Centro de Estudios Espinosa Yglesias

DOCUMENTO DE TRABAJO

Núm. 001/2017

Enero

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Still Looking for the Land of Opportunity: The Case of Mexico

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Enero 2017

Resumen

With the aim of comparing patterns of intergenerational mobility between Mexico's 32 federative entities using two sources of data — the ESRU Survey of Social Mobility in Mexico 2011 (EMOVI-2011) and the National Nutrition and Health Survey 2012 (ENSANUT-2012) — this study conducts a regional disaggregation exercise, enabling the construction of intergenerational transition matrices for each of the country's 32 states. Mobility is measured using a wealth index that is calculated based on the variables of the services and assets of contemporary households, and on interviewees' origin. Once all the dichotomous variables were established, the index was estimated using the Multiple Correspondence Analysis (MCA) method. The results, similar to those observed in recent literature pertaining to other countries, show heterogeneous patterns of mobility among the different states. This heterogeneity indicates the need for future surveys to collect primary information, in order to ensure the possibility of regionally disaggregating social mobility measures.

Palabras clave: movilidad social, índice de riqueza, desagregación regional, México.

[1] We would like to thank Rocío Espinosa and Luis Ángel Monroy-Gómez-Franco for their excellent research assistance. We are also grateful for the comments provided by those attending the workshop held on 13 March, 2014, at the Espinosa Yglesias Research Centre, as well as the participants at the 'Social mobility in regions of Mexico: cases in Monterrey and hurricane zones' seminar, organised by the Universidad Popular Autónoma del Estado de Puebla (UPAEP), held on 29 January, 2016. Also, we are grateful for the comments provided by Gaston Yalonetzky during the WEAI Conference at Santiago, Chile, held on 2-6 January, 2017. All the errors and opinions in this work are the sole responsibility of the authors.

1. Introduction

The most recent evidence on Mexico reveals a country where relative intergenerational social mobility is low at the extremes of the socioeconomic distribution (Vélez, Campos and Huerta, 2013). That is, the options of leaving one's socioeconomic origin, if the latter lies at the low or high end of the distribution, are limited. That being said, a pending subject in the analysis of mobility is the identification of differences between the diverse regions of the country. To this end, Chetty et al. (2015) previously questioned whether or not the qualification of 'the land of opportunity' generically assigned to the United States was true. They argue and find empirically that the North American country is not a homogeneous place, but that it presents degrees of intergenerational mobility differentiated by its regions, where some of them effectively are the 'land of opportunity', but not all. It can be said that, due to its implications in contemporary literature, this regional disaggregation exercise carried out by Chetty and his coauthors constitutes a watershed in studies on intergenerational mobility.

In Mexico, although there exists a tradition of generating information for the study of social mobility that began around half a century ago, there is still no inclusion of national measurements that include disaggregated comparability at the regional level. Given the historical dynamics of the subject as it has been studied, there emerged the need to expand representativeness on social mobility to the national level. On the way, however, the possibility of understanding the regional and local characteristics was lost. In this sense, the research of Chetty and his coauthors invites the recovery of that possibility, but with a key characteristic: that regional and local realities can be mutually compared. In this regard, performing an exercise similar to that of the United States is still a pending task. Herein lies the objective of the present work: to generate disaggregated measurements at the state level of Mexico, which then allow for the measurement of relative mobility between two generations in terms of a 'wealth index'.

Given the lack of information containing the required representative characteristics, alternatives can be explored. The one chosen in the current exercise was to use statistical tools to make estimates to allow the generation of regionally disaggregated results. To do so, two sources of data were matched: the *ESRU Social Mobility Survey in Mexico 2011* (EMOVI-2011) and the *National Health and Nutrition Survey 2012* (ENSANUT-2012). The EMOVI-2011 survey enables the construction of the wealth index for two generations, but does not contain statistical representation beyond the national level. For its part, the ENSANUT-2012 survey can be disaggregated at the level of each of the 32 federative entities, but does not contain retrospective information with which to construct the wealth index for the households of origin for the adults interviewed. Thus, by taking advantage of both of these sources, and based on a simple pairing exercise, results can be obtained as to the degree of relative mobility of Mexico's 32 states.

The wealth index was constructed based on information about tenure and access to household goods and services. Since we are not dealing with continuous variables, we opted for the Multiple Correspondence Analysis (MCA) method. To apply this, the approaches of Vélez, Vélez and Stabridis (2012) and Vélez and Stabridis (2013) were followed. The matching exercise between the sources, undertaken in order to impute the wealth index of the generation of origin in the ENSANUT-2012, and thus to be able to disaggregate the estimates at the state level, was conducted on the basis of ranking, age and gender characteristics.

The results show Mexico to be a country with heterogeneous intergenerational mobility patterns across its federative entities. Thus, for example, Oaxaca demonstrates an intergenerational persistence rate in the lowest wealth quintile, more than two times that observed at the national level. In contrast, this proportion is 0.39 for the state of Jalisco. As for the extent of upward mobility, the possibility of being born in the lowest quintile and then reaching the highest is very different across the states. Thus, while in Mexico City (Distrito Federal) this proportion represents three times the national level, the state that follows it in this classification, Jalisco, experiences one that is two times less. Meanwhile, at the other extreme are states like Oaxaca and Chiapas, which do not reach a proportion beyond the national 0.2.

Regarding the characterisation of the results, although the rates of mobility were constructed in relative terms, when these were disaggregated at the state level they also captured an absolute component. This is due to the fact that the quintile thresholds were determined in terms of the national ones to ensure comparability between the federative entities. This has two implications; the first is positive, since relative mobility by federative entity was evaluated in relation to average national advances. On the other hand, the fact of establishing national thresholds caused a loss of detail with regard to the degree of social fluidity in local dynamics. With regard to these local dynamics, however, it should be mentioned that the ENSANUT-2012 survey, which is the database that allows for state disaggregation, does not contain information by which to differentiate individuals by their migration condition as it does not report their state of origin.

The remainder of this paper is organised as follows. The next section provides a brief review of the literature on social mobility with regional disaggregation. The third section describes the prevailing situation of intergenerational social mobility in Mexico, as well as the primary data sources in the country that exist on this subject. Following this, the data sources to be used in the regional disaggregation exercise are presented, alongside the definition of mobility in terms of its size and type, and the methodology to be used. The fifth section presents the national and disaggregated results at state level. The robustness of the estimates is discussed

in the sixth section. Finally, the paper is concluded and a future agenda for generating information and analysis is proposed.

2. Studies on social mobility with regional disaggregation

In the literature on intergenerational social mobility with regional comparisons, efforts have concentrated on two dimensions of analysis: education and income. In general, for developing countries, such literature has been able to advance more in the education dimension, since the statistics available in this area are more common. In particular, the studies that stand out most are those of Ray and Rajareshi (2010) in the case of India, and those of Bonilla (2010) and Galvis and Meisel (2014) in the case of Colombia.

In the study on India, the authors analyse the absolute intergenerational mobility among different castes and between different regions in the period 1993-2004. The authors find that, despite evidence of a general improvement in the average education of both parents and children throughout the analysis period, the differences between those at high and low social strata persist. Moreover, in addition to the above, in regional terms they find that the probability of children superseding their parents' education is much higher in the prosperous regions than in the poor, by almost 50 percentage points.

In the study on Colombia, and unlike that on India, Bonilla concentrates on analysing the differences between regions in terms of relative intergenerational mobility. The results show that the rates of educational mobility are higher in rural than in urban areas, which is explained by the fact that the initial average levels of education in the latter are higher and, therefore, the absolute improvements by themselves do not necessarily translate, as in the rural case, into a better position. However, based on the research of Galvis and Meisel, the advances observed in the country's absolute mobility, when disaggregating them regionally for the period 2001-2011, are characterised by their great heterogeneity. In fact, a positive correlation is found between average education and educational mobility between the regions, which suggests a tendency towards polarisation in this dimension. In addition, given the outcomes of this study, it should be emphasised that when estimating a variable outcome regarding quality of life in order to then measure absolute mobility, there are high persistence rates at each end of the distribution, as well as a predominance of downward mobility in the middle part of the distribution.

With regard to a regionally disaggregated analysis in terms of income, this is an approach that has taken great hold in the study of intergenerational mobility in the North American case. It is possible to say that this has been made possible, among other elements, thanks to the availability of and access to administrative fiscal data, which then allows for following up with parents and children even when

there are changes of residence. The major studies referred to are those of Chetty et al. (2014), Chetty et al. (2015), Chetty and Hendren (2015) and Chetty, Hendren and Katz (2016).

As for the type of intergenerational mobility they estimate, it is worth mentioning that they adopt a measure of relative mobility in terms of percentiles, making it possible to identify the probability with which children will reach a higher position than their parents at that particular level of disaggregation. In the first study, in 2014, the authors found that although mobility rates for the cohort born in the 1970s did not change in comparison to the later ones, there was an increase in inequality. This implies that the order of birth is important in terms of the 'distances' to be 'travelled' to achieve a better relative position on the socioeconomic ladder.

For their part, Chetty et al. (2015) find significant differences in the degree of intergenerational mobility among more than 700 geographical areas of the country. In order to identify these differences, their analysis focuses on characteristics common in the literature: residential segregation, the quality of primary schools, and income inequality, among others. The observed heterogeneity is significant. As the authors report, a child who comes from the lowest income quintile in San Jose, California, is three times more likely to reach the highest income quintile than a child from the same quintile of origin but born in Charlotte (12.9% versus 4.4%). Along the same lines, Chetty and Hendren (2015) also find that the longer one's exposure in better-off neighbourhoods, the greater the effects on life's achievements for both those native to the neighbourhood and those moving there. In the later work of Chetty, Hendren and Katz (2016), however, this last result is qualified, since they find that the positive effects apply to those who move before the age of 13 years.

3. Social mobility in Mexico: the context and existing data sources

a. Social mobility in Mexico

Mexico is characterised by low levels of social mobility at the extremes of its socioeconomic distribution. This is illustrated by the *Report on Social Mobility in Mexico 2013: Imagine Your Future* (Vélez, Campos y Huerta, 2013), edited by the Espinosa Yglesias Research Centre (CEEY).[2] On the structural causes of this national pattern, for example, Serrano and Torche (2010) argue that among the main barriers to upward mobility are child labor, coming from isolated rural areas, or the indigenous ethnic status itself. Campos and Vélez (2014), on the other hand, refer to gender differences in a context of low female labor participation. From their results, it can be inferred that the household role model is transmitted from generation to generation; therefore, the condition of non-labor participation by the

[2] In 2014, an English version of this report was also published and is available here: http://www.ceey.org.mx/reporte/report-social-mobility-mexico-imagine-your-future (12/30/2016).

mothers of Mexican adults has an inhibiting effect on such participation on couples among these adults. Moreover, in the same sense, they find that the condition of non-labor participation of the mothers of adult Mexicans has negative effects on the equal allocation of resources by gender to the next generation, that of their children.

With regard to the educational dimension, Solís (2015) identifies differences in the probability of completing the entire educational cycle, depending on whether basic private and public education was attended. In short, this study finds that those attending basic public education are less likely to complete the entire educational cycle. In addition, among these Mexicans, the probability of achievement is lower for those attending the afternoon school shift. Given the above, one consequence of not eliminating barriers to social mobility is, for example, that the options for such mobility are reduced for the younger age groups (Behrman and Velez, 2015). More recently, and based on different sources of information, the *Mexico 2016 Human Development Report: Inequality and Mobility* (*Informe sobre desarrollo humano México 2016: desigualdad y movilidad*) (PNUD, 2016) reports that, although inequalities in aspects such as health and education have decreased, this has not happened in the context of income and, therefore, mobility in socioeconomic achievement has been limited.

b. Existing sources of information

In Mexico, there exists a whole tradition of information surveys that permit the analysis of social mobility. The survey coordinated in 1965 by Balán, Browning and Jelin (1977), the *Survey on Social Mobility and Geography in Monterrey*, can be considered the pioneering study on the subject in the country. As its title implies, the work is confined to a particular metropolitan area. With the passage of time, the coverage of this type of study expanded. Thus, in 1994, a module was included in the *National Survey of Urban Employment* (ENEU) which, as its name indicates, guarantees representativeness for the country's urban areas.[3] In 1998, the *Retrospective Demographic Survey* (EDER) was drawn up, which analyses the life histories of three Mexican birth cohorts (1936-1938, 1951-1953, 1966-1968), from a representative sample at the national level. In particular, the EDER aims to: "collect individual information on the temporal nature of the social and demographic processes experienced by Mexico during the second half of the twentieth century, as well as on the interrelationships between different demographic phenomena in people's life trajectories."[4] With a sample size similar to the previous one, but designed as a module of the *National Survey of Occupation and Employment* (ENOE), in 2011 the EDER survey was reactivated. On that occasion, the focus was on two of the three target birth cohorts of 1998, 1951-1953 and 1966-1968, in addition to that born in the period 1978-1980.

[3] At the time of writing the current paper, it was not yet possible to access the survey's databases.
[4] Taken from the survey site at: http://www.colef.mx/eder/ (08/30/2016).

In 2006, the Espinosa Rugarcía Foundation (ESRU) commissioned a survey to analyse intergenerational social mobility with national representation which, unlike the EDER, had a significantly larger sample size. In this way, from a sample of around 3200 people in the EDER-1998 survey, for the year 2006 the *ESRU Survey of Social Mobility in Mexico* (EMOVI-2006) attained 7288 effective interviews and was representative of male household heads. In addition, a second commitment established in the ESRU through the CEEY was to carry out comparable surveys over time. Thus, in 2011 and with the aim of also obtaining a representative sample for women, as in the case of the EDER, the sample reached 11001 effective interviews. It should be mentioned that in the case of EMOVI-2011, the defined sub-strata of interest were men and women, and household heads and non-heads.[5]

In all the cases mentioned above, and related to the purpose of the current paper, the available data sources do not contain the possibility of measuring intergenerational social mobility so as to undertake regional comparisons. As a result, and in order to undertake the EMOVI-2017 survey, the ESRU and CEEY agreed to conduct a representative survey of at least four major regions of the country (four or five), which will be held during the months of May and June, 2017. It is also worth mentioning that during the *2016 National Household Survey* (ENH), the National Institute of Statistics and Geography (INEGI) of Mexico included a thematic module on intergenerational social mobility.[6] The ENH, among whose main objectives is the understanding of the living conditions of the Mexican population, is a nationally representative sample with geographical breakdown at the level of the federative entity (32 states). As far as information is available, the thematic module of mobility was applied in the field over two consecutive quarters, to a total of approximately 32 thousand homes and with an average of 1000 cases per federative entity. That being the case, it will be necessary to await the publication of the database and the methodological documents of the ENH-2016 survey, announced around the middle of 2017, in order to ascertain the scope of regional disaggregation that the survey can offer.

4. Strategy and estimation steps

Since there currently exist no surveys of intergenerational social mobility that can be regionally disaggregated, we sought to do so using a combination of data sources containing some information in common and which, in short, include all that is required to carry out the desired exercise. Since the purpose of this work was to achieve state-level estimates, two data sources were combined: the

[5] Details on the survey can be found in the appendix to the *Report on Social Mobility in Mexico 2013: Imagine Your Future* (Vélez, Campos and Huerta, 2013).
[6] For details on this national survey, please see: http://www.beta.inegi.org.mx/proyectos/enchogares/regulares/enh/2015/default.html (12/30/2016).

ENSANUT-2012 survey, which guarantees state disaggregation, and the EMOVI-2011 survey, which includes retrospective intergenerational information. In order to make the estimates, wealth indices for two generations were calculated based on household assets and services, using the Multiple Correspondence Analysis (MCA) method.

This strategy was composed of three stages. The first involved the construction of a wealth index for the contemporary generation based on the survey with disaggregated representation, but without retrospective information — that is, ENSANUT-2012. Secondly, the same was done with the less disaggregated survey but with retrospective information, in this case the EMOVI-2011, with the addition of the construction of a wealth index for the respondents' parents' households (i.e., the previous generation). Finally, the third stage involved the matching of the two data sources based on the contemporary wealth index, so that the index of the previous generation could be imputed from the EMOVI-2011 to the ENSANUT-2012 survey. From there, it became possible to present descriptive statistics results enabling the classification of the federative entities in terms of their levels of relative intergenerational mobility.

a. The Multiple Correspondence Analysis Method (MCA)

In order to estimate the relative rates of mobility, wealth indexes were constructed for two generations. The wealth index was calculated based on household services and assets. In the literature, asset indices are considered approximations of households' permanent incomes. Thus, for example, Torche and Spilerman (2010) argue that accumulation of wealth increases consumption and reduces the vulnerability of households. In the same way, Sahn and Stiffel (2003) argue that asset indices are good indicators of the dynamics of poverty, since the accumulation of these indicators adequately predicts the reduction of the latter.

Wealth indices, constructed on the basis of household services and assets, were estimated using MCA. This method, according to Greenacre and Blasius (1994), was originally developed by the French statistician Jean Paul Benzécri. The technique, called correspondence analysis, was initially used in the study of contingency tables with two variables, but when extended to a greater number of variables it was renamed to encompass multiple correspondences (Peña, 2002).

MCA is similar to other commonly used methods, such as Principal Components Analysis (PCA), but is more appropriate when only qualitative variables are available, whose values are defined as classes. In the case of the PCA, the maximisation of variability among the variables is constructed using euclidean distances. However, when working with categorical values and, in the particular case of MCA, variability — in this case called inertia — this is obtained from the so-

called Ji-square distance, which is based on the relative frequencies of each category of each variable (Greenacre, 2007).

Vélez, Vélez and Stabridis (2012) and Vélez and Stabridis (2013) have constructed estimates of intergenerational mobility in Mexico based on wealth indexes calculated using MCA. In the first study, the estimates were made based on the EMOVI-2006 survey data, with the second using EMOVI-2011 data as its source. In both cases and unlike the present study, the objective was to make estimates for the total national population without any territorial breakdown. The estimation methodology used in the current paper was drawn from both of these studies, in particular from the second, and is here reproduced.[7]

b. Data source characteristics

As previously mentioned, in order to carry out the disaggregation by state, it was necessary to combine two data sources containing the necessary characteristics to do so. Thus, firstly ENSANUT-2012 data that contains state representation was selected; the second source was EMOVI-2011 data which, despite not having this same characteristic, is ahead of ENSANUT-2012 in the sense that it contains information enabling the construction of an index for the generation prior to that of the interviewees themselves. In particular, ENSANUT-2012 is a survey carried out by the National Institute of Public Health, representative at national and state levels, which collects information on the health and nutrition status of the Mexican population, taking into account socioeconomic levels and geographical distribution. The survey includes information on the use of public health programmes, reproductive health, and diseases such as diabetes, hypertension and obesity. The information was collected in 50,528 households for 96,031 respondents from all federative entities, with differentiation between rural and urban areas.

The second data source used, the EMOVI-2011 survey, is representative at the national level for men and women, household heads and non-heads, and for the age group 25-64 years. Due to the explicit design objective pertaining to the measurement of intergenerational social mobility in Mexico, and being a cross-section, the EMOVI-2011 survey includes both contemporary and retrospective information (the latter regarding when the respondent was 14 years old), which enables an understanding of the socioeconomic conditions both of the home of origin and the current one of the adult interviewed. The sample includes a total of 11,001 individuals. In spite of having these characteristics, and as already mentioned above, the limitation of EMOVI-2011 lies in its lack of possibilities of

[7] To study the methodological details of the multiple correspondence estimation of the current paper, the studies mentioned here can be reviewed: Vélez, Vélez and Stabridis (2012) and Vélez and Stabridis (2013). A methodological note on the estimation made by Vélez and Stabridis (2013) can be found in the annex of the *Report on Social Mobility in Mexico 2013: Imagine your future* (Vélez, Campos and Huerta, 2013). In particular, and in relation to the explained inertia mentioned in the text, in the present study a threshold equivalent to that used in the two mentioned studies, 80%, was fixed.

regional disaggregation, for which an alternative source — in this case, the ENSANUT-2012 survey — was required. The latter benefits from a larger sample size and the necessary representativeness to be able to disaggregate the results at the state level.

c. Wealth indices' components and imputation exercise

The wealth indices were composed of asset-holding variables and household services for two distinct generations. The contemporary index for ENSANUT-2012 was based on 14 dichotomous variables: *another house, TV, cable TV, refrigerator, stove, washing machine, boiler, computer, internet, microwave, landline, mobile telephone, car, tank and iron*. The same contemporary index, but based on the EMOVI-2011 survey, included the same variables except for *cistern* and *iron*, adding *vacuum cleaner* and *toaster* instead. Finally, as far as the retrospective index for EMOVI-2011 was concerned, this was based on 10 tenure variables: *stove, washing machine, refrigerator, TV, boiler, vacuum cleaner, toaster, domestic piped water, bathroom and electricity*.

The pairing of the ENSANUT-2012 and EMOVI-2011 surveys using the contemporary indexes was simple, and was conducted via three variables: the constructed index twentile, the birth year of the main informant, and the sex of the same. Thus, for example, a person from ENSANUT-2012 was paired with another from EMOVI-2011 if both belonged to twentile 13 of the respective classification in their contemporary wealth index, were women, and were born in 1973. From there, the retrospective index information from the EMOVI-2011 survey was imputed into the ENSANUT-2012. In the end, there was a total sample of 82,477 cases.

5. Results

Using the wealth indexes, transition matrices were constructed allowing for the capture of relative intergenerational mobility; that is, changes of the position occupied by one generation in relation to the other. In the present case, quintiles were defined for the two generations analysed. Thus, as shown in figure 1, at a national level 34% of those born in the lowest quintile (quintile 1) remained there, while 8% of those born in that condition managed to reach the higher wealth stratum (quintile 5). In the same way, at the other extreme, there can be observed a rate of intergenerational persistence in the highest quintile of 54%, while long-term downward mobility — that is, those who are born in the highest quintile and end up in the lowest — represent 2% of this population. In summary, when comparing the relative mobility patterns at each extreme end of the distribution, one can observe a greater persistence in the high part than in the low part. In addition, it can be seen that the possibilities of falling a long way are lower than the possibilities of advancing in the same magnitude from the bottom end of the distribution. It should also be noted that quintiles 2 and 3 of origin show high rates of mobility, while for quintile 4 of origin, upward mobility at 31% is greater than any other type of change or persistence in relation to the original position.

Figure 1. Mobility matrix of the household wealth index for two generations at national level
(row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	6,009	4,464	3,397	2,442	1,352	17,664
Quintile 2	2,877	3,118	2,655	2,831	1,270	12,751
Quintile 3	2,844	3,357	3,874	3,553	2,791	16,419
Quintile 4	1,112	3,574	4,161	4,272	5,882	19,001
Quintile 5 (highest)	270	786	2,108	4,568	8,910	16,641

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	34%	25%	19%	14%	8%	100%
Quintile 2	23%	24%	21%	22%	10%	100%
Quintile 3	17%	20%	24%	22%	17%	100%
Quintile 4	6%	19%	22%	22%	31%	100%
Quintile 5 (highest)	2%	5%	13%	27%	54%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

For the state results, as in the national case, sample weights were applied. Likewise, in the case of state matrices, the defined quintile thresholds were taken from the national results. As mentioned in the introduction, this decision has some implications. On one hand, setting the thresholds in this way permits the comparisons of results across states in terms of how they are changing relative to what is happening at the national level. On the other hand, not measuring relative mobility in relation to the thresholds derived from the magnitude of the distances within each state, but in relation to the national ones, causes the state measurement to capture an absolute component, associated with national levels and not only with the composition of the distribution of each of the federative entities. The result of the latter is observed when comparing entities with significantly different national position compositions, such as Mexico City and Chiapas (see figure 2).[8]

[8] Annex 1 presents the matrices for the 32 federative entities.

Figure 2. Mobility matrix of the household wealth index for two generations, as percentages, in Mexico City and Chiapas
(row distribution)

MEXICO CITY

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	13%	19%	16%	27%	25%	100%
Quintile 2	7%	16%	16%	35%	26%	100%
Quintile 3	7%	12%	16%	29%	36%	100%
Quintile 4	1%	8%	13%	25%	53%	100%
Quintile 5 (highest)	0%	2%	6%	24%	69%	100%

CHIAPAS

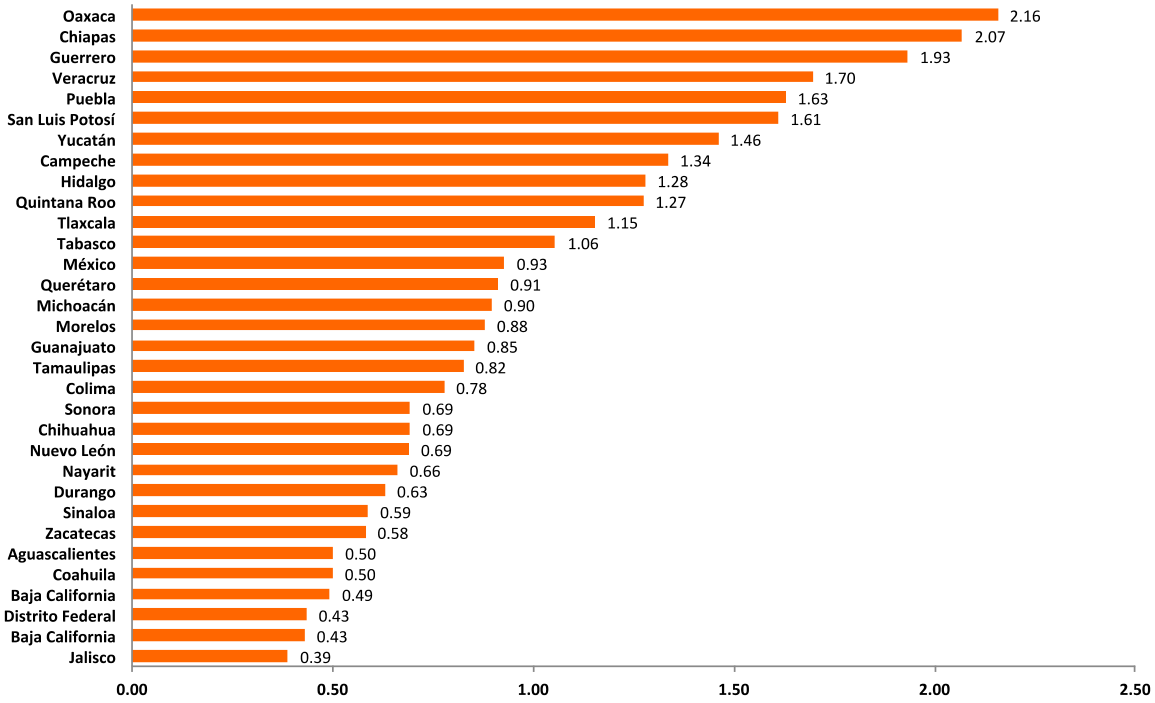
Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	64%	22%	8%	5%	1%	100%
Quintile 2	54%	21%	14%	10%	1%	100%
Quintile 3	46%	23%	18%	11%	3%	100%
Quintile 4	19%	33%	24%	13%	12%	100%
Quintile 5 (highest)	12%	12%	16%	32%	28%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

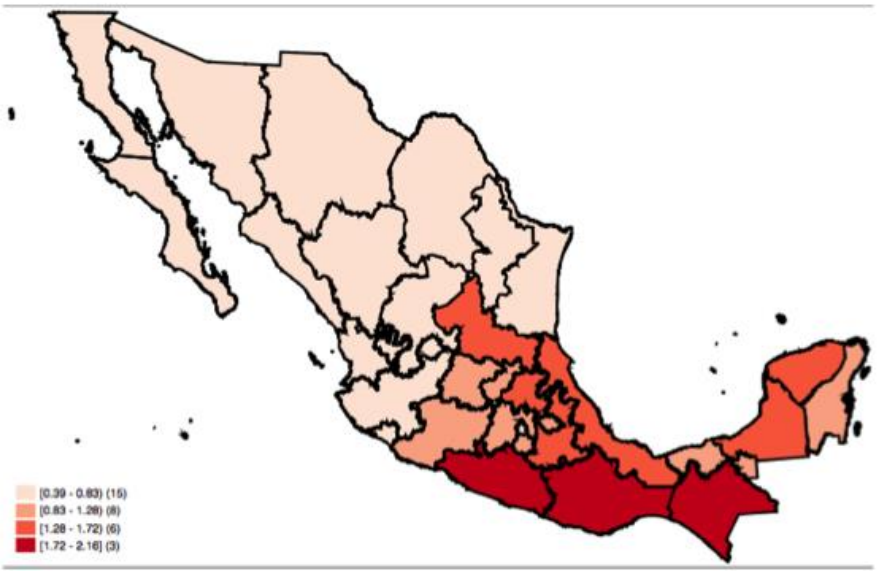
One way of identifying differences between the federative entities was obtained from the comparison of upward mobility and immobility rates from the bottom part of the distribution. To do so, and in order to establish the national value as a reference frame, the ratios of state mobility in relation to the national one were calculated for two cases: (1) the persistence rate in the bottom quintile of each federative entity divided by the same rate at the national level; (2) the rate of upward mobility from the lowest to the highest quintile (long-range upward mobility) divided by the same rate at the national level.

As can be seen in figure 3 (map 1), the rate of persistence in the lower part of the distribution ranges from 0.39 to 2.16 times the national rate, where one observed characteristic is that historically more disadvantaged states have the highest persistence rates: Oaxaca, Chiapas, Guerrero, Veracruz and Puebla. On the other hand, the lowest persistence rates — that is, where a lower proportion of people born in the lower quintile remained there — are concentrated in states such as Jalisco, Baja California, Mexico City, Baja California Sur, Coahuila, and Aguascalientes. At this end of the classification, the fact that these are historically more developed states and with a significant urbanisation component is highlighted.

Figure 3. State persistence rates in the lowest wealth quintile
National level=1

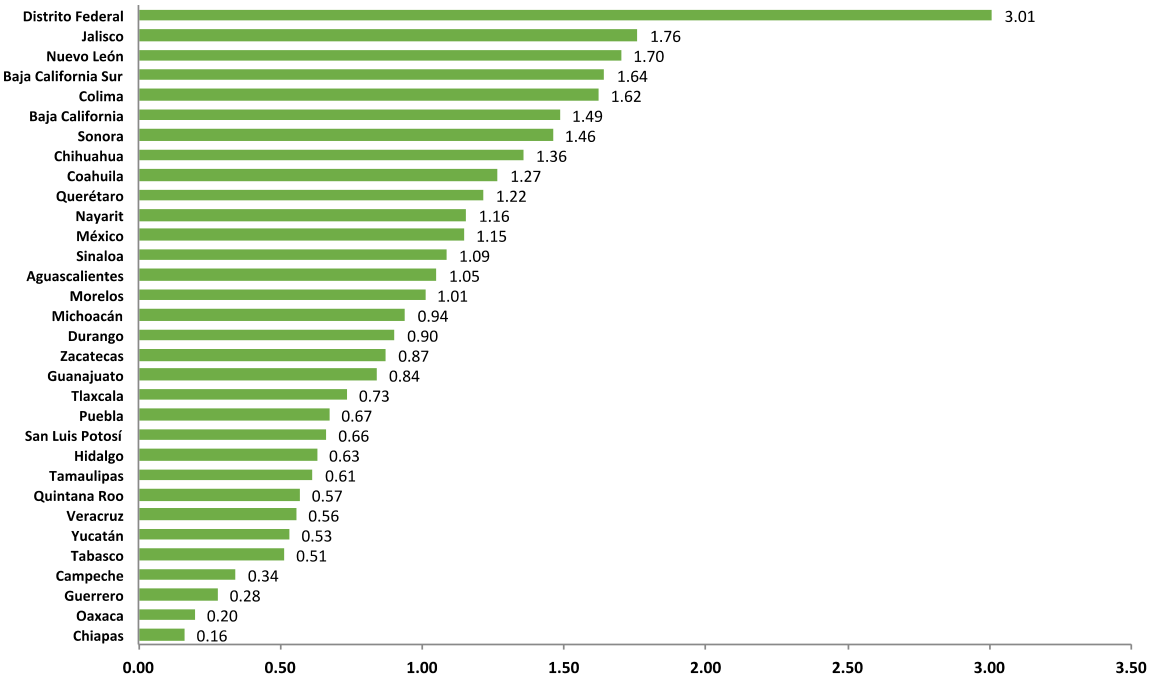


Map 1



In terms of long-range upward mobility, that is, the ratio of the mobility rates of the lower quintile (quintile 1) to the upper quintile (quintile 5), figure 4 (map 2) shows the state classification. In this case, the mobility ratio moves in a greater range than the previous one, from 0.16 to 3.01. At one extreme — the one with the greatest mobility — the case of Mexico City is more than significant, since the next state along with the greatest rate of long-range upward mobility, Jalisco, has a value of 1.76. On this same side of the classification, and following Jalisco, are Nuevo León, Baja California Sur and Colima. Here, it is worth noting that the classification at this end of the distribution is not a mirror of the persistence at the bottom. Thus, for example, although Nuevo Leon does not present one of the country's lowest rates of persistence, it does constitute one of the entities with a higher proportion of individuals originating in the bottom part of the distribution who reach the top. It is also worth noting that both Mexico City, alongside Baja California and Baja California Sur, reappear as the best placed entities in the state classification.

Figure 4. State persistence rates in the highest wealth quintile
National level=1



At the other extreme, although there is no perfect mirror compared to the persistence rates of figure 3, Chiapas, Oaxaca, and Guerrero, with rates that are significantly distant from those of the great majority of states, occupy the worst classification places. In this part of the distribution, it should be noted that the first state not belonging to the south-southeast region of the country appears to come in 9th place starting from the tail (24th position and descending). Likewise, there are

cases such as that of Puebla, which goes from being located in a very unfavourable position with regard to a persistence rate in the lower quintile, to scaling up to 21st place with regard to upward mobility. Analysing Puebla's conditions highlights the fact that it contains an important metropolitan area, connected to the most dynamic markets in the central area of the country.

Map 2

6. Robustness of estimates

As previously mentioned, the estimation of state matrices contains some limitations. Of these, two have been highlighted. The first refers to the fact that, due to the need to maintain comparability in the estimates, the thresholds for defining the quintiles were taken as the national ones and not the ones derived from the distribution of each of the federative entities. As a result, the mobility measured is not purely relative, since the national thresholds in themselves constitute 'absolute lines', such as those of poverty. It should be noted, however, that the advantage of eliminating intergenerational anonymity remains.

Secondly, a potentially important limitation is that of the absence of information regarding individuals' entity of origin. In that sense, state measures do not capture the migratory effect. For example, a hypothesis about the positive-negative selection of the immigrant population in a state such as Mexico City, which shows a significantly higher rate of upward mobility than the other states, cannot be checked. In the same sense, moreover, it is not possible to isolate the effects of international migration on the intergenerational mobility experienced in each of the federative entities. In other words, in the measurement of entities from which there is a high rate of emigration, a part of the population that was born there cannot be

located because it has already migrated to the United States. This last case is a challenge not only for exercises of this type, but also applies to the design of social mobility surveys in countries with migration dynamics that are as significant and heterogeneous in geographical terms as those of Mexico.

Having said that, a simple way of analysing the quality, not of the estimation but of the database resulting from the imputation, is by carrying out tests of difference between variables of the same and another survey with representativeness disaggregated at the state level. In order to do so, we used the Socioeconomic Conditions Module (MCS) of the *National Survey of Household Income and Expenditure* (ENIGH) in 2010. As can be seen in figure 5, referring to the comparison between national samples, the tests of differences in means were performed both for variables included in the estimation of the wealth indices as for others. In particular, as can be observed for the national case, for all selected variables the null hypothesis of the equality of means was not rejected.

The latter result is not maintained when the tests of difference between means are performed for each of the 32 federative entities (see Annex 2). In this situation, the null hypothesis of the equality of means is rejected, on average, for 29% of the 11 contrasted variables, in a range extending from 1 to 7 of the same. Here, clearly, there is a significant margin for improvement that should be attempted to be resolved in later exercises.

7. Conclusions

Recently, much of the discussion relating to the measurement of social mobility has turned to solving the potential problems presented by regionally disaggregated estimates, such as those undertaken by the research team of Raj Chetty and his colleagues, whose work has been cited in the introduction and literature review section of this paper.[9] Likewise, for example, Mazumder (2015) argues that due to the sample composition used by these authors in relation to the moment that captures of the labor trajectories of parents and children, in addition to the recessive economic moment faced by the latter, the estimates of social mobility are greater than conventionally observed in literature on the North American case.

Having said this, it should be mentioned that not all national cases are located in the same moment of academic discussion. In fact, in cases like the present, where the work of Chetty and his coauthors constitutes the motivation to carry out a disaggregated exercise in the Mexican case, the challenge for researchers is more basic: to find information with the characteristics required to make estimates about

[9] This discussion became evident during the *2016 Social Mobility Summit* organised by the Espinosa Yglesias Study Center during the month of November in Mexico City. The event conference speakers and papers can be found here: http://socialmobilitysummit.org/ (12/30/2016).

intergenerational mobility, which then permits the disaggregation of this information in geographical terms, and without impairing the representativeness of the samples used.

Hence, the first task to be performed in the current paper after the literature review was to identify the data sources that meet the required characteristics to perform this type of exercise. In this sense, and regarding administrative records, to date the possibility of matching the fiscal information of parents and children has not been identified, as it has been in the North American case. On the other hand, as far as surveys are concerned, although there exist surveys focused on the measurement of intergenerational social mobility, none of these include the possibility of undertaking regional disaggregation that are representative of the 32 federative entities. Therefore, at this point the solution adopted has been to perform a pairing of two sources with central variables in common which, in addition, cover all the information and representativeness needs of the analysis. Thus, owing to containing common information regarding the household assets and services of the adults interviewed, the ENSANUT-2012 survey was chosen for its state representation, and the EMOVI-2011 survey for including among its variables retrospective information about the conditions of origin referring, once again, to services and household assets.

Based on the above and following a couple of previous studies undertaken by Vélez, Vélez and Stabridis (2012) and Vélez and Stabridis (2013), wealth indices with a battery of variables on access and ownership of assets and household services were constructed, based on the MCA method. The matching of the sources was very simple, based on the contemporary index (the home of the interviewed adult), which is common to both of the data sources used; this was done in order to be able to impute the retrospective wealth index of the EMOVI-2011 respondents in the database, with the possibility of this being disaggregated at the state level, in this case the ENSANUT-2012 survey.

The results of the estimation show heterogeneous patterns of intergenerational mobility among the 32 federative entities of Mexico. In particular, two observed differentiators are those that refer to the geographic location and the degree of urbanisation of the state in question. The study, however, is far from conclusive. There is a variety of scope for improvement. First, and in terms of the selected estimation method, the MCA, several exercises were performed with diverse combinations of variables until the one that yielded the greatest explanatory power was found. However, a sensitivity exercise employing alternative methods remains pending. Secondly, and from the analysis presented in the section on the robustness of the results, there is a need to try to perform a more accurate matching exercise to avoid the problems of measurement error that can be attributed to the composition of the resulting sample.

As to the limitations of the mobility measures used, two have been mentioned in the text. On one hand, the simple fact of using national thresholds in the construction of quintiles for all federative entities avoids the possibility of fully capturing the mobility dynamics relative to the interior of each state, in addition to incorporating an absolute component to the measurement in relation to the country. On the other hand, it should be recognised that the ENSANUT-2012 survey does not include information on the in interviewees' place of origin, meaning that it is not possible to control for the possible effects of migration between states on the rates of mobility in each of them. In addition to the above, it should not be forgotten that the Mexican case is one of an international migratory dynamic, occurring on such a scale that it cannot be ignored in an exercise of territorial disaggregation like the present one.

Finally, and as far as building on the current study is concerned, in addition to themes for future research derived from the above, contrasting the results obtained with other state variables of interest remains to be done; these other state variables include poverty, inequality in one or several dimensions, ethnic composition, population density, and economic growth, among others. In addition, with regard to the information used and the impossibility of accessing administrative records that allow for the measuring of intergenerational mobility at the level of disaggregation presented here, this study has confirmed the importance of designing surveys with a degree of representativeness that allows for regional comparisons.

Figure 5.7 Testing of means differences, National

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.55486	0.54826	0.01006	0.00407	-0.00659	0.01085	-0.60735	0.54362	Not significant	1.81303	0.74256
Electricity	0.99147	0.99335	0.00108	0.00071	0.00188	0.00129	1.44991	0.14708	Not significant	0.10923	0.07133
Earth floor	0.02898	0.03207	0.00208	0.00147	0.00308	0.00254	1.21259	0.22529	Not significant	7.16826	4.57061
Van	0.20928	0.20533	0.00581	0.00277	-0.00395	0.00644	-0.61344	0.53959	Not significant	2.77510	1.34955
Car	0.29112	0.28100	0.00694	0.00343	-0.01012	0.00775	-1.30619	0.19149	Not significant	2.38534	1.22179
PC/laptop	0.32120	0.31359	0.00751	0.00331	-0.00761	0.00821	-0.92736	0.35374	Not significant	2.33873	1.05671
Stove	0.90806	0.90383	0.00469	0.00280	-0.00423	0.00547	-0.77407	0.43889	Not significant	0.51674	0.31030
Cable TV	0.34240	0.33393	0.00747	0.00374	-0.00846	0.00835	-1.01322	0.31096	Not significant	2.18215	1.11885
Internet	0.24329	0.25808	0.00734	0.00326	0.01479	0.00803	1.84170	0.06552	Not significant	3.01619	1.26261
Landline	0.41070	0.40814	0.00856	0.00383	-0.00256	0.00938	-0.27307	0.78480	Not significant	2.08484	0.93808
Household members	4.61467	3.94931	0.04802	0.01348	-0.66536	0.04988	-13.34021	0.00000	Significant	1.04059	0.34135

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

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Annex 1

A1.1 Mobility matrix of the household wealth index for two generations, Aguascalientes (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	75	114	161	93	43	486
Quintile 2	35	96	96	115	56	398
Quintile 3	48	100	159	100	104	511
Quintile 4	11	119	156	156	219	661
Quintile 5 (highest)	3	23	73	181	312	592

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	15%	23%	33%	19%	9%	100%
Quintile 2	9%	24%	24%	29%	14%	100%
Quintile 3	9%	20%	31%	20%	20%	100%
Quintile 4	2%	18%	24%	24%	33%	100%
Quintile 5 (highest)	0%	4%	12%	31%	53%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.2 Mobility matrix of the household wealth index for two generations, Baja California (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	56	88	107	120	53	424
Quintile 2	23	68	95	122	84	392
Quintile 3	28	73	110	126	127	464
Quintile 4	10	82	111	159	286	648
Quintile 5 (highest)	1	12	94	179	474	759

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	13%	21%	25%	28%	13%	100%
Quintile 2	6%	17%	24%	31%	22%	100%
Quintile 3	6%	16%	24%	27%	27%	100%
Quintile 4	2%	13%	17%	24%	44%	100%
Quintile 5 (highest)	0%	2%	12%	24%	62%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.3 Mobility matrix of the household wealth index for two generations, Baja California Sur (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	67	98	119	97	61	443
Quintile 2	36	78	68	103	49	333
Quintile 3	31	70	102	153	111	467
Quintile 4	21	84	127	148	253	633
Quintile 5 (highest)	7	28	67	167	409	678

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	15%	22%	27%	22%	14%	100%
Quintile 2	11%	23%	20%	31%	15%	100%
Quintile 3	7%	15%	22%	33%	24%	100%
Quintile 4	3%	13%	20%	23%	40%	100%
Quintile 5 (highest)	1%	4%	10%	25%	60%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.4 Mobility matrix of the household wealth index for two generations, Campeche (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	249	155	121	61	17	603
Quintile 2	129	113	81	71	33	427
Quintile 3	133	125	157	90	63	569
Quintile 4	48	109	169	118	144	588
Quintile 5 (highest)	9	29	77	130	222	468

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	41%	26%	20%	10%	3%	100%
Quintile 2	30%	26%	19%	17%	8%	100%
Quintile 3	23%	22%	28%	16%	11%	100%
Quintile 4	8%	18%	29%	20%	24%	100%
Quintile 5 (highest)	2%	6%	17%	28%	48%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.5 Mobility matrix of the household wealth index for two generations, Coahuila (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	71	107	114	117	49	457
Quintile 2	32	85	84	103	41	345
Quintile 3	38	96	124	160	90	508
Quintile 4	9	81	153	192	216	652
Quintile 5 (highest)	6	22	74	187	304	592

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	15%	23%	25%	26%	11%	100%
Quintile 2	9%	25%	24%	30%	12%	100%
Quintile 3	7%	19%	24%	31%	18%	100%
Quintile 4	1%	12%	24%	30%	33%	100%
Quintile 5 (highest)	1%	4%	13%	32%	51%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.6 Mobility matrix of the household wealth index for two generations, Colima (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	114	133	108	56	65	476
Quintile 2	53	79	63	79	48	322
Quintile 3	40	101	121	108	106	477
Quintile 4	19	132	124	125	198	598
Quintile 5 (highest)	9	24	60	140	307	540

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	24%	28%	23%	12%	14%	100%
Quintile 2	16%	24%	19%	25%	15%	100%
Quintile 3	8%	21%	25%	23%	22%	100%
Quintile 4	3%	22%	21%	21%	33%	100%
Quintile 5 (highest)	2%	4%	11%	26%	57%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.7 Mobility matrix of the household wealth index for two generations, Chiapas (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	568	192	72	45	12	889
Quintile 2	257	103	66	48	7	481
Quintile 3	251	124	99	60	16	551
Quintile 4	86	152	111	63	55	467
Quintile 5 (highest)	25	25	32	66	58	206

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	64%	22%	8%	5%	1%	100%
Quintile 2	54%	21%	14%	10%	1%	100%
Quintile 3	46%	23%	18%	11%	3%	100%
Quintile 4	19%	33%	24%	13%	12%	100%
Quintile 5 (highest)	12%	12%	16%	32%	28%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.8 Mobility matrix of the household wealth index for two generations, Chihuahua (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	83	59	98	105	45	389
Quintile 2	41	47	80	104	39	311
Quintile 3	25	55	119	144	101	444
Quintile 4	9	63	98	156	241	567
Quintile 5 (highest)	2	12	65	183	375	638

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	21%	15%	25%	27%	11%	100%
Quintile 2	13%	15%	26%	33%	13%	100%
Quintile 3	6%	12%	27%	32%	23%	100%
Quintile 4	2%	11%	17%	27%	43%	100%
Quintile 5 (highest)	0%	2%	10%	29%	59%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.9 Mobility matrix of the household wealth index for two generations, Mexico City (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	54	77	63	108	103	406
Quintile 2	24	57	56	123	89	348
Quintile 3	38	63	79	146	181	507
Quintile 4	5	57	97	189	396	744
Quintile 5 (highest)	0	13	51	202	581	847

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	13%	19%	16%	27%	25%	100%
Quintile 2	7%	16%	16%	35%	26%	100%
Quintile 3	7%	12%	16%	29%	36%	100%
Quintile 4	1%	8%	13%	25%	53%	100%
Quintile 5 (highest)	0%	2%	6%	24%	69%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.10 Mobility matrix of the household wealth index for two generations, Durango (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	94	137	128	89	37	486
Quintile 2	34	102	101	111	32	380
Quintile 3	66	69	144	135	85	499
Quintile 4	21	99	130	160	183	593
Quintile 5 (highest)	6	28	75	184	259	553

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	19%	28%	26%	18%	8%	100%
Quintile 2	9%	27%	27%	29%	8%	100%
Quintile 3	13%	14%	29%	27%	17%	100%
Quintile 4	4%	17%	22%	27%	31%	100%
Quintile 5 (highest)	1%	5%	14%	33%	47%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.11 Mobility matrix of the household wealth index for two generations, Guanajuato (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	143	176	117	66	38	541
Quintile 2	64	117	83	114	37	414
Quintile 3	72	122	134	99	75	502
Quintile 4	35	136	162	145	145	623
Quintile 5 (highest)	5	21	77	173	253	529

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	26%	33%	22%	12%	7%	100%
Quintile 2	15%	28%	20%	27%	9%	100%
Quintile 3	14%	24%	27%	20%	15%	100%
Quintile 4	6%	22%	26%	23%	23%	100%
Quintile 5 (highest)	1%	4%	15%	33%	48%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.12 Mobility matrix of the household wealth index for two generations, Guerrero (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	464	163	88	44	18	778
Quintile 2	207	133	70	48	13	471
Quintile 3	195	147	89	61	30	522
Quintile 4	88	122	98	68	57	433
Quintile 5 (highest)	16	23	41	67	67	215

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	60%	21%	11%	6%	2%	100%
Quintile 2	44%	28%	15%	10%	3%	100%
Quintile 3	37%	28%	17%	12%	6%	100%
Quintile 4	20%	28%	23%	16%	13%	100%
Quintile 5 (highest)	7%	11%	19%	31%	31%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.13 Mobility matrix of the household wealth index for two generations, Hidalgo (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	219	142	96	68	29	554
Quintile 2	103	83	71	89	23	368
Quintile 3	108	103	97	112	68	487
Quintile 4	47	109	109	144	133	544
Quintile 5 (highest)	7	27	44	172	231	481

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	39%	26%	17%	12%	5%	100%
Quintile 2	28%	22%	19%	24%	6%	100%
Quintile 3	22%	21%	20%	23%	14%	100%
Quintile 4	9%	20%	20%	27%	24%	100%
Quintile 5 (highest)	2%	6%	9%	36%	48%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.14 Mobility matrix of the household wealth index for two generations, Jalisco (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	50	99	119	88	62	418
Quintile 2	28	83	76	115	72	373
Quintile 3	31	79	135	157	133	534
Quintile 4	10	104	141	177	273	704
Quintile 5 (highest)	1	26	54	180	426	687

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	12%	24%	29%	21%	15%	100%
Quintile 2	7%	22%	20%	31%	19%	100%
Quintile 3	6%	15%	25%	29%	25%	100%
Quintile 4	1%	15%	20%	25%	39%	100%
Quintile 5 (highest)	0%	4%	8%	26%	62%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.15 Mobility matrix of the household wealth index for two generations, Estado de México (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	166	116	125	116	56	579
Quintile 2	83	83	110	116	58	450
Quintile 3	96	111	130	175	113	623
Quintile 4	43	123	150	202	239	758
Quintile 5 (highest)	9	23	77	189	341	638

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	29%	20%	22%	20%	10%	100%
Quintile 2	18%	19%	24%	26%	13%	100%
Quintile 3	15%	18%	21%	28%	18%	100%
Quintile 4	6%	16%	20%	27%	32%	100%
Quintile 5 (highest)	1%	4%	12%	30%	53%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.16 Mobility matrix of the household wealth index for two generations, Michoacán (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	140	150	96	81	40	506
Quintile 2	88	108	84	66	33	380
Quintile 3	77	104	138	106	88	513
Quintile 4	33	117	145	128	174	598
Quintile 5 (highest)	8	31	78	124	217	458

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	28%	30%	19%	16%	8%	100%
Quintile 2	23%	29%	22%	17%	9%	100%
Quintile 3	15%	20%	27%	21%	17%	100%
Quintile 4	5%	20%	24%	21%	29%	100%
Quintile 5 (highest)	2%	7%	17%	27%	47%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.17 Mobility matrix of the household wealth index for two generations, Morelos (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	137	133	114	79	43	506
Quintile 2	82	99	73	81	37	372
Quintile 3	83	121	102	96	81	483
Quintile 4	50	122	113	119	179	583
Quintile 5 (highest)	10	30	46	126	277	490

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	27%	26%	23%	16%	9%	100%
Quintile 2	22%	27%	20%	22%	10%	100%
Quintile 3	17%	25%	21%	20%	17%	100%
Quintile 4	9%	21%	19%	20%	31%	100%
Quintile 5 (highest)	2%	6%	9%	26%	57%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.18 Mobility matrix of the household wealth index for two generations, Nayarit (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	115	189	134	69	55	561
Quintile 2	63	121	87	76	32	378
Quintile 3	52	148	138	75	73	486
Quintile 4	27	116	130	115	163	551
Quintile 5 (highest)	6	28	54	120	214	421

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	20%	34%	24%	12%	10%	100%
Quintile 2	17%	32%	23%	20%	9%	100%
Quintile 3	11%	31%	28%	15%	15%	100%
Quintile 4	5%	21%	24%	21%	30%	100%
Quintile 5 (highest)	2%	7%	13%	28%	51%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.19 Mobility matrix of the household wealth index for two generations, Nuevo León (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	109	120	102	105	73	510
Quintile 2	48	88	72	97	53	357
Quintile 3	52	72	111	109	131	474
Quintile 4	14	105	137	135	306	696
Quintile 5 (highest)	4	20	79	175	405	683

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	21%	24%	20%	21%	14%	100%
Quintile 2	13%	25%	20%	27%	15%	100%
Quintile 3	11%	15%	23%	23%	28%	100%
Quintile 4	2%	15%	20%	19%	44%	100%
Quintile 5 (highest)	1%	3%	12%	26%	59%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.20 Mobility matrix of the household wealth index for two generations, Oaxaca (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	548	154	68	39	14	823
Quintile 2	235	124	57	49	8	473
Quintile 3	199	116	93	56	35	499
Quintile 4	71	103	120	84	51	430
Quintile 5 (highest)	26	22	53	87	85	273

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	67%	19%	8%	5%	2%	100%
Quintile 2	50%	26%	12%	10%	2%	100%
Quintile 3	40%	23%	19%	11%	7%	100%
Quintile 4	17%	24%	28%	20%	12%	100%
Quintile 5 (highest)	9%	8%	20%	32%	31%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.21 Mobility matrix of the household wealth index for two generations, Puebla (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	307	152	81	36	35	610
Quintile 2	160	107	86	59	34	446
Quintile 3	159	110	88	95	88	540
Quintile 4	66	118	102	125	165	577
Quintile 5 (highest)	19	30	59	87	265	460

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	50%	25%	13%	6%	6%	100%
Quintile 2	36%	24%	19%	13%	8%	100%
Quintile 3	30%	20%	16%	18%	16%	100%
Quintile 4	12%	20%	18%	22%	29%	100%
Quintile 5 (highest)	4%	6%	13%	19%	58%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.22 Mobility matrix of the household wealth index for two generations, Querétaro (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	126	113	87	76	46	448
Quintile 2	59	86	72	100	52	369
Quintile 3	74	85	114	115	110	498
Quintile 4	23	114	107	141	256	642
Quintile 5 (highest)	3	32	55	155	402	648

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	28%	25%	19%	17%	10%	100%
Quintile 2	16%	23%	19%	27%	14%	100%
Quintile 3	15%	17%	23%	23%	22%	100%
Quintile 4	4%	18%	17%	22%	40%	100%
Quintile 5 (highest)	0%	5%	9%	24%	62%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.23 Mobility matrix of the household wealth index for two generations, Quintana Roo (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	226	152	117	52	28	574
Quintile 2	106	102	98	76	40	422
Quintile 3	93	112	149	96	86	536
Quintile 4	44	121	146	109	192	612
Quintile 5 (highest)	9	22	71	122	275	499

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	39%	27%	20%	9%	5%	100%
Quintile 2	25%	24%	23%	18%	10%	100%
Quintile 3	17%	21%	28%	18%	16%	100%
Quintile 4	7%	20%	24%	18%	31%	100%
Quintile 5 (highest)	2%	4%	14%	25%	55%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.24 Mobility matrix of the household wealth index for two generations, San Luis Potosí (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	328	133	96	65	37	659
Quintile 2	161	98	86	78	26	450
Quintile 3	133	114	114	113	51	526
Quintile 4	39	101	145	118	141	544
Quintile 5 (highest)	9	24	81	126	209	448

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	50%	20%	15%	10%	6%	100%
Quintile 2	36%	22%	19%	17%	6%	100%
Quintile 3	25%	22%	22%	22%	10%	100%
Quintile 4	7%	19%	27%	22%	26%	100%
Quintile 5 (highest)	2%	5%	18%	28%	47%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.25 Mobility matrix of the household wealth index for two generations, Sinaloa (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index					
	Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	89	149	119	88	45	491
Quintile 2	56	115	104	73	56	404
Quintile 3	44	101	133	99	88	466
Quintile 4	20	117	152	108	166	563
Quintile 5 (highest)	7	17	80	154	298	557

PERCENTAGE

Wealth index of home of origin	Current household wealth index					
	Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	18%	30%	24%	18%	9%	100%
Quintile 2	14%	28%	26%	18%	14%	100%
Quintile 3	10%	22%	29%	21%	19%	100%
Quintile 4	3%	21%	27%	19%	29%	100%
Quintile 5 (highest)	1%	3%	14%	28%	53%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.26 Mobility matrix of the household wealth index for two generations, Sonora (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	99	111	108	88	57	463
Quintile 2	48	69	90	116	46	370
Quintile 3	49	75	121	143	134	521
Quintile 4	21	78	108	169	224	600
Quintile 5 (highest)	5	19	70	137	424	656

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	21%	24%	23%	19%	12%	100%
Quintile 2	13%	19%	24%	31%	12%	100%
Quintile 3	9%	14%	23%	27%	26%	100%
Quintile 4	4%	13%	18%	28%	37%	100%
Quintile 5 (highest)	1%	3%	11%	21%	65%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.27 Mobility matrix of the household wealth index for two generations, Tabasco (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	223	272	127	33	30	685
Quintile 2	132	144	124	63	18	480
Quintile 3	132	149	158	77	48	564
Quintile 4	39	169	166	75	115	564
Quintile 5 (highest)	9	35	89	85	151	370

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	33%	40%	19%	5%	4%	100%
Quintile 2	27%	30%	26%	13%	4%	100%
Quintile 3	23%	26%	28%	14%	9%	100%
Quintile 4	7%	30%	29%	13%	20%	100%
Quintile 5 (highest)	2%	10%	24%	23%	41%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.28 Mobility matrix of the household wealth index for two generations, Tamaulipas (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	122	159	107	67	25	481
Quintile 2	54	110	91	115	32	402
Quintile 3	54	116	136	111	83	501
Quintile 4	21	105	142	150	156	574
Quintile 5 (highest)	4	25	68	152	254	504

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	25%	33%	22%	14%	5%	100%
Quintile 2	13%	27%	23%	29%	8%	100%
Quintile 3	11%	23%	27%	22%	17%	100%
Quintile 4	4%	18%	25%	26%	27%	100%
Quintile 5 (highest)	1%	5%	14%	30%	50%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.29 Mobility matrix of the household wealth index for two generations, Tlaxcala (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	206	158	103	76	36	579
Quintile 2	97	103	88	89	39	416
Quintile 3	116	133	135	115	77	577
Quintile 4	60	127	155	142	169	653
Quintile 5 (highest)	16	31	61	162	244	514

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	36%	27%	18%	13%	6%	100%
Quintile 2	23%	25%	21%	21%	9%	100%
Quintile 3	20%	23%	23%	20%	13%	100%
Quintile 4	9%	19%	24%	22%	26%	100%
Quintile 5 (highest)	3%	6%	12%	31%	48%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.30 Mobility matrix of the household wealth index for two generations, Veracruz (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	371	170	79	55	33	708
Quintile 2	174	114	76	57	14	436
Quintile 3	143	132	101	92	72	541
Quintile 4	53	111	98	107	121	490
Quintile 5 (highest)	10	23	47	80	152	311

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	52%	24%	11%	8%	5%	100%
Quintile 2	40%	26%	18%	13%	3%	100%
Quintile 3	27%	24%	19%	17%	13%	100%
Quintile 4	11%	23%	20%	22%	25%	100%
Quintile 5 (highest)	3%	7%	15%	26%	49%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.31 Mobility matrix of the household wealth index for two generations, Yucatán (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	306	171	108	63	30	679
Quintile 2	126	133	86	79	35	459
Quintile 3	142	116	124	87	67	536
Quintile 4	43	147	131	88	127	536
Quintile 5 (highest)	15	38	75	104	203	435

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	45%	25%	16%	9%	4%	100%
Quintile 2	27%	29%	19%	17%	8%	100%
Quintile 3	26%	22%	23%	16%	13%	100%
Quintile 4	8%	27%	24%	16%	24%	100%
Quintile 5 (highest)	3%	9%	17%	24%	47%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

A1.32 Mobility matrix of the household wealth index for two generations, Zacatecas (row distribution)

OBSERVATIONS

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	81	123	116	99	33	453
Quintile 2	39	72	82	97	33	323
Quintile 3	42	114	120	142	75	494
Quintile 4	23	131	128	156	138	575
Quintile 5 (highest)	4	23	78	170	216	491

PERCENTAGE

Wealth index of home of origin	Current household wealth index: Quintile 1 (lowest)	Quintile 2	Quintile 3	Quintile 4	Quintile 5 (highest)	TOTAL
Quintile 1 (lowest)	18%	27%	26%	22%	7%	100%
Quintile 2	12%	22%	25%	30%	10%	100%
Quintile 3	9%	23%	24%	29%	15%	100%
Quintile 4	4%	23%	22%	27%	24%	100%
Quintile 5 (highest)	1%	5%	16%	35%	44%	100%

Source: Authors' own calculation using EMOVI-11 and ENSANUT-12 data.

Annex 2

A2.1 Testing of means differences, Aguascalientes

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.69344	0.75440	0.03384	0.01732	0.06096	0.03802	1.60346	0.10883	Not significant	4.88049	2.29557
Electricity	0.99695	0.99289	0.00135	0.00219	-0.00407	0.00257	-1.58220	0.11360	Not significant	0.13555	0.22024
Earth floor	0.00408	0.01088	0.00171	0.00273	0.00679	0.00322	2.10797	0.03503	Significant	41.91115	25.11054
Van	0.23677	0.31080	0.01547	0.01221	0.07403	0.01971	3.75666	0.00017	Significant	6.53522	3.92708
Car	0.41276	0.39877	0.02300	0.01485	-0.01399	0.02738	-0.51086	0.60945	Not significant	5.57266	3.72339
PC/laptop	0.33984	0.37405	0.02135	0.01470	0.03420	0.02593	1.31918	0.18711	Not significativa	6.28330	3.93123
Stove	0.98649	0.97064	0.00500	0.00452	-0.01585	0.00674	-2.35324	0.01861	Significant	0.50673	0.46529
Cable TV	0.34061	0.39208	0.02234	0.01411	0.05146	0.02642	1.94777	0.05144	Not significant	6.55849	3.59879
Internet	0.25633	0.28244	0.02368	0.01273	0.02611	0.02689	0.97115	0.33147	Not significant	9.23881	4.50687
Landline	0.48395	0.45413	0.02701	0.01597	-0.02982	0.03138	-0.95033	0.34194	Not significant	5.58158	3.51622
Household members	4.87724	4.06370	0.12239	0.04956	-0.81354	0.13204	-6.16127	0.00000	Significant	2.50935	1.21958

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.2 Testing of means differences, Baja California

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.06221	0.03603	0.01251	0.00528	-0.02618	0.01358	-1.92872	0.05377	Not significant	20.10384	14.65395
Electricity	0.99487	0.99532	0.00162	0.00167	0.00044	0.00233	0.19087	0.84863	Not significant	0.16271	0.16799
Earth floor	0.00945	0.01085	0.00276	0.00264	0.00141	0.00382	0.36816	0.71276	Not significant	29.21192	24.33053
Van	0.36358	0.29381	0.01860	0.01271	-0.06977	0.02253	-3.09691	0.00196	Significant	5.11700	4.32443
Car	0.56126	0.51323	0.02549	0.01546	-0.04803	0.02982	-1.61075	0.10723	Not significant	4.54212	3.01273
PC/laptop	0.46520	0.45367	0.02335	0.01613	-0.01153	0.02838	-0.40618	0.68461	Not significant	5.01889	3.55592
Stove	0.97887	0.97435	0.00514	0.00443	-0.00452	0.00679	-0.66593	0.50546	Not significant	0.52504	0.45464
Cable TV	0.52777	0.51146	0.02439	0.01578	-0.01632	0.02905	-0.56169	0.57432	Not significant	4.62131	3.08472
Internet	0.38645	0.43961	0.02396	0.01590	0.05316	0.02876	1.84859	0.06452	Not significant	6.20068	3.61656
Landline	0.46762	0.46900	0.02289	0.01627	0.00137	0.02808	0.04896	0.96095	Not significant	4.89429	3.46848
Household members	4.38160	3.64145	0.13685	0.05348	-0.74015	0.14692	-5.03761	0.00000	Significant	3.12319	1.46863

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.3 Testing of means differences, Baja California Sur

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.75033	0.69768	0.02989	0.02145	-0.05265	0.03679	-1.43107	0.15241	Not significant	3.98332	3.07438
Electricity	0.99681	0.99048	0.00201	0.00460	-0.00633	0.00502	-1.26114	0.20726	Not significant	0.20161	0.46419
Earth floor	0.01258	0.02048	0.00281	0.00727	0.00791	0.00779	1.01453	0.31033	Not significant	22.33479	35.49381
Van	0.41335	0.46161	0.01848	0.01871	0.04826	0.02630	1.83542	0.06644	Not significant	4.47103	4.05229
Car	0.52236	0.42063	0.02390	0.01492	-0.10174	0.02818	-3.61059	0.00031	Significant	4.57577	3.54733
PC/laptop	0.43998	0.42540	0.02383	0.01655	-0.01458	0.02901	-0.50243	0.61536	Not significant	5.41636	3.88972
Stove	0.96334	0.93381	0.00666	0.00979	-0.02954	0.01184	-2.49472	0.01261	Significant	0.69155	1.04809
Cable TV	0.60111	0.50342	0.02307	0.01628	-0.09769	0.02824	-3.45962	0.00054	Significant	3.83816	3.23366
Internet	0.36097	0.36702	0.02326	0.01638	0.00605	0.02845	0.21268	0.83158	Not significant	6.44499	4.46399
Landline	0.44317	0.43089	0.02289	0.01709	-0.01228	0.02857	-0.42980	0.66734	Not significant	5.16595	3.96717
Household members	4.11431	3.50816	0.08523	0.04682	-0.60616	0.09724	-6.23350	0.00000	Significant	2.07147	1.33466

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.4 Testing of means differences, Campeche

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.63011	0.57780	0.02858	0.01567	-0.05231	0.03260	-1.60489	0.10852	Not significant	4.53626	2.71177
Electricity	0.96848	0.99620	0.01707	0.00159	0.02772	0.01714	1.61720	0.10583	Not significant	1.76230	0.16001
Earth floor	0.02560	0.01092	0.01002	0.00249	-0.01468	0.01032	-1.42218	0.15497	Not significant	39.13139	22.82731
Van	0.15285	0.16288	0.01327	0.01123	0.01003	0.01739	0.57679	0.56408	Not significant	8.68075	6.89767
Car	0.20824	0.23942	0.02164	0.01119	0.03118	0.02436	1.27991	0.20058	Not significant	10.38978	4.67482
PC/laptop	0.30196	0.31258	0.02352	0.01193	0.01062	0.02638	0.40255	0.68728	Not significant	7.79044	3.81767
Stove	0.83256	0.81424	0.02063	0.01460	-0.01832	0.02527	-0.72476	0.46860	Not significant	2.47807	1.79263
Cable TV	0.59660	0.63301	0.02750	0.01791	0.03640	0.03282	1.10934	0.26728	Not significant	4.60866	2.83010
Internet	0.22871	0.25978	0.02444	0.01163	0.03107	0.02707	1.14779	0.25106	Not significant	10.68650	4.47806
Landline	0.32230	0.30410	0.03089	0.01493	-0.01820	0.03431	-0.53054	0.59574	Not significant	9.58509	4.90970
Household members	4.40217	3.84106	0.10011	0.05808	-0.56110	0.11574	-4.84812	0.00000	Significant	2.27404	1.51213

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.5 Testing of means differences, Coahuila

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.56962	0.62157	0.04751	0.02000	0.05195	0.05155	1.00782	0.31354	Not significant	8.34069	3.21824
Electricity	0.99585	0.99459	0.00235	0.00283	-0.00127	0.00367	-0.34502	0.73008	Not significant	0.23579	0.28407
Earth floor	0.00585	0.00891	0.00360	0.00244	0.00307	0.00435	0.70527	0.48064	Not significant	61.61689	27.36319
Van	0.29210	0.29558	0.01826	0.01452	0.00347	0.02333	0.14885	0.88167	Not significant	6.25107	4.91116
Car	0.43124	0.37116	0.02475	0.01528	-0.06008	0.02909	-2.06542	0.03888	Significant	5.73887	4.11764
PC/laptop	0.36379	0.37915	0.02685	0.01580	0.01536	0.03116	0.49309	0.62195	Not significant	7.38102	4.16845
Stove	0.97692	0.96739	0.00599	0.00622	-0.00952	0.00864	-1.10267	0.27017	Not significant	0.61303	0.64315
Cable TV	0.38599	0.34429	0.02765	0.01558	-0.04170	0.03173	-1.31387	0.18889	Not significant	7.16231	4.52595
Internet	0.25009	0.30647	0.02650	0.01457	0.05638	0.03024	1.86446	0.06226	Not significant	10.59560	4.75440
Landline	0.44532	0.43319	0.03355	0.01662	-0.01213	0.03744	-0.32401	0.74593	Not significant	7.53345	3.83683
Household members	4.30066	3.77178	0.07818	0.04936	-0.52888	0.09246	-5.72011	0.00000	Significant	1.81796	1.30856

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.6 Testing of means differences, Colima

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.61506	0.61442	0.03706	0.01928	-0.00063	0.04178	-0.01514	0.98792	Not significant	6.02579	3.13865
Electricity	0.99247	0.99776	0.00316	0.00137	0.00529	0.00344	1.53684	0.12433	Not significant	0.31805	0.13692
Earth floor	0.01343	0.02115	0.00377	0.00407	0.00772	0.00555	1.39249	0.16377	Not significant	28.03517	19.24859
Van	0.31231	0.31025	0.01631	0.01268	-0.00206	0.02066	-0.09961	0.92066	Not significant	5.22133	4.08793
Car	0.31089	0.27364	0.02476	0.01208	-0.03725	0.02755	-1.35204	0.17636	Not significant	7.96394	4.41406
PC/laptop	0.41442	0.36854	0.02869	0.01395	-0.04588	0.03190	-1.43816	0.15039	Not significant	6.92304	3.78458
Stove	0.95910	0.94668	0.00761	0.00701	-0.01242	0.01034	-1.20115	0.22969	Not significant	0.79336	0.74006
Cable TV	0.43183	0.42303	0.02548	0.01661	-0.00880	0.03041	-0.28931	0.77234	Not significant	5.89990	3.92568
Internet	0.33717	0.31706	0.02767	0.01459	-0.02010	0.03128	-0.64270	0.52042	Not significant	8.20720	4.60077
Landline	0.50744	0.46278	0.02445	0.01654	-0.04466	0.02952	-1.51263	0.13037	Not significant	4.81881	3.57450
Household members	4.12988	3.71898	0.09225	0.05064	-0.41090	0.10523	-3.90480	0.00009	Significant	2.23362	1.36160

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.7 Testing of means differences, Chiapas

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.40453	0.29726	0.03327	0.01705	-0.10727	0.03738	-2.86968	0.00411	Significant	8.22420	5.73407
Electricity	0.98422	0.98446	0.00593	0.00860	0.00024	0.01045	0.02301	0.98164	Not significant	0.60265	0.87365
Earth floor	0.05873	0.07377	0.00911	0.01081	0.01504	0.01414	1.06385	0.28740	Not significant	15.50633	14.65979
Van	0.07615	0.10046	0.01004	0.00818	0.02431	0.01295	1.87693	0.06053	Not significant	13.18641	8.14734
Car	0.12959	0.11710	0.01681	0.00997	-0.01249	0.01954	-0.63894	0.52286	Not significant	12.97173	8.51281
PC/laptop	0.13596	0.13596	0.01929	0.01016	0.00000	0.02180	0.00012	0.99990	Not significant	14.19093	7.47110
Stove	0.66626	0.59205	0.02889	0.02490	-0.07421	0.03814	-1.94559	0.05170	Not significant	4.33615	4.20641
Cable TV	0.19438	0.20945	0.01604	0.01507	0.01508	0.02201	0.68505	0.49331	Not significant	8.25028	7.19640
Internet	0.06704	0.08436	0.01244	0.00785	0.01732	0.01471	1.17757	0.23897	Not significant	18.54951	9.30984
Landline	0.18424	0.13769	0.02165	0.00989	-0.04655	0.02380	-1.95580	0.05049	Not significant	11.75142	7.18126
Household members	5.01915	4.38973	0.10660	0.08523	-0.62942	0.13649	-4.61156	0.00000	Significant	2.12390	1.94165

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.8 Testing of means differences, Chihuahua

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT EMOVI	MCA	ENSANUT EMOVI	MCA	$P_{MCA} - P_{ENSANUT/EMOVI}$						
Water tank	0.30734	0.48120	0.05081	0.02312	0.17386	0.05582	3.11466	0.00184	Significant	16.53186	4.80451
Electricity	0.97093	0.99239	0.01338	0.00371	0.02146	0.01388	1.54626	0.12204	Not significant	1.37766	0.37362
Earth floor	0.01292	0.00445	0.00398	0.00169	-0.00847	0.00432	-1.95986	0.05001	Not significant	30.78876	37.98094
Van	0.37856	0.37497	0.01957	0.01539	-0.00359	0.02490	-0.14435	0.88523	Not significant	5.16991	4.10476
Car	0.49007	0.42407	0.02541	0.01487	-0.06600	0.02944	-2.24188	0.02497	Significant	5.18439	3.50595
PC/laptop	0.39344	0.41015	0.02534	0.01354	0.01671	0.02873	0.58154	0.56088	Not significant	6.43962	3.30193
Stove	0.95399	0.95624	0.01419	0.01420	0.00225	0.02007	0.11232	0.91057	Not significant	1.48774	1.48456
Cable TV	0.38342	0.40556	0.02864	0.01485	0.02214	0.03226	0.68621	0.49258	Not significant	7.46890	3.66191
Internet	0.29328	0.34496	0.02522	0.01295	0.05168	0.02835	1.82301	0.06830	Not significant	8.59875	3.75467
Landline	0.51725	0.50334	0.02492	0.01471	-0.01390	0.02894	-0.48044	0.63092	Not significant	4.81819	2.92253
Household members	4.26132	3.57102	0.10837	0.04707	-0.69030	0.11816	-5.84225	0.00000	Significant	2.54320	1.31823

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.9 Testing of means differences, Mexico City

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.78092	0.81853	0.02038	0.01264	0.03761	0.02398	1.56837	0.11679	Not significant	2.60920	1.54417
Electricity	0.99627	1.00000	0.00194	--	0.00373	---	---	---	---	0.19453	---
Earth floor	0.00852	0.00176	0.00329	0.00104	-0.00676	0.00345	-1.96058	0.04993	Significant	38.59394	59.39066
Van	0.11969	0.05862	0.01283	0.00641	-0.06108	0.01434	-4.25812	0.00002	Significant	10.72104	10.93442
Car	0.39877	0.39812	0.02170	0.01336	-0.00065	0.02548	-0.02555	0.97962	Not significant	5.44190	3.35516
PC/laptop	0.52123	0.49511	0.02008	0.01357	-0.02612	0.02423	-1.07814	0.28097	Not significant	3.85153	2.74028
Stove	0.98816	0.97910	0.00298	0.00428	-0.00906	0.00522	-1.73693	0.08240	Not significant	0.30189	0.43697
Cable TV	0.35385	0.35457	0.02392	0.01357	0.00072	0.02750	0.02631	0.97901	Not significant	6.75863	3.82811
Internet	0.45098	0.42570	0.02262	0.01362	-0.02528	0.02641	-0.95736	0.33839	Not significant	5.01675	3.20027
Landline	0.75869	0.65957	0.01889	0.01249	-0.09911	0.02265	-4.37616	0.00001	Significant	2.49036	1.89347
Household members	4.64708	3.53278	0.14098	0.04796	-1.11430	0.14891	-7.48279	0.00000	Significant	3.03371	1.35770

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.10 Testing of means differences, Durango

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.70070	0.73012	0.03956	0.02297	0.02941	0.04574	0.64304	0.52020	Not significant	5.64531	3.14573
Electricity	0.99381	0.99816	0.00254	0.00102	0.00435	0.00274	1.58628	0.11268	Not significant	0.25607	0.10253
Earth floor	0.01519	0.03246	0.00567	0.00520	0.01728	0.00770	2.24486	0.02478	Significant	37.34772	16.02220
Van	0.35784	0.34174	0.01548	0.01621	-0.01610	0.02241	-0.71826	0.47260	Not significant	4.32559	4.74209
Car	0.33627	0.22688	0.02688	0.01128	-0.10939	0.02915	-3.75259	0.00018	Significant	7.99328	4.97244
PC/laptop	0.29423	0.29227	0.03062	0.01185	-0.00196	0.03283	-0.05966	0.95242	Not significant	10.40510	4.05304
Stove	0.95768	0.93073	0.01216	0.01649	-0.02695	0.02048	-1.31586	0.18822	Not significant	1.26936	1.77135
Cable TV	0.34295	0.32512	0.02889	0.01732	-0.01783	0.03368	-0.52943	0.59651	Not significant	8.42276	5.32665
Internet	0.20713	0.20791	0.02696	0.01254	0.00078	0.02974	0.02622	0.97908	Not significant	13.01805	6.02902
Landline	0.46461	0.40170	0.03041	0.02002	-0.06291	0.03641	-1.72774	0.08403	Not significant	6.54568	4.98469
Household members	4.81414	4.14844	0.12888	0.05060	-0.66570	0.13846	-4.80792	0.00000	Significant	2.67717	1.21971

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.11 Testing of means differences, Guanajuato

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.70200	0.69532	0.03007	0.01822	-0.00668	0.03516	-0.18998	0.84933	Not significant	4.28295	2.62045
Electricity	0.99551	0.99038	0.00237	0.00363	-0.00513	0.00433	-1.18376	0.23651	Not significant	0.23808	0.36640
Earth floor	0.01336	0.02086	0.00451	0.00418	0.00751	0.00615	1.22140	0.22193	Not significant	33.76037	20.02052
Van	0.28762	0.28513	0.01791	0.01713	-0.00249	0.02478	-0.10064	0.91984	Not significant	6.22679	6.00633
Car	0.24561	0.24118	0.02595	0.01292	-0.00443	0.02899	-0.15297	0.87842	Not significant	10.56531	5.35625
PC/laptop	0.26109	0.23619	0.02516	0.01427	-0.02489	0.02892	-0.86070	0.38940	Not significant	9.63678	6.03981
Stove	0.96158	0.95191	0.00604	0.00796	-0.00967	0.00999	-0.96815	0.33297	Not significant	0.62853	0.83603
Cable TV	0.30569	0.25830	0.02309	0.01295	-0.04739	0.02648	-1.78979	0.07349	Not significant	7.55442	5.01419
Internet	0.19146	0.17450	0.02255	0.00983	-0.01696	0.02460	-0.68947	0.49053	Not significant	11.77582	5.63300
Landline	0.42885	0.41213	0.02910	0.01896	-0.01672	0.03473	-0.48133	0.63028	Not significant	6.78484	4.60044
Household members	4.91939	4.33278	0.10943	0.05422	-0.58661	0.12213	-4.80313	0.00000	Significant	2.22454	1.25147

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.12 Testing of means differences, Guerrero

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.41618	0.30926	0.03037	0.01572	-0.10692	0.03420	-3.12646	0.00177	Significant	7.29781	5.08227
Electricity	0.97562	0.98962	0.00940	0.00312	0.01400	0.00990	1.41330	0.15757	Not significant	0.96354	0.31530
Earth floor	0.08199	0.11999	0.01357	0.01258	0.03800	0.01850	2.05352	0.04002	Significant	16.54692	10.48705
Van	0.10988	0.09407	0.01381	0.01030	-0.01581	0.01723	-0.91767	0.35879	Not significant	12.56649	10.95360
Car	0.13542	0.10738	0.01429	0.00909	-0.02804	0.01693	-1.65572	0.09778	Not significant	10.55028	8.46550
PC/laptop	0.14480	0.15030	0.02051	0.00994	0.00549	0.02280	0.24093	0.80961	Not significant	14.16701	6.61384
Stove	0.72432	0.70701	0.02947	0.02376	-0.01732	0.03786	-0.45741	0.64738	Not significant	4.06929	3.36095
Cable TV	0.23086	0.22268	0.02774	0.01676	-0.00818	0.03240	-0.25237	0.80076	Not significant	12.01415	7.52493
Internet	0.11005	0.13441	0.01787	0.01006	0.02437	0.02051	1.18819	0.23476	Not significant	16.23941	7.48325
Landline	0.30963	0.32240	0.03061	0.01548	0.01277	0.03430	0.37230	0.70967	Not significant	9.88621	4.80192
Household members	4.69414	4.11488	0.08515	0.07323	-0.57925	0.11231	-5.15773	0.00000	Significant	1.81403	1.77953

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.13 Testing of means differences, Hidalgo

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.72873	0.60358	0.02138	0.02540	-0.12515	0.03320	-3.76971	0.00016	Significant	2.93405	4.20747
Electricity	0.99442	0.99056	0.00221	0.00573	-0.00386	0.00614	-0.62858	0.52962	Not significant	0.22211	0.57838
Earth floor	0.01148	0.04279	0.00297	0.00839	0.03131	0.00890	3.51649	0.00044	Significant	25.85085	19.61836
Van	0.22964	0.19832	0.01648	0.01530	-0.03131	0.02249	-1.39246	0.16378	Not significant	7.17641	7.71592
Car	0.31135	0.23499	0.01945	0.01481	-0.07636	0.02445	-3.12331	0.00179	Significant	6.24796	6.30140
PC/laptop	0.27169	0.20858	0.02280	0.01416	-0.06311	0.02684	-2.35180	0.01868	Significant	8.39018	6.78937
Stove	0.88825	0.86388	0.01347	0.02400	-0.02438	0.02752	-0.88591	0.37567	Not significant	1.51650	2.77761
Cable TV	0.34332	0.30059	0.03008	0.02157	-0.04273	0.03702	-1.15422	0.24841	Not significant	8.76293	7.17604
Internet	0.19119	0.15448	0.02385	0.01330	-0.03671	0.02731	-1.34405	0.17893	Not significant	12.47702	8.60930
Landline	0.35625	0.26648	0.02494	0.01837	-0.08977	0.03098	-2.89790	0.00376	Significant	7.00091	6.89421
Household members	4.69202	4.03756	0.10634	0.06344	-0.65446	0.12383	-5.28528	0.00000	Significant	2.26637	1.57136

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.14 Testing of means differences, Jalisco

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.74094	0.77073	0.03439	0.01753	0.02979	0.03860	0.77174	0.44027	Not significant	4.64171	2.27414
Electricity	0.99932	0.99769	0.00040	0.00125	-0.00163	0.00131	-1.24609	0.21273	Not significant	0.04010	0.12492
Earth floor	0.00737	0.01343	0.00233	0.00319	0.00606	0.00395	1.53297	0.12528	Not significant	31.62414	23.75282
Van	0.32700	0.31515	0.02206	0.01722	-0.01185	0.02799	-0.42331	0.67207	Not significant	6.74742	5.46375
Car	0.33308	0.29131	0.02103	0.01666	-0.04177	0.02683	-1.55715	0.11944	Not significant	6.31363	5.71781
PC/laptop	0.42716	0.38115	0.02357	0.01538	-0.04601	0.02814	-1.63510	0.10203	Not significant	5.51715	4.03502
Stove	0.98090	0.96149	0.00453	0.00925	-0.01940	0.01030	-1.88374	0.05960	Not significant	0.46175	0.96224
Cable TV	0.48640	0.40275	0.02742	0.01870	-0.08365	0.03319	-2.52040	0.01172	Significant	5.63706	4.64413
Internet	0.34497	0.29954	0.02496	0.01655	-0.04543	0.02995	-1.51670	0.12934	Not significant	7.23650	5.52444
Landline	0.59822	0.51429	0.02362	0.01604	-0.08393	0.02856	-2.93927	0.00329	Significant	3.94877	3.11962
Household members	4.70277	4.09670	0.12084	0.06008	-0.60606	0.13496	-4.49077	0.00001	Significant	2.56965	1.46663

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.15 Testing of means differences, Estado de México

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.68928	0.68573	0.02730	0.01647	-0.00355	0.03188	-0.11139	0.91130	Not significant	3.96059	2.40217
Electricity	0.99067	0.99727	0.00319	0.00166	0.00660	0.00360	1.83650	0.06628	Not significant	0.32213	0.16615
Earth floor	0.01385	0.01466	0.00248	0.00364	0.00082	0.00441	0.18546	0.85287	Not significant	17.90396	24.83973
Van	0.13495	0.10452	0.01231	0.01013	-0.03043	0.01594	-1.90905	0.05626	Not significant	9.12229	9.68778
Car	0.31345	0.29824	0.02285	0.01613	-0.01521	0.02797	-0.54361	0.58671	Not significant	7.29075	5.40839
PC/laptop	0.33713	0.29169	0.02389	0.01499	-0.04544	0.02820	-1.61112	0.10715	Not significant	7.08604	5.13988
Stove	0.95479	0.96022	0.00801	0.00656	0.00542	0.01035	0.52412	0.60019	Not significant	0.83873	0.68277
Cable TV	0.25226	0.24307	0.02264	0.01496	-0.00919	0.02714	-0.33877	0.73479	Not significant	8.97525	6.15672
Internet	0.25654	0.23742	0.02204	0.01471	-0.01912	0.02650	-0.72146	0.47063	Not significant	8.59071	6.19612
Landline	0.55097	0.43550	0.02409	0.01788	-0.11547	0.03000	-3.84876	0.00012	Significant	4.37245	4.10584
Household members	4.69431	4.20394	0.09860	0.05806	-0.49037	0.11443	-4.28545	0.00002	Significant	2.10043	1.38113

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.16 Testing of means differences, Michoacán

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.69184	0.58941	0.02907	0.02259	-0.10244	0.03682	-2.78225	0.00540	Significant	4.20189	3.83317
Electricity	0.99611	0.99125	0.00195	0.00447	-0.00486	0.00488	-0.99558	0.31946	Not significant	0.19568	0.45122
Earth floor	0.03178	0.06370	0.00622	0.00970	0.03193	0.01153	2.76954	0.00561	Significant	19.57862	15.23393
Van	0.27570	0.26041	0.02248	0.01429	-0.01529	0.02664	-0.57382	0.56609	Not significant	8.15363	5.48887
Car	0.27863	0.20882	0.03132	0.01708	-0.06981	0.03567	-1.95700	0.05035	Not significant	11.24024	8.17750
PC/laptop	0.27881	0.23842	0.03071	0.01538	-0.04039	0.03435	-1.17598	0.23960	Not significant	11.01445	6.45211
Stove	0.93056	0.88735	0.01437	0.01683	-0.04321	0.02213	-1.95261	0.05087	Not significant	1.54412	1.89651
Cable TV	0.41575	0.35600	0.02930	0.01972	-0.05974	0.03531	-1.69170	0.09070	Not significant	7.04651	5.53926
Internet	0.20947	0.18610	0.02930	0.01554	-0.02336	0.03317	-0.70443	0.48117	Not significant	13.98773	8.35150
Landline	0.38814	0.31889	0.03134	0.01969	-0.06925	0.03701	-1.87132	0.06130	Not significant	8.07314	6.17432
Household members	4.60320	4.11601	0.12063	0.06443	-0.48720	0.13676	-3.56251	0.00037	Significant	2.62054	1.56533

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.17 Testing of means differences, Morelos

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.66485	0.67090	0.02364	0.01951	0.00604	0.03065	0.19719	0.84368	Not significant	3.55556	2.90758
Electricity	0.98982	0.99605	0.00354	0.00207	0.00623	0.00410	1.51868	0.12884	Not significant	0.35762	0.20827
Earth floor	0.02364	0.04758	0.00457	0.00747	0.02394	0.00876	2.73298	0.00628	Significant	19.34542	15.70403
Van	0.16490	0.13313	0.01136	0.01106	-0.03177	0.01585	-2.00416	0.04505	Significant	6.88913	8.30481
Car	0.26501	0.27683	0.01629	0.01456	0.01183	0.02185	0.54130	0.58830	Not significant	6.14841	5.25923
PC/laptop	0.30661	0.30414	0.02349	0.01523	-0.00247	0.02800	-0.08811	0.92979	Not significant	7.66244	5.00639
Stove	0.93491	0.94431	0.00826	0.00901	0.00940	0.01223	0.76886	0.44198	Not significant	0.88373	0.95445
Cable TV	0.37661	0.29653	0.02701	0.01594	-0.08008	0.03137	-2.55317	0.01067	Significant	7.17297	5.37535
Internet	0.25969	0.27185	0.02196	0.01473	0.01216	0.02644	0.45979	0.64567	Not significant	8.45583	5.41786
Landline	0.51443	0.47457	0.02548	0.01934	-0.03986	0.03199	-1.24631	0.21265	Not significant	4.95265	4.07469
Household members	4.45650	3.84754	0.10523	0.06475	-0.60896	0.12356	-4.92861	0.00000	Significant	2.36136	1.68277

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.18 Testing of means differences, Nayarit

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.54769	0.53870	0.03562	0.02141	-0.00899	0.04156	-0.21642	0.82866	Not significant	6.50306	3.97466
Electricity	0.99280	0.97478	0.00276	0.01073	-0.01801	0.01108	-1.62516	0.10413	Not significant	0.27842	1.10122
Earth floor	0.01752	0.02237	0.00404	0.00531	0.00485	0.00667	0.72742	0.46697	Not significant	23.06111	23.73354
Van	0.34383	0.30860	0.01914	0.01369	-0.03523	0.02354	-1.49687	0.13443	Not significant	5.56718	4.43761
Car	0.24219	0.18601	0.02105	0.01193	-0.05617	0.02419	-2.32197	0.02023	Significant	8.69032	6.41279
PC/laptop	0.30115	0.33779	0.02597	0.01415	0.03664	0.02958	1.23870	0.21546	Not significant	8.62503	4.18789
Stove	0.95591	0.90336	0.01240	0.01717	-0.05256	0.02118	-2.48193	0.01307	Significant	1.29710	1.90019
Cable TV	0.44089	0.36498	0.02940	0.01766	-0.07591	0.03430	-2.21291	0.02690	Significant	6.66931	4.83943
Internet	0.23816	0.26052	0.02512	0.01344	0.02236	0.02849	0.78493	0.43249	Not significant	10.54733	5.15781
Landline	0.42392	0.41100	0.02964	0.01761	-0.01291	0.03447	-0.37463	0.70794	Not significant	6.99116	4.28430
Household members	4.14937	3.86382	0.06080	0.06806	-0.28556	0.09126	-3.12911	0.00175	Significant	1.46519	1.76142

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.19 Testing of means differences, Nuevo León

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.17760	0.18664	0.03049	0.01378	0.00904	0.03346	0.27027	0.78695	Not significant	17.16723	7.38185
Electricity	0.99575	0.99934	0.00236	0.00066	0.00359	0.00245	1.46434	0.14310	Not significant	0.23737	0.06583
Earth floor	0.00980	0.00765	0.00384	0.00282	-0.00216	0.00477	-0.45256	0.65087	Not significant	39.17053	36.91300
Van	0.22195	0.31242	0.01869	0.01391	0.09046	0.02330	3.88265	0.00010	Significant	8.42235	4.45132
Car	0.36957	0.36761	0.02963	0.01785	-0.00195	0.03459	-0.05645	0.95498	Not significant	8.01732	4.85582
PC/laptop	0.42428	0.45114	0.03251	0.01776	0.02686	0.03704	0.72510	0.46839	Not significant	7.66205	3.93567
Stove	0.95804	0.97896	0.01182	0.00513	0.02092	0.01288	1.62382	0.10441	Not significant	1.23358	0.52390
Cable TV	0.35132	0.39182	0.02939	0.01812	0.04050	0.03453	1.17298	0.24080	Not significant	8.36440	4.62568
Internet	0.35231	0.40904	0.03592	0.01878	0.05673	0.04053	1.39947	0.16167	Not significant	10.19654	4.59024
Landline	0.56902	0.59910	0.03559	0.01934	0.03008	0.04051	0.74244	0.45782	Not significant	6.25495	3.22851
Household members	4.43342	3.78861	0.08803	0.04677	-0.64480	0.09969	-6.46829	0.00000	Significant	1.98567	1.23454

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.20 Testing of means differences, Oaxaca

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.53523	0.41686	0.03454	0.02477	-0.11837	0.04250	-2.78499	0.00535	Significant	6.45338	5.94164
Electricity	0.98043	0.97915	0.00482	0.01002	-0.00128	0.01112	-0.11543	0.90810	Not significant	0.49169	1.02303
Earth floor	0.09679	0.08407	0.01221	0.01268	-0.01272	0.01760	-0.72263	0.46991	Not significant	12.61175	15.08183
Van	0.15545	0.14470	0.01608	0.01072	-0.01076	0.01933	-0.55651	0.57787	Not significant	10.34599	7.40733
Car	0.12321	0.13503	0.01680	0.01186	0.01182	0.02056	0.57502	0.56528	Not significant	13.63374	8.77984
PC/laptop	0.16150	0.19083	0.01775	0.01328	0.02934	0.02217	1.32323	0.18576	Not significant	10.99392	6.95927
Stove	0.69868	0.73930	0.02943	0.02444	0.04061	0.03825	1.06186	0.28830	Not significant	4.21156	3.30525
Cable TV	0.25224	0.22770	0.02488	0.01775	-0.02454	0.03056	-0.80278	0.42210	Not significant	9.86468	7.79542
Internet	0.10169	0.12480	0.01881	0.01157	0.02311	0.02209	1.04656	0.29530	Not significant	18.49933	9.27067
Landline	0.23921	0.25329	0.02673	0.01936	0.01409	0.03301	0.42684	0.66950	Not significant	11.17370	7.64489
Household members	4.82434	4.03268	0.13274	0.07388	-0.79166	0.15191	-5.21135	0.00000	Significant	2.75137	1.83205

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.21 Testing of means differences, Puebla

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.62136	0.54495	0.02841	0.01781	-0.07641	0.03353	-2.27868	0.02269	Significant	4.57281	3.26791
Electricity	0.99282	0.99465	0.00353	0.00223	0.00183	0.00417	0.43930	0.66044	Not significant	0.35512	0.22456
Earth floor	0.04630	0.04983	0.01074	0.00805	0.00353	0.01342	0.26289	0.79264	Not significant	23.18685	16.14632
Van	0.16143	0.14691	0.01481	0.01229	-0.01452	0.01925	-0.75437	0.45063	Not significant	9.17507	8.36542
Car	0.25169	0.19370	0.02845	0.01464	-0.05798	0.03199	-1.81236	0.06993	Not significant	11.30202	7.56007
PC/laptop	0.27545	0.19843	0.02544	0.01194	-0.07702	0.02810	-2.74093	0.00613	Significant	9.23580	6.01574
Stove	0.86959	0.87739	0.02132	0.01439	0.00779	0.02572	0.30302	0.76187	Not significant	2.45133	1.64009
Cable TV	0.26021	0.17978	0.02485	0.01337	-0.08043	0.02822	-2.85027	0.00437	Significant	9.54923	7.43808
Internet	0.22084	0.15774	0.02375	0.01150	-0.06310	0.02638	-2.39176	0.01677	Significant	10.75224	7.29039
Landline	0.42723	0.33349	0.02438	0.01778	-0.09374	0.03018	-3.10632	0.00189	Significant	5.70685	5.33216
Household members	4.89819	4.21240	0.12832	0.07065	-0.68579	0.14648	-4.68170	0.00000	Significant	2.61972	1.67718

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.22 Testing of means differences, Querétaro

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.72742	0.69717	0.02735	0.01810	-0.03025	0.03280	-0.92211	0.35647	Not significant	3.76029	2.59684
Electricity	0.98859	0.98928	0.00492	0.00375	0.00069	0.00619	0.11142	0.91128	Not significant	0.49812	0.37929
Earth floor	0.00427	0.02619	0.00182	0.00595	0.02191	0.00622	3.52055	0.00043	Significant	42.57759	22.73284
Van	0.26732	0.23032	0.01887	0.01661	-0.03700	0.02514	-1.47185	0.14106	Not significant	7.05854	7.21360
Car	0.40052	0.31589	0.02683	0.01390	-0.08463	0.03022	-2.80069	0.00510	Significant	6.69937	4.39961
PC/laptop	0.42723	0.31878	0.03223	0.01789	-0.10846	0.03686	-2.94207	0.00326	Significant	7.54387	5.61319
Stove	0.96405	0.91563	0.00709	0.00750	-0.04841	0.01032	-4.69022	0.00000	Significant	0.73573	0.81907
Cable TV	0.49108	0.41610	0.02531	0.01729	-0.07498	0.03065	-2.44637	0.01443	Significant	5.15312	4.15602
Internet	0.32631	0.27817	0.03206	0.01673	-0.04814	0.03616	-1.33117	0.18313	Not significant	9.82508	6.01453
Landline	0.46619	0.37162	0.03190	0.01709	-0.09457	0.03619	-2.61303	0.00897	Significant	6.84322	4.59807
Household members	4.50295	3.91576	0.09213	0.06033	-0.58719	0.11012	-5.33215	0.00000	Significant	2.04589	1.54076

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.23 Testing of means differences, Quintana Roo

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.79468	0.75892	0.02355	0.01518	-0.03576	0.02802	-1.27625	0.20187	Not significant	2.96326	2.00037
Electricity	0.99463	0.99351	0.00240	0.00231	-0.00113	0.00333	-0.33826	0.73517	Not significant	0.24147	0.23226
Earth floor	0.03474	0.01907	0.01877	0.00525	-0.01567	0.01949	-0.80382	0.42150	Not significant	54.03755	27.50985
Van	0.12171	0.13271	0.01649	0.01025	0.01100	0.01941	0.56647	0.57107	Not significant	13.54789	7.72306
Car	0.26693	0.26170	0.02401	0.01294	-0.00524	0.02727	-0.19201	0.84774	Not significant	8.99537	4.94274
PC/laptop	0.32319	0.34582	0.02917	0.01409	0.02263	0.03239	0.69877	0.48470	Not significant	9.02427	4.07368
Stove	0.86219	0.83972	0.02745	0.01492	-0.02246	0.03124	-0.71891	0.47220	Not significant	3.18433	1.77628
Cable TV	0.58550	0.55589	0.02839	0.01549	-0.02960	0.03234	-0.91530	0.36004	Not significant	4.84912	2.78669
Internet	0.28009	0.33132	0.02948	0.01426	0.05123	0.03274	1.56457	0.11768	Not significant	10.52406	4.30305
Landline	0.33031	0.30194	0.02995	0.01299	-0.02837	0.03264	-0.86911	0.38479	Not significant	9.06616	4.30207
Household members	4.30854	3.70218	0.10876	0.05030	-0.60636	0.11983	-5.06008	0.00000	Significant	2.52434	1.35878

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.24 Testing of means differences, San Luis Potosí

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.51500	0.58380	0.03633	0.02107	0.06880	0.04200	1.63800	0.10142	Not significant	7.05486	3.60948
Electricity	0.96932	0.98118	0.01072	0.00516	0.01186	0.01190	0.99727	0.31863	Not significant	1.10602	0.52555
Earth floor	0.03947	0.04060	0.00718	0.00763	0.00113	0.01048	0.10763	0.91429	Not significant	18.18804	18.79226
Van	0.26047	0.22757	0.01718	0.01380	-0.03290	0.02204	-1.49271	0.13551	Not significant	6.59736	6.06361
Car	0.24838	0.25642	0.02189	0.01287	0.00804	0.02539	0.31646	0.75166	Not significant	8.81251	5.01931
PC/laptop	0.23953	0.27879	0.02368	0.01277	0.03926	0.02690	1.45924	0.14450	Not significant	9.88668	4.58011
Stove	0.82879	0.84689	0.01691	0.02299	0.01810	0.02853	0.63436	0.52585	Not significant	2.03997	2.71422
Cable TV	0.28760	0.33601	0.02757	0.01901	0.04841	0.03349	1.44537	0.14835	Not significant	9.58651	5.65792
Internet	0.16402	0.21480	0.02132	0.01136	0.05078	0.02415	2.10237	0.03552	Significant	12.99558	5.28810
Landline	0.32691	0.37065	0.02321	0.01585	0.04374	0.02811	1.55606	0.11969	Not significant	7.10081	4.27591
Household members	4.74016	4.07292	0.09816	0.06372	-0.66724	0.11703	-5.70147	0.00000	Significant	2.07088	1.56439

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.25 Testing of means differences, Sinaloa

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.42200	0.37150	0.04626	0.02252	-0.05050	0.05145	-0.98150	0.32635	Not significant	10.96203	6.06247
Electricity	0.99394	0.99626	0.00276	0.00154	0.00231	0.00316	0.73209	0.46411	Not significant	0.27724	0.15480
Earth floor	0.01843	0.03081	0.00369	0.00687	0.01238	0.00780	1.58716	0.11248	Not significant	20.01737	22.31560
Van	0.33332	0.30633	0.01435	0.01544	-0.02699	0.02108	-1.28028	0.20045	Not significant	4.30588	5.03926
Car	0.42140	0.34582	0.02753	0.01436	-0.07558	0.03105	-2.43402	0.01493	Significant	6.53320	4.15344
PC/laptop	0.34624	0.34090	0.02665	0.01391	-0.00535	0.03007	-0.17783	0.85885	Not significant	7.69770	4.08110
Stove	0.96746	0.94900	0.00612	0.01160	-0.01846	0.01312	-1.40735	0.15932	Not significant	0.63263	1.22239
Cable TV	0.48114	0.40652	0.03344	0.02101	-0.07462	0.03949	-1.88953	0.05882	Not significant	6.94987	5.16709
Internet	0.27518	0.26027	0.02489	0.01186	-0.01491	0.02757	-0.54100	0.58851	Not significant	9.04333	4.55622
Landline	0.41061	0.35335	0.02860	0.01539	-0.05726	0.03248	-1.76314	0.07788	Not significant	6.96420	4.35638
Household members	4.60762	3.89078	0.09344	0.04632	-0.71684	0.10429	-6.87363	0.00000	Significant	2.02791	1.19046

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.26 Testing of means differences, Sonora

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.42401	0.35514	0.04014	0.01756	-0.06887	0.04381	-1.57194	0.11596	Not significant	9.46662	4.94484
Electricity	0.98514	0.99471	0.00490	0.00170	0.00956	0.00518	1.84401	0.06518	Not significant	0.49705	0.17133
Earth floor	0.02704	0.02162	0.00462	0.00382	-0.00542	0.00600	-0.90379	0.36611	Not significant	17.09087	17.66967
Van	0.30882	0.35282	0.01780	0.01469	0.04400	0.02308	1.90659	0.05657	Not significant	5.76488	4.16246
Car	0.50450	0.39631	0.02249	0.01397	-0.10819	0.02647	-4.08701	0.00004	Significant	4.45727	3.52447
PC/laptop	0.43096	0.43139	0.02428	0.01273	0.00043	0.02742	0.01581	0.98738	Not significant	5.63483	2.95032
Stove	0.96291	0.95597	0.01078	0.00773	-0.00694	0.01326	-0.52330	0.60077	Not significant	1.11902	0.80820
Cable TV	0.48994	0.46909	0.02986	0.01793	-0.02085	0.03483	-0.59851	0.54950	Not significant	6.09505	3.82159
Internet	0.34312	0.35178	0.02276	0.01202	0.00866	0.02574	0.33634	0.73661	Not significant	6.63429	3.41637
Landline	0.44444	0.41248	0.02086	0.01605	-0.03196	0.02632	-1.21441	0.22459	Not significant	4.69396	3.89026
Household members	4.48404	3.66147	0.10086	0.04651	-0.82257	0.11106	-7.40633	0.00000	Significant	2.24922	1.27026

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.27 Testing of means differences, Tabasco

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.33593	0.33897	0.02636	0.01691	0.00305	0.03132	0.09723	0.92254	Not significant	7.84689	4.98858
Electricity	0.99823	0.99307	0.00107	0.00250	-0.00516	0.00272	-1.89418	0.05820	Not significant	0.10686	0.25218
Earth floor	0.03087	0.03749	0.01065	0.00733	0.00662	0.01292	0.51214	0.60855	Not significant	34.48170	19.54486
Van	0.13822	0.11913	0.01525	0.01135	-0.01909	0.01901	-1.00438	0.31520	Not significant	11.03299	9.52544
Car	0.19986	0.17054	0.02149	0.01093	-0.02932	0.02411	-1.21599	0.22399	Not significant	10.75263	6.41179
PC/laptop	0.23505	0.22983	0.01983	0.01378	-0.00522	0.02415	-0.21619	0.82884	Not significant	8.43676	5.99672
Stove	0.88897	0.83825	0.01225	0.01826	-0.05072	0.02199	-2.30672	0.02107	Significant	1.37794	2.17816
Cable TV	0.38572	0.38631	0.02454	0.02242	0.00059	0.03324	0.01765	0.98592	Not significant	6.36186	5.80469
Internet	0.15581	0.15524	0.02112	0.01187	-0.00057	0.02422	-0.02334	0.98138	Not significant	13.55309	7.64525
Landline	0.26004	0.19762	0.02460	0.01484	-0.06242	0.02873	-2.17253	0.02982	Significant	9.46117	7.50869
Household members	4.46526	3.91813	0.08460	0.04966	-0.54713	0.09809	-5.57761	0.00000	Significant	1.89456	1.26739

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.28 Testing of means differences, Tamaulipas

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.26029	0.27469	0.03303	0.01905	0.01440	0.03813	0.37758	0.70574	Not significant	12.69017	6.93661
Electricity	0.99638	0.99868	0.00150	0.00094	0.00230	0.00177	1.29836	0.19416	Not significant	0.15026	0.09437
Earth floor	0.01623	0.00617	0.00417	0.00192	-0.01006	0.00459	-2.19107	0.02845	Significant	25.70108	31.11403
Van	0.33432	0.28984	0.01724	0.01454	-0.04448	0.02255	-1.97220	0.04859	Significant	5.15583	5.01725
Car	0.37351	0.31027	0.02533	0.01317	-0.06323	0.02855	-2.21476	0.02678	Significant	6.78154	4.24601
PC/laptop	0.32082	0.37081	0.02031	0.01376	0.04999	0.02453	2.03755	0.04160	Significant	6.32994	3.71215
Stove	0.95284	0.96056	0.00782	0.00603	0.00772	0.00988	0.78130	0.43463	Not significant	0.82075	0.62786
Cable TV	0.39711	0.45248	0.02056	0.01629	0.05537	0.02623	2.11063	0.03480	Significant	5.17738	3.60052
Internet	0.26324	0.34522	0.01988	0.01343	0.08199	0.02399	3.41719	0.00063	Significant	7.55160	3.89116
Landline	0.41070	0.41930	0.02118	0.01411	0.00860	0.02544	0.33783	0.73549	Not significant	5.15624	3.36412
Household members	4.45011	3.71467	0.07318	0.04754	-0.73544	0.08727	-8.42734	0.00000	Significant	1.64454	1.27975

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.29 Testing of means differences, Tlaxcala

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.76837	0.67867	0.01974	0.01649	-0.08971	0.02573	-3.48693	0.00049	Significant	2.56943	2.43038
Electricity	0.99662	0.99765	0.00136	0.00110	0.00103	0.00175	0.59026	0.55501	Not significant	0.13649	0.11058
Earth floor	0.00880	0.02012	0.00265	0.00416	0.01132	0.00493	2.29567	0.02169	Significant	30.08636	20.67020
Van	0.18702	0.16505	0.01967	0.01131	-0.02196	0.02269	-0.96805	0.33302	Not significant	10.51642	6.85428
Car	0.29600	0.24726	0.02142	0.01263	-0.04874	0.02487	-1.95991	0.05001	Not significant	7.23778	5.10764
PC/laptop	0.28278	0.21686	0.02368	0.01413	-0.06592	0.02757	-2.39096	0.01680	Significant	8.37244	6.51568
Stove	0.95913	0.93603	0.00705	0.00919	-0.02310	0.01158	-1.99514	0.04603	Significant	0.73465	0.98167
Cable TV	0.37958	0.27145	0.03223	0.01596	-0.10813	0.03597	-3.00622	0.00265	Significant	8.49181	5.88078
Internet	0.19977	0.15427	0.02709	0.01154	-0.04550	0.02944	-1.54545	0.12224	Not significant	13.55874	7.48193
Landline	0.38478	0.29116	0.02887	0.01362	-0.09362	0.03192	-2.93270	0.00336	Significant	7.50286	4.67825
Household members	4.76908	4.35400	0.10665	0.05687	-0.41508	0.12086	-3.43422	0.00059	Significant	2.23623	1.30622

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.30 Testing of means differences, Veracruz

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.46580	0.41631	0.03472	0.01990	-0.04949	0.04002	-1.23671	0.21620	Not significant	7.45409	4.77887
Electricity	0.98937	0.98925	0.00483	0.00367	-0.00012	0.00606	-0.01964	0.98433	Not significant	0.48781	0.37118
Earth floor	0.09317	0.08580	0.01393	0.01291	-0.00737	0.01899	-0.38803	0.69800	Not significant	14.94934	15.04564
Van	0.18896	0.16717	0.01961	0.01295	-0.02179	0.02350	-0.92749	0.35367	Not significant	10.37674	7.74708
Car	0.18498	0.17732	0.01732	0.01359	-0.00766	0.02201	-0.34811	0.72776	Not significant	9.36076	7.66527
PC/laptop	0.25131	0.23554	0.02000	0.01271	-0.01577	0.02370	-0.66545	0.50576	Not significant	7.95954	5.39746
Stove	0.80264	0.86038	0.01713	0.01888	0.05774	0.02549	2.26517	0.02350	Significant	2.13378	2.19437
Cable TV	0.28884	0.29637	0.02062	0.01795	0.00753	0.02733	0.27547	0.78295	Not significant	7.13784	6.05513
Internet	0.18351	0.19097	0.01875	0.01382	0.00746	0.02329	0.32019	0.74882	Not significant	10.21549	7.23643
Landline	0.32315	0.30342	0.02445	0.01584	-0.01973	0.02913	-0.67724	0.49825	Not significant	7.56557	5.22194
Household members	4.48783	3.67838	0.10946	0.06093	-0.80945	0.12528	-6.46109	0.00000	Significant	2.43912	1.65651

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.31 Testing of means differences, Yucatán

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.73820	0.65176	0.02147	0.01817	-0.08645	0.02813	-3.07298	0.00212	Significant	2.90885	2.78827
Electricity	0.99498	0.98360	0.00176	0.00361	-0.01138	0.00402	-2.83391	0.00460	Significant	0.17738	0.36688
Earth floor	0.00745	0.01538	0.00248	0.00373	0.00794	0.00448	1.77299	0.07623	Not significant	33.26170	24.24776
Van	0.11636	0.12320	0.01680	0.00985	0.00684	0.01947	0.35128	0.72538	Not significant	14.43525	7.99192
Car	0.24869	0.26333	0.02340	0.01411	0.01464	0.02732	0.53565	0.59220	Not significant	9.40862	5.35768
PC/laptop	0.26515	0.27825	0.02360	0.01325	0.01310	0.02706	0.48404	0.62836	Not significant	8.90047	4.76159
Stove	0.76596	0.73402	0.01987	0.02095	-0.03194	0.02887	-1.10644	0.26854	Not significant	2.59356	2.85360
Cable TV	0.45177	0.43555	0.02998	0.01744	-0.01622	0.03468	-0.46760	0.64007	Not significant	6.63534	4.00460
Internet	0.20286	0.24319	0.02249	0.01222	0.04032	0.02560	1.57501	0.11525	Not significant	11.08853	5.02579
Landline	0.31253	0.28163	0.02525	0.01237	-0.03091	0.02812	-1.09905	0.27175	Not significant	8.08032	4.39169
Household members	4.62440	4.01480	0.10058	0.06495	-0.60960	0.11973	-5.09132	0.00000	Significant	2.17503	1.61788

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.

A2.32 Testing of means differences, Zacatecas

Variable	Medium		Standard error		Change in incidence rate	Standard error of difference	Z Statistics	Significance level of difference (two-tailed)	Conclusion on the significance of the difference[1]	Coefficient of variation ENSANUT-EMOVI[2]	Coefficient of variation MCA[2]
	ENSANUT-EMOVI	MCA	ENSANUT-EMOVI	MCA	$P_{MCA}-P_{ENSANUT/EMOVI}$						
Water tank	0.77650	0.77615	0.02236	0.01911	-0.00035	0.02941	-0.01200	0.99042	Not significant	2.87912	2.46231
Electricity	0.99517	0.99210	0.00195	0.00193	-0.00308	0.00274	-1.12103	0.26228	Not significant	0.19609	0.19439
Earth floor	0.01011	0.00873	0.00271	0.00223	-0.00138	0.00351	-0.39433	0.69333	Not significant	26.78483	25.50815
Van	0.40939	0.40027	0.01541	0.01551	-0.00912	0.02186	-0.41691	0.67674	Not significant	3.76445	3.87459
Car	0.24191	0.25872	0.02723	0.01495	0.01681	0.03107	0.54120	0.58837	Not significant	11.25805	5.77887
PC/laptop	0.29143	0.28495	0.02669	0.01840	-0.00649	0.03242	-0.20010	0.84140	Not significant	9.15756	6.45745
Stove	0.98223	0.95616	0.00447	0.00727	-0.02607	0.00853	-3.05623	0.00224	Significant	0.45497	0.75999
Cable TV	0.38199	0.36001	0.02481	0.02046	-0.02198	0.03216	-0.68356	0.49425	Not significant	6.49496	5.68266
Internet	0.17929	0.20467	0.02588	0.01512	0.02538	0.02998	0.84668	0.39717	Not significant	14.43644	7.38899
Landline	0.44394	0.39359	0.02735	0.02173	-0.05036	0.03493	-1.44160	0.14941	Not significant	6.16059	5.52125
Household members	4.52451	3.98556	0.08732	0.05340	-0.53895	0.10236	-5.26540	0.00000	Significant	1.93003	1.33983

[1] Statistical significance at 0.05.

[2] The coefficient of variation is multiplied by 100.