

APPENDIX

Table A1: Summary Statistics of All the Variables

Variables	Percentage (Standard Errors)
Up-trade or not	Up-trade 26.531 (0.012)
	Otherwise 73.469 (0.012)
Down-trade or not	Down-trade 29.116 (0.012)
	Otherwise 70.884 (0.012)
Change in income	Income increased 34.848 (0.018)
	Income decreased 65.152 (0.018)
Education	Illiterate 28.100 (0.017)
	Less educated (1-8 years of schooling) 48.347 (0.019)
	More educated (9 or more years of schooling) 23.554 (0.016)
Rural	Rural 68.871 (0.017)
	Urban 31.129 (0.012)
Addiction Level	Less addicted (first smoke after one hour of waking up) 38.979 (0.008)
	More addicted (first smoke within one hour of waking up) 61.02 (0.008)

Table A2: Summary Statistics (Mean and Standard Errors) for Full Sample and by Cigarette Price Tier

Variables	All	Low	Medium	High	Premium
Up-trade or not (1 – up-trade, 0 – otherwise)	0.198 (0.009) Obs: 1971	-	-	-	-
Down-trade or not (1 – down-trade, 0 – otherwise)	0.269 (0.011) Obs: 1590	-	-	-	-
Change in Income (range: -22706 – 20436)	-250.287 (0.090) Obs: 4112	-685.925 (0.161) Obs: 1050	-69.088 (0.220) Obs: 802	755.233 (0.330) Obs: 433	536.213 (0.499) Obs: 223
Education (1 - illiterate, 2 - 1-8 years of schooling, 3 - 9 or more years of schooling)	1.915 (0.010) Obs: 4790	1.712 (0.018) Obs: 1161	1.998 (0.022) Obs: 924	2.423 (0.028) Obs: 511	2.700 (0.032) Obs: 261
Age (range: 15-107)	39.710 (0.227) Obs: 4800	39.470 (0.447) Obs: 1162	37.358 (0.493) Obs: 927	32.992 (0.532) Obs: 511	33.091 (0.674) Obs: 263
Urban (0 - rural, 1 - urban)	0.344 (0.007) Obs: 4800	0.202 (0.012) Obs: 1162	0.369 (0.016) Obs: 927	0.665 (0.021) Obs: 511	0.844 (0.022) Obs: 263
Addiction Level (0 - less addicted, 1 – more addicted)	0.610 (0.008) Obs: 3389	0.660 (0.014) Obs: 1110	0.632 (0.016) Obs: 888	0.507 (0.023) Obs: 481	0.419 (0.032) Obs: 246

Table A3: Summary Statistics (Mean and Standard Errors) for Full Sample and by Price Tier Switch

Variables	All	Unchanged	Up-trade	Down-trade
Change in Income (range: -22706 – 20436)	-250.287 (0.090) Obs: 4112	- - 441.450) 0.156 Obs: 1402	1566.281 (0.354) Obs: 349	-845.185 (0.322) Obs: 370
Education (1 - illiterate, 2 - 1-8 years of schooling, 3 - 9 or more years of schooling)	1.915 (0.010) Obs: 4790	1.953 (0.017) Obs: 1577	2.281 (0.033) Obs: 388	2.042 (0.032) Obs: 426
Age (range: 15-107)	39.710 (0.227) Obs: 4800	37.104 (0.361) Obs: 1581	36.236 (0.717) Obs: 390	35.086 (0.663) Obs: 428
Urban (0 - rural, 1 - urban)	0.344 (0.007) Obs: 4800	0.361 (0.012) Obs: 1581	0.546 (0.025) Obs: 390	0.404 (0.024) Obs: 428
Addiction Level (0 - less addicted, 1 – more addicted)	0.610 (0.008) Obs: 3389	0.642 (0.012) Obs: 1513	0.556 (0.026) Obs: 369	0.619 (0.024) Obs: 407

Table A4: Effects of change in price, change in income, change in addiction level along with other demographic variables on probability to up-trade or not

Variables	Dependent variable: Probability to Up-trade			
	Marginal Effects			
	Model 1	Model 2	Model 3	Model 4
Δ in actual self-reported price	0.012*** (0.002)	-	-	-
Δ in actual tax	-	0.017*** (0.001)	-	-
Δ in village-level mean price	-	-	0.007*** (0.003)	-
Δ in predicted price	-	-	-	0.010*** (0.002)
Δ in income	0.003 (0.002)	0.001 (0.002)	0.006*** (0.002)	0.002 (0.002)
Δ in addiction	0.019 (0.018)	0.008 (0.017)	0.002 (0.019)	0.017 (0.019)
Age	0.000 (0.001)	0.001 (0.001)	-0.002* (0.001)	-0.001 (0.001)
Less educated	0.080*** (0.022)	0.077*** (0.022)	0.099*** (0.024)	0.076*** (0.027)
More educated	0.144*** (0.032)	0.098*** (0.030)	0.227*** (0.033)	0.167*** (0.036)
Urban	0.043* (0.023)	0.025 (0.022)	0.073*** (0.024)	0.071*** (0.025)

Notes: Standard errors are given in parentheses, * indicates significance at the 10% level, ** indicates significance at the 5% level, *** at the 1% level. For the education category, illiterate is the reference group and for urban, rural is the reference group.

Table A5: Effects of change in price, change in income, change in addiction level along with other demographic variables on probability to up-trade or not

Variables	Dependent variable: Probability to Down-trade			
	Marginal Effects			
	Model 1	Model 2	Model 3	Model 4
Δ in actual self-reported price	-0.023*** (0.001)	-	-	-
Δ in actual tax	-	-0.033*** (0.002)	-	-
Δ in village-level mean price	-	-	-0.013*** (0.003)	-
Δ in predicted price	-	-	-	-0.014*** (0.003)
Δ in income	0.001 (0.002)	0.002 (0.003)	-0.007** (0.003)	-0.000 (0.003)
Δ in addiction	-0.049*** (0.019)	-0.056** (0.023)	-0.041* (0.024)	-0.062** (0.025)
Age	-0.000 (0.001)	-0.001 (0.001)	0.000 (0.001)	0.000 (0.001)
Less educated	-0.065* (0.034)	-0.041 (0.042)	-0.049 (0.049)	-0.014 (0.049)
More educated	-0.133*** (0.038)	-0.068 (0.042)	-0.186*** (0.050)	-0.118** (0.053)
Urban	-0.096*** (0.026)	-0.105*** (0.032)	-0.119*** (0.032)	-0.115*** (0.032)

Notes: Standard errors are given in parentheses, * indicates significance at the 10% level, ** indicates significance at the 5% level, *** at the 1% level. For the education category, illiterate is the reference group and for urban, rural is the reference group.

Table A6: Multi-logit regression results

Variables	Marginal Effects							
	Up-trade				Down-trade			
	Model 1	Model 2	Model 3	Model 4	Model1	Model 2	Model 3	Model 4
Δ in actual self-reported price	0.014*** (0.002)	-	-	-	-0.024*** (0.002)	-	-	-
Δ in actual tax	-	0.017*** (0.001)	-	-	-	-0.029*** (0.002)	-	-
Δ in village-level mean price	-	-	0.006** (0.003)	-	-	-	-0.008*** (0.003)	-
Δ in predicted price	-	-	-	0.010*** (0.002)	-	-	-	-0.008*** (0.002)
Δ in income	0.003* (0.002)	0.002 (0.002)	0.007*** (0.002)	0.003 (0.002)	-0.001 (0.002)	-0.000 (0.002)	-0.005** (0.002)	-0.002 (0.002)
Δ in addiction	0.006 (0.016)	0.000 (0.016)	-0.002 (0.019)	0.010 (0.019)	-0.023* (0.013)	-0.025* (0.014)	-0.028 (0.018)	-0.037* (0.019)
Age	0.000 (0.001)	0.001 (0.001)	-0.001* (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001** (0.001)	-0.001 (0.001)	-0.001 (0.001)
Less educated	0.078*** (0.024)	0.079*** (0.025)	0.098*** (0.023)	0.079*** (0.027)	0.010 (0.019)	0.022 (0.019)	0.033 (0.030)	0.044 (0.030)
More educated	0.096*** (0.031)	0.060** (0.030)	0.191*** (0.032)	0.145*** (0.035)	-0.018 (0.026)	0.039 (0.028)	-0.032 (0.033)	0.001 (0.036)
Urban	0.018 (0.021)	-0.008 (0.022)	0.045* (0.024)	0.044* (0.025)	-0.027 (0.021)	-0.001 (0.020)	-0.019 (0.026)	-0.015 (0.027)

Notes: Standard errors are given in parentheses, * indicates significance at the 10% level, ** indicates significance at the 5% level, *** at the 1% level. For the education category, illiterate is the reference group and for urban, rural is the reference group.

Table A7: Probit Regression Results - Effects of Down-trading, Changes in Prices, Income levels and Addiction levels on Probability to intend to Quit or not

Dependent variable: Probability to intend to quit				
Variables	Marginal Effects			
	Model 1	Model 2	Model 3	Model 4
Down-trade or not (1 – down-trade, 0 – otherwise)	-0.012 (0.042)	-0.007 (0.043)	-0.015 (0.033)	-0.015 (0.034)
Δ in actual self- reported price	0.000 (0.001)	-	-	-
Δ in actual tax	-	0.001 (0.002)	-	-
Δ in village-level mean price	-	-	0.006 (0.004)	-
Δ in predicted price	-	-	-	0.003 (0.003)
Δ in income	0.003 (0.002)	0.003 (0.002)	0.003 (0.002)	0.002 (0.003)
Δ in addiction	0.074*** (0.022)	0.073*** (0.022)	0.077*** (0.021)	0.077*** (0.022)
Age	0.002** (0.001)	0.002** (0.001)	0.002** (0.001)	0.002** (0.001)
Urban	-0.053* (0.032)	-0.053* (0.032)	-0.064** (0.031)	-0.058* (0.032)
Less educated	0.020 (0.041)	0.021 (0.041)	0.016 (0.040)	0.011 (0.043)
More educated	0.055 (0.045)	0.053 (0.046)	0.043 (0.044)	0.036 (0.048)

Notes: Standard errors are given in parentheses, * indicates significance at the 10% level, ** indicates significance at the 5% level, *** at the 1% level. For the education category, illiterate is the reference group and for urban, rural is the reference group.

Table A8: Cox Regression Results: Hazard Ratios

Up-trade	Hazard ratios (95% CI)			
	Model 1 (N = 1507)	Model 2 (N = 1500)	Model 3 (N = 1651)	Model 4 (N = 1518)
Actual self-reported price	5.778*** (3.678 – 9.077)	-	-	-
Actual tax	-	5.572*** (2.942 – 10.554)	-	-
Village-level mean price	-	-	1.483** (1.096 – 2.006)	-
Predicted price	-	-	-	1.932*** (1.347 – 2.772)
Income	1.511*** (1.129 – 2.022)	1.542*** (1.151 – 2.064)	1.631*** (1.225 – 2.172)	1.380** (1.021 – 1.866)
Addiction	1.293 (0.886 – 1.886)	1.199 (0.822 – 1.749)	1.200 (0.827 – 1.740)	1.354 (0.925 – 1.982)
Age	0.996 (0.986 – 1.007)	0.994 (0.984 – 1.005)	0.992 (0.982 – 1.003)	0.995 (0.984 – 1.005)
Less educated	2.378*** (1.387 – 4.076)	2.578*** (1.507 – 4.411)	2.648*** (1.549 – 4.527)	2.111*** (1.227 – 3.632)
More educated	2.938*** (1.691 – 5.106)	3.824*** (2.205 – 6.631)	4.169*** (2.411 – 7.209)	3.168*** (1.807 – 5.553)
Urban	1.217 (0.900 – 1.645)	1.345* (0.994 – 1.822)	1.267 (0.941 – 1.707)	1.307* (0.966 – 1.768)
Down-trade	Hazard ratios (95% CI)			
	Model 1 (N = 1507)	Model 2 (N = 1500)	Model 3 (N = 1651)	Model 4 (N = 1518)
Actual self-reported price	0.080*** (0.048 – 0.132)	-	-	-
Actual tax	-	0.056*** (0.037 – 0.083)	-	-
Village-level mean price	-	-	0.754** (0.574 – 0.992)	-
Predicted price	-	-	-	0.572*** (0.422 – 0.777)
Income	0.910 (0.679 – 1.220)	0.991 (0.739 – 1.329)	0.872 (0.656 – 1.159)	0.989 (0.730 – 1.339)
Addiction	0.751 (0.500 – 1.128)	0.835 (0.556 – 1.255)	0.745 (0.498 – 1.116)	0.738 (0.490 – 1.110)
Age	0.996 (0.697 – 1.300)	1.000 (0.990 – 1.010)	0.997 (0.988 – 1.007)	0.998 (0.989 – 1.008)
Less educated	1.172 (0.831 – 1.653)	1.012 (0.716 – 1.429)	1.272 (0.903 – 1.791)	1.300 (0.914 – 1.849)
More educated	1.399 (0.910 – 2.149)	1.000 (0.654 – 1.530)	0.977 (0.903 – 1.791)	1.080 (0.696 – 1.676)
Urban	0.952 (0.697 – 1.300)	0.809 (0.594 – 1.101)	0.866 (0.639 – 1.173)	0.865 (0.634 – 1.181)

Quit	Hazard ratios (95% CI)			
	Model 1 (N = 709)	Model 2 (N = 706)	Model 3 (N = 751)	Model 4 (N = 713)
Down-trade	0.977 (0.487 – 1.960)	0.995 (0.446 – 2.219)	0.901 (0.545 – 1.488)	0.884 (0.532 – 1.468)
Actual self-reported price	1.115 (0.589 – 2.111)	-	-	-
Actual tax	-	1.141 (0.515 – 2.529)	-	-
Village-level mean price	-	-	1.266 (0.812 – 1.974)	-
Predicted price	-	-	-	0.959 (0.592 – 1.552)
Income	1.422 (0.924 – 2.188)	1.428 (0.930 – 2.195)	1.422 (0.927 – 2.181)	1.427 (0.911 – 2.235)
Addiction	1.841** (1.134 – 2.988)	1.829** (1.127 – 2.969)	1.971*** (1.222 – 3.178)	1.833** (1.121 – 2.998)
Age	1.017** (1.003 – 1.033)	1.017** (1.002 – 1.032)	1.018** (1.003 – 1.033)	1.017** (1.002 – 1.032)
Less educated	1.164 (0.622 – 2.177)	1.165 (0.623 – 2.178)	1.154 (0.619 – 2.152)	1.165 (0.618 – 2.198)
More educated	1.437 (0.742 – 2.781)	1.434 (0.741 – 2.775)	1.366 (0.707 – 2.639)	1.420 (0.722 – 2.794)
Urban	0.630* (0.394 – 1.008)	0.631* (0.395 – 1.010)	0.592** (0.370 – 0.947)	0.632* (0.395 – 1.011)

Notes: 95% confidence intervals are given in the parentheses, * indicates significance at the 10% level, ** indicates significance at the 5% level, *** at the 1% level. For the education category, illiterate is the reference group and for urban, rural is the reference group.