

ONLINE APPENDIX

**CONSUMPTION SMOOTHING AND FREQUENCY OF BENEFIT PAYMENTS OF CASH TRANSFER
PROGRAMS**

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Table A: Effects of the Monthly (Valladolid) and Bimonthly (Motul) Programs on Food Availability, Health Care Use, and Purchase of Durable Goods

Variables	DID Means			DID Regressions			DID Propensity Score Matching		
	W3-W1	W3-W2	W2-W1	W3-W1	W3-W2	W2-W1	W3-W1	W3-W2	W2-W1
Food Availability									
<i>Household level (last 3 mo.)</i>									
Often run out of food always-never (1-4)	0.103 ** (0.033)	0.001 (0.027)	0.084 ** (0.032)	0.101 * (0.054)	0.001 (0.044)	0.084 (0.052)	0.119 ** (0.046)	-0.003 (0.039)	0.090 ** (0.044)
Often hungry because cannot afford food always-never (1-4)	0.100 ** (0.024)	-0.001 (0.016)	0.072 ** (0.023)	0.095 * (0.040)	-0.001 (0.026)	0.072 (0.038)	0.105 ** (0.034)	-0.008 (0.021)	0.079 ** (0.033)
Someone in household often does not eat for 1 day always-never (1-4)	0.069 ** (0.018)	-0.026 (0.013)	0.078 ** (0.017)	0.068 * (0.031)	-0.026 (0.022)	0.077 ** (0.028)	0.069 ** (0.025)	-0.034 (0.018)	0.085 ** (0.025)
Received food from charity always-never (1-4)	0.046 ** (0.013)	-0.023 (0.010)	0.074 ** (0.013)	0.046 * (0.021)	-0.023 (0.017)	0.073 ** (0.020)	0.046 ** (0.020)	-0.023 (0.015)	0.072 ** (0.018)
<i>Respondent level (last 3 mo.)</i>									
How often you eat cereal never/at least once a month/once a week-daily (0-1)	0.052 ** (0.009)	0.033 ** (0.007)	0.005 (0.009)	0.051 ** (0.013)	0.033 ** (0.010)	0.005 (0.014)	0.051 ** (0.013)	0.034 ** (0.009)	0.005 (0.013)
Health Care Utilization									
<i>Respondent level (last 3 mo.)</i>									
Visited a doctor No - Yes (0-1)	0.097 ** (0.023)	0.031 (0.021)	0.073 ** (0.020)	0.094 ** (0.034)	0.031 (0.032)	0.074 ** (0.030)	0.100 ** (0.032)	0.032 (0.032)	0.070 ** (0.029)
Number of doctor visits	0.273 ** (0.105)	0.049 (0.080)	0.301 ** (0.081)	0.269 * (0.154)	0.053 (0.117)	0.303 ** (0.118)	0.274 ** (0.149)	0.055 (0.116)	0.304 ** (0.115)
Dealt with health problem No - Yes (0-1)	0.094 ** (0.016)	0.065 ** (0.013)	0.030 ** (0.014)	0.093 ** (0.024)	0.065 ** (0.019)	0.030 (0.020)	0.090 ** (0.023)	0.060 ** (0.019)	0.027 * (0.019)
Durable Goods									
<i>Household level</i>									
Owning Refrigerator No - Yes (0-1)	0.008 (0.016)	-0.016 (0.014)	0.032 * (0.014)	0.004 (0.026)	-0.014 (0.024)	0.027 (0.024)	0.011 (0.022)	-0.013 (0.021)	0.031 (0.020)
Owning Telephone No - Yes (0-1)	0.003 (0.011)	-0.020 * (0.009)	0.008 (0.010)	0.004 (0.018)	-0.021 (0.015)	0.008 (0.018)	0.001 (0.016)	-0.020 (0.014)	0.006 (0.014)
Owning Cellphone No - Yes (0-1)	-0.150 ** (0.017)	-0.098 ** (0.016)	-0.053 ** (0.015)	-0.153 ** (0.028)	-0.095 ** (0.027)	-0.059 * (0.025)	-0.153 ** (0.025)	-0.096 ** (0.024)	-0.057 ** (0.022)
Owning Bicycle No - Yes (0-1)	-0.067 ** (0.015)	-0.044 ** (0.015)	-0.016 (0.013)	-0.062 ** (0.024)	-0.043 (0.023)	-0.014 (0.021)	-0.074 ** (0.022)	-0.043 ** (0.020)	-0.015 (0.019)

Notes: The survey question for “dealt with health problem” is: “In the last three months, was there at least one instance when you had a serious health problem but did not go to the doctor? yes-no (1-0)”. This variable was inverted to Dealt with health problem: 0 – No, 1 – Yes. Control variables not shown for the DID regressions and DID propensity-score matching. Control variables are: age, age squared, gender (male=1, female=0), marital status (couple=1, single=0), years of education, lives alone (yes=1, no=0), and household size. For the DID propensity-score matching, we impose common support across groups and use Kernel matching to estimate the ITT. Standard errors for the DID propensity-score matching are obtained with the bootstrap method with 1,000 replications. Standard errors in parentheses. ** indicates significance at 5% and * indicates significance at 10% when using the Holm-Bonferroni correction for multiple-hypothesis testing.

Analysis of Common Trends: Statistics of Motul, Valladolid and Two Comparison Towns.

Figure A: Multidimensional Poverty Measures

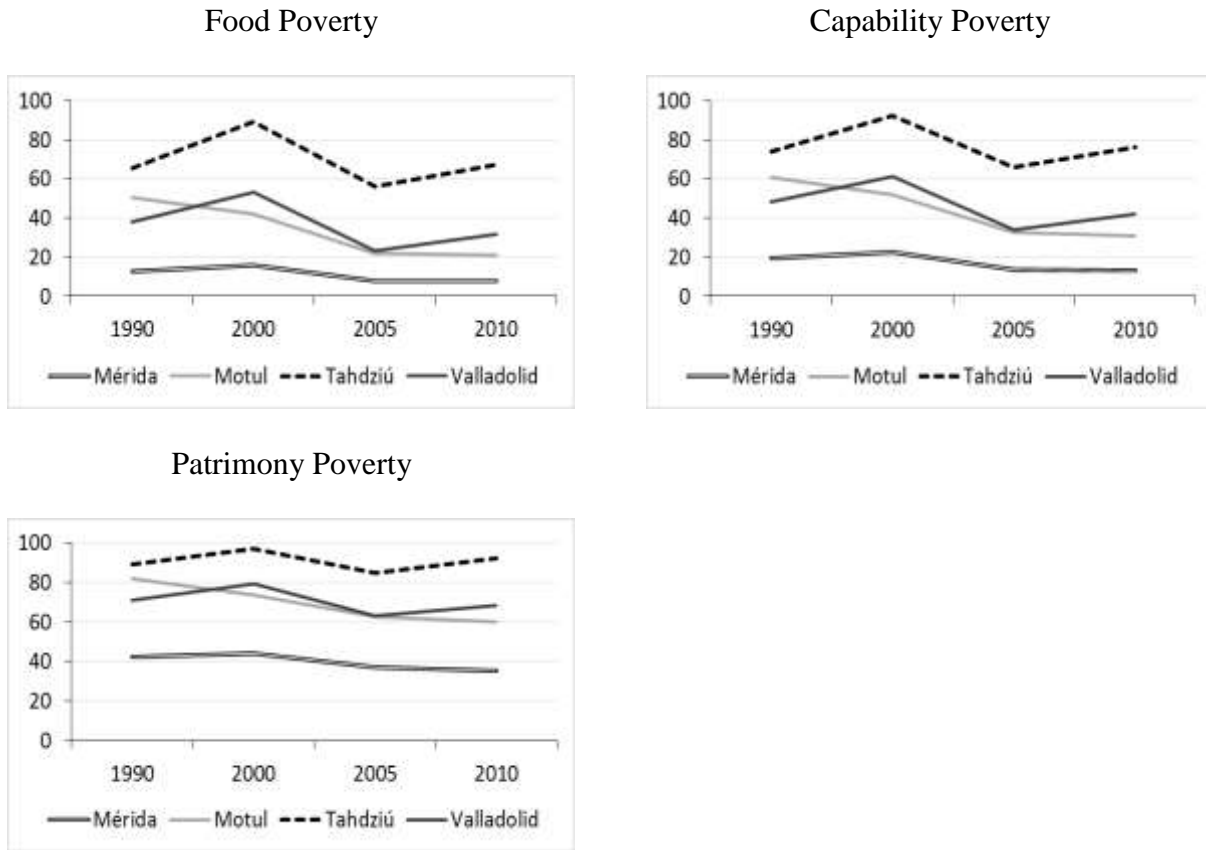
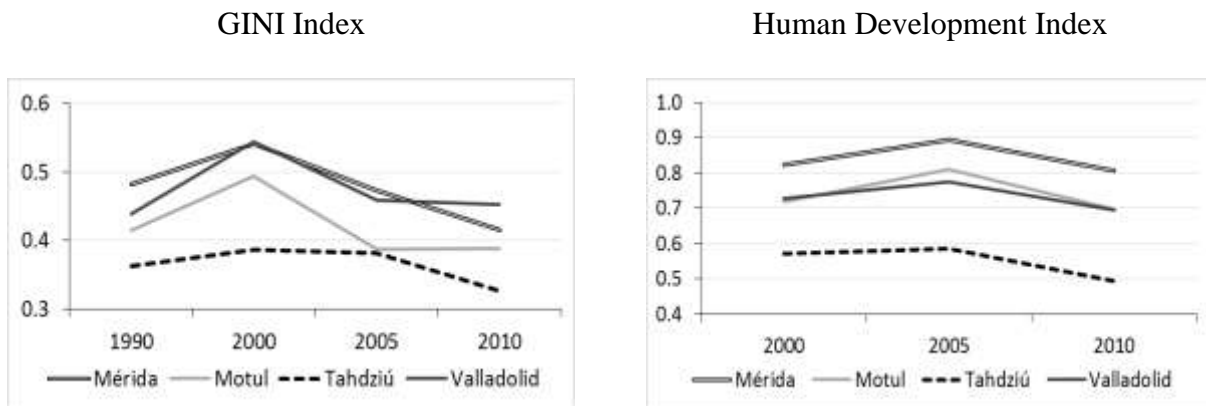
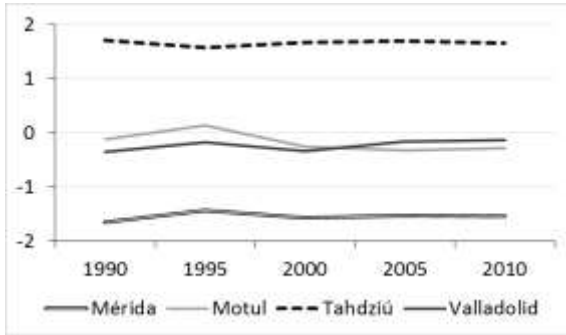


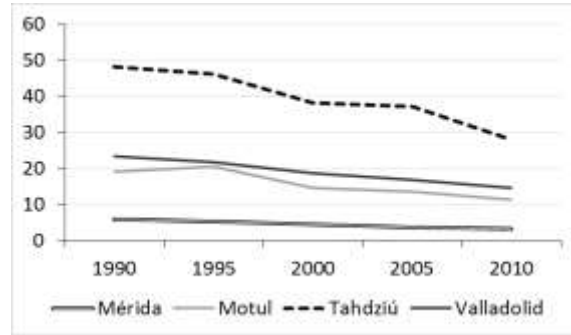
Figure B: Other Indicators



Marginalization Index



Illiteracy Rate



Notes: Food poverty is defined as the non affordability of a basic food basket, even if using the entire household's available income for that purpose. *Capability poverty* is defined as the insufficiency of available income to afford the food basket and to make necessary expenses in health and education, even if assigning the household's total income just for these purposes. *Patrimony poverty* is defined as insufficiency of income available to afford the food basket, as well as to make necessary expenses in health, clothing, housing, transportation, and education, even if the entire household's income were used exclusively for the acquisition of these goods and services. The Gini coefficient is an inequality measure intended to represent the income distribution of a country's residents. The Human Development Index (HDI) is a measure of well-being in a country and takes into account life expectancy, education, and income per capita indicators. The marginalization index measures social deprivations of population. Illiteracy rate is the proportion of individuals 15 years old and above who are unable to read and write a message. *Sources:* CONEVAL, World Bank, UNDP, CONAPO, and INEGIa.

Table B – OLS Regressions to Test for Common Trends on Food Expenditures using Data from the Mexican National Consumer and Expenditure (ENIGH) 2004-2010 for Households in the Monthly (Valladolid) and Bimonthly (Motul) Towns

	Total Food Expenditure (weekly)	Household expenditures in food and beverages at home (weekly)
Monthly	397.800*** (78.650)	254.200*** (69.800)
Interaction Terms		
Monthly * 2004	-223.700* (120.100)	-120.800 (99.230)
Monthly * 2005	39.740 (130.700)	127.900 (104.500)
Monthly * 2006	-199.200 (142.900)	-108.900 (116.100)
Monthly * 2010	-455.700*** (120.100)	-264.800*** (100.500)
Year		
2004	74.980 (88.640)	11.500 (70.480)
2005	40.180 (77.250)	-60.570 (63.750)
2006	35.160 (62.860)	11.630 (65.430)
2010	217.000** (92.000)	101.300 (77.760)
Constant	362.100*** (48.920)	337.700*** (50.160)
No. Observations	271	271
R-squared	0.147	0.131
F (interaction)	1.950	2.220
Prob > F (interaction)	0.122	0.087

Notes: F-test was conducted only for the Interaction of Monthly*2004, Monthly*2005, and Monthly*2006 because the program started in 2008. The reference category is 2008. Consumption expenditures deflated with the Mexican National Consumer Price Index (INEGI) and converted to December 2010 values.

Source: Encuesta Nacional de Ingresos y Gastos de los Hogares [ENIGH] 2004 to 2010 (INEGIb).

REFERENCES

- Consejo Nacional de Evaluación de la Política de Desarrollo Social [CONEVAL]. N.d. “Medición de la Pobreza. Archivo Histórico.” <http://www.coneval.org.mx/Medicion/Paginas/Archivo-historico.aspx>.
- Consejo Nacional de Población [CONAPO]. N.d.. “Índices de Marginación” http://www.conapo.gob.mx/es/CONAPO/Indices_de_Marginacion.
- Instituto Nacional de Estadística y Geografía [INEGIa]. 2000, 2005 2010. “Censos y Conteos de Población y Vivienda”. <http://www.inegi.org.mx/est/contenidos/proyectos/ccpv/default.aspx>
- Instituto Nacional de Estadística y Geografía [INEGIb]. 2004, 2005, 2006, 2008, 2010. “Encuesta Nacional de Ingresos y Gastos de los Hogares [ENIGH]” <http://www.inegi.org.mx/est/contenidos/proyectos/encuestas/hogares/regulares/enigh/default.aspx>
- Instituto Nacional de Estadística y Geografía [INEGI]. N.d.. “Índices de precios al consumidor: índice nacional de precios al consumidor y sus componentes”. <http://www.inegi.org.mx/sistemas/IndicePrecios/Exportacion.aspx?INPtipoExporta=HTML>.
- United Nations Development Programme [UNDP]. 2008 “Índice de Desarrollo Humano Municipal en México 2000-2005” http://www.cinu.org.mx/prensa/especiales/2008/idh/IDH_Municipal_en_Mexico_2000-2005%5B1%5D.pdf
- United Nations Development Programme [UNDP]. 2014 “Índice de Desarrollo Humano Municipal en México”. <http://www.mx.undp.org/content/mexico/es/home/library/poverty/idh-municipal-en-mexico--nueva-metodologia.html>