






SUPPLEMENTARY TABLES

Supplementary Table 1. Country and survey characteristics across five countries of the ITC surveys






	<b>BRAZIL</b> 	<b>JAPAN</b> 	<b>REPUBLIC OF KOREA</b> 	<b>MALAYSIA</b> 	<b>MEXICO</b> 
<b>Country characteristics</b>					
Country income level <sup>a</sup>	Upper-middle	High	High	Upper-middle	Upper-middle
Current cigarette smoking prevalence <sup>b</sup>	11.2%	18.9%	19.3%	17.9%	13.9%
<b>Survey characteristics</b>					
Survey sampling frame	Adults (aged 18+) who smoke cigarettes and non-smokers, living in Sao Paulo, Rio de Janeiro and Porto Alegre.	Adults (aged 20+) who smoke cigarettes, who use heated tobacco products, and non-users.	Adults (aged 19+) who smoke cigarettes, use heated tobacco products, use electronic cigarettes, and non-users.	Adults (aged 18+) who smoke cigarettes and non-smokers.	Adults (aged 18+) who smoke cigarettes.
Sampling design	Households randomly called using systematic sampling from an electronic phone number directory.	Rakuten Insight panel. Panelists pre-profiled with pre-targeted variables (e.g., smoking). Quotas based on the region of residence, sex, and age, were applied to ensure the final sample sizes were proportional to stratum sizes based on the Japan Society and New Tobacco Internet Survey (JASTIS). Methods are used to maintain panel to be consistent as possible with general population.	Rakuten Insight panel. Panelists pre-profiled with pre-targeted variables (e.g., smoking). Quotas based on sex and age groups, applied to target final sample sizes proportional to stratum sizes based on smoking prevalence estimates in combination with Korea census data. Methods are used to maintain panel to be consistent as possible with general population.	Rakuten Insight panel. Panelists pre-profiled with pre-targeted variables (e.g., smoking). Quotas based on region of residence, sex, and age, were applied to ensure the final sample was proportional to stratum sizes based on Malaysian census data. Methods are used to maintain panel to be consistent as possible with general population.	Online market research consumer panel. Quotas based on age, sex, education groups, and people who vape..
Analytic sample	Adults (aged 18+) who smoke cigarettes at least monthly AND smoked 100+ cigarettes in their lifetime (N=1215).	Adults (aged 20+) who smoke cigarettes at least monthly AND smoked 100+ cigarettes in their lifetime (N=2876).	Adults (aged 19+) who smoke cigarettes at least monthly AND smoked 100+ cigarettes in their lifetime (N=3765).	Adults (aged 18+) who smoke cigarettes at least monthly AND smoked 100+ cigarettes in their lifetime (N=1104).	Adults (aged 18+) who smoked cigarettes in the last 30 days (N=1104).
Sample type	Recontact and replenishment	Recontact and replenishment	Recontact and replenishment	Newly sampled	Recontact and replenishment
Dates of data collection	September 2016 to March 2017	July 2021 to August 2021	November 2021 to December 2021	February 2020 to March 2020	March 2021 to April 2021
Survey wave	3	4	2	1	8
Survey mode	Telephone	Web	Web	Web	Web
Response rate (%) <sup>c</sup>	35.5	27.4	16.4	11.3	--
Cooperation rate (%)	60.4	94.5	97.0	95.3	--

<sup>a</sup> 2021 World Bank

<sup>b</sup> 2021 WHO age-standardized estimated prevalence of smoking among those aged 15 years or more; WHO report on the global tobacco epidemic, 2023: protect people from tobacco smoke. Geneva: World Health Organization; 2023.






<sup>c</sup> The denominator of the response rates for the web panel surveys (all countries except Brazil) is all potential respondents who were sent invitations to the surveys. It should be noted that many panel members are no longer active. For the telephone survey in Brazil, the denominator of the response rate is all potential respondents who were phoned. Those who did not answer after seven tries were considered a non-response. Post-stratification weights adjust for non-response bias.

Supplementary Table 2. Overall sample characteristics of adults who smoke cigarettes across five countries of the ITC Surveys, weighted (full table)

	BRAZIL <i>Wave 3, 2016/2017</i> (N=1215) 			JAPAN <i>Wave 4, 2021</i> (N=2876) 			REPUBLIC OF KOREA <i>Wave 2, 2021</i> (N=3765) 			MALAYSIA <i>Wave 1, 2020</i> (N=1104) 			MEXICO <i>Wave 8, 2021</i> (N=1331) 		
	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI
Sex															
Male	602	47.9	(43.7, 42.2)	2090	67.5	(63.0, 71.8)	3250	89.9	(85.8, 92.9)	995	97.3	(96.5, 97.9)	645	60.1	(53.3, 66.5)
Female	614	52.1	(47.8, 56.3)	786	32.4	(28.2, 37.0)	515	10.1	(7.1, 14.2)	105	2.7	(2.1, 3.5)	686	39.9	(33.5, 46.7)
Age group (years)															
18-24 <sup>a</sup>	26	4.4	(2.8, 7.1)	14	2.7	(0.8, 8.5)	125	8.8	(4.5, 16.5)	160	13.7	(11.4, 16.4)	134	9.6	(6.7, 13.5)
25-39	205	34.6	(30.2, 39.2)	758	31.9	(27.4, 36.8)	1213	26.2	(22.6, 30.2)	670	51.0	(47.1, 54.9)	575	56.1	(49.2, 62.7)
40-54	334	34.6	(30.8, 38.6)	988	31.7	(28.2, 35.3)	1698	37.4	(32.7, 42.4)	228	29.7	(26.0, 33.8)	437	25.9	(20.6, 32.0)
55+	651	26.3	(23.4, 29.5)	1116	33.8	(30.0, 37.7)	729	27.6	(22.2, 33.7)	46	5.5	(3.9, 7.8)	185	8.4	(6.2, 11.3)
Education															
Low	357	29.5	(25.8, 33.4)	78	2.2	(1.7, 2.8)	29	1.9	(1.2, 3.1)	366	47.6	(43.7, 51.5)	116	47.6	(40.3, 54.9)
Moderate	435	37.5	(33.4, 41.8)	1448	52.5	(48.0, 56.9)	699	58.6	(53.6, 63.5)	314	36.5	(32.8, 40.3)	763	36.7	(31.2, 42.6)
High	406	31.9	(28.0, 36.1)	1312	45.3	(40.9, 49.8)	3022	39.4	(34.7, 44.4)	412	15.9	(14.0, 18.0)	452	15.7	(12.7, 19.2)
Smoking frequency															
Daily	18	1.1	(0.6, 2.1)	2426	69.1	(62.9, 74.7)	3240	69.6	(61.8, 76.4)	937	88.5	(86.0, 90.5)	651	47.1	(40.0, 54.3)
Non-daily	1,135	92.8	(90.2, 94.8)	450	30.9	(25.3, 37.1)	525	30.4	(23.6, 38.2)	167	11.5	(9.4, 14.0)	660	52.9	(45.7, 60.0)
Plans to quit															
No plans	81	7.2	(5.2, 9.8)	1284	46.1	(41.3, 50.9)	1028	30.0	(25.5, 35.0)	153	14.8	(12.1, 17.9)	294	23.8	(18.0, 30.9)
Within the next 6 months	574	52.9	(48.4, 57.3)	235	19.4	(14.3, 25.7)	1042	40.3	(33.9, 47.0)	460	42.0	(38.2, 46.0)	460	38.7	(31.5, 46.5)
In future beyond 6 months	316	23.9	(20.5, 27.7)	924	34.5	(30.4, 38.9)	1313	29.7	(24.5, 35.4)	424	43.2	(39.2, 47.2)	485	37.4	(30.6, 44.8)

<sup>a</sup> Age group is 20-24 years for Japan and 19-24 years for Republic of Korea, based on the respective countries’ definitions of the start of adulthood.

Supplementary Table 3. Prevalence of usual/preferred brand has a flavour capsule overall and by sociodemographic characteristics and smoking behaviours among adults who smoke cigarettes across five countries of the ITC Surveys, weighted (full table)






	BRAZIL <i>Wave 3, 2016/2017</i> (N=1215) 			JAPAN <i>Wave 4, 2021</i> (N=2876) 			REPUBLIC OF KOREA <i>Wave 2, 2021</i> (N=3765) 			MALAYSIA <i>Wave 1, 2020</i> (N=1104) 			MEXICO <i>Wave 8, 2021</i> (N=1331) 		
	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI
Overall	74	6.7	(4.7, 9.5)	485	21.6	(17.4, 26.4)	1216	31.8	(26.4, 37.8)	332	26.5	(23.3, 30.0)	751	50.3	(43.1, 57.4)
Sex															
Male	39	6.1	(4.0, 9.2)	313	20.1	(15.0, 26.4)	1022	31.3	(25.4, 37.7)	294	26.3	(23.0, 30.0)	304	39.1	(30.0, 49.0)
Female	35	7.3	(4.1, 12.6)	172	24.5	(18.0, 32.5)	194	38.0	(26.8, 50.8)	38	32.3	(21.6, 45.1)	447	67.2	(58.0, 75.2)
Age group (years) <sup>a</sup>															
18-24	2	12.0	(2.0, 47.4) <sup>‡</sup>	3	80.4	(44.3, 95.5) <sup>‡</sup>	75	61.3	(26.4, 87.4)	45	23.7	(16.7, 32.6)	94	70.1	(52.2, 83.4)
25-39	21	8.5	(4.7, 14.9)	167	26.2	(18.5, 35.7)	522	43.1	(36.5, 49.9)	222	30.3	(26.0, 35.0)	376	54.7	(43.4, 65.5)
40-54	20	4.6	(2.5, 8.4) <sup>‡</sup>	172	19.7	(14.7, 25.9)	515	28.9	(23.0, 35.7)	60	25.0	(18.6, 32.8)	216	39.6	(29.1, 51.2)
55+	31	6.2	(3.5, 10.8)	143	13.8	(10.4, 18.1)	104	14.3	(6.0, 30.3) <sup>‡</sup>	5	7.6	(2.3, 22.3) <sup>‡</sup>	65	30.4	(18.7, 45.3)
Education															
Low	18	4.4	(2.3, 8.3) <sup>‡</sup>	6	6.6	(2.2, 18.1) <sup>‡</sup>	8	22.1	(8.6, 45.9) <sup>‡</sup>	103	26.2	(21.3, 31.9)	62	43.7	(30.9, 57.4)
Moderate	24	6.7	(3.5, 12.5) <sup>‡</sup>	253	18.9	(14.8, 23.8)	215	29.1	(20.7, 39.1)	79	24.0	(18.7, 30.1)	402	54.8	(48.5, 61.0)
High	32	9.0	(5.3, 14.9)	220	24.8	(17.7, 33.7)	990	36.5	(31.4, 41.9)	147	31.6	(26.4, 37.3)	282	59.8	(50.5, 68.6)
Refused/don't know*	0	--	--	6	--	--	3	--	--	3	--	--	0	--	--
Smoking frequency															
Daily	66	13.8	(4.9, 33.4)	373	17.4	(15.7, 19.1)	1003	26.5	(23.9, 29.3)	278	26.3	(22.8, 30.1)	348	52.9	(42.8, 62.8)
Non-daily	8	6.1	(4.2, 8.9) <sup>‡</sup>	112	31.5	(19.4, 46.7)	213	44.5	(28.2, 62.0)	54	28.0	(19.7, 38.0)	403	47.2	(37.2, 57.6)
Refused/ don't know*	0	--	--	0	--	--	0	--	--	0	--	--	0	--	--
Plans to quit															
No plans	19	5.4	(2.9, 9.9) <sup>‡</sup>	184	17.8	(11.7, 26.1)	305	28.5	(19.9, 38.9)	43	27.4	(18.9, 38.1)	177	53.6	(37.8, 68.8)
Within the next 6 months	33	6.5	(3.7, 11.1)	60	27.7	(15.0, 45.5)	385	38.0	(26.6, 50.9)	157	30.1	(24.9, 35.9)	256	52.5	(39.8, 64.9)
In future beyond 6 months	19	8.4	(4.0, 16.6) <sup>‡</sup>	177	23.6	(18.0, 30.4)	442	30.8	(24.1, 38.4)	116	23.7	(18.9, 29.3)	285	47.2	(36.3, 58.4)
Refused/don't know*	3	--	--	64	--	--	84	--	--	16	--	--	33	--	--

<sup>a</sup> Age group is 20-24 years for Japan and 19-24 years for Republic of Korea, based on the respective countries' definitions of the start of adulthood.

<sup>‡</sup> Indicates high sampling variability; relative standard error > 0.3; interpret with caution

\*Refused/don't know responses set to missing

Supplementary Table 4. Correlates of usual cigarette brand smoke has a flavour capsule among adults who smoke across five countries of the ITC Surveys, weighted, logistic regression analyses (full table)





	BRAZIL <i>Wave 3, 2016/2017</i> (N=1215) 			JAPAN <i>Wave 4, 2021</i> (N=2876) 			REPUBLIC OF KOREA <i>Wave 2, 2021</i> (N=3765) 			MALAYSIA <i>Wave 1, 2020</i> (N=1104) 			MEXICO <i>Wave 8, 2021</i> (N=1331) 		
	aOR†	95% CI	p-value	aOR†	95% CI	p-value	aOR†	95% CI	p-value	aOR†	95% CI	p-value	aOR†	95% CI	p-value
Sex															
Male	1.00			1.00			1.00			1.00			1.00		
Female	1.41	(0.69, 2.86)	0.341	1.79	(1.35, 2.38)	<0.001	1.03	(0.61, 1.75)	0.901	1.39	(0.78, 2.47)	0.264	3.18	(1.69, 5.98)	<0.001
Age group (years) <sup>a</sup>															
18-24	1.69	(0.36, 7.88)	0.506	0.29	(0.04, 2.26)	0.235	16.69	(8.11, 34.33)	<0.001	3.43	(0.84, 13.98)	0.085	3.10	(0.99, 9.73)	0.052
25-39	1.89	(0.83, 3.83)	0.077	1.55	(1.13, 2.11)	<b>0.006</b>	4.61	(2.94, 7.22)	<0.001	4.25	(1.10, 16.38)	<b>0.035</b>	2.13	(0.88, 5.14)	0.092
40-54	0.94	(0.46, 1.93)	0.876	1.18	(0.88, 1.58)	0.261	2.38	(1.51, 3.75)	<0.001	3.19	(0.80, 12.76)	0.101	1.37	(0.57, 3.28)	0.486
55+	1.00			1.00			1.00			1.00			1.00		
Education															
Low	1.00			1.00			1.00			1.00			1.00		
Moderate	1.28	(0.54, 3.02)	0.569	3.44	(0.87, 13.51)	0.077	0.74	(0.20, 2.71)	0.654	0.82	(0.53, 1.27)	0.374	1.72	(0.87, 3.42)	0.120
High	2.37	(1.12, 4.99)	<b>0.024</b>	4.04	(1.01, 16.10)	<b>0.048</b>	1.20	(0.33, 4.32)	0.784	1.27	(0.86, 1.86)	0.224	2.38	(1.10, 5.15)	<b>0.028</b>
Smoking frequency															
Daily	1.00			1.00			1.00			1.00			1.00		
Non-daily	1.68	(0.56, 5.07)	0.358	1.43	(0.93, 2.22)	0.105	1.76	(1.07, 2.91)	<b>0.026</b>	0.96	(0.58, 1.60)	0.890	0.91	(0.47, 1.77)	0.782
Plans to quit															
No plans	1.00			1.00			1.00			1.00			1.00		
Within the next 6 months	1.28	(0.56, 2.93)	0.550	2.13	(1.42, 3.19)	<0.001	1.56	(1.10, 2.22)	<b>0.013</b>	1.05	(0.59, 1.84)	0.874	0.93	(0.40, 2.19)	0.868
In future beyond 6 months	1.98	(0.85, 4.59)	0.112	1.51	(1.15, 1.98)	<b>0.003</b>	1.50	(1.04, 2.17)	<b>0.030</b>	0.74	(0.41, 1.32)	0.303	0.66	(0.31, 1.37)	0.261

<sup>a</sup> Age group is 20-24 years for Japan and 19-24 years for Republic of Korea, based on the respective countries’ definitions of the start of adulthood.

† Separate logistic regression models estimated for each country and adjusted for all variables in table.

**Bolded= p<0.05**

Supplementary Table 5. Frequency of crushing capsule among adults who smoke whose usual/current brand of cigarettes has a flavour capsule across four countries of the ITC Surveys, weighted (full table)





BRAZIL <i>Wave 3, 2016/2017</i> (N=74) 				JAPAN <i>Wave 4, 2021</i> (N=485) 			REPUBLIC OF KOREA <i>Wave 2, 2021</i> (N=1216) 			MALAYSIA <i>Wave 1, 2020</i> (N=332) 		
Frequency of crushing capsules <sup>a</sup>	n	%	95%CI	n	%	95%CI	n	%	95%CI	n	%	95%CI
Every capsule	38	52.7	(34.4, 70.3)	332	76.6	(67.9, 83.5)	711	59.7	(47.1, 71.1)	138	45.1	(37.7, 52.7)
Most capsules	5	12.1	(3.3, 35.7) ‡	71	13.6	(8.2, 21.8)	266	24.2	(13.1, 40.3)	93	26.1	(20.2, 33.0)
About half of capsules	5	3.0	(1.0, 8.9) ‡	23	3.1	(1.8, 5.0)	119	5.0	(3.1, 8.0)	42	10.5	(7.1, 15.2)
Some capsules, but less than half	10	14.3	(5.5, 32.5) ‡	29	3.7	(2.3, 5.8)	70	6.5	(4.0, 10.4)	27	7.1	(4.2, 11.6)
Never	15	17.8	(8.2, 34.5) ‡	22	3.1	(1.8, 5.1)	46	4.6	(2.8, 7.6)	21	11.2	(6.9, 17.5)

<sup>a</sup> “*When you smoke a pack of your usual/current brand, how often do you crush the flavour capsule?*”; This question was not asked in the Wave 8 ITC Mexico survey.

‡ Indicates high sampling variability; relative standard error > 0.3; interpret with caution

Refused/don’t know responses set to missing: Brazil (n=1), Japan (n=8), Republic of Korea (n=4), Malaysia (n=1)

Supplementary Table 6. Perceptions of usual cigarette brand harmfulness compared to other brands among adults who smoke whose usual/current brand of cigarettes has a flavour capsule compared to no capsules across four countries of the ITC Surveys, weighted (full table)

BRAZIL 								JAPAN 						
Flavour capsule (N=74)				No capsule (N=1127)				Flavour capsule (N=485)			No capsule (N=2211)			
Harm of usual brand compared to others <sup>a</sup>	n	%	95%CI	n	%	95%CI	p-value <sup>b</sup>	n	%	95%CI	n	%	95%CI	p-value <sup>b</sup>
Little less harmful	15	13.7	(6.3, 27.3) ‡	228	19.1	(16.0, 22.7)	0.372	35	8.8	(4.3, 17.1) ‡	133	6.9	(5.1, 9.2)	0.533
No different	44	58.0	(38.6, 75.2)	761	70.6	(66.5, 74.4)	0.175	348	85.0	(76.8, 90.6)	1446	77.2	(72.8, 81.1)	0.084
Little more harmful	12	28.3	(13.1, 50.9) ‡	105	10.2	(7.9, 13.3)	<b>0.011</b>	36	6.2	(4.0, 9.6)	290	15.9	(12.4, 20.1)	<b>&lt;0.001</b>
Refused/don't know*	3	--	--	33	--	--	--	66	--	--	342	--	--	--
REPUBLIC OF KOREA 								MALAYSIA 						
Flavour capsule (N=1216)				No capsule (N=2414)				Flavour capsule (N=332)			No capsule (N=719)			
Harm of usual brand compared to others <sup>a</sup>	n	%	95%CI	n	%	95%CI	p-value <sup>b</sup>	n	%	95%CI	n	%	95%CI	p-value <sup>b</sup>
Little less harmful	72	11.5	(4.4, 26.8) ‡	118	8.7	(4.2, 16.9)	0.633	58	18.5	(13.3, 25.0)	86	11.1	(8.5, 14.4)	<b>0.016</b>
No different	820	74.2	(61.4, 83.8)	1761	78.5	(71.8, 84.0)	0.496	202	66.9	(58.6, 73.6)	516	78.6	(74.5, 82.1)	<b>0.003</b>
Little more harmful	238	14.3	(8.8, 22.6)	360	12.8	(10.1, 16.1)	0.681	54	14.6	(10.1, 20.6)	76	10.3	(7.9, 13.4)	0.128
Refused/ don't know*	86	--	--	175	--	--	--	18	--	--	41	--	--	--



<sup>a</sup>“Do you think that the brand you usually/currently smoke, might be a little less harmful, no different, or a little more harmful, compared to other cigarette brands?”; This question was not asked in the Wave 8 (2021) ITC Mexico study. However, ITC Mexico data from 2018-2020 captured relative harm perceptions in a recent study.(5)

<sup>b</sup> P-values from weighted  $\chi^2$  tests comparing the proportion of each outcome by usual brand flavour capsule vs no capsule; **Bolded**= p<0.05

‡ Indicates high sampling variability; relative standard error > 0.3; interpret with caution

\*Refused/don’t know responses set to missing

Supplementary Table 7. Reasons for usual brand choice among adults who smoke whose usual/current brand of cigarettes has a flavour capsule compared to no capsules in Brazil and Malaysia, ITC Surveys, weighted

	BRAZIL 							MALAYSIA 						
	Flavour capsule (N=74)			No capsule (N=1127)				Flavour capsule (N=332)			No capsule (N=719)			
Reasons for usual brand choice <sup>a</sup>	n	%	95%CI	n	%	95%CI	p-value <sup>b</sup>	n	%	95%CI	n	%	95%CI	p-value <sup>b</sup>
Taste (Yes)	65	89.5	(74.8, 96.1)	644	60.6	(56.0, 65.1)	<0.001	290	95.9	(91.6, 98.0)	593	93.0	(89.9, 95.2)	0.198
No	9			399				13			40			
Don't know/refused/not applicable*	0			10				29			86			
Price (Yes)	17	27.6	(14.7, 45.7)	380	37.1	(32.9, 41.6)	0.288	225	79.1	(72.7, 84.3)	442	73.9	(69.5, 77.8)	0.167
No	57			670				77			191			
Don't know/refused/not applicable*	0			3				30			86			
Tar, nicotine levels (Yes)	22	33.4	(18.8, 52.1)	348	33.9	(29.7, 38.3)	0.960	--	--	--	--	--	--	--
No	52			663										
Don't know/refused/not applicable *	0			42										
Not as bad for health (Yes)	22	23.7	(12.8, 39.5)	397	37.8	(33.5, 42.4)	0.080	148	50.3	(42.5, 58.0)	184	25.7	(22.5, 31.5)	<0.001
No	52			628				138			401			
Don't know/refused/not applicable *	0			28				46			134			
Pack colour (Yes)	14	21.5	(10.4, 39.6) ‡	116	10.8	(8.0, 14.4)	0.077	--	--	--	--	--	--	--
No	59			930										
Don't know/refused/not applicable *	1			7										
Pack design (Yes)	--	--	--	--	--	--	--	152	46.1	(38.6, 53.8)	148	20.8	(17.2, 24.9)	<0.001
No								147			478			
Don't know/refused/not applicable*								33			93			
Friends use (Yes)	--	--	--	--	--	--	--	170	52.0	(44.3, 59.7)	245	35.3	(30.8, 40.0)	<0.001
No								126			374			
Don't know/refused/not applicable *								36			100			

<sup>a</sup> “In choosing your usual brand, was part of your decision to smoke this brand based on any of the following...”

<sup>b</sup> P-values from weighted  $\chi^2$  tests comparing the proportion of each outcome by usual brand flavour capsule vs no capsule; **Bolded**= p<0.05

‡ Indicates high sampling variability; relative standard error > 0.3; interpret with caution

\*Refused/don’t know responses set to missing