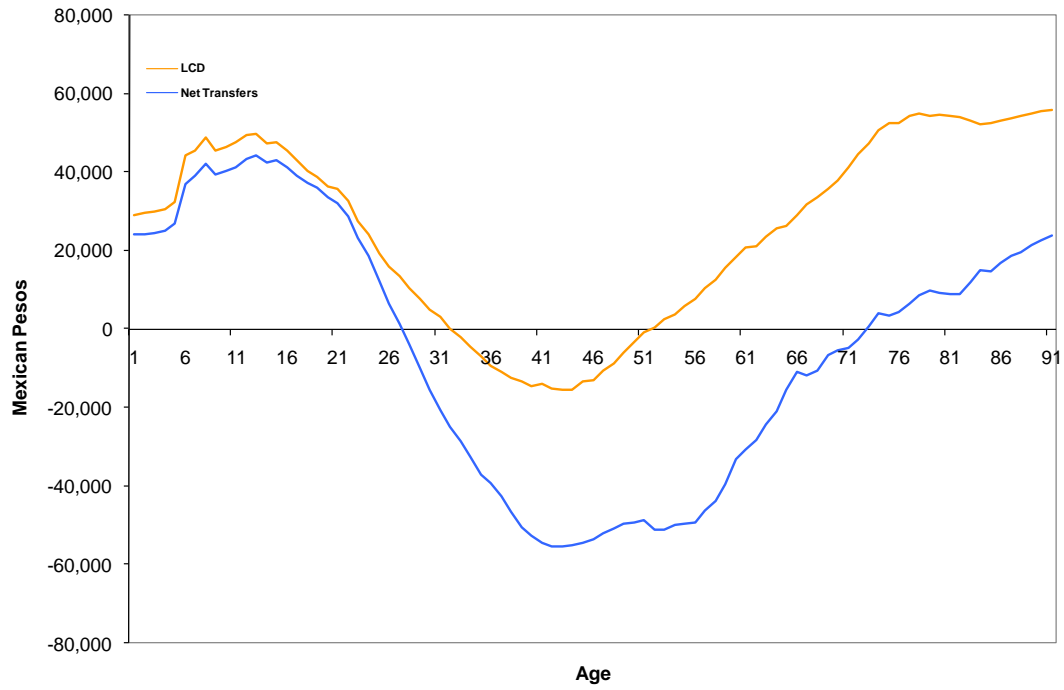
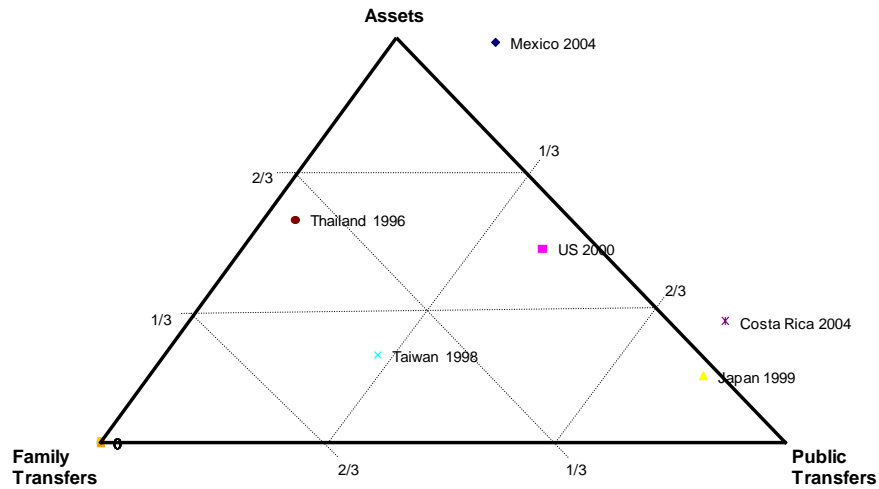


Figure 11. Composition of Old-Age Lifecycle Deficit, Mexico 2004



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Appendix

Some detailed profiles are shown in this section for Public and Private Transfers.

Figure A1. Per Capita Public Outflows Profiles, Mexico 2004

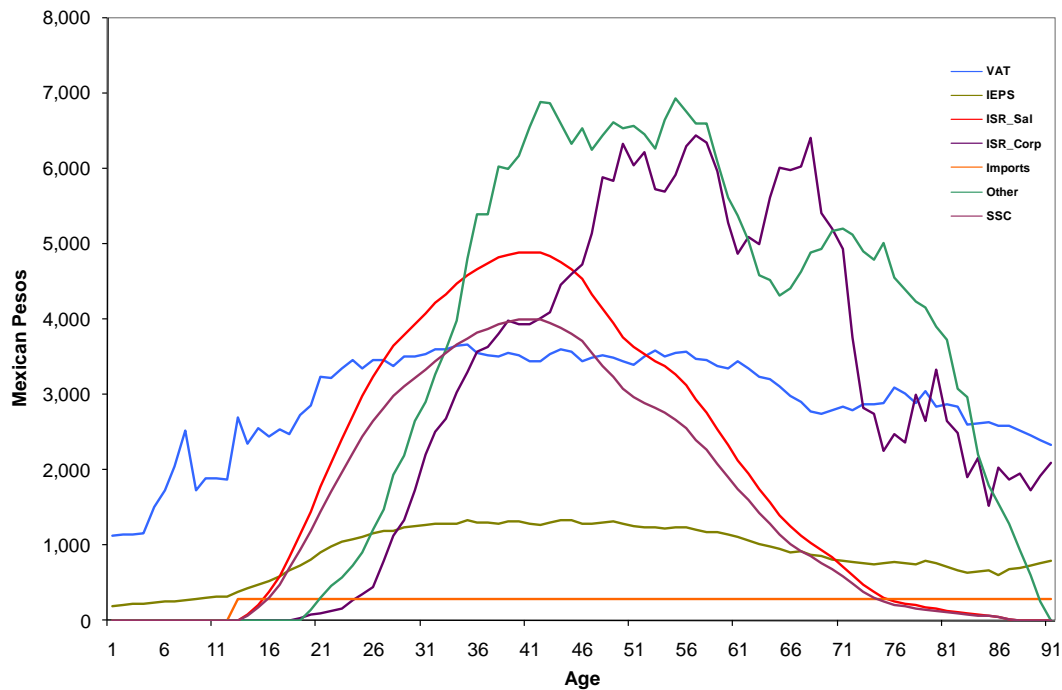


Figure A2. Per Capita Net Intra-household Transfers Components: a) Education, b) Health, c) Other no durable, d) Housing, e) Saving and f) Other durable Mexico 2004

