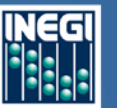


Expert Meeting on Measuring Poverty and Inequality

Topic B: Improving response rate and sampling precision in surveys

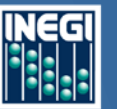
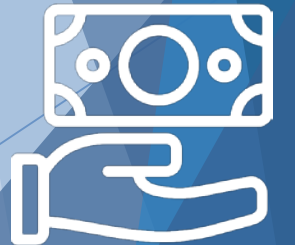
Noviembre 2018
Edgar Vielma Orozco
INEGI-Mexico



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Introduction

- ▶ Income surveys, both nationally and internationally, have historically detected that there is a **sub report of income** on the part of informants
- ▶ The National Statistics Offices (NSO) work continuously to ensure that the measurements reflect better the reality of household income
- ▶ By analyzes of previous events, it was identified:
 - ❑ Households with **zero income** or income **not consistent**.
 - ❑ Detection of inconsistencies in sociodemographic information and the income captured in the survey questionnaires.
 - ❑ **Inconsistencies in income and expenditure**, if they are not measured together.



How to improve response rate and sampling precision in surveys?

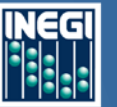
► The improvement of the National Household Income and Expenditure Survey is addressed through three sections:

- ❑ conceptual,
- ❑ statistical, and
- ❑ operational.



Improvement in conceptual terms

- ▶ **Joint measurement** of income and expenditure aims to understand the essential economic problems that households present to meet their basic needs.
- ▶ When household **expenses** are **not** collected, **less income** is obtained in the **lower part** of the distribution, especially in the non-monetary income items.
- ▶ The collection of income **without** the collection of **expenditure** generates that the amount of **income** is the result only from the **perception** of the informant, as a **spontaneous** response, which is **not linked** to the economic situation of the household.



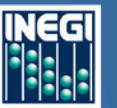
Improvement in conceptual terms

Decile	ENIGH (Income and expenditure)	Standard Error	MCS (Income)	Standard Error	Difference ENIGH vs MCS
National	1,814	47	1,826	29	No
I	314	5	250	4	Yes
II	549	6	480	5	Yes
III	733	7	668	6	Yes
IV	917	9	853	7	Yes
V	1,115	10	1,073	8	Yes
VI	1,348	12	1,333	10	No
VII	1,647	16	1,668	13	No
VIII	2,080	23	2,162	19	No
IX	2,866	42	2,991	29	No
X	6,576	398	6,782	212	No

Improvement in conceptual terms

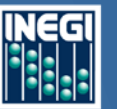
Joint measurement

- ▶ Allows the household to take stock of its economic situation.
- ▶ The economic situation of the household is captured truthfully, and not as an appreciation, just as it happens when asking only income.
- ▶ For lower-income households, which usually lack a resource management, they are completely shown their economic situation, which can be extremely useful in their administration.
- ▶ Allows the measurement of poverty calculated by income and expenses.
- ▶ Prior to 2016, only a part of the sample captured the income and expenditure information jointly, so in 2016 and 2018, the total sample collected information on both variables.



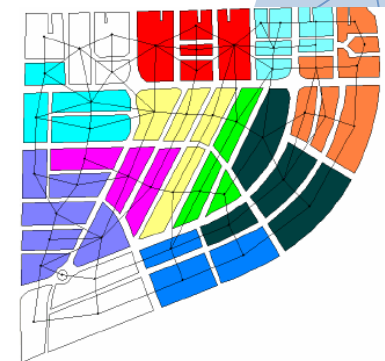
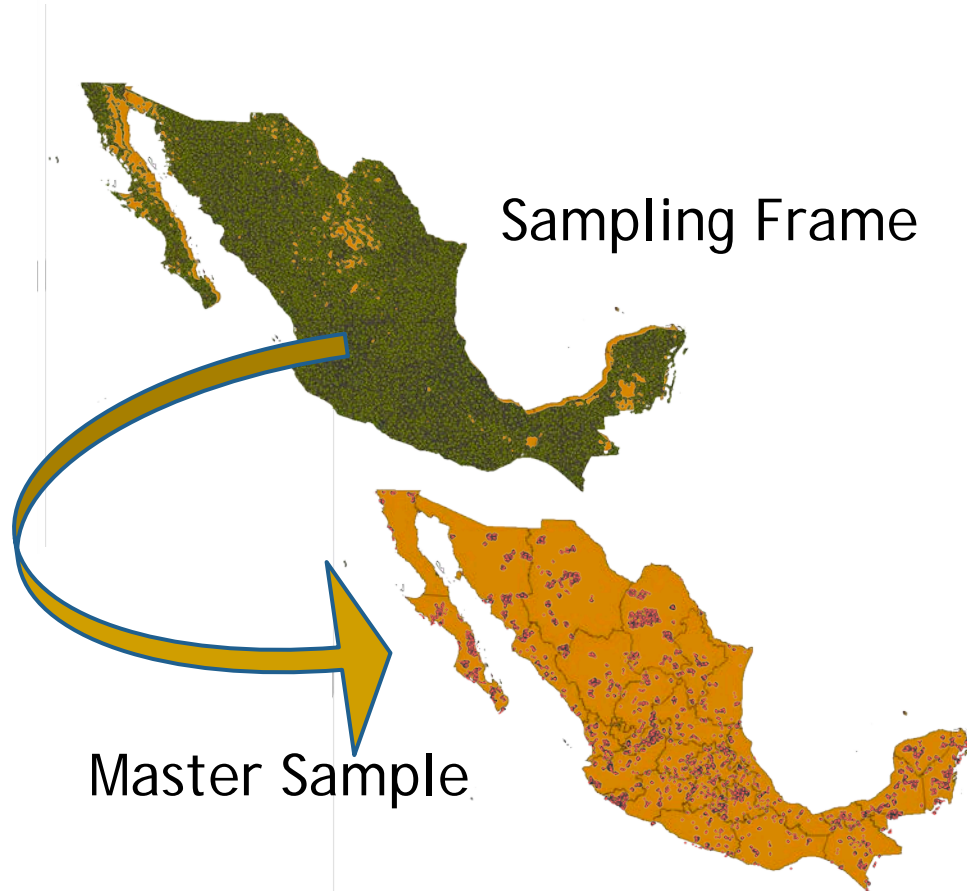
Improvement in conceptual terms

- ▶ Improvement of the training process and its support materials
 - ❑ Strengthened the technical capacities of the operational staff to carry out the interview.
 - ❑ Conceptual training to improve the capture of the information provided by the household.
 - ❑ Improvement of the Interviewer's Manual that provides instructions to allow interviewers to be more analytical.



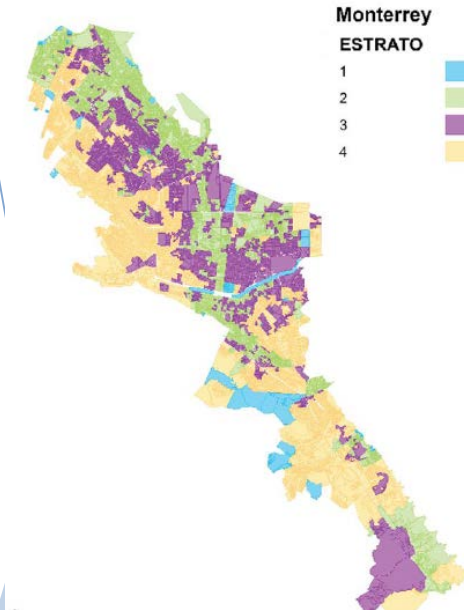
Improvement in statistical terms:

- In INEGI, there is a **conglomerate (cluster) Sampling Frame** that covers all of the country's dwellings, according to the census information.
- The statistical design of the ENIGH is done with the **Master Sample** that is **continuously updated** (new growth, type of housing, people, age and sex)



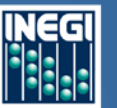
Improvement in statistical terms:

- ▶ Clusters were classified into one of four groups at a national level, using multivariate stratification techniques with sociodemographic indicators at cluster level that allowed measuring the degree of marginalization of the population. Then, these groups are combined with geographic strata to form the survey design strata.
- ▶ It is possible to generate more precise estimates, since, within these strata, the income and expenditure phenomena tend to be more homogeneous compared to a simple random sample, with the consequence of estimating smaller sampling errors.



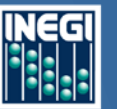
Improvement in statistical terms:

- ▶ From the set of Master Sample' clusters that are continuously updated, a subset of them is selected for the ENIGH survey. The dwellings will be chosen in a new sampling stage.
- ▶ The sample size of the ENIGH 2018 allows generating estimates of total income, income from work and total household expenditure, in each of the 32 states and their urban and rural domains.
- ▶ The national sample size of the ENIGH 2016 was 80,328 dwellings. For the ENIGH 2018, the number is 87,828 dwellings, when considering a differentiated non-response rate by federal entity.
- ▶ Within ENIGH, there is an additional sample of 5,000 dwellings, called *Cruzada contra el hambre*, in order to identify and characterize the population living in extreme poverty.



Specific groups of population

- ▶ population under 12 years old,
- ▶ population from 12 to 29 years old,
- ▶ population from 30 to 60 years old,
- ▶ population of 60 years and over,
- ▶ population with physical or mental difficulties,
- ▶ indigenous population,
- ▶ population by size of locality,
- ▶ indigenous language speaking population,
- ▶ illiterate population,
- ▶ older adults without access to jubilations and/or pensions,
- ▶ population that subsists with transfers,
- ▶ employed population without access to social security.



Improvement in terms of field operation

A review in **low** and **high** strata:

- ▶ The implementation of a **validation criterion** to the **persistence** of a sample number of households with **zero income** or income **not consistent** with the **sociodemographic** and **economic characteristics** of the household members and their homes.
- ▶ For the review of all those income **below** the established threshold, a review of the **basic income** is made to **subsist**, taking into account the cost of a **food basket**, as well as the **poverty lines** used in the country.



Improvement in terms of field operation

- ▶ Through the computer platform of the project, identifying the homes listed, then it must be verified that in the observations part of any of the questionnaires that make up the ENIGH there is some justification that supports the situation of the home regarding your income.
- ▶ In the absence of such observation, it is requested to return the questionnaire to the field operation in order to obtain a justification or, if applicable, to retrieve missing information.



Improvement in terms of field operation

- ▶ The application of this criterion led to a higher quality and accuracy of the information by considerably reducing the inconsistencies generated in the information.
- ▶ Change in the mentality of the operational figures that led to avoid an excessive burden on field returns.



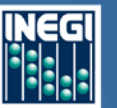
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