The environmental profile of a community’s health: a cross-sectional study on tobacco marketing in 16 countries

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Objective To examine and compare tobacco marketing in 16 countries while the Framework Convention on Tobacco Control requires parties to implement a comprehensive ban on such marketing.

Methods Between 2009 and 2012, a kilometre-long walk was completed by trained investigators in 462 communities across 16 countries to collect data on tobacco marketing. We interviewed community members about their exposure to traditional and non-traditional marketing in the previous six months. To examine differences in marketing between urban and rural communities and between high- and low-income countries, we used multilevel regression models controlling for potential confounders.

Findings Compared with high-income countries, the number of tobacco advertisements observed was 81 times higher in low-income countries (incidence rate ratio, IRR: 80.98; 95% confidence interval, CI: 4.15–1578.42) and the number of tobacco outlets was 2.5 times higher in both low- and lower-middle-income countries (IRR: 2.58; 95% CI: 1.17–5.67 and IRR: 2.52; CI: 1.23–5.17, respectively). Of the 11842 interviewees, 1184 (10%) reported seeing at least five types of tobacco marketing. Self-reported exposure to at least one type of traditional marketing was 10 times higher in low-income countries than in high-income countries (odds ratio, OR: 9.77; 95% CI: 1.24–76.77). For almost all measures, marketing exposure was significantly lower in the rural communities than in the urban communities.

Conclusion Despite global legislation to limit tobacco marketing, it appears ubiquitous. The frequency and type of tobacco marketing varies on the national level by income group and by community type, appearing to be greatest in low-income urban communities.

Abstracts in 中文, Français, Русский and Español at the end of each article.
Introduction

Tobacco is a leading cause of morbidity and mortality, responsible for an estimated 18%, 11% and 4% of deaths in high-, middle- and low-income countries, respectively. Since the prevalence of smoking is falling in high-income countries but increasing in many middle- and low-income countries, the global burden of disease caused by tobacco use is expected to shift increasingly from high-income countries to countries with lower incomes.

As marketing by the tobacco industry plays a substantial role in smoking initiation,2–4 complete bans on such marketing can be an effective means of reducing tobacco use.5,6 In 2005, the World Health Organization’s (WHO’s) Framework Convention on Tobacco Control (FCTC) called for a comprehensive ban on all tobacco marketing.7 However, the lack of relevant capacity and/or political will in many countries and the insidious influence of the tobacco industry have meant that the implementation of some of the FCTC’s recommendations has been slow.8

In this paper, we assess the global tobacco marketing environment by examining and comparing the extent and nature of tobacco marketing in 462 communities spread across 16 low-, middle- and high-income countries.

Methods

Data source

All of the data we analysed were collected as part of the Environmental Profile of a Community’s Health study, which has already been described in detail.9–11 This study is a component of the Prospective Urban Rural Epidemiology study – a large cohort study that is designed to examine the relationship between lifestyle factors and cardiovascular disease in adults aged 35–70 years.12,13 The Environmental Profile of a Community’s Health study includes an objective environmental audit in which trained investigators walk a predefined kilometre-long route within a study community. During each such walk, the investigators visit stores and systematically record physical aspects of the environment – e.g. the number of tobacco advertisements that they see. The second part of the Environmental Profile of a Community’s Health study involves an interviewer-administered questionnaire that captures individuals’ perceptions of their community – including whether the interviewees recall seeing certain types of tobacco marketing within the previous six months.1 This questionnaire was administered to a subsample of the participants of the Prospective Urban Rural Epidemiology study.

We investigated data collected between 2009 and 2012, in 16 countries. According to the World Bank’s 2006 classification,14 three of the countries – Canada, Sweden and the United Arab Emirates – were high-income, seven – Argentina, Brazil, Chile, Malaysia, Poland, South Africa and Turkey – were upper-middle-income, three – China, Colombia and the Islamic Republic of Iran – were lower-middle-income and three – India, Pakistan and Zimbabwe – were low-income. Although Bangladesh is included in the Prospective Urban Rural Epidemiology study,10 we excluded Bangladeshi data on tobacco marketing from our analyses because they were relatively incomplete.

Measures of marketing

The Environmental Profile of a Community’s Health study records both push and pull marketing. Push marketing, which aims to increase product availability,12,13,15 was measured by trained researchers who recorded the number of tobacco outlets – e.g. vendors, street stands and general stores – seen during the audit walk and whether a tobacco-selling store visited during the walk sold single cigarettes. Pull marketing, which encourages customers to seek out a product through advertising and promotion,12,13 was measured using both direct observation – i.e. the number of tobacco advertisements counted during the audit walk and whether the tobacco-selling store visited during the walk had point-of-sale tobacco advertising – and via self-report in interviews – i.e. whether an interviewee recalled seeing various forms of tobacco advertising in the previous six months. Almost all of the tobacco marketing measures that we examined reflected those covered by the

Table 1. Sample sizes for a tobacco marketing study in 462 communities, 16 countries, 2009–2012

| Country* | No. of study communities | No. of interviewees |
|----------|--------------------------|---------------------|
|          | Total | Urban | Rural | Total | Urban | Rural |
| High-income |        |       |       |       |       |       |
| Canada   | 46    | 31    | 15    | 1145  | 807   | 338   |
| Sweden   | 23    | 20    | 3     | 580   | 496   | 84    |
| United Arab Emirates | 3    | 1     | 2     | 89    | 26    | 63    |
| Total     | 72    | 52    | 20    | 1814  | 1329  | 485   |
| Upper-middle-income |        |       |       |       |       |       |
| Argentina | 20    | 6     | 14    | 544   | 171   | 373   |
| Brazil   | 14    | 7     | 7     | 387   | 202   | 185   |
| Chile    | 5     | 2     | 3     | 127   | 51    | 76    |
| Malaysia | 33    | 18    | 15    | 1168  | 591   | 577   |
| Poland   | 4     | 1     | 3     | 89    | 26    | 63    |
| South Africa | 6    | 3     | 3     | 194   | 99    | 95    |
| Turkey   | 38    | 25    | 13    | 1207  | 795   | 412   |
| Total     | 120   | 62    | 58    | 3716  | 1935  | 1781  |
| Lower-middle-income |        |       |       |       |       |       |
| China     | 101   | 39    | 62    | 3131  | 1224  | 1907  |
| Colombia | 54    | 31    | 23    | 278   | 151   | 127   |
| Iran (Islamic Republic of) | 20    | 11    | 9     | 593   | 321   | 272   |
| Total     | 175   | 81    | 94    | 4002  | 1696  | 2306  |
| Low-income |       |       |       |       |       |       |
| India     | 88    | 37    | 51    | 2118  | 766   | 1352  |
| Pakistan | 4     | 2     | 2     | 111   | 57    | 54    |
| Zimbabwe | 3     | 1     | 2     | 81    | 26    | 55    |
| Total     | 95    | 40    | 55    | 2310  | 849   | 1461  |

* Countries were categorized according to the World Bank’s 2006 classification.11
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Fig. 1. Tobacco-selling outlets in urban or rural study community, 16 countries, 2009–2012

| Outlet type and country income group | Mean number of outlets per community |
|-------------------------------------|-------------------------------------|
| HIC | LIC | LMIC | HIC | LIC | LMIC | HIC | LIC | LMIC |
| All | Urban | Rural |

HIC: high-income country; LIC: low-income country; LMIC: lower-middle-income country; UMIC: upper-middle-income country.
Notes: Countries were categorized according to the World Bank’s 2006 classification.11 Outlets were counted during a kilometre-long audit walk in each study community.

Table 3. Incidence rate ratios for push and pull observed marketing of tobacco, 16 countries, 2009–2012

| Group | Tobacco outlets<sup>a</sup> | Tobacco advertisements<sup>a</sup> |
|-------|--------------------------|-------------------------------|
| Community type | IRR (95% CI)<sup>c</sup> | IRR (95% CI)<sup>c</sup> |
| Urban | 1 | 1 |
| Rural | 0.73 (0.63–0.85) | 0.40 (0.26–0.60) |
| Country income group<sup>c</sup> | | |
| High | 1 | 1 |
| Upper-middle | 1.29 (0.67–2.49) | 3.96 (0.30–52.88) |
| Lower-middle | 2.52 (1.23–5.17) | 4.68 (0.26–85.00) |
| Low | 2.58 (1.17–5.67) | 80.98 (4.15–1578.42) |

CI: confidence interval; IRR: incidence rate ratio.
<sup>a</sup> Derived from negative binomial multilevel regression models.
<sup>b</sup> Based on the mean numbers of outlets and advertisements observed during a kilometre-long audit walk in each community.
<sup>c</sup> Countries were categorized according to the World Bank’s 2006 classification.11

FCTC<sup>c</sup> or the associated implementation guidelines.14 However, we also assessed tobacco outlet density as this has been shown to play an important role in smoking prevalence among adults and adolescents.15,16

Observed data

For each country and country income group, the mean numbers of tobacco outlets and advertisements observed per community, the percentage of visited stores that sold single cigarettes and the percentage of visited stores that had point-of-sale tobacco advertising, were calculated – separately for the urban and rural communities.

As statistical tests showed that our outcome data were highly overdispersed, we used negative binomial multilevel regression models to examine differences in the number of observed tobacco outlets and tobacco advertisements between urban and rural communities and between country income groups. In these models, the number of outlets or advertisements was used as the outcome variable. Country income group and community type – i.e. rural or urban – were used as the categorical explanatory variables, and a random effect was included for the country. Incidence rate ratios (IRRs) were obtained by exponentiation of the regression coefficient and reported with the corresponding 95% confidence intervals (CIs). As data on the sale of single cigarettes and point-of-sale advertising were based on only one tobacco-selling store per community – and it is not possible to know whether the selected store was representative of all tobacco-selling stores within the community – such data were not included in the regression analyses.

Self-reported data

To examine differences in self-reported marketing levels between community types and across country income groups, we considered 13 binary outcome variables. These included whether or not individuals reported seeing tobacco marketing of any of six traditional types of media – i.e. posters, signage, television, radio, print and cinema – and five non-traditional types – i.e. sponsorship, marketing on other products, marketing on the internet, free samples and vouchers. We also combined all the traditional types and all the non-traditional types of marketing into two separate binary variables.

We applied a logistic multilevel regression model to each of the binary outcome measures and again included categorical explanatory variables for country income group and community type. We also included random effects for country and community. Each model was adjusted for potential confounders – i.e. sex, age, education, smoking status, having close friends who smoke, access to the internet, television ownership and radio ownership.27,28 The resulting odds ratios (ORs) are reported with corresponding 95% CIs.

All of the models were fitted using the glmmADMB and glmer functions from the glmmADMB and lme4 packages of R version 3.0.2 (R Foundation, Vienna, Austria).

Results

We analysed data from 235 urban and 227 rural communities, across 16 countries (Table 1). Overall, 11 842 individuals who resided in the observed communities – i.e. 5809 in the urban and 6033 in the rural communities – were interviewed and included in the final analyses.
Observed data

Push marketing

There were marked differences in outlet type and density between countries and country income group (Fig. 1 and Table 2 available at: http://www.who.int/bulletin/volumes/93/12/15-155846). The mean number of tobacco-selling outlets observed in each community increased with decreasing country income, from 1.7 in the high-income countries to 3.4 in the upper-middle-income countries and over 5.0 in the lower-middle-income and low-income countries. This trend was driven largely by the relatively high numbers of vendors and street stands observed – a mean of almost two per community – in low-income countries. No such outlets were observed in high-income countries and, on average, only 0.2 and 0.7 were observed per community in the upper-middle-income and lower-middle-income countries, respectively. The mean number of general stores observed per community did not follow the same pattern – 1.7, 3.2, 4.6 and 3.4 in the high-, upper-middle-, lower-middle- and low-income countries, respectively.

Combining data from all 16 countries, more vendors and/or street stands were observed in the urban communities than in the rural – means of 0.9 and 0.5 per community, respectively – and the urban communities also had a higher mean number of general stores selling tobacco – 3.7, compared with 3.3 per rural community. However, these urban/rural differences were not consistent across all four country income groups (Fig. 1 and Table 2).

After controlling for community type and country income group, the upper-middle-income countries had similar numbers of tobacco outlets (IRR: 1.29; 95% CI: 0.67–2.49) compared with high-income countries, but lower-middle-income countries (IRR: 2.52; 95% CI: 1.23–5.17) and low-income countries (IRR: 2.58; 95% CI: 1.17–5.67) had significantly more (Table 3). Across all countries, the mean number of tobacco outlets observed per community was significantly lower in rural than in urban communities (IRR: 0.73; 95% CI: 0.63–0.85; Table 3).

The sale of single cigarettes was not observed in any of the communities in eight of the countries (Table 2). However, overall, outlets selling single cigarettes became increasingly common with declining country income (Fig. 2 and Table 2). Although the urban/rural differences in the sale of single cigarettes varied by country income group, the sale of single cigarettes was more common in urban than rural communities in both lower-middle- and low-income countries.

Pull marketing

Tobacco advertisements were much more common in low-income countries than in the other countries. Very few tobacco advertisements were seen in high-income countries. In middle- and low-income countries, means of approximately 1 and 3 observed advertisements per community were recorded, respectively (Fig. 3 and Table 2). Combining data from all countries, tobacco advertisements were more common in the urban than rural communities, with means of 1.7 and 0.9 observed per community, respectively.

After controlling for community type and country income group, the middle-income countries had similar
numbers of tobacco advertisements (upper-middle-income IRR: 3.96; 95% CI: 0.30–52.88 and lower-middle-income IRR: 4.68; 95% CI: 0.26–85.00) as the high-income countries, whereas low-income countries had many more (IRR: 80.98; 95% CI: 4.15–1578.42). Overall, the mean number of tobacco advertisements observed per community was much lower in rural communities than in urban communities (IRR: 0.40; 95% CI: 0.26–0.60; Table 3).

The percentage of tobacco-selling stores that had point-of-sale tobacco advertising did not appear to differ clearly by country income group: 18% (13/72) in high-income, 40% (48/120) in upper-middle-income, 21% (36/171) in lower-middle-income and 44% (42/95) in low-income countries (Fig. 4 and Table 2). However the percentages across all countries were generally higher in the urban communities (41%; 96/235) than in the rural communities (19%; 43/223).

Self-reported data

Of the 11,842 interviewees, 5,349 (45%; range: 4–100%) reported exposure to at least one type of tobacco marketing over the previous six months and 1,184 (10%; range: 0–56%) reported exposure to at least five types of marketing over the same period (available from the corresponding author).

Pull marketing

Traditional Interviewees in high-income countries were least likely to report exposure to all forms of traditional marketing except print media, although differences between other country income groups varied by the type of marketing (Fig. 5; further details available from corresponding author). Overall, television marketing – seen by 3,501 (30%) of interviewees in the previous six months – was the most common form of traditional marketing, followed by posters (2,334; 20%), print media (1,949; 16%), signage (1,934; 16%), radio (1,465; 12%) and cinema marketing (567; 5%). All forms of traditional marketing except television marketing – and exposure to at least one form of traditional marketing – were less common in rural communities than urban ones (Table 4 available at: http://www.who.int/bulletin/volumes/93/12/15-155846).

The likelihood that interviewees from low-income countries reported exposure to at least one form of traditional marketing was almost 10 times higher (OR: 9.77; 95% CI: 1.24–76.77) than in high-income countries. Specifically, the likelihood of exposure to radio (OR: 46.05; 95% CI: 1.29–1642.57), signage (OR: 11.02; 95% CI: 1.07–113.60), television (OR: 9.42; 95% CI: 1.21–73.20) and cinema marketing of tobacco (OR: 3.08; 95% CI: 1.46–6.49) were significantly higher in low-income than in high-income countries (Table 5). Compared with the interviewees from urban communities, the likelihood that interviewees from rural communities reported exposure to traditional marketing was either significantly lower – posters, signage, print and cinema marketing – or not significantly different – television and radio marketing (Table 5).
Non-traditional marketing was reported less frequently than traditional marketing (Table 4). Although tobacco marketing on other products – e.g. umbrellas – was the most commonly reported form of non-traditional marketing, only 1468 (12%) of the interviewees reported seeing such marketing in the previous six months (Fig. 6 and Table 4). Country income group appeared to have little impact on exposure to non-traditional marketing but overall exposure and exposure to each form of non-traditional marketing appeared more common in the urban communities than in the rural.

After controlling for confounders, the likelihood of exposure to non-traditional tobacco marketing in the low- and middle-income countries appeared similar to that in the high-income countries (Table 6). However, compared with their urban counterparts, the likelihood that rural interviewees reported exposure to one or more forms of non-traditional marketing was significantly lower (OR: 0.38, 95% CI: 0.25–0.59) – including the odds of exposure to sponsorship (OR: 0.35, 95% CI: 0.22–0.56), marketing on other products (OR: 0.32, 95% CI: 0.20–0.54), internet marketing (even after controlling for internet access; OR: 0.45, 95% CI: 0.26–0.78), free samples (OR: 0.37, 95% CI: 0.21–0.66) and vouchers (OR: 0.28, 95% CI: 0.16–0.51).

Discussion

Our study has three important findings in relation to tobacco marketing. First, we identified high levels of ongoing exposure to tobacco marketing – despite 14 of the study countries having ratified the FCTC at the time the data were collected; by December 2014, Argentina had signed but not ratified the FCTC and Zimbabwe had only acceded to it. Although ratification requires countries to implement comprehensive marketing bans, 10% of the interviewees reported seeing at least five types of tobacco marketing in the six months before interview and 45% reported seeing at least one type of tobacco marketing over the same period. Second, we detected substantially higher levels of tobacco marketing in the lower-income countries we investigated than in the higher-income. This result is consistent with the tobacco industry specifically targeting low- and middle-income countries, 19,20,21.
which could be due to large youth populations in lower-income countries and to high-income countries having more established policies on tobacco control.20 Third, for 13 of 15 marketing measures, exposure was significantly lower in the rural communities than in the urban ones.

High levels of tobacco marketing may reflect failure to enact legislation and/or to enforce compliance.21 Yet many of our interviewees – even those from countries with highly regarded tobacco control measures such as Brazil, Canada and Sweden22–26 – reported substantial exposure to tobacco marketing. This indicates that the tobacco industry may still be finding ways to market its products. Given that we recorded 10 times greater exposure to traditional marketing in the low-income countries than in the high-income countries – but similar levels of exposure to non-traditional marketing across all country income groups – it appears that legislation may have been relatively successful in controlling traditional marketing in high-income countries. This success may have resulted in the tobacco industry using newer, less regulated forms of marketing. Therefore, enforcement may need to be stronger and legislation continuously adapted to the changing marketing practices of the tobacco industry. Data on the tobacco industry’s marketing expenditure would also be useful, but such data are available for very few countries27 and not for any of our study countries.

Our observation of more intense tobacco marketing in urban communities than in rural communities is consistent with evidence that the tobacco industry focuses its marketing and distribution on areas with the greatest potential impact – i.e. areas with dense populations28–29 that can be easily reached at relatively low cost.30

Our study had several limitations. First, although diverse,11 the countries studied are not necessarily representative of low-, middle- and high-income countries globally and the communities investigated within each country are not necessarily representative of all communities.12 Although this means that the results cannot reliably be extrapolated to all communities within a country, the demographic characteristics of our interviewees do appear to match those of adults in the corresponding national populations.13 We also note that the main tobacco company in two of the three lower-middle-income countries – i.e. China and the Islamic Republic of Iran – is state-owned.33 Countries with state-owned monopolies traditionally do not market their products aggressively because the lack of competition renders this unnecessary.32 Our findings, especially those on self-reported marketing, indicate that the tobacco marketing environment may well be affected by state ownership of the local tobacco industry. In the Islamic Republic of Iran, for example, exposure to most forms of marketing appeared to be less intense than in other lower-middle-income countries. Our results appear to be consistent with data from WHO’s Global Adult Tobacco Survey13 that was conducted in 16 countries, including six of our study countries – Brazil, China, India, Pakistan, Poland and Turkey. Although the WHO’s survey did not include statistical comparisons, it did show relatively high self-reported exposure to tobacco marketing in lower-income countries – with the exception of the Russian Federation – and in urban communities.13 Our findings also seem similar to those from the International Tobacco Control Policy Evaluation Project,34 which has collected data from 22 countries, including five of our study countries – Brazil, Canada, China, India and Malaysia.

Second, the sample size varied markedly by country – both for the number of communities and number of interviewees. We would expect more uncertainty in an estimate for a country in which only a few communities are sampled. Additionally, the number of countries per country income group and the small number of communities surveyed in two of the three low-income countries may explain the wide CIs seen in some significant comparisons between low- and high-income countries. Third, although the methods used have been shown to be reliable,30 only one tobacco-selling store was visited per community during the walk – and it is not possible to know whether the selected store was representative of all stores within the community. Fourth, our study was limited by difficulties in estimating the tobacco industry’s marketing expenditure in each study country and by exposure of many individuals to cross-border marketing – including internet marketing. Finally, the study used data collected between 2009 and 2012 and some of the countries have since taken further steps to strengthen their tobacco marketing regulations.

Our study also has strengths. The Environmental Profile of a Community’s

Fig. 6. Proportion of urban or rural interviewees who reported seeing at least one non-traditional type of tobacco marketing in the previous six months, 16 countries, 2009–2012

Notes: Countries were categorized according to the World Bank’s 2006 classification.11 Non-traditional types of marketing were sponsorship, tobacco marketing on other products, on the internet, free samples and vouchers.
The likelihood that interviewees reported seeing non-traditional types of tobacco marketing within the previous six months, 16 countries, 2009–2012

| Group                        | OR (95% CI)* |
|------------------------------|-------------|
|                              | Sponsorship | On other products | Internet | Free samples | Vouchers | Any type |
| Community type               |             |                   |          |              |          |          |
| Urban                        | 1           | 1                  | 1        | 1            | 1        |          |
| Rural                        | 0.35 (0.22–0.56) | 0.32 (0.20–0.54) | 0.45 (0.26–0.78) | 0.37 (0.21–0.66) | 0.28 (0.16–0.51) | 0.38 (0.25–0.59) |
| Country income group         |             |                   |          |              |          |          |
| High                         |             |                   |          |              |          |          |
| Upper-middle                 | 0.57 (0.04–7.71) | 0.59 (0.03–12.56) | 0.75 (0.06–8.66) | 4.03 (0.07–224.84) | 1.94 (0.04–88.53) | 0.82 (0.07–10.03) |
| Lower-middle                 | 0.91 (0.05–18.13) | 1.26 (0.04–42.87) | 0.46 (0.03–7.76) | 10.20 (0.11–987.76) | 10.73 (0.15–74.21) | 0.96 (0.05–17.18) |
| Low                          | 1.32 (0.06–29.21) | 1.10 (0.03–42.45) | 0.06 (0.00–1.47) | 10.95 (0.11–1086.21) | 1.19 (0.01–120.60) | 1.03 (0.05–20.59) |

CI: confidence interval; OR: odds ratio.
* Derived from logistic multilevel regression models.
+ Countries were categorized according to the World Bank's 2006 classification.

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Tobacco marketing in 16 countries

Résumé

Profil environnemental de la santé d’une communauté: étude transversale sur le marketing du tabac dans 16 pays

Objectif Examinier et comparer les pratiques de marketing du tabac dans 16 pays, alors que la Convention-cadre pour la lutte antitabac exige aux parties d’instaurer une interdiction globale de ce type de pratiques.

Méthodes De 2009 à 2012, des enquêtes qualifiées ont rencontré 462 communautés, réparties dans 16 pays, le long d’un parcours d’un kilomètre afin de recueillir des données sur le marketing du tabac. Nous avons interrogé des membres de ces communautés au sujet de leurs déclarations, l’exposition à au moins une forme de marketing du tabac. Selon leurs déclarations, l’exposition à au moins une forme de marketing traditionnelle était 10 fois plus importante dans les pays à revenu faible et intermédiaire, que dans les pays à revenu élevé (rapport des cotes: 9,77; IC 95%: 1,24–76,77). Pour presque toutes les mesures, l’exposition aux pratiques de marketing était sensiblement plus faible dans les communautés rurales que dans les communautés urbaines.

Conclusion En dépit de la législation mondiale visant à limiter les pratiques de marketing du tabac, celles-ci sont très répandues. À l’échelle nationale, leur fréquence et leur type varient en fonction des tranches de revenus et du type de communauté, étant plus importantes dans les pays à revenu faible et les communautés urbaines.

Research

Зависимость состояния здоровья в общинах от экологической обстановки: одномерное поперечное исследование маркетинга табака в 16 странах

Цель Изучить и сравнить маркетинг табака в 16 странах, принимая во внимание требование Рамочной конвенции Всемирной организации здравоохранения по борьбе против табака ввести полный запрет на маркетинг подобного рода в государствах-участниках.

Методы В период с 2009 по 2012 годы обученные исследователи проходили путь длиной в 1 км в 462 общин в 16 стран и собирали данные о маркетинге табака. Жители исследуемой общины оценивались относительно то, приходилось ли им сталкиваться с традиционным и нетрадиционным маркетингом такого рода за последние шесть месяцев. Для изучения маркетинговых различий между городскими и сельскими община, а также для выявления различий между странами с низким, средним и высоким уровнем дохода были использованы модели многоуровневой регрессии с контролем потенциальных, исключающих результаты факторов. Результаты По сравнению со странами, характеризующимися высоким уровнем дохода, в странах с низким уровнем дохода реклама табака наблюдала в 81 раз чаще (отношение частоты случаев, ОЧС: 80,98; 95% доверительный интервал, ДИ: 4,15–1578,42), а количество торговых точек, реализующих табачные изделия, было в 2,5 раза больше в странах с низким уровнем дохода и уровнем дохода ниже среднего (ОЧС: 2,58; 95% ДИ: 1,17–5,67 и ОЧС: 2,52; ДИ: 1,23–5,17 соответственно). Из 11 842 опрошенных 1184 человека (10%) сообщили о том, что сталкивались по меньшей мере с пятью видами маркетинга
Resumen

El perfil ambiental de la salud de una comunidad: un estudio transversal sobre la publicidad del tabaco en 16 países

Objetivo
Examinar y comparar la publicidad del tabaco en 16 países mientras el Convenio Marco de la OMS para el Control del Tabaco obliga a las partes a implementar una prohibición generalizada en este tipo de publicidad.

Métodos
Entre 2009 y 2012, investigadores entrenados completaron una ruta kilométrica en 462 comunidades de 16 países para recopilar datos sobre la publicidad del tabaco. Se entrevistó a miembros de cada comunidad sobre su exposición a la publicidad tradicional y no tradicional durante los seis meses previos. Se utilizaron modelos de regresión en múltiples niveles que controlaran los posibles factores de confusión para examinar las diferencias en la publicidad entre las comunidades urbanas y rurales y entre los países de ingresos altos, medios y bajos.

Resultados
En comparación con los países de ingresos altos, la cantidad de anuncios sobre tabaco encontrados fue 81 veces superior en los países de ingresos bajos (razón de tasas de incidencia, IRR: 80,98; intervalo de confianza, IC, del 95%: 4,15–1578,42) y el número de estancos era 2,5 veces superior tanto en los países de ingresos bajos como en los países de ingresos medios más bajos (IRR: 2,58; IC del 95%: 1,17–5,67) en 15 países, y 2,5 veces superior en el país de ingresos altos (IRR: 2,52; IC: 1,23–5,17, respectivamente). De los 11.842 entrevistados, 1,184 (10%) informaron haber visto al menos cinco tipos de publicidad del tabaco. La exposición autodeclarada a al menos una clase de publicidad tradicional fue 10 veces más alta en los países de ingresos bajos que en los países de ingresos altos (cociente de posibilidades: 9,77 [IC del 95%: 1,24–76,77]). En prácticamente todas las mediciones, la exposición era significativamente más baja en las comunidades rurales que en las comunidades urbanas.

Conclusión
A pesar de la legislación global para limitar la publicidad del tabaco, esta parece ubicua. La frecuencia y la clase de publicidad del tabaco varían en un nivel nacional por grupo de ingresos y tipo de comunidad, y parece ser mayor en los países de ingresos bajos y en las comunidades rurales.

References

1. Global health risks: mortality and burden of disease attributable to selected major risks. Geneva: World Health Organization, 2009. Available from: http://www.who.int/healthinfo/global_burden_disease/GlobalHealthRisks_report_full.pdf [cited 2013 Jun 15].
2. The role of the media in promoting and reducing tobacco use. NCI Tobacco Control Monograph No. 19. Bethesda: National Institutes of Health; 2008.
3. Difranza JR, Wollman RJ, Sargent JD, Weitzman M, Hippie BJ, Winickoff JP, Tobacco Consortium, Center for Child Health Research of the American Academy of Pediatrics. Tobacco promotion and the initiation of tobacco use: assessing the evidence for causality. Pediatrics. 2006 Jun;117(6):e1237–48. doi: http://dx.doi.org/10.1542/peds.2005-1817 PMID: 16740823.
4. Pierce JP, Choi WS, Gilpin EA, Farkas AJ, Berry CC. Tobacco industry promotion of cigarettes and adolescent smoking. JAMA. 1998 Feb 18;279(7):511–5. doi: http://dx.doi.org/10.1001/jama.279.7.511 PMID: 9480360.
5. Blecher E. The impact of tobacco advertising bans on consumption in developing countries. J Health Econ. 2008 Jul;27(4):930–42. doi: http://dx.doi.org/10.1016/j.jhealeco.2008.02.010 PMID: 18440661.
6. Saifer H, Chaloupska F. The effect of tobacco advertising bans on tobacco consumption. J Health Econ. 2000 Nov;19(6):1117–37. doi: http://dx.doi.org/10.1016/S0167-6296(00)00054-0 PMID: 11186847.
7. WHO Framework Convention on Tobacco Control. Geneva: World Health Organization, 2005.
8. 2010 Global progress report on the implementation of the WHO Framework Convention on Tobacco Control. Geneva: World Health Organization, 2010. Available from: http://www.who.int/fctc/reporting/summarereport.pdf [cited 2013 Jan 15].
9. Chow CK, Lock K, Madhavan M, Corsi DJ, Gilmore AB, Subramanian SV, et al. Environmental Profile of a Community’s Health (EPOCH): an instrument to measure environmental determinants of cardiovascular health in five countries. PLoS ONE. 2010;5(12):e14294. doi: http://dx.doi.org/10.1371/journal.pone.0014294 PMID: 21170320.
10. Teo K, Chow CK, Var M, Rangarajan S, Yusuf S, PURE investigators-Writing Group. The Prospective Urban Rural Epidemiology (PURE) study: examining the impact of societal influences on chronic noncommunicable diseases in low-, middle-, and high-income countries. Am Heart J. 2009 Jul;158(1):1–7. e1. doi: http://dx.doi.org/10.1016/j.ahj.2009.04.019 PMID: 19540385.
11. Yusuf S, Rangarajan S, Teo K, Islam S, LiW, Liu L, et al.; PURE Investigators. Cardiovascular risk and events in 17 low-, middle-, and high-income countries. N Engl J Med. 2014 Aug 28;371(9):818–27. doi: http://dx.doi.org/10.1056/NEJMoa1311890 PMID: 25162888.
12. Adcock D, Halborg A, Ross C. Marketing: principles and practice. 4th ed. Harlow: Financial Times Prentice Hall, 2001.
13. Dacko S. The advanced dictionary of marketing: putting theory to use. Oxford: Oxford University Press; 2007.
14. WHO Framework Convention on Tobacco Control: guidelines for implementation [Internet]. Geneva: World Health Organization; 2013. Available from: http://www.who.int/fctc/guidelines/adopted/guidel_2011/en/ [cited 2014 Jan 15].
15. Chuan YC, Cubbin C, Ahn D, Winkleby MA. Effects of neighbourhood socioeconomic status and convenience store concentration on individual level smoking. J Epidemiol Community Health. 2005 Jul;59(7):568–73. doi: http://dx.doi.org/10.1136/jech.2004.020401 PMID: 15963160.
16. Henrikson L, Feigheny EC, Schleicher NW, Cowling DW, Kline RS, Fortmann SP. Is adolescent smoking related to the density and proximity of tobacco outlets and retail cigarette advertising near schools? Prev Med. 2008 Aug;47(2):210–4. doi: http://dx.doi.org/10.1016/j.ypmed.2008.04.008 PMID: 18544662.
17. Armar A, Haglund M. From social taboo to “torch of freedom”: the marketing of cigarettes to women. Tob Control. 2000 Mar;9(1):3–8. doi: http://dx.doi.org/10.1136/tc.9.1.3 PMID: 10691743.
18. Lee K, Carpenter C, Challa C, Lee S, Connolly GN, Koh HK. The strategic targeting of females by transnational tobacco companies in South Korea following trade liberalization. Global Health. 2009;5:2. doi: http://dx.doi.org/10.1186/1744-8603-5-2 PMID: 19183443.
19. Braun S, Mejia R, Ling PM, Pérez-Stable EJ. Tobacco industry targeting adolescents. Tob Control. 2004;13(4):279–84. PMID: 15544462.
20. Amos A, Haglund M. From social taboo to “torch of freedom”: the marketing of cigarettes to women. Tob Control. 2000 Mar;9(1):3–8. doi: http://dx.doi.org/10.1136/tc.9.1.3 PMID: 10691743.
21. Lee K, Carpenter C, Challa C, Lee S, Connolly GN, Koh HK. The strategic targeting of females by transnational tobacco companies in South Korea following trade liberalization. Global Health. 2009;5:2. doi: http://dx.doi.org/10.1186/1744-8603-5-2 PMID: 19183443.
22. Braun S, Mejia R, Ling PM, Pérez-Stable EJ. Tobacco industry targeting youth in Argentina. Tob Control. 2008 Apr;17(2):111–7. doi: http://dx.doi.org/10.1136/tc.2007.018481 PMID: 18299308.
23. AMESCA regional plan 1999-2001. London: British American Tobacco: 1999.
24. Lee K, Carpenter C, Challa C, Lee S, Connolly GN, Koh HK. The strategic targeting of females by transnational tobacco companies in South Korea following trade liberalization. Global Health. 2009;5:2. doi: http://dx.doi.org/10.1186/1744-8603-5-2 PMID: 19183443.
25. Armar A, Haglund M. From social taboo to “torch of freedom”: the marketing of cigarettes to women. Tob Control. 2000 Mar;9(1):3–8. doi: http://dx.doi.org/10.1136/tc.9.1.3 PMID: 10691743.
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22. Thun M, Da Costa E, Silva VL. Introduction and overview of global tobacco surveillance. In: Shafey-O, Dolwick S, Guindon GE, editors. Tobacco control country profiles. 2nd ed. Atlanta: American Cancer Society; 2003.

23. Nagler RH, Viswanath K. Implementation and research priorities for FCTC Articles 13 and 16: tobacco advertising, promotion, and sponsorship and sales to and by minors. Nicotine Tob Res. 2013 Apr;15(4):832–46. doi: http://dx.doi.org/10.2471/BLT.15.155846

24. Iglesias R, Prabhat J, Pinto M. Luiza da Costa e Silva V, Godinho J. Tobacco control in Brazil. Washington: World Bank; 2007. Available from: http://www-wds.worldbank.org/external/default/WDSContentServer/WDS/IB/2007/09/12/000200953_20070912143436/Rendered/PDF/408350BR0TobaccoControl01PUBLIC1.pdf [cited 2014 Feb 15].

25. Best practices in tobacco control: regulation of tobacco products, Canada report [Internet]. Geneva: World Health Organization; 2005. Available from: http://www.who.int/tobacco/global_interaction/tobreg/canadian_bp/en/ [cited 2014 Jan 15].

26. Joossens L, Raw M. The tobacco control scale 2013 in Europe. Brussels: Association of European Cancer Leagues; 2014.

27. IARC handbook of cancer prevention. Vol. 14: Effectiveness of tax and price policies for tobacco control [Internet]. Geneva: World Health Organization; 2011. Available from: http://www.iarc.fr/en/publications/pdfs-online/prev/handbook14/index.php [cited 2014 Aug 15].

28. Perlman F, Bobak M, Gilmore A, McKee M. Trends in the prevalence of smoking in Russia during the transition to a market economy. Tob Control. 2007 Oct;16(5):299–305. doi: http://dx.doi.org/10.1136/tc.2006.019455 PMID: 17897987

29. Gilmore AB, Radu-Loghin C, Zatushevski I, McKee M. Pushing up smoking incidence: plans for a privatised tobacco industry in Moldova. Lancet. 2005 Apr 9-15;365(9467):1354–9. doi: http://dx.doi.org/10.1016/S0140-6736(05)61035-5 PMID: 15823388

30. Neuwirth B. Marketing channel strategies in rural emerging markets: unlocking business potential. [Internet]. Evanston: Kellogg School of Management; 2012. Available from: http://www.kellogg.northwestern.edu/~rmedia/files/research/curt/marketing%20channel%20strategy%20in%20rural%20emerging%20markets%20bernhard%20neuwirth.pdf [cited 2013 Aug 15].

31. Eriksen M, Mackay J, Ross H. The tobacco atlas, 4th ed. Atlanta: American Cancer Society; 2012.

32. Gilmore AB, McKee M. Moving east: how the transnational tobacco industry gained entry to the emerging markets of the former Soviet Union-part II: an overview of priorities and tactics used to establish a manufacturing presence. Tob Control. 2004 Jun;13(2):151–60. doi: http://dx.doi.org/10.1136/tc.2003.005207 PMID: 15175532

33. GATS (Global Adult Tobacco Survey) [Internet]. Geneva: World Health Organization; 2013. Available from: http://www.who.int/tobacco/surveillance/gats/en/ [cited 2013 Aug 15].

34. The international tobacco control evaluation project [Internet]. Ontario: ITC Project; 2012. Available from: http://www.itcproject.org/ [cited 2013 Nov 15].
### Table 2. Observed push and pull tobacco marketing, 16 countries, 2009–2012

| Country* | Push marketing | Pull marketing |  |
|----------|----------------|----------------|  |
|          | Outlets selling cigarettes/tobacco | No. of selected tobacco stores selling single cigarettes, (%) | Mean no. of outlet advertising with POS advertising, (%) | No. of selected tobacco stores with POS advertising, (%) |
|          | Mean no. of outlets | Mean no. of vendors or street stands |  |
| All countries |  |  |  |
| All communities (n=462) | 4.2 | 0.7 | 3.5 | 145/461 (31.5) | 13 | 139/458 (30.4) |
| Urban (n=235) | 4.6 | 0.9 | 3.7 | 74/235 (31.5) | 1.7 | 96/235 (40.9) |
| Rural (n=227) | 3.8 | 0.5 | 3.3 | 71/226 (31.4) | 0.9 | 43/223 (19.3) |
| High-income countries |  |  |  |
| Canada |  |  |  |
| Urban (n=31) | 1.5 | 0.0 | 1.5 | 0/31 (0.0) | 0.0 | 3/31 (9.7) |
| Rural (n=15) | 1.1 | 0.0 | 1.1 | 0/15 (0.0) | 0.0 | 0/15 (0.0) |
| Sweden |  |  |  |
| Urban (n=20) | 2.1 | 0.0 | 2.1 | 0/20 (0.0) | 0.8 | 10/20 (50.0) |
| Rural (n=3) | 1.0 | 0.0 | 1.0 | 0/3 (0.0) | 0.0 | 0/3 (0.0) |
| United Arab Emirates |  |  |  |
| Urban (n=1) | 6.0 | 0.0 | 6.0 | 1/1 (100.0) | 0.0 | 0/1 (0.0) |
| Rural (n=2) | 4.5 | 0.0 | 4.5 | 1/2 (50.0) | 0.0 | 0/2 (0.0) |
| Total | 1.7 | 0.0 | 1.7 | 2/72 (2.8) | 0.2 | 13/72 (18.1) |
| All communities (n=72) |  |  |  |
| Urban (n=52) | 1.8 | 0.0 | 1.8 | 1/52 (1.9) | 0.3 | 13/52 (25.0) |
| Rural (n=20) | 1.5 | 0.0 | 1.5 | 1/20 (5.0) | 0.0 | 0/20 (0.0) |
| Upper-middle-income countries |  |  |  |
| Argentina | 2.0 | 0.0 | 2.0 | 2/6 (33.3) | 0.5 | 1/6 (16.7) |
| Urban (n=6) | 0.8 | 0.0 | 0.8 | 3/14 (21.4) | 0.5 | 1/14 (7.1) |
| Brazil | 1.0 | 0.3 | 0.7 | 0/7 (0.0) | 10.4 | 7/7 (100.0) |
| Urban (n=7) | 2.0 | 0.0 | 2.0 | 0/7 (0.0) | 6.0 | 7/7 (100.0) |
| Chile | 3.0 | 1.0 | 2.0 | 0/2 (0.0) | 0.5 | 1/2 (50.0) |
| Urban (n=2) | 1.3 | 0.3 | 1.0 | 2/3 (66.7) | 1.0 | 3/3 (100.0) |
| Malaysia | 5.8 | 0.2 | 5.6 | 0/18 (0.0) | 0.1 | 9/18 (50.0) |
| Urban (n=18) | 7.2 | 0.7 | 6.5 | 4/15 (26.7) | 0.1 | 7/15 (46.7) |

(continues...
(continued)

| Country                                      | Push marketing | Pull marketing |
|-----------------------------------------------|----------------|----------------|
|                                               | Outlets selling cigarettes/tobacco | No. of selected tobacco stores selling single cigarettes, (%) | Mean no. of cigarette or tobacco adverts | No. of selected tobacco stores with POS advertising, (%) |
|                                               | Mean no. of outlets\(^\text{b}\) | Mean no. of vendors or street stands | Mean no. of general stores |
| **Poland**                                   |                |                            |                            |
| Urban (\(n = 1\))                            | 8.0            | 0.0                        | 8.0                         | 0/1 (0.0) | 0.0 | 0/1 (0.0) |
| Rural (\(n = 3\))                            | 1.3            | 0.0                        | 1.3                         | 0/3 (0.0) | 0.0 | 0/3 (0.0) |
| **South Africa**                             |                |                            |                            |
| Urban (\(n = 3\))                            | 3.3            | 1.0                        | 2.3                         | 1/3 (33.3) | 0.0 | 1/3 (33.3) |
| Rural (\(n = 3\))                            | 1.3            | 0.0                        | 1.3                         | 1/3 (33.3) | 0.0 | 1/3 (33.3) |
| **Turkey**                                   |                |                            |                            |
| Urban (\(n = 25\))                           | 4.0            | 0.0                        | 4.0                         | 0/25 (0.0) | 0.0 | 9/25 (36.0) |
| Rural (\(n = 13\))                           | 1.2            | 0.0                        | 1.2                         | 0/13 (0.0) | 0.0 | 1/13 (7.7) |
| **Total**                                    | 3.4            | 0.2                        | 3.2                         | 13/120 (10.8) | 1.1 | 48/120 (40.0) |
| All communities (\(n = 120\))                |                |                            |                            |
| Urban (\(n = 62\))                           | 4.0            | 0.2                        | 3.8                         | 3/62 (4.8) | 1.3 | 28/62 (45.2) |
| Rural (\(n = 58\))                           | 2.8            | 0.2                        | 2.6                         | 10/58 (17.2) | 0.9 | 20/58 (34.5) |
| **Lower-middle-income countries**             |                |                            |                            |
| China                                        |                |                            |                            |
| Urban (\(n = 39\))                           | 6.7            | 0.4                        | 6.3                         | 0/39 (0.0) | 0.0 | 8/39 (20.5) |
| Rural (\(n = 62\))                           | 3.0            | 0.0                        | 2.9                         | 0/61 (0.0) | 0.0 | 0/58 (0.0) |
| Colombia                                     |                |                            |                            |
| Urban (\(n = 31\))                           | 7.7            | 2.4                        | 5.3                         | 31/31 (100.0) | 3.3 | 17/31 (54.8) |
| Rural (\(n = 23\))                           | 7.3            | 1.2                        | 6.2                         | 23/23 (100.0) | 2.1 | 10/23 (43.5) |
| Iran (Islamic Republic of)                   |                |                            |                            |
| Urban (\(n = 11\))                           | 3.0            | 0.0                        | 3.0                         | 7/11 (63.6) | 0.0 | 0/11 (0.0) |
| Rural (\(n = 9\))                            | 3.9            | 0.0                        | 3.9                         | 8/9 (88.9) | 0.1 | 1/9 (11.1) |
| **Total**                                    | 5.3            | 0.7                        | 4.6                         | 69/174 (39.7) | 1.0 | 36/171 (21.1) |
| All communities (\(n = 175\))                |                |                            |                            |
| Urban (\(n = 81\))                           | 6.6            | 1.1                        | 5.5                         | 38/81 (46.9) | 1.5 | 25/81 (30.9) |
| Rural (\(n = 94\))                           | 4.1            | 0.3                        | 3.8                         | 31/93 (33.3) | 0.6 | 11/90 (12.2) |
| **Low-income countries**                     |                |                            |                            |
| India                                        |                |                            |                            |
| Urban (\(n = 37\))                           | 5.4            | 2.8                        | 2.6                         | 32/37 (86.5) | 4.5 | 28/37 (75.7) |
| Rural (\(n = 51\))                           | 5.2            | 1.3                        | 3.9                         | 29/51 (569) | 1.3 | 9/51 (17.7) |

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| Country       | Push marketing | Pull marketing |
|--------------|----------------|----------------|
|              | Outlets selling cigarettes/tobacco | No. of selected tobacco stores selling single cigarettes, (%) | Mean no. of cigarette or tobacco adverts | No. of selected tobacco stores with POS advertising, (%) |
|              | Mean no. of outlets\(^b\) | Mean no. of vendors or street stands | Mean no. of general stores | |
| Pakistan     |                 |               |                           |                       |
| Urban (n = 2)| 4.0            | 0.0           | 4.0                       | 0/2 (0.0)             |
| Rural (n = 2)| 3.0            | 0.0           | 3.0                       | 0/2 (0.0)             |
| Zimbabwe     |                 |               |                           |                       |
| Urban (n = 1)| 1.0            | 0.0           | 1.0                       | 0/1 (0.0)             |
| Rural (n = 2)| 7.5            | 4.0           | 3.5                       | 0/2 (0.0)             |
| Total        | 5.2            | 1.9           | 3.4                       | 61/95 (64.2)          |
| Urban (n = 40)| 5.3         | 2.6           | 2.7                       | 32/40 (80.0)          |
| Rural (n = 55)| 5.2         | 1.4           | 3.9                       | 29/55 (52.7)          |
| Total (n = 95)|            |               |                           | 2.8                   |
|              | 42/95 (44.2)   |               |                           |                       |
| POS: point-of-sale. |
| 1\(^a\) Countries were categorized according to the World Bank’s 2006 classifications. |
| 2\(^b\) Includes vendors, street stands and general stores. |

Note: Observed numbers by trained investigators during a kilometre-long walk in each community.
| Country* | Postersa | Signageb | Television | Radio | Print media | Cinema | Seen at least one type | Sponsorshipc | On other productsd | Internet | Free samples | Vouchersf | Seen at least one type |
|----------|----------|---------|-----------|-------|------------|--------|------------------------|--------------|-------------------|----------|---------------|-----------|----------------------|
| All countries | | | | | | | | | | | | | |
| All communities | 2335/11819 (19.8) | 1934/11813 (16.4) | 3501/11815 (29.6) | 1465/11811 (12.4) | 1949/11815 (16.5) | 567/11813 (4.8) | 5012/11820 (42.4) | 1060/11818 (9.0) | 1468/11818 (12.4) | 938/11817 (8.1) | 491/11816 (4.2) | 491/11818 (4.2) | 2139/11823 (18.1) |
| Urban | 1323/5800 (23.0) | 1164/5795 (20.1) | 1625/5797 (28.0) | 763/5793 (13.2) | 1234/5796 (21.3) | 351/5795 (6.1) | 2358/5800 (40.8) | 712/5799 (12.3) | 950/5799 (16.4) | 630/5799 (10.9) | 293/5798 (5.1) | 312/5799 (5.4) | 1391/5799 (24.0) |
| Rural | 1002/6019 (16.7) | 770/6018 (12.8) | 1876/6018 (31.2) | 702/6018 (11.7) | 715/6019 (11.9) | 216/6018 (3.6) | 2474/6020 (41.1) | 348/6019 (5.8) | 518/6019 (8.6) | 308/6018 (5.1) | 198/6018 (3.3) | 179/6019 (3.0) | 748/6019 (12.4) |
| High-income countries | | | | | | | | | | | | | |
| Canada | | | | | | | | | | | | | |
| Urban | 59/807 (7.3) | 67/807 (8.3) | 68/807 (8.4) | 17/807 (2.1) | 162/807 (20.1) | 18/807 (2.2) | 244/807 (30.2) | 108/807 (13.4) | 54/807 (6.7) | 39/807 (4.8) | 4/807 (0.5) | 7/807 (0.9) | 165/807 (20.5) |
| Rural | 27/338 (8.0) | 23/338 (6.8) | 29/338 (8.6) | 9/338 (2.7) | 6/338 (18.3) | 12/338 (3.6) | 95/338 (28.1) | 35/338 (10.4) | 15/338 (4.4) | 14/338 (4.1) | 0/338 (0.0) | 3/338 (0.9) | 5/338 (16.3) |
| Sweden | | | | | | | | | | | | | |
| Urban | 66/495 (13.3) | 97/491 (19.8) | 48/492 (9.8) | 4/490 (0.8) | 194/492 (39.4) | 19/491 (3.9) | 237/495 (47.9) | 44/493 (8.9) | 12/493 (25.4) | 81/491 (16.5) | 4/492 (0.8) | 7/493 (1.4) | 182/495 (36.8) |
| Rural | 2/84 (2.4) | 6/84 (7.1) | 6/84 (7.1) | 0/84 (0.0) | 36/84 (42.0) | 2/84 (2.4) | 40/84 (47.6) | 5/84 (6.0) | 15/84 (17.9) | 9/84 (10.7) | 3/84 (3.6) | 0/84 (0.0) | 22/84 (26.2) |
| United Arab Emirates | | | | | | | | | | | | | |
| Urban | 2/26 (7.7) | 2/26 (7.7) | 1/26 (3.9) | 1/26 (3.9) | 1/26 (3.9) | 2/26 (7.7) | 2/26 (7.7) | 1/26 (3.9) | 1/26 (3.9) | 2/26 (7.7) | 0/26 (0.0) | 0/26 (0.0) | 2/26 (7.7) |
| Rural | 5/63 (7.9) | 1/63 (1.6) | 4/63 (6.4) | 1/63 (1.6) | 4/63 (6.4) | 0/63 (0.0) | 9/63 (14.3) | 1/63 (1.6) | 1/63 (1.6) | 0/63 (0.0) | 0/63 (0.0) | 1/63 (1.6) |
| Total | | | | | | | | | | | | | |
| All communities | 161/1813 (8.9) | 196/1809 (10.8) | 156/1810 (8.6) | 32/1808 (1.8) | 459/1810 (25.4) | 53/1809 (2.9) | 627/1813 (34.6) | 193/1811 (10.7) | 211/1811 (11.7) | 146/1809 (8.1) | 11/1810 (0.6) | 17/1811 (0.9) | 427/1813 (23.6) |
| Urban | 127/1328 (9.6) | 166/1324 (12.5) | 117/1325 (8.8) | 22/1323 (1.7) | 373/1325 (26.9) | 39/1324 (3.0) | 483/1326 (36.4) | 153/1326 (11.5) | 180/1326 (13.7) | 122/1324 (9.2) | 8/1325 (0.6) | 14/1326 (1.1) | 348/1328 (26.3) |
| Rural | 34/485 (7.0) | 30/485 (6.2) | 39/485 (8.0) | 10/485 (2.1) | 102/485 (21.0) | 14/485 (2.9) | 144/485 (29.7) | 40/485 (8.3) | 31/485 (6.4) | 24/485 (5.0) | 3/485 (0.6) | 3/485 (0.6) | 78/485 (16.1) |
| Upper-middle-income countries | | | | | | | | | | | | | |
| Argentina | | | | | | | | | | | | | |
| Urban | 16/171 (9.4) | 16/171 (9.4) | 36/171 (21.1) | 0/171 (0.0) | 15/171 (8.8) | 0/171 (0.0) | 49/171 (28.7) | 4/171 (2.3) | 1/171 (0.6) | 1/171 (0.6) | 0/171 (0.0) | 0/171 (0.0) | 6/171 (3.5) |
| Rural | 6/373 (1.6) | 7/373 (1.9) | 86/373 (23.1) | 2/373 (0.5) | 24/373 (6.4) | 0/373 (0.0) | 103/373 (27.6) | 6/373 (1.6) | 0/373 (0.0) | 2/373 (0.5) | 0/373 (0.0) | 0/373 (0.0) | 8/373 (2.1) |

(continues...)
| Country | Traditional marketing | Non-traditional marketing |
|---------|-----------------------|---------------------------|
|         | Postersb | Signagec | Television | Radiob | Print media² | Cinema | Seen at least one type | Sponsorship² | On other products¹ | Internet | Free samples | Vouchers² | Seen at least one type |
| Brazil  |          |          |            |        |             |        |                        |              |                     |          |              |           |                           |
| Urban   | 15/202 (7.4) | 8/202 (4.0) | 37/202 (18.3) | 8/202 (4.0) | 23/202 (11.4) | 3/202 (1.5) | 56/202 (27.7) | 6/202 (3.0) | 2/202 (1.0) | 7/202 (3.5) | 1/202 (0.5) | 1/202 (0.5) | 13/202 (6.4) |
| Rural   | 22/185 (12.1) | 1/185 (0.5) | 3/185 (1.6) | 2/185 (1.1) | 5/185 (2.7) | 0/185 (0.0) | 64/185 (34.6) | 0/185 (0.0) | 0/185 (0.0) | 0/185 (0.0) | 0/185 (0.0) | 0/185 (0.0) |                           |
| Chile   | 35/51 (68.6) | 18/51 (35.3) | 51/51 (100.0) | 37/51 (72.6) | 24/51 (47.1) | 0/51 (0.0) | 51/51 (100.0) | 2/51 (3.9) | 3/51 (6.0) | 0/51 (0.0) | 0/51 (0.0) | 39/51 (76.5) |                           |
| Urban   | 3/76 (40.0) | 1/76 (1.3) | 12/76 (15.8) | 4/76 (5.3) | 3/76 (40.0) | 0/76 (0.0) | 14/76 (18.4) | 0/76 (0.0) | 2/76 (2.6) | 0/76 (0.0) | 0/76 (0.0) | 2/76 (2.6) |                           |
| Malaysia | 260/591 (44.0) | 194/591 (32.8) | 271/591 (45.9) | 223/591 (37.7) | 251/591 (42.5) | 67/591 (11.3) | 300/591 (50.8) | 191/591 (32.3) | 191/591 (32.3) | 230/591 (38.9) | 80/591 (13.5) | 101/591 (17.1) | 262/591 (44.3) |
| Urban   | 202/577 (35.0) | 163/577 (28.3) | 216/577 (37.4) | 173/577 (30.0) | 181/577 (31.4) | 41/577 (7.1) | 227/577 (39.3) | 123/577 (21.3) | 146/577 (25.3) | 161/577 (27.9) | 72/577 (12.5) | 66/577 (11.4) | 178/577 (30.9) |
| Poland  | 6/26 (23.1) | 5/26 (19.2) | 4/26 (15.4) | 1/26 (3.9) | 6/26 (23.1) | 1/26 (3.9) | 12/26 (46.2) | 2/26 (7.7) | 3/26 (11.5) | 4/26 (15.4) | 4/26 (15.4) | 2/26 (7.7) | 11/26 (42.3) |
| Urban   | 10/63 (15.9) | 9/63 (14.3) | 7/63 (11.1) | 1/63 (1.6) | 8/63 (12.7) | 1/63 (1.6) | 23/63 (36.5) | 1/63 (1.6) | 5/63 (7.9) | 3/63 (4.8) | 1/63 (1.6) | 0/63 (0.0) | 8/63 (12.7) |
| South Africa | 48/93 (49.0) | 44/93 (44.9) | 5/49 (5.1) | 45/98 (45.9) | 53/98 (54.1) | 21/98 (21.4) | 80/98 (81.6) | 30/99 (30.3) | 29/99 (29.3) | 17/99 (17.2) | 30/99 (30.3) | 34/99 (34.3) | 50/99 (50.5) |
| Urban   | 38/95 (40.0) | 33/95 (34.7) | 34/95 (35.8) | 46/95 (48.4) | 29/95 (30.5) | 3/94 (3.2) | 65/95 (68.4) | 16/95 (16.8) | 17/95 (17.9) | 5/94 (5.3) | 16/94 (17.0) | 10/95 (10.5) | 25/95 (26.3) |
| Turkey  | 124/795 (15.6) | 127/795 (16.0) | 170/795 (21.4) | 45/795 (5.7) | 89/795 (11.2) | 12/795 (1.5) | 252/795 (31.7) | 43/795 (5.4) | 87/795 (10.9) | 21/795 (2.6) | 6/795 (0.8) | 4/795 (0.5) | 11/795 (13.8) |
| Rural   | 30/412 (7.3) | 40/412 (9.7) | 85/412 (20.6) | 19/412 (4.6) | 31/412 (7.5) | 6/412 (1.5) | 113/412 (27.4) | 14/412 (3.4) | 39/412 (9.5) | 11/412 (2.7) | 3/412 (0.7) | 0/412 (0.0) | 56/412 (13.6) |
| Total   | 825/3715 (22.2) | 666/3715 (17.9) | 1097/3715 (29.5) | 606/3715 (16.3) | 742/3715 (20.0) | 155/3714 (4.2) | 1409/3715 (37.9) | 438/3716 (11.8) | 561/3716 (15.1) | 471/3715 (12.7) | 213/3715 (5.7) | 218/3716 (5.9) | 768/3716 (20.7) |
| Urban   | 504/1934 (26.1) | 412/1934 (21.3) | 62.3/1934 (32.2) | 35.9/1934 (18.6) | 461/1934 (23.8) | 104/1934 (5.4) | 800/1934 (41.4) | 278/1935 (14.4) | 352/1935 (18.2) | 289/1935 (14.9) | 121/1935 (6.3) | 142/1935 (7.3) | 491/1935 (25.4) |
| Rural   | 321/1781 (18.0) | 254/1781 (14.3) | 474/1781 (26.6) | 247/1781 (13.9) | 281/1781 (15.8) | 51/1780 (2.9) | 609/1781 (34.2) | 160/1781 (9.0) | 209/1781 (11.7) | 182/1780 (10.2) | 92/1780 (5.2) | 76/1781 (4.3) | 277/1781 (15.6) |

Lower-middle-income countries

China

(continues...)
| Country                  | No. individuals reporting seeing marketing/individuals interviewed (%) | Tradational marketing | Non-traditional marketing |
|-------------------------|------------------------------------------------------------------------|-----------------------|---------------------------|
|                         | Posters | Signage | Television | Radio | Print media | Cinema | Seen at least one type | Sponsorship | On other products | Internet | Free samples | Vouchers | Seen at least one type |
| Urban                   | 329/1217 (27.0) | 225/1215 (18.5) | 257/1217 (43.3) | 158/1893 (84.4) | 102/1216 (8.4) | 946/1894 (50.0) | 141/1217 (11.6) | 265/1217 (21.0) | 188/1219 (15.4) | 81/1217 (6.7) | 73/1217 (6.0) | 372/1220 (30.5) |
| Rural                   | 234/1893 (12.4) | 135/1892 (7.1) | 83/1893 (44.0) | 224/1216 (16.4) | 52/1893 (2.8) | 946/1894 (50.0) | 44/1893 (2.3) | 2011893 (9.0) | 83/1893 (4.4) | 35/1893 (1.9) | 34/1893 (1.8) | 261/1893 (13.8) |
| Colombia                | 89/151 (58.9) | 67/151 (44.4) | 88/151 (58.3) | 53/151 (35.1) | 9/151 (6.0) | 115/151 (76.2) | 58/151 (38.4) | 60/151 (39.7) | 53/151 (35.1) | 54/151 (35.8) | 64/151 (42.4) |
| Rural                   | 96/127 (75.6) | 79/127 (62.2) | 72/127 (56.7) | 55/127 (43.3) | 9/127 (7.1) | 108/127 (85.0) | 66/127 (52.0) | 67/127 (52.8) | 17/127 (13.4) | 62/127 (48.8) | 64/127 (50.4) | 70/127 (55.1) |
| Iran (Islamic Republic of) | 17/321 (5.3) | 50/321 (15.6) | 11/321 (3.4) | 9/321 (2.8) | 22/321 (6.9) | 76/321 (23.7) | 3/321 (0.9) | 7/321 (2.1) | 1/321 (0.3) | 0/321 (0.0) | 1/321 (0.3) | 12/321 (3.7) |
| Rural                   | 1/272 (0.7) | 2/272 (0.7) | 2/272 (0.7) | 4/272 (1.5) | 11/272 (4.0) | 1/272 (0.4) | 1/272 (0.4) | 0/272 (0.0) | 0/272 (0.0) | 1/272 (0.4) | 1/272 (0.4) |
| Total                   | 766/3981 (19.2) | 559/3979 (14.1) | 150/3980 (38.9) | 501/3980 (12.6) | 198/3980 (5.0) | 192/3982 (47.5) | 313/3981 (7.9) | 569/3981 (14.3) | 301/3983 (7.6) | 231/3981 (6.8) | 226/3981 (5.7) | 780/3984 (19.8) |
| Urban                   | 435/1689 (25.8) | 340/1688 (20.1) | 626/1689 (37.1) | 286/1688 (16.9) | 133/1688 (7.9) | 827/1689 (49.0) | 202/1689 (12.0) | 330/1689 (19.5) | 200/1689 (11.8) | 134/1689 (7.9) | 128/1689 (7.6) | 448/1692 (26.5) |
| Rural                   | 331/2292 (14.4) | 219/2291 (9.6) | 92/2291 (40.3) | 339/2292 (14.8) | 215/2292 (9.4) | 65/2292 (2.8) | 11/2292 (4.8) | 2/2291 (0.4) | 101/2291 (4.4) | 97/2292 (4.2) | 98/2292 (4.3) | 3.32/2292 (14.5) |
| Low-income countries    |                     |                    |                |           |              |              |                     |                |           |              |              |                     |
| India                   | 211/766 (27.6) | 187/766 (24.4) | 201/766 (26.2) | 76/766 (9.4) | 49/766 (12.3) | 63/766 (8.2) | 47/766 (6.1) | 57/766 (7.4) | 3/766 (0.4) | 19/766 (2.5) | 22/766 (2.9) | 62/766 (8.1) |
| Rural                   | 254/1352 (18.8) | 189/1352 (14.0) | 396/1352 (29.3) | 53/1352 (3.9) | 76/1352 (5.6) | 83/1352 (6.1) | 14/1352 (1.0) | 17/1352 (1.3) | 0/1352 (0.0) | 2/1352 (0.2) | 1/1352 (0.1) | 2/1352 (0.2) |
| Pakistan                | 33/57 (57.9) | 44/57 (77.2) | 36/57 (63.2) | 26/57 (45.6) | 25/57 (40.4) | 9/57 (15.8) | 19/57 (33.3) | 14/57 (24.6) | 16/57 (28.1) | 9/57 (15.8) | 5/57 (8.9) | 23/57 (40.4) |
| Rural                   | 23/54 (42.6) | 35/54 (64.8) | 26/54 (48.2) | 10/54 (18.5) | 10/54 (18.5) | 1/54 (1.9) | 3/54 (5.6) | 1/54 (1.9) | 0/54 (0.0) | 2/54 (3.7) | 1/54 (1.9) | 5/54 (9.3) |
| Zimbabwe                | 22/26 (84.6) | 15/26 (57.7) | 2/26 (84.6) | 6/26 (23.1) | 13/26 (50.0) | 3/26 (11.5) | 1/26 (50.0) | 17/26 (65.4) | 0/26 (0.0) | 2/26 (7.7) | 1/26 (3.9) | 18/26 (89.2) |
| Country        | No. of individuals reporting seeing marketing/individuals interviewed (%) |
|---------------|--------------------------------------------------------------------------|
|               | Traditional marketing                                                  | Non-traditional marketing                           |
|               | Posters | Signage  | Television | Radio | Print media | Cinema | Seen at least one type | Sponsorship | On other products | Internet | Free samples | Vouchers | Seen at least one type |
| Rural         | 39/55 (70.9) | 43/55 (78.2) | 17/55 (30.9) | 43/55 (78.2) | 31/55 (56.4) | 2/55 (3.6) | 53/55 (96.4) | 20/55 (36.4) | 2/55 (3.6) | 1/55 (1.8) | 2/55 (3.6) | 0/55 (0.0) | 27/55 (49.1) |
| Total         | 582/2310 (25.2) | 513/2310 (22.2) | 698/2310 (30.2) | 195/2310 (8.4) | 247/2310 (10.7) | 161/2310 (7.0) | 1084/2310 (46.9) | 116/2310 (5.0) | 127/2310 (5.5) | 20/2310 (0.9) | 36/2310 (1.6) | 30/2310 (1.3) | 164/2310 (7.1) |
| Urban         | 266/849 (31.3) | 246/849 (29.0) | 259/849 (30.5) | 89/849 (10.5) | 130/849 (15.3) | 75/849 (8.8) | 428/849 (50.4) | 79/849 (9.3) | 88/849 (10.4) | 19/849 (2.2) | 30/849 (3.5) | 28/849 (3.3) | 103/849 (12.1) |
| Rural         | 316/1461 (21.6) | 267/1461 (18.3) | 439/1461 (30.1) | 106/1461 (7.3) | 117/1461 (8.0) | 86/1461 (5.9) | 656/1461 (44.9) | 37/1461 (2.5) | 39/1461 (2.7) | 1/1461 (0.1) | 6/1461 (0.4) | 2/1461 (0.1) | 61/1461 (4.2) |

1. Countries were categorized according to the World Bank’s 2006 classification.
2. For example billboards, pasted on walls, visible on the sides of taxis and buses.
3. Permanently-sponsored signage on shops or other buildings.
4. For example newspapers and magazines.
5. For example sporting, music or other events.
6. Sponsorship of sporting, music or other events.
7. On products such as umbrellas, ashtrays, shopping bags, clothing or any other products.
8. Promotional vouchers that allow discounts.