# Beyond Necessities: A Closer Look at Per Capita Consumption Expenditure on Tobacco and Alcoholic Beverages during the last Decade

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Shivani Badola
Sacchidananda Mukherjee

**National Institute of Public Finance and Policy**
**New Delhi**

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Shivani Badola[1] and Sacchidananda Mukherjee[2]

[1] Research Fellow, National Institute of Public Finance and Policy (NIPFP), 18/2, Satsang Vihar Marg, Special Institutional Area, New Delhi – 110 067, INDIA. E-mail: Shivani.badola@nipfp.org.in

[2] Professor, National Institute of Public Finance and Policy (NIPFP), 18/2, Satsang Vihar Marg, Special Institutional Area, New Delhi – 110 067, INDIA. Fax: +91-11-26852548, Mobile: +91-9643413877. E-mail: Sacchidananda.mukherjee@nipfp.org.in

## Abstract

Over the last decade, rising household consumption expenditure on intoxicants, particularly on tobacco, tobacco products and alcoholic beverages, poses serious concerns for public health in India. The consumption of intoxicants is associated with negative externalities to society in terms of morbidity and mortality. It also undermines the national objective of poverty alleviation for individuals already at the lower end of the socio-economic strata. Understanding the prevalence of consumption of intoxicants across states, regions (rural versus urban), and fractile classes helps to identify high-risk groups and regions. Analysis of compositional changes in the consumption of intoxicants is crucial for identifying the effectiveness of existing taxation policies and regulations. We analyse the temporal and spatial variations in the consumption of intoxicants between 2011-12 and 2022-23. The study's findings indicate an increasing preference for alcoholic beverages, particularly among higher-fractile classes in both rural and urban areas. Likewise, there has been a growing preference for chewing tobacco and cigarettes among the low and middle fractile classes, particularly in rural areas. Higher taxes may make these products less affordable and discourage consumption, particularly among price-sensitive consumers. However, the effectiveness of the taxation policy also depends on the own-price, cross-price, and income elasticity of demand. Moreover, the availability of alternative supplies (other than those from formal sources) renders the taxation and regulation policies inefficient.

**Key words:** Monthly Per Capita Expenditure, Intoxicant Products, Rural-Urban Divide, India.

**JEL Classification:** D12, H22, H31, L66**,** R20

## 1. Introduction

India has seen a rise in the consumption of alcohol and tobacco products over the past few decades. While these products significantly contribute to state revenues, they also pose serious public health and economic concerns, particularly among vulnerable groups. Such products are classified as demerit goods. The consumption of demerit goods is linked to a broad range of negative externalities, including increased medical costs, diminished quality of life, reduced life expectancy, and higher risks of disability and death (John & Araujo, 2024). Therefore, intoxicants (tobacco and alcohol) are taxed heavily, as high prices are believed to deter consumption at the margin. This policy aims to generate positive societal externalities (marginal social benefits) and improve the health of consumers, leading to positive internalities. The presence of alternatives to taxed intoxicants (such as supplies from informal, unregulated sources or locally produced substitutes) diminishes the effectiveness of the taxation system. Consequently, beyond taxation, regulations governing the manufacturing, storage, and distribution of intoxicants are crucial to controlling their supply to consumers.

Globally, the consumption of tobacco and alcoholic beverages causes over 11 million deaths annually, with a disproportionate impact on low- and middle-income countries such as India (IHME, 2000; Summers, 2018). It is surprising that, despite their harmful effects and high taxes, the average monthly expenditure on intoxicants (including pan, tobacco, and alcohol) increased from 2.87% in 1999-2000 to 3.79% in 2022-23 in rural India. Similarly, in urban areas, it rose from 1.90% in 1999-2000 to 2.43% in 2022-23 (Table 1). This rising expenditure not only worsens the public health burden but also places significant strains on the healthcare system and households through high out-of-pocket (OOP) costs and productivity losses due to morbidity and premature death (Casswell & Thamarangsi, 2009; Rehm et al., 2009). The consumption habits and related burdens of tobacco and alcohol vary widely across India, owing to the country's vast population and diverse socioeconomic, cultural, and geographical features, along with differing tobacco and liquor policies across states (Rajpal et al., 2025). Considering the varied socio-economic and geographic landscape, along with distinct liquor policies, it is vital to analyse the trends and patterns of alcohol and tobacco use in India.

There have been notable shifts in the consumption of intoxicants across rural and urban India over the past few decades (Table 1). This paper explores the composition of intoxicant consumption, focusing specifically on tobacco and alcoholic beverages, to evaluate changes in consumption preferences over time. While overall trends provide a broad overview of increasing expenditure on intoxicants, they often conceal significant differences in the types of products consumed (Table 1). Analysing the compositional change in intoxicant consumption is essential for understanding how consumption patterns have shifted from one type of intoxicant to another, such as moving from bidis to cigarettes, or from country liquor to foreign liquor and beer. This analysis is important because different intoxicants are subject to varying tax rates and face different regulatory

environments. For instance, taxes on cigarettes tend to be higher than on bidis. Similarly, beer and foreign liquor are taxed more heavily than country liquor. In this study, we examine temporal and spatial variations in intoxicant consumption, both in terms of value (monthly per capita expenditure, MPCE) and volume or quantity, to provide a comprehensive picture of evolving consumer preferences in India.

**Table 1:** Percentage Share of the Average MPCE on Food, Intoxicants, and Non-food from 1999-2000 to 2022-23 by Regions: All India

| Item Group | 1999-00 | 2004-05 | 2009-10 | 2011-12 | 2022-23 |
|---|---|---|---|---|---|
| | NSS (55th round) | NSS (61st round) | NSS (66th round) | NSS (68th round) | |
| **Rural** | | | | | |
| ***Food*** | 59.4 | 53.11 | 56.98 | 52.9 | 46.38 |
| ***Intoxicants (Pan, tobacco & intoxicants)*** | **2.87** | **2.60** | **2.95** | **3.21** | **3.79** |
| ***Non-Food*** | 37.73 | 44.29 | 40.07 | 43.89 | 49.83 |
| **Urban** | | | | | |
| ***Food*** | 48.06 | 40.51 | 44.39 | 42.62 | 39.17 |
| ***Intoxicants (Pan, tobacco & intoxicants)*** | **1.90** | **1.54** | **1.53** | **1.61** | **2.43** |
| ***Non-Food*** | 50.04 | 57.95 | 54.08 | 55.77 | 58.40 |

***Note:*** For the years 1999-00 and 2004-05, the percentage shares are based on Mixed Reference Period (MRP) estimates. For the years 2009-10, 2011-12, and 2022-23, these are based on Modified MRP (MMRP) estimates.
***Source:*** Compiled by authors from the NSSO's Household Consumption Expenditure Survey (various years)

We present the average share of expenditure on intoxicants within the total monthly per capita consumption expenditure for 2011-12 and 2022-23 in Table 2. It reveals that the consumption of chewing tobacco, foreign liquor (FL) or wine, and beer has increased between 2011-12 and 2022-23 in both rural and urban areas (Table 2). A rising preference for such intoxicants poses a concern from a public health perspective. The shift in consumption from lower-taxed to higher-taxed intoxicants also raises questions about affordability, accessibility, and social acceptance. Studying patterns of tobacco and alcohol consumption is crucial for designing effective taxation policies to discourage their use. Understanding the prevalence of expenditure on such demerit goods across states, regions (rural versus urban), and income groups helps identify high-risk groups and areas. The growing share of spending on tobacco and alcohol emphasises the need for more robust health taxes as a policy measure. These taxes, such as higher tobacco levies or increased excise and sales taxes on alcohol, can make these products less affordable and discourage consumption, especially among price-sensitive consumers. Moreover, revenue generated from these taxes can be allocated to public health programmes, de-addiction centres, and various prevention initiatives. Consequently, this study aims to analyse the trends and patterns of consumption expenditure on tobacco and alcoholic products in India from 2011-12 to 2022-23, based on data from the National Sample Survey Office's (NSSO) Household Consumption Expenditure Survey (HCES).

In the following section, we examine consumption expenditure on tobacco and alcoholic beverages at the all-India level, across regions (rural versus urban), and by fractile classes of the average MPCE. In Section Three, we analyse the trends in tobacco and alcohol consumption expenditure across Indian states, followed by the conclusions in Section Four.

**Table 2:** Trend in the share of Expenditure on Pan, Tobacco, and Intoxicants in 2011-12 and 2022-23 (% share in total MPCE)

| Item | Rural | | Urban | | Difference | |
|---|---|---|---|---|---|---|
| | 2011-12 | 2022-23 | 2011-12 | 2022-23 | Rural | Urban |
| | A | B | C | D | B-A | D-C |
| pan: leaf | 0.10 | 0.09 | 0.04 | 0.04 | -0.01 | 0.00 |
| pan: finished | 0.19 | 0.28 | 0.13 | 0.14 | 0.09 | 0.02 |
| ingredients for pan | 0.19 | 0.14 | 0.07 | 0.06 | -0.05 | -0.01 |
| **pan: sub-total** | **0.48** | **0.51** | **0.23** | **0.24** | **0.04** | **0.01** |
| bidi | 0.65 | 0.31 | 0.16 | 0.09 | -0.35 | -0.08 |
| cigarettes | 0.20 | 0.25 | 0.29 | 0.35 | 0.05 | 0.06 |
| leaf tobacco | 0.17 | 0.16 | 0.03 | 0.04 | -0.01 | 0.01 |
| snuff | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| hookah tobacco | 0.02 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| cheroot | 0.01 | 0.00 | 0.00 | 0.00 | -0.01 | 0.00 |
| gutka, zarda, kimam, surti (chewing tobacco) | 0.08 | 0.57 | 0.03 | 0.27 | 0.49 | 0.24 |
| other tobacco products | 0.31 | 0.12 | 0.21 | 0.08 | -0.19 | -0.14 |
| **tobacco: sub-total** | **1.44** | **1.42** | **0.74** | **0.83** | **-0.02** | **0.09** |
| ganja | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| toddy | 0.11 | 0.12 | 0.01 | 0.01 | 0.01 | 0.00 |
| country liquor | 0.47 | 0.57 | 0.17 | 0.19 | 0.10 | 0.02 |
| beer | 0.09 | 0.30 | 0.12 | 0.37 | 0.21 | 0.25 |
| foreign/refined liquor or wine | 0.48 | 0.77 | 0.33 | 0.77 | 0.29 | 0.44 |
| other intoxicants | 0.14 | 0.08 | 0.02 | 0.02 | -0.06 | 0.01 |
| **intoxicants: sub-total** | **1.29** | **1.85** | **0.64** | **1.36** | **0.56** | **0.72** |
| **total intoxicants (All)** | **3.21** | **3.79** | **1.61** | **2.43** | **0.57** | **0.82** |

***Source:*** Provided by authors using NSSO Household Consumption Expenditure round (2011-12- 68th Round & HCES-2022-23).

# 2. The Consumption Expenditure on Intoxicants in India

## 2.1 Consumption of Tobacco and Tobacco Products

India ranks as the world's second-largest tobacco consumer, with around 267 million individuals above the age of 15 estimated to consume tobacco in various forms, including smoking and smokeless methods (MoHFW, 2017). A wide variety of tobacco products are available in India, such as bidi, cigarettes, hookah tobacco, and smokeless tobacco like gutka, zarda, kimam, surti, and others. We found that the share of expenditure on bidi and 'other tobacco products' in overall consumption expenditure (total MPCE) has decreased in both rural and urban areas between 2011-12 and 2022-23 (Table 2). Conversely, the expenditure share on chewing tobacco increased from 0.08% to 0.57% in rural India and

from 0.03% to 0.27% in urban India over the same period (Table 2). Similarly, the expenditure on cigarettes rose from 0.20% to 0.25% in rural India and from 0.29% to 0.35% in urban India between 2011-12 and 2022-23. In terms of quantity (in numbers), the average number of bidi sticks consumed per person per month has decreased in both rural and urban areas (Tables A3 and A4 in the Appendix). In contrast, the average number of cigarettes consumed per person per month has risen in rural India, while a marginal decline is observed in urban areas. Overall, these trends suggest declining preferences for bidi and increasing preferences for cigarettes and chewing tobacco consumption in India.

### *2.1.1 Consumption of Tobacco and Tobacco Products across Fractile Classes*

To gain greater clarity on the distribution of expenditure on intoxicants—particularly on tobacco and alcoholic beverages—the population of India has been divided into 12 fractile classes based on average MPCE (Table 3). In other words, the distribution of the estimated population from the NSSO's HCES 2022-23 is ordered by ascending average MPCE, with each fractile class comprising 5 or 10% of the total population. Fractile classes are commonly identified by their percentile range. For example, 0- 5% ($P_5$) represents the bottom 5% of the population ranked by average MPCE, ' 5- 10%' ($P_{10}$) indicates the next 5%, and so on. The fractile class' 95- 100%' ($P_{100}$) encompasses the top 5% of the estimated population ranked by average MPCE in ascending order. Table A2 in the Appendix shows the average MPCE within each fractile class, along with the upper and lower limits for each region. Table 3 displays the percentage share of spending on tobacco and tobacco products relative to total MPCE across these fractile classes.

The distribution of expenditure on tobacco and alcoholic beverages across fractile classes of the average MPCE is vital to understanding consumers' preferences for habitual commodities. If consumers from lower fractile classes spend a larger share of their monthly total expenditure on intoxicants, it may compel them to reduce their spending on food and non-food items. This could have significant socio-economic and public health consequences. Intoxicants like tobacco and alcoholic beverages attract higher taxes than standard goods and services in India. As a result, the distribution of tax burden among consumer groups will also depend on their expenditure on intoxicants.

Understanding how different fractile classes allocate their spendings on tobacco and alcoholic beverages would assist in evaluating who bears the tax burden on these goods. The insights derived from this expenditure distribution will support in designing effective tax policies. In other words, this analysis is vital for developing taxation strategies that discourage the consumption of intoxicants.

The proportion of expenditure on tobacco and tobacco products varies across fractile classes (Table 3). In rural areas, this share has increased from 2011-12 to 2022-23 for the fractile class up to $P_{50}$. Afterwards, it has decreased. This suggests that the expenditure share on tobacco has risen in rural areas among consumers from lower fractile classes. In urban areas, the share has grown for all fractile classes except $P_{40}$, $P_{60}$, and $P_{70}$. Although the average expenditure share on tobacco products is lower in urban areas than in rural

areas across all fractile classes, the share of expenditure has increased in urban India across almost all fractile groups in 2022-23 compared to 2011-12. In other words, urban consumers are allocating a larger portion of their total expenditure to tobacco and tobacco products in 2022-23 than they did in 2011-12.

In urban areas, there has been a consistent decline in the proportion of expenditure on tobacco products across higher fractile classes, both in 2011-12 and 2022-23 (Table 3). This shows that, in urban areas, consumers from lower fractile classes allocate a larger share of their total consumption expenditure to tobacco products compared to those from higher fractile classes.

Overall, in both rural and urban areas, consumers in the lower fractile classes allocate a larger share of their expenditure to tobacco and tobacco products within their overall consumption basket than consumers from higher fractile classes.

**Table 3:** Average MPCE on Tobacco Products (% share in total MPCE)#

| **Fractile Classes of Average MPCE** | Rural | | | Urban | | |
|---|---|---|---|---|---|---|
| | **2011-12** | **2022-23** | **% change** | **2011-12** | **2022-23** | **% change** |
| | **A** | **B** | **[(B-A)/A]*100** | **C** | **D** | **[(D-C)/C]*100** |
| **$P_5$ (0-5%)** | 1.62 | 1.97 | 21.24 | 1.39 | 1.55 | 11.71 |
| **$P_{10}$ (5-10%)** | 1.68 | 1.91 | 13.60 | 1.33 | 1.48 | 11.63 |
| **$P_{20}$ (10-20%)** | 1.66 | 1.84 | 10.81 | 1.32 | 1.36 | 2.80 |
| **$P_{30}$ (20-30%)** | 1.58 | 1.77 | 11.68 | 1.11 | 1.19 | 7.39 |
| **$P_{40}$ (30-40%)** | 1.71 | 1.75 | 1.79 | 1.09 | 1.08 | -0.55 |
| **$P_{50}$ (40-50%)** | 1.63 | 1.66 | 2.20 | 0.83 | 0.96 | 15.04 |
| **$P_{60}$ (50-60%)** | 1.61 | 1.60 | -0.59 | 0.98 | 0.96 | -2.38 |
| **$P_{70}$ (60-70%)** | 1.64 | 1.47 | -10.18 | 0.87 | 0.82 | -5.47 |
| **$P_{80}$(70-80%)** | 1.56 | 1.41 | -9.62 | 0.71 | 0.75 | 4.95 |
| **$P_{90}$ (80-90%)** | 1.42 | 1.25 | -12.08 | 0.60 | 0.64 | 6.01 |
| **$P_{95}$(90-95%)** | 1.28 | 1.14 | -11.22 | 0.51 | 0.58 | 12.66 |
| **$P_{100}$(95-100%)** | 0.86 | 0.84 | -2.46 | 0.34 | 0.54 | 59.00 |
| All Classes | **1.44** | **1.42** | **-1.61** | **0.74** | **0.83** | **12.26** |

***Note:*** #-Tobacco Products consist of bidi, cigarettes, chewing tobacco (gutka, zarda, kimam, surty, leaf tobacco), hookah and other tobacco products.
***Source:*** Compiled by authors based on the NSSO's Household Consumption Expenditure Survey (2011-12 & 2022-23).

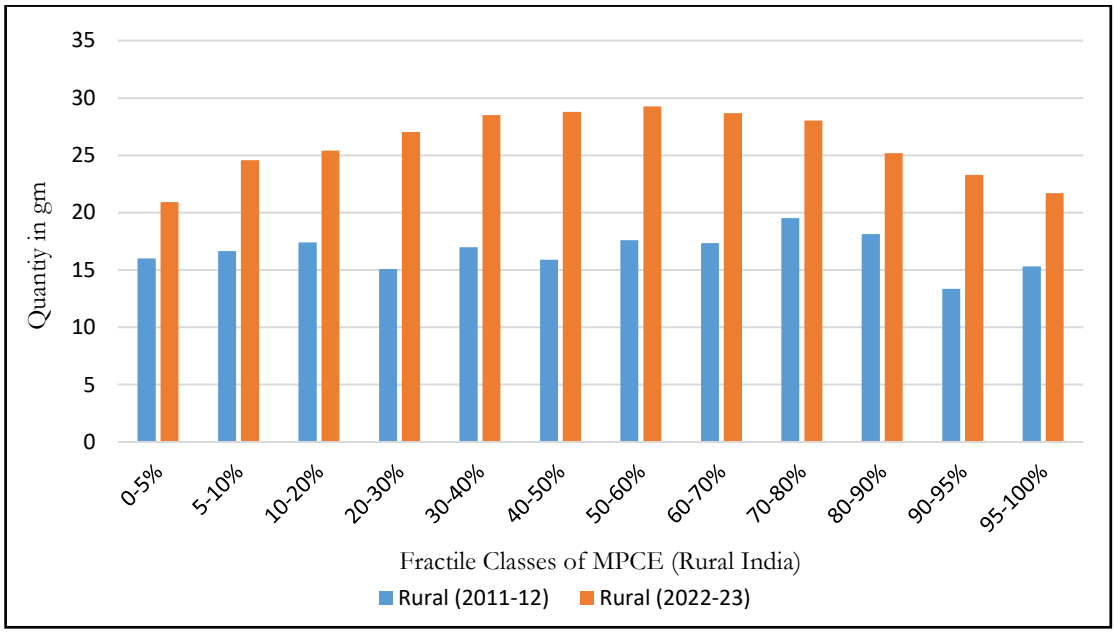
An examination of item-wise consumption (in quantity) of tobacco products across fractile classes throws some insights (Tables A3 and A4 in the Appendix). For instance, in both rural and urban India, the monthly per capita bidi consumption has declined for all the fractile classes from 2011-12 to 2022-23 (Tables A3 and A4). On average, the per capita monthly consumption of bidi in rural India has declined from 26 to 12.5 sticks between 2011-12 and 2022-23. In contrast, in urban India, the number of sticks fell from 11 to 6 over the same period. However, in rural areas, the consumption of bidis (in numbers) generally increases for consumers belonging to higher fractile

classes compared to those in lower fractile classes in both 2011-12 and 2022-23. In contrast, in urban areas, average monthly consumption of bidi (in number of sticks) declines for consumers belonging to higher fractile classes in both 2011-12 and 2022-23. In rural areas, the consumption of bidis is primarily driven by affordability, as consumers from higher fractile classes can afford to spend on bidis more than those from lower fractile classes. In contrast, the consumption of bidis in urban areas deteriorates the status of consumers, and therefore, they may opt for substitutes for bidis. This analysis indicates that the monthly per capita consumption of bidis has declined over time; however, in rural areas, it is more preferred by higher fractile classes, whereas in urban areas, it is preferred by households in lower fractile classes.

There has been an increase in cigarette consumption up to the fractile class $P_{80}$ in rural India from 2011-12 to 2022-23, after which it declines for higher fractile classes. In urban areas, cigarette consumption has increased up to the fractile class $P_{50}$, then it decreases. In both rural and urban areas, and across all years, the average monthly per capita consumption of cigarettes rises for consumers in higher fractile classes compared to those in lower ones. This indicates that relative affordability influences cigarette consumption in India.

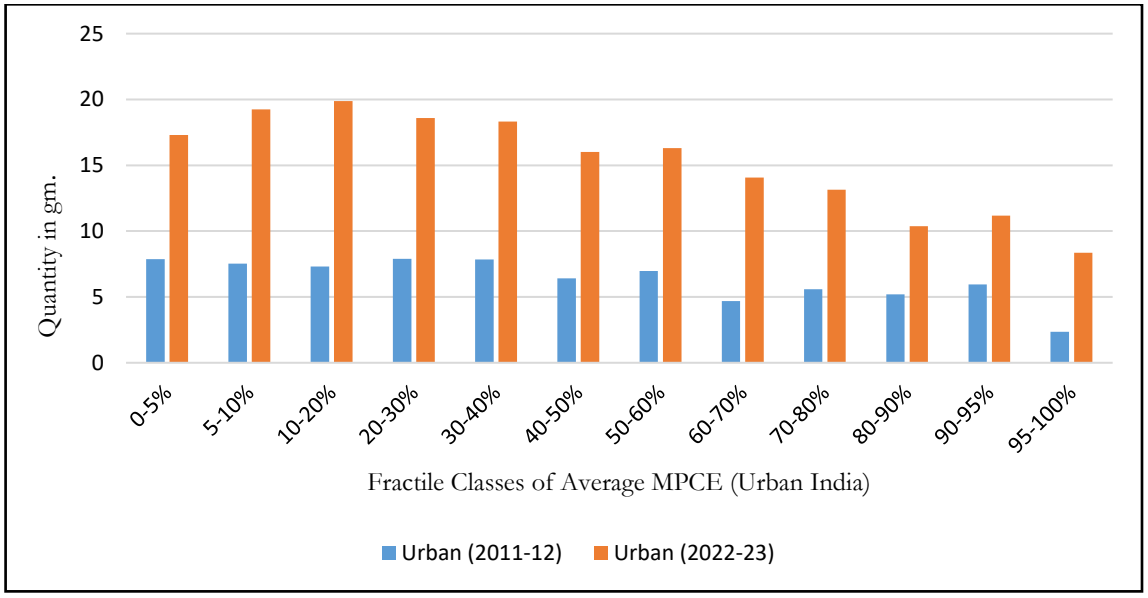
The average monthly per capita consumption of chewing tobacco (in grams) is nearly twice as high in rural India as in urban India in 2011-12 (Tables A3 and A4). Both rural and urban India have seen an increase in chewing tobacco consumption across all fractile classes between 2011-12 and 2022-23 (Figures 1 and 2). In rural areas, consumption is higher among households in the middle fractile classes, i.e., from $P_{40}$ to $P_{80}$, compared to lower and higher fractile classes (Figure 1). This shows an inverted U-shape pattern in rural India's chewing tobacco consumption across fractile classes. In urban India, consumption has risen across all fractile classes; however, significant consumption remains among the lowest to middle fractile classes, i.e., from $P_{10}$ to $P_{60}$ (Figure 2). Overall, the trend indicates that a preference for chewing tobacco products is growing in India, mainly driven by consumers from the lower and middle fractile classes of the average MPCE.

**Figure 1:** Average monthly Per Capita Consumption on Chewing Tobacco: All India (**Rural**) (in gm.)




***Note:*** #-Chewing tobacco includes Gutka, Zarda, Kimam, Surti, and Leaf Tobacco.
***Source:*** Computed by authors based on the NSSO's Household Consumption Expenditure Survey (2011-12 & 2022-23).

**Figure 2:** Average monthly Per Capita Consumption on Chewing Tobacco: All India (**Urban**) (in gm.)




***Source:*** As in Figure 1.

## 2.2. Consumption of Alcoholic Beverages

The prevalence of alcohol consumption among men aged 15 years and above is 16.5% in urban areas and 19.9% in rural areas of India in 2019-20 (as reported in the NFHS-5: 2019-20, MoH&FW, 2021). Meanwhile, for women aged 15 years and above, the prevalence is 0.6% in urban areas and 1.6% in rural areas (NFHS-5, 2019-20). Thus, a significant portion of the Indian population—especially men—consumes alcoholic beverages. Various types of alcoholic drinks, such as country liquor (CL), toddy (locally brewed or traditionally fermented), Indian Made Foreign Liquor (IMFL), wine, beer, and other intoxicants, are widely consumed across India.

We have observed a rising share of expenditure on foreign/refined liquor or wine (hereafter referred to as FL), and beer from 2011-12 to 2022-23 in the total consumption expenditure (overall MPCE) in both rural and urban India (Table 2). The share of FL increased from 0.48% to 0.77% in rural areas and from 0.33% to 0.77% in urban areas during this period. Notably, the rural-urban gap in the expenditure share on FL has significantly narrowed by 2022-23. There has also been a notable increase in the expenditure share on CL in rural areas. Conversely, urban areas experienced only a marginal increase in the share of spending on CL from 2011-12 to 2022-23. The expenditure share on CL in rural India stood at 0.57%, considerably higher than in urban areas (0.19%) as of 2022-23 (Table 2). The increase in alcohol consumption is evident not only in value terms (percentage share in MPCE) but also in volume terms (litres). The average per capita consumption (litres) of CL and toddy, as well as FL and beer, has risen from 2011-12 to 2022-23 in both rural and urban India (Table A5).

### *2.2.1 Consumption of Alcoholic Beverages across Fractile Classes*

In urban India, the proportion of consumption expenditure on alcoholic beverages has nearly doubled across all fractile groups, except for the $P_{10}$ to $P_{40}$ and $P_{70}$ groups, from 2011-12 to 2022-23. Similarly, in rural India, the proportion has increased across all fractile groups between 2011-12 and 2022-23 (Table 4). This suggests a rising share of expenditure on alcoholic beverages in both rural and urban India across all fractile groups of the average MPCE in 2022-23 compared to 2011-12. Furthermore, a broader pattern shows that the share of spending on alcoholic beverages is higher for consumers in the higher fractile groups than for those in lower groups in both rural and urban areas (Table 4). Additionally, the proportion of expenditure on alcoholic beverages in rural India exceeds that in urban India across all fractile groups and years. This indicates that rural residents spend a larger share of their average MPCE on alcoholic beverages than their urban counterparts.

In rural India, the share of expenditure on alcoholic beverages exhibits greater variation across fractile classes (coefficient of variation: 0.17) compared to urban India (CV: 0.09). This suggests that the share of expenditure on alcohol has become a consistent element of consumption expenditure, regardless of fractile class in urban India.

Conversely, in rural India, the proportion spent on alcohol is higher for the lower and upper fractile classes compared to those in the middle fractile classes.

Overall, a dual trend is evident in rural and urban India: an increasing consumption share among lower fractile classes in rural areas, indicating deeper penetration of alcohol consumption among consumers from these lower classes, and a rising share of expenditure in urban areas for higher fractile classes. However, the variation in expenditure share across fractile groups remains moderate in urban regions, implying that the average monthly spending on alcoholic beverages is fairly evenly distributed among different fractile classes in urban areas.

**Table 4:** Average MPCE on Alcoholic Beverages# (% share in total MPCE)

| Fractile Classes of Average MPCE | Rural | | | Urban | | |
|---|---|---|---|---|---|---|
| | 2011-12 | 2022-23 | % change | 2011-12 | 2022-23 | % change |
| | A | B | [(B-A)/A]*100 | C | D | [(D-C)/C]*100 |
| **$P_5$ (0-5%)** | 0.87 | 2.10 | 140.66 | 0.59 | 1.22 | 108.17 |
| **$P_{10}$ (5-10%)** | 0.86 | 1.67 | 94.36 | 0.71 | 1.17 | 63.68 |
| **$P_{20}$ (10-20%)** | 0.77 | 1.54 | 99.41 | 0.65 | 1.14 | 76.11 |
| **$P_{30}$ (20-30%)** | 0.79 | 1.42 | 80.76 | 0.81 | 1.16 | 43.86 |
| **$P_{40}$ (30-40%)** | 0.98 | 1.45 | 48.36 | 0.81 | 1.27 | 56.63 |
| **$P_{50}$ (40-50%)** | 0.97 | 1.53 | 56.93 | 0.61 | 1.27 | 107.78 |
| **$P_{60}$ (50-60%)** | 0.93 | 1.58 | 69.60 | 0.56 | 1.38 | 147.09 |
| **$P_{70}$ (60-70%)** | 1.22 | 1.74 | 42.30 | 0.81 | 1.39 | 70.65 |
| **$P_{80}$(70-80%)** | 1.27 | 1.91 | 50.03 | 0.61 | 1.35 | 119.68 |
| **$P_{90}$ (80-90%)** | 1.51 | 2.21 | 45.92 | 0.60 | 1.43 | 137.10 |
| **$P_{95}$ (90-95%)** | 1.49 | 2.34 | 56.95 | 0.59 | 1.40 | 135.60 |
| **$P_{100}$ (95-100%)** | 2.04 | 2.12 | 3.98 | 0.55 | 1.50 | 171.93 |
| **All Classes** | 1.29 | 1.85 | 43.39 | 0.64 | 1.36 | 113.07 |

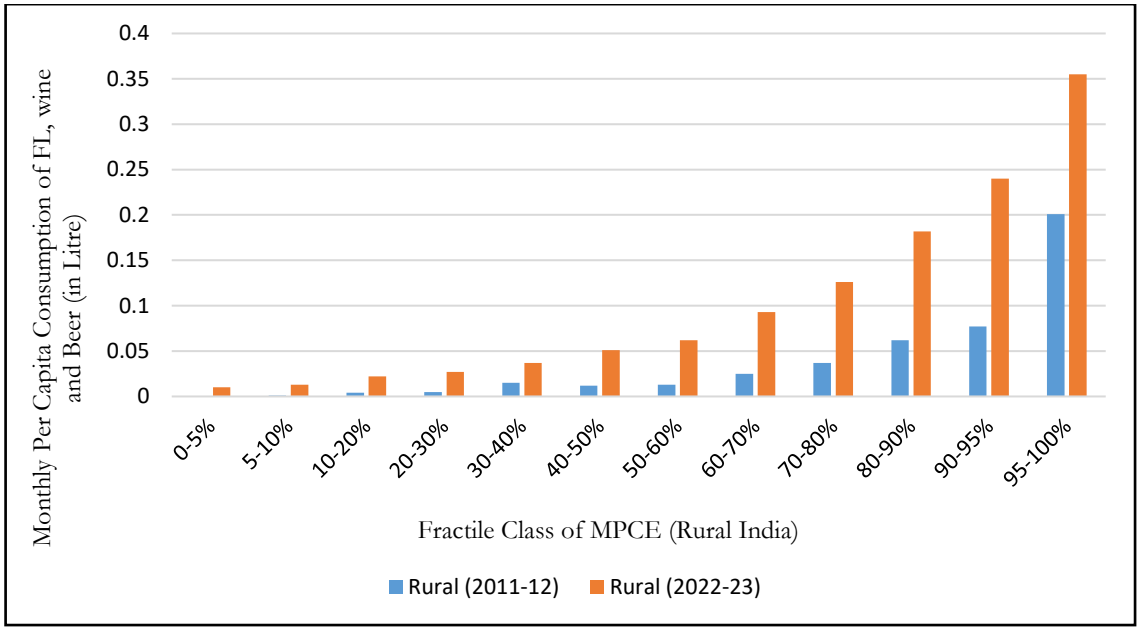
***Note:*** #- Alcoholic Beverages include Toddy, Country Liquor, Beer, FL or wine, Ganja and other intoxicants. The expenditure share on ganja in overall consumption expenditure is negligible; this is the reason for categorising the share of spending on the intoxicant group as alcoholic beverages (Table 2).
***Source:*** Computed by authors based on the NSSO's Household Consumption Expenditure Survey (2011-12 & 2022-23).

Within alcoholic beverages, the average monthly consumption of country liquor and toddy (CLT) is higher in rural areas compared to urban areas across all fractile classes and years. On average, the consumption of CLT in rural areas was 0.23 litres, whereas in urban areas it was 0.07 litres in 2022-23 (Table A5 in the Appendix). This reflects a strong preference for CLT in rural areas compared to urban areas (Table A5). From 2011-12 to 2022-23, the consumption of CLT has increased in both rural (except for fractile classes $P_{90}$ and $P_{100}$) and urban areas. In rural India, except for the $P_5$ class, consumption of CL and toddy rises up to the fractile class $P_{80}$ and then declines in 2022-23. However, in urban areas, there is a downward trend in the consumption of CL and toddy (in litres) for higher fractile classes (Table A5).

Regarding the consumption of foreign liquor and beer, there has been an increase in the amount consumed in both rural and urban areas across all fractile classes from 2011-

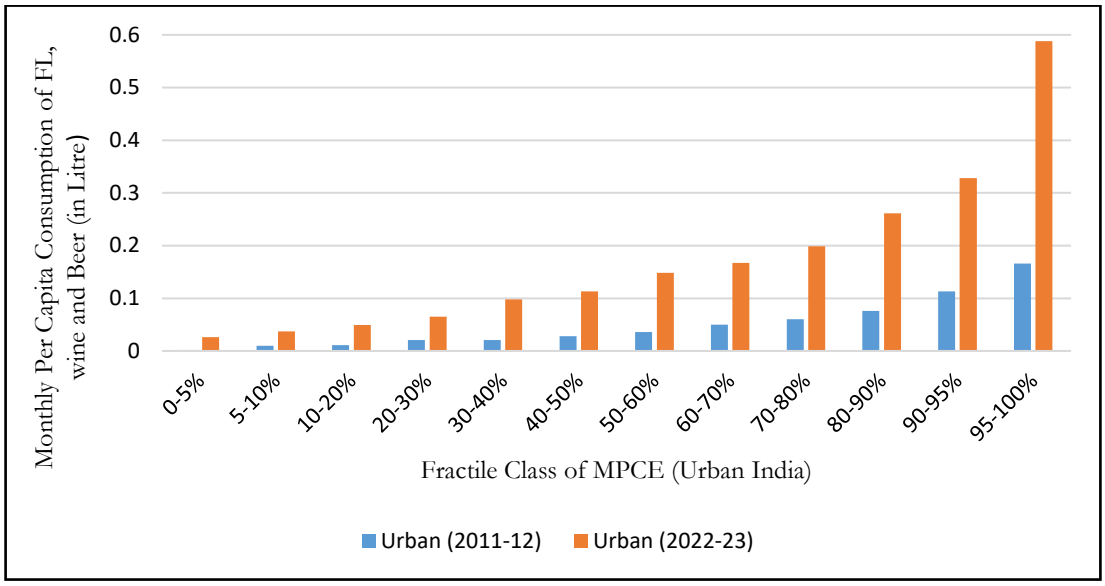
12 to 2022-23 (Figures 3 and 4). The average monthly per capita consumption of foreign liquor and beer (FLB) rose from 0.04 litres to 0.10 litres and from 0.17 litres to 0.59 litres, respectively, in rural and urban India, between 2011-12 and 2022-23. Both rural and urban regions show a similar pattern, with the average monthly per capita consumption of foreign liquor and beer increasing across all fractile classes from 2011-12 to 2022-23. The consumption of FLB remains higher in urban areas across all fractile classes compared to rural areas. In 2022-23, the average monthly per capita consumption of FLB is greater in urban areas than in rural areas for the $P_{40}$ and above fractile class. In rural India, the consumption of CLT is generally higher across all fractile classes compared to FLB. This indicates that, on average, CL and toddy are the preferred alcoholic beverages in rural India, whereas in urban India, FL and beer are preferred for fractile $P_{40}$ and above. Affordability and accessibility may be key factors influencing people's preference for certain alcoholic beverages.

**Figure 3:** Average Monthly Per Capita Consumption of Foreign Liquor or Wine and Beer: All India (Rural) (in Litres)




***Source:*** Constructed by authors using NSSO Household Consumption Expenditure round (2011-12 & 2022-23).

**Figure 4:** Average Monthly Per Capita Consumption on FL and Beer: All India (Urban) (in Litre)




***Source:*** Constructed by authors using NSSO Household Consumption Expenditure round (2011-12 & 2022-23).

## 3. State-Level Analysis of the Consumption Expenditure on Intoxicants

So far, our analysis has been limited to the all-India level. In this section, we provide a state-level analysis of the average monthly per capita expenditure on specific intoxicants. Within the tobacco group, the consumption of bidis, cigarettes, leaf tobacco, chewing tobacco (gutka, zarda, kimam, surti), and other tobacco products accounts for the largest share of total expenditure. In this analysis, we examine the average annual per capita consumption expenditure on bidi, cigarette, and leaf tobacco across states. For alcoholic beverages, we compare combined country liquor and toddy (CLT) with combined foreign liquor and beer (FLB). We present data for 29 states across regions for 2022-23. We note significant heterogeneity across states in the consumption of tobacco and alcoholic beverages (Tables A6 and A7 in the Appendix).

### 3.1. Consumption of Tobacco

In rural areas, Rajasthan records the highest average annual per capita expenditure on bidi at Rs. 438. It is followed by Haryana (Rs. 402), Himachal Pradesh (Rs. 379), and Uttarakhand (Rs. 308) (Table A6). Expenditure on bidis is also notably high in rural regions of Meghalaya, West Bengal, Tripura, Madhya Pradesh, Gujarat, and Delhi (Table A6). In urban areas, Haryana reports the highest bidi expenditure at Rs. 277, then Himachal Pradesh (Rs. 186), West Bengal (Rs. 160), Rajasthan (Rs. 153), Uttarakhand (Rs. 152), and

Tripura (Rs. 140). For states such as Haryana, Himachal Pradesh, Uttarakhand, West Bengal, and Tripura, bidi expenditure remains relatively higher across regions. Preferences for bidis over other tobacco products are shaped by regional cultural preferences and affordability. Generally, populations from the Himalayan and northeastern states spend more on bidis compared to other parts of the country.

On cigarettes, Mizoram reports the highest per capita consumption in rural areas (Rs. 1,313). It is followed by Sikkim (Rs. 1,225), Arunachal Pradesh (Rs. 556), Delhi (Rs. 556), and Telangana (Rs. 415) (Table A6). Expenditure on cigarettes is also quite high in rural parts of Meghalaya (Rs. 374), Andhra Pradesh (Rs. 317), and Tripura (Rs. 313). In urban regions, Sikkim shows the highest expenditure on cigarettes (Rs. 1,719), followed by Mizoram (Rs. 1,514), Arunachal Pradesh (Rs. 912), Tripura (Rs. 804), and Meghalaya (Rs. 775). This again highlights that residents of the Northeastern states spend more on cigarettes than those from other regions. Targeted state-specific campaigns on the health impacts of smoking may effectively reduce bidis and cigarette consumption across India. Besides affordability, social norms and consumption habits further motivate people to use bidis and cigarettes.

In rural areas, the highest per capita consumption of gutka and leaf tobacco is in Madhya Pradesh (Rs. 792). This is followed by Arunachal Pradesh (Rs. 533), Nagaland (Rs. 510), Gujarat (Rs. 472), and Assam (Rs. 459). In urban areas, the highest expenditure on leaf tobacco is reported in Madhya Pradesh (Rs. 735). This is followed by Arunachal Pradesh (Rs. 650), Nagaland (Rs. 628), Assam (Rs. 500), and Sikkim (Rs. 481). The prevalence of gutka and leaf tobacco consumption is mainly concentrated in the central and western parts of India (e.g., Madhya Pradesh, Gujarat, and Rajasthan) and some northeastern states.

## 3.2 Consumption of Alcoholic Beverages

In rural areas, the highest expenditure on CLT is reported in Chhattisgarh (Rs. 1,053). This is followed by Arunachal Pradesh (Rs. 989), Manipur (Rs. 914), Punjab (Rs. 790), and Himachal Pradesh (Rs. 768). In urban areas, the highest expenditure on CLT is reported in Manipur (Rs. 694). This is followed by Punjab (Rs. 630), Arunachal Pradesh (Rs. 621), Chhattisgarh (Rs. 562), and Himachal Pradesh (Rs. 542). This again shows that people's preference for CLT is concentrated in certain states, whether they are in urban or rural areas. Some northern states (like Punjab, Haryana and Delhi), Himalayan states (Himachal Pradesh and Uttarakhand), and northeastern states (Arunachal Pradesh and Manipur) have higher expenditure on CLT than others.

In rural areas, the highest expenditure on foreign liquor and beer (FLB) is reported in Telangana (Rs. 3,061). This is followed by Sikkim (Rs. 3,046), Delhi (Rs. 2,294), Arunachal Pradesh (Rs. 2,046), and Tamil Nadu (Rs. 1,901). Other states with relatively higher FLB expenditure in rural areas include Uttarakhand, Andhra Pradesh, Karnataka, Tripura, and Goa. In urban areas, the highest expenditure on FLB is reported in Sikkim (Rs. 4,232), followed by Arunachal Pradesh (Rs. 3,458), Telangana (Rs. 2,926),

Uttarakhand (Rs. 2,664), and Tripura (Rs. 2,167). Additionally, Delhi, Haryana, Assam, Tamil Nadu, and Goa are other states where expenditure on FLB is comparatively higher.

## 4. Summary and Conclusions

Over the past decade, the proportion of consumption expenditure on intoxicants (tobacco and alcoholic beverages) has risen in both rural and urban India. Consumption of intoxicants has harmful effects on consumers, and there are negative externalities for society, such as increased pressure on the public healthcare system, rising poverty, and reduced spending on beneficial services like health and education. Intoxicants are taxed heavily because it is believed that, at the margin, high prices will discourage consumption. This can benefit society through positive externalities (marginal social benefits) and enhance the health of consumers, leading to positive internalities. The availability of alternatives to taxed intoxicants (e.g., supplies from informal and unregulated sources or locally made substitutes) diminishes the effectiveness of the taxation system. Therefore, besides taxation, regulations governing the manufacturing, storage, and distribution of intoxicants are crucial to managing their supply to consumers.

Assessment of intoxicant consumption patterns helps to understand evolving consumer preferences. Developing suitable taxation policies and regulatory frameworks may deter consumers from habitual intake. In this paper, we explore the changing dynamics of intoxicant use in India over the past decade. We also provide state-level consumption data of major intoxicants for the years 2011-12 and 2022-23.

The share of expenditure on bidi and 'other tobacco products' in the overall consumption expenditure has decreased in both rural and urban India between 2011-12 and 2022-23. Conversely, the share of expenditure on cigarettes and chewing tobacco has risen. In terms of quantity (in numbers), the average per capita monthly consumption of bidi has fallen in both rural and urban areas. In contrast, the per capita monthly consumption of cigarettes has increased in rural India, while a marginal decline is observed in urban areas. Overall, the trends suggest a shift in consumption from bidis to cigarettes and chewing tobacco between 2011-12 and 2022-23.

The share of expenditure on tobacco and tobacco products varies across fractile classes. In rural areas, the share has increased from 2011-12 to 2022-23 for the fractile class up to P50. After that, it has fallen. This suggests that the share of expenditure on tobacco has risen in rural areas for consumers from lower fractile classes. In urban areas, the share has increased for all fractile classes except $P_{40}$, $P_{60}$, and $P_{70}$. Although the average share of expenditure on tobacco products in urban areas is lower than in rural areas across all fractile classes, the share of expenditure has grown across all fractile classes in urban India—except for a few ($P_{40}$, $P_{60}$, and $P_{70}$)—from 2011-12 to 2022-23. In other words, urban

consumers are spending a larger share of their total expenditure on tobacco and tobacco products in 2022-23 compared to 2011-12.

Across regions, consumers in the lower fractile classes spend a larger proportion of their total expenditure on tobacco and tobacco products than those in higher fractile classes.

Our analysis shows that the monthly per capita consumption of bidis has decreased over time; however, in rural areas, it is more popular among higher fractile classes, while in urban areas, it is preferred by households in lower fractile classes.

There has been an increase in cigarette consumption (by quantity) up to the fractile class $P_{80}$ in rural India from 2011-12 to 2022-23, after which it decreases for higher fractile classes. In urban areas, cigarette consumption has risen up to the fractile class $P_{50}$, then declines. In both rural and urban areas, and across all years, the average monthly per capita cigarette consumption is higher for consumers in the upper fractile classes compared to those in lower classes. This indicates that relative affordability influences cigarette consumption in India.

The average monthly per capita consumption of chewing tobacco (in grams) is nearly twice as high in rural India as it is in urban India. Both rural and urban areas have seen an increase in chewing tobacco consumption across all fractile classes between 2011-12 and 2022-23. In rural regions, households in the middle fractile classes consume more chewing tobacco compared to those in lower and higher fractile classes. In urban India, consumption has risen across all fractile classes; however, significant usage remains among the lowest to middle fractile classes. Overall, the trend and pattern suggest that a growing preference for chewing tobacco products is emerging in India, mainly driven by consumers from the lower and middle fractile classes of the average MPCE.

There has been a noticeable increase in the consumption of alcoholic beverages in India. We have observed a rising share of expenditure on foreign or refined liquor and wine (FL), as well as beer, from 2011-12 to 2022-23 across different regions. The rural-urban gap in the share of spending on FL has significantly narrowed in 2022-23. A substantial increase in the expenditure on country liquor (CL) has also been observed in rural areas. The increase in alcoholic beverage consumption in India is evident not only in value terms (% share in MPCE) but also in volume terms (litres). Per capita consumption of CL and toddy, as well as FL and beer, has risen on average from 2011-12 to 2022-23 in both rural and urban areas.

In urban India, the share of consumption expenditure on alcoholic beverages has almost doubled across all fractile classes, except for the P10 to P40 and P70, from 2011-12 to 2022-23. Likewise, in rural India, the share has increased across all fractile classes between 2011-12 and 2022-23. This indicates that the proportion of monthly consumption expenditure spent on alcoholic beverages rose in both rural and urban India across all fractile classes in 2022-23 compared to 2011-12. Moreover, a broader trend shows that the share is higher for consumers in the higher fractile classes than those in lower fractile

classes in both rural and urban India. Additionally, the share in rural India remains higher than in urban India across all fractile classes and all years. This suggests that rural households spend a larger share of their average MPCE on alcoholic beverages than their urban counterparts.

The share of expenditure on alcoholic beverages exhibits notable differences across fractile classes in both rural and urban India. In rural areas, this share varies more significantly across fractile classes (coefficient of variation: 0.17) compared to urban areas (CV: 0.09). This suggests that expenditure on alcoholic beverages has become a stable component of overall consumption, regardless of fractile class in urban India. Conversely, in rural India, the proportion spent on alcohol is higher for both the lower and higher fractile classes than for the middle classes. This variation in expenditure share among different fractile groups is a crucial feature of alcohol expenditure distribution in India.

Overall, a dual trend is apparent in rural and urban India: an increasing share of consumption among the lower fractile classes in rural India, indicating a deeper penetration of alcohol use among consumers from lower fractile groups, and a rising share of expenditure in urban India for higher fractile groups. However, the variation in the share of expenditure across fractile classes remains moderate in urban India. This suggests that the average monthly share of spending on alcoholic beverages is evenly distributed across fractile groups.

Within alcoholic beverages, the average monthly consumption of country liquor and toddy (CLT) is higher in rural areas compared to urban areas across all fractile classes and years. This shows a strong preference for CLT in rural regions over urban ones. From 2011-12 to 2022-23, CLT consumption has risen in both rural (except for fractile classes P90 and P100) and urban areas. In rural India, aside from the $P_5$ class, CLT intake increases up to the fractile class $P_{80}$ and then declines in 2022-23. Conversely, in urban areas, there is a downward trend in CLT consumption (in litres) among higher fractile classes.

Regarding the consumption of foreign liquor and beer (FLB), there has been an increase in the quantity consumed in both rural and urban areas across all fractile classes from 2011-12 to 2022-23. Both rural and urban regions show a similar pattern, with the average monthly per capita consumption of foreign liquor and beer increasing across all fractile classes during this period. Consumption of FLB is higher in urban areas across all fractile classes compared to rural ones. In 2022-23, the average monthly per capita consumption of FLB is greater in urban areas than in rural areas for the P40 and above fractile class. In rural India, the consumption of CLT is generally higher across all fractile classes compared to FLB. This indicates that, on average, CL and toddy are the preferred alcoholic beverages in rural India, whereas in urban areas, FL and beer are more popular among fractile class P40 and above. Affordability and accessibility likely influence people's preference for certain alcoholic beverages over others.

In rural India, states such as Bihar, Chhattisgarh, Jharkhand, and Odisha, which have low annual per capita total expenditure, tend to consume more bidis, gutka, and country liquor.

Conversely, states with higher annual per capita expenditure like Sikkim, Delhi, Telangana, and Arunachal Pradesh prefer cigarettes, foreign liquor, and beer. For example, Sikkim records the highest annual per capita expenditure on foreign liquor and beer. Geographically, the Northeastern states favour and consume cigarettes over bidis, with Mizoram, Sikkim, and Arunachal Pradesh leading in annual per capita expenditure on cigarettes. In these states, a dual pattern exists, characterised by the coexistence of traditional alcoholic beverages (country liquor) and branded alcohol (foreign liquor). North Indian states such as Haryana and Himachal Pradesh prefer bidis over other tobacco products, while Rajasthan, Uttar Pradesh, Uttarakhand, and Madhya Pradesh have comparatively higher expenditures on both bidi and smokeless tobacco. Punjab and Bihar are at the lower end of bidi consumption; however, Bihar shows significant consumption of chewing tobacco. South Indian states like Kerala, Tamil Nadu, and Telangana show lower consumption of country liquor and toddy but higher consumption of foreign liquor and wine.

In urban India, most states have low per capita expenditure on bidi, regardless of their annual per capita total expenditure. In contrast to bidi, cigarette consumption is higher in states with greater annual per capita expenditure on consumption. Sikkim, Arunachal Pradesh, and Mizoram have higher per capita expenditure on cigarettes, as well as higher annual per capita consumption expenditure. For gutka and leaf tobacco products, high per capita consumption expenditure is common even in states with low annual per capita total expenditure. The overall patterns show that gutka or smokeless tobacco use is widespread in states that sit within the middle range of annual per capita total expenditure. Additionally, states with higher consumption expenditures also spend more on foreign liquor and beer per capita. For example, Sikkim, Delhi, Goa, and Arunachal Pradesh have higher per capita expenditure on foreign liquor and beer. Not only the top four states in terms of consumption expenditure, but also those in the middle expenditure range, spend more on foreign refined liquor, wine, and beer.

The findings of the study point towards the growing preference for alcoholic beverages, especially among higher fractile classes spending more on products like foreign liquor, wine, and beer. This trend presents a situation for policymakers to consider increasing taxes on premium alcoholic drinks, as such a move would not place a disproportionate financial burden on lower fractile classes. Similarly, high consumption of chewing tobacco and cigarettes among the lower and middle fractile classes, particularly in rural areas, raises serious public health concerns. Raising taxes on these products can serve as an effective deterrent to reduce usage among the lower and middle fractile classes.

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## Appendix

**Table A1:** Average Monthly Per Capita Expenditure on Intoxicants (in Rs.)

| Item | Rural | Rural | Urban | Urban | Difference | |
|---|---|---|---|---|---|---|
| | 2011-12 | 2022-23 | 2011-12 | 2022-23 | Rural | Urban |
| | A | B | C | D | B-A | D-C |
| pan: leaf | 1.41 | 3.4 | 0.95 | 2.5 | 1.99 | 1.55 |
| pan: finished | 2.68 | 10.59 | 3.31 | 9.25 | 7.91 | 5.94 |
| ingredients for pan | 2.72 | 5.38 | 1.86 | 3.87 | 2.66 | 2.01 |
| **pan: sub-total** | **6.81** | **19.37** | **6.12** | **15.62** | **12.56** | **9.5** |
| bidi | 9.31 | 11.54 | 4.28 | 5.62 | 2.23 | 1.34 |
| cigarettes | 2.93 | 9.43 | 7.58 | 22.65 | 6.50 | 15.07 |
| leaf tobacco | 2.36 | 5.88 | 0.89 | 2.64 | 3.52 | 1.75 |
| snuff | 0.09 | 0.10 | 0.06 | 0.07 | 0.01 | 0.01 |
| hookah tobacco | 0.28 | 0.72 | 0.04 | 0.20 | 0.44 | 0.16 |
| cheroot | 0.13 | 0.09 | 0.05 | 0.02 | -0.04 | -0.03 |
| zarda, kimam, surti | 1.12 | 21.38 | 0.88 | 17.45 | 20.26 | 16.57 |
| other tobacco products | 4.44 | 4.47 | 5.62 | 4.88 | 0.03 | -0.74 |
| **tobacco: sub-total** | **20.65** | **53.61** | **19.41** | **53.52** | **32.96** | **34.11** |
| ganja | 0.07 | 0.31 | 0.01 | 0.03 | 0.24 | 0.02 |
| toddy | 1.57 | 4.51 | 0.21 | 0.54 | 2.94 | 0.33 |
| country liquor | 6.72 | 21.54 | 4.49 | 12.33 | 14.82 | 7.84 |
| beer | 1.3 | 11.31 | 3.03 | 23.67 | 10.01 | 20.64 |
| foreign/refined liquor or wine | 6.86 | 29.17 | 8.56 | 49.69 | 22.31 | 41.13 |
| other intoxicants | 1.95 | 3.03 | 0.47 | 1.49 | 1.08 | 1.02 |
| **intoxicants: sub-total** | **18.47** | **69.88** | **16.77** | **87.76** | **51.41** | **70.99** |
| **total intoxicants (All)** | **45.93** | **142.86** | **42.3** | **156.9** | **96.93** | **114.6** |

***Source:*** Compiled by authors based on the NSSO's Household Consumption Expenditure Survey (2011-12 & 2022-23).

**Table A2:** Average MPCE across Fractile Classes of MPCE by Regions (in Rs.)

| Fractile Classes of Average MPCE | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
| | NSS 68th Round Survey: 2011-12 | | NSS HCES: 2022-23 | | NSS 68th Round Survey: 2011-12 | | NSS HCES: 2022-23 | |
| | $MPCE_{MMRP}$ Class | Average $MPCE_{MMRP}$ (INR) | $MPCE_{MMRP}$ Class | Average $MPCE_{MMRP}$ (INR) | $MPCE_{MMRP}$ Class | Average $MPCE_{MMRP}$ (INR) | $MPCE_{MMRP}$ Class | Average $MPCE_{MMRP}$ (INR) |
| **$P_5$ (0-5%)** | ≤525 | 521 | ≤1,638 | 1,373 | ≤725 | 701 | ≤2,382 | 2,001 |
| **$P_{10}$ (5-10%)** | 525-600 | 666 | 1,638-1,912 | 1,782 | 725-860 | 909 | 2,382-2,813 | 2,607 |
| **$P_{20}$ (10-20%)** | 600-720 | 783 | 1,912-2,289 | 2,112 | 860-1,090 | 1,118 | 2,813-3,467 | 3,157 |
| **$P_{30}$ (20-30%)** | 720-825 | 905 | 2,289-2,612 | 2,454 | 1,090-1,295 | 1,363 | 3,467-4,053 | 3,762 |
| **$P_{40}$ (30-40%)** | 825-925 | 1,018 | 2,612-2,927 | 2,768 | 1,295-1,510 | 1,625 | 4,053-4,647 | 4,348 |
| **$P_{50}$ (40-50%)** | 925-1,035 | 1,136 | 2,927-3,268 | 3,094 | 1,510-1,760 | 1,888 | 4,647-5,286 | 4,963 |
| **$P_{60}$ (50-60%)** | 1,035-1,165 | 1,266 | 3,268-3,657 | 3,455 | 1,760-2,070 | 2,181 | 5,286-6,061 | 5,662 |
| **$P_{70}$ (60-70%)** | 1,165-1,335 | 1,427 | 3,657-4,138 | 3,887 | 2,070-2,460 | 2,548 | 6,061-7,036 | 6,524 |
| **$P_{80}$(70-80%)** | 1,335-1,585 | 1,645 | 4,138-4,819 | 4,458 | 2,460-3,070 | 3,063 | 7,036-8,425 | 7,673 |
| **$P_{90}$ (80-90%)** | 1,585-2,055 | 2,007 | 4,819-6,043 | 5,356 | 3,070-4,280 | 3,893 | 8,425-11,089 | 9,582 |
| **$P_{95}$(90-95%)** | 2,055-2,625 | 2,556 | 6,043-7,411 | 6,638 | 4,280-6,015 | 5,350 | 11,089-14,189 | 12,399 |
| **$P_{100}$(95-100%)** | >2,625 | 4,481 | >7,411 | 10,501 | >6,015 | 10,282 | >14,189 | 20,824 |
| All classes | - | **1,430** | - | **3,773** | - | **2,630** | - | **6,459** |

***Source:*** Compiled by authors based on the NSSO's Household Consumption Expenditure round (2011-12 & 2022-23).

**Table A3:** Average Monthly Per Capita Consumption of Tobacco Products (in Quantities): Rural India

| Fractile Classes of Average MPCE | Rural | | | | | |
|---|---|---|---|---|---|---|
| | Bidi (in no.) | | Cigarettes (in no.) | | Chewing Tobacco (gm) | |
| | 2011-12 | 2022-23 | 2011-12 | 2022-23 | 2011-12 | 2022-23 |
| **$P_5$ (0-5%)** | 11.24 | 7.10 | 0.04 | 0.11 | 15.99 | 20.92 |
| **$P_{10}$ (5-10%)** | 17.77 | 9.82 | 0.06 | 0.21 | 16.66 | 24.56 |
| **$P_{20}$ (10-20%)** | 20.98 | 11.13 | 0.12 | 0.36 | 17.40 | 25.42 |
| **$P_{30}$ (20-30%)** | 21.96 | 11.94 | 0.29 | 0.44 | 15.09 | 27.03 |
| **$P_{40}$ (30-40%)** | 24.77 | 12.86 | 0.36 | 0.61 | 16.99 | 28.52 |
| **$P_{50}$ (40-50%)** | 27.92 | 13.31 | 0.40 | 0.66 | 15.89 | 28.79 |
| **$P_{60}$ (50-60%)** | 26.40 | 13.85 | 0.47 | 0.95 | 17.60 | 29.26 |
| **$P_{70}$ (60-70%)** | 32.84 | 13.73 | 0.89 | 1.08 | 17.36 | 28.68 |
| **$P_{80}$ (70-80%)** | 34.64 | 14.61 | 1.11 | 1.39 | 19.52 | 28.03 |
| **$P_{90}$ (80-90%)** | 33.17 | 14.02 | 2.11 | **1.93** | 18.13 | 25.19 |
| **$P_{95}$ (90-95%)** | 33.28 | 14.01 | 3.00 | **2.50** | 13.36 | 23.30 |
| **$P_{100}$ (95-100%)** | 28.31 | 13.73 | 5.19 | **4.28** | 15.30 | 21.70 |
| All Classes (Average) | **26.11** | **12.51** | **1.17** | **1.21** | **16.61** | **25.95** |

***Source:*** Compiled by authors based on the NSSO's Household Consumption Expenditure Survey (2011-12 & 2022-23).

**Table A4:** Average Monthly Per Capita Consumption of Tobacco Products (in Quantities): Urban India

| Fractile Classes of Average MPCE | Urban | | | | | |
|---|---|---|---|---|---|---|
| | Bidi (in no.) | | Cigarettes (in no.) | | Chewing Tobacco (gm) | |
| | 2011-12 | 2022-23 | 2011-12 | 2022-23 | 2011-12 | 2022-23 |
| **$P_5$ (0-5%)** | 12.92 | 8.17 | 0.16 | 0.34 | 7.86 | 17.31 |
| **$P_{10}$ (5-10%)** | 13.57 | 9.34 | 0.24 | 0.54 | 7.52 | 19.25 |
| **$P_{20}$ (10-20%)** | 16.93 | 8.48 | 0.53 | 0.80 | 7.32 | 19.88 |
| **$P_{30}$ (20-30%)** | 15.86 | 8.19 | 0.78 | 1.07 | 7.89 | 18.60 |
| **$P_{40}$ (30-40%)** | 14.93 | 6.65 | 1.48 | 1.47 | 7.85 | 18.31 |
| **$P_{50}$ (40-50%)** | 12.05 | 6.49 | 1.59 | 1.71 | 6.41 | 16.02 |
| **$P_{60}$ (50-60%)** | 13.35 | 5.36 | 2.22 | **2.21** | 6.98 | 16.30 |
| **$P_{70}$ (60-70%)** | 11.14 | 4.92 | 2.70 | **2.52** | 4.68 | 14.08 |
| **$P_{80}$ (70-80%)** | 8.80 | 3.95 | 2.88 | **2.80** | 5.60 | 13.14 |
| **$P_{90}$ (80-90%)** | 6.57 | 3.41 | 4.14 | **3.55** | 5.20 | 10.39 |
| **$P_{95}$ (90-95%)** | 5.59 | 2.95 | 5.32 | **4.19** | 5.94 | 11.18 |
| **$P_{100}$ (95-100%)** | 2.49 | **2.65** | 7.26 | **7.23** | 2.35 | 8.36 |
| **All Classes (Average)** | 11.18 | 5.88 | 2.44 | 2.37 | 6.30 | 15.23 |

***Source*:** Compiled by authors based on the NSSO's Household Consumption Expenditure Survey (2011-12 & 2022-23).

**Table A5:** Average Monthly Per Capita Consumption of Alcoholic Beverages (in Litres)

| Fractile Classes of Average MPCE | Rural | | | | Urban | | | |
|---|---|---|---|---|---|---|---|---|
| | CL & Toddy (in Litres) | | FL & Beer (in Litres) | | CL & Toddy (in Litres) | | FL & Beer (in Litres) | |
| | 2011-12 | 2022-23 | 2011-12 | 2022-23 | 2011-12 | 2022-23 | 2011-12 | 2022-23 |
| **$P_5$ (0-5%)** | 0.07 | 0.22 | 0.00 | 0.01 | 0.06 | 0.07 | 0.00 | 0.03 |
| **$P_{10}$ (5-10%)** | 0.13 | 0.19 | 0.00 | 0.01 | 0.09 | 0.09 | 0.01 | 0.04 |
| **$P_{20}$ (10-20%)** | 0.10 | 0.20 | 0.00 | 0.02 | 0.06 | 0.08 | 0.01 | 0.05 |
| **$P_{30}$ (20-30%)** | 0.12 | 0.20 | 0.01 | 0.03 | 0.07 | 0.08 | 0.02 | 0.07 |
| **$P_{40}$ (30-40%)** | 0.21 | 0.23 | 0.02 | 0.04 | 0.07 | 0.08 | 0.02 | 0.10 |
| **$P_{50}$ (40-50%)** | 0.17 | 0.24 | 0.01 | 0.05 | 0.04 | 0.08 | 0.03 | 0.11 |
| **$P_{60}$ (50-60%)** | 0.19 | 0.25 | 0.01 | 0.06 | 0.05 | 0.06 | 0.04 | 0.15 |
| **$P_{70}$ (60-70%)** | 0.20 | 0.25 | 0.03 | 0.09 | 0.06 | 0.07 | 0.05 | 0.17 |
| **$P_{80}$ (70-80%)** | 0.26 | 0.27 | 0.04 | 0.13 | 0.04 | 0.05 | 0.06 | 0.20 |
| **$P_{90}$ (80-90%)** | 0.28 | 0.26 | 0.06 | 0.18 | 0.03 | 0.05 | 0.08 | 0.26 |
| **$P_{95}$ (90-95%)** | 0.24 | 0.25 | 0.08 | 0.24 | 0.03 | 0.04 | 0.11 | 0.33 |
| **$P_{100}$ (95-100%)** | 0.26 | 0.22 | 0.20 | 0.36 | 0.02 | 0.04 | 0.17 | 0.59 |
| All Classes (Average) | **0.19** | **0.23** | **0.04** | **0.10** | **0.05** | **0.07** | **0.05** | **0.17** |

***Source*:** Compiled by authors based on the NSSO's Household Consumption Expenditure Survey (2011-12 & 2022-23).

**Table A6:** Average Annual Per Capita Expenditure on Intoxicants across Indian States (in Rs.): Rural India (2022-23)

| State Name | Bidi | Rank | Cigarette | Rank | Gutka and Leaf Tobacco | Rank | Country Liquor and Toddy | Rank | Foreign Liquor and Beer | Rank | Total Consumption Expenditure | Rank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Andhra Pradesh** | 120 | 13 | 317 | 7 | 57 | 23 | 204 | 23 | 1,429 | 7 | 58,443 | 11 |
| **Arunachal Pradesh** | 141 | 11 | 556 | 3 | 533 | 2 | 989 | 2 | 2,046 | 4 | 63,316 | 8 |
| **Assam** | 96 | 19 | 171 | 14 | 459 | 5 | 302 | 17 | 416 | 17 | 41,189 | 22 |
| **Bihar** | 8 | 28 | 56 | 20 | 430 | 9 | 175 | 24 | 4 | 29 | 40,609 | 23 |
| **Chhattisgarh** | 47 | 21 | 45 | 21 | 326 | 12 | **1,053** | **1** | 169 | 25 | 29,594 | 29 |
| **Delhi** | 141 | 10 | 556 | 4 | 212 | 16 | 639 | 7 | 2,294 | 3 | 78,908 | 3 |
| **Goa** | 4 | 29 | 23 | 27 | 16 | 28 | 77 | 27 | 1,145 | 10 | 88,399 | 2 |
| **Gujarat** | 187 | 9 | 12 | 29 | 472 | 4 | 46 | 28 | 24 | 28 | 45,580 | 20 |
| **Haryana** | 402 | 2 | 45 | 21 | 27 | 27 | 626 | 8 | 497 | 14 | 58,304 | 12 |
| **Himachal Pradesh** | 379 | 3 | 97 | 16 | 51 | 25 | 768 | 5 | 654 | 13 | 66,730 | 5 |
| **Jharkhand** | 13 | 27 | 57 | 19 | 262 | 15 | 513 | 12 | 162 | 26 | 33,159 | 28 |
| **Karnataka** | 111 | 15 | 200 | 13 | 268 | 14 | 77 | 26 | 1,201 | 8 | 52,770 | 15 |
| **Kerala** | 73 | 20 | 223 | 11 | 1 | 29 | 107 | 25 | 833 | 11 | 71,083 | 4 |
| **Madhya Pradesh** | 210 | 8 | 42 | 23 | **792** | **1** | 523 | 10 | 378 | 18 | 37,352 | 26 |
| **Maharashtra** | 25 | 25 | 28 | 26 | 447 | 8 | 234 | 20 | 161 | 27 | 48,125 | 19 |
| **Manipur** | 19 | 26 | 312 | 9 | 59 | 22 | 914 | 3 | 206 | 21 | 52,325 | 17 |
| **Meghalaya** | 285 | 5 | 374 | 6 | 61 | 21 | 214 | 22 | 727 | 12 | 42,166 | 21 |
| **Mizoram** | 105 | 16 | **1,313** | **1** | 157 | 18 | 330 | 15 | 193 | 23 | 62,684 | 9 |
| **Nagaland** | 117 | 14 | 72 | 17 | 510 | 3 | 302 | 16 | 179 | 24 | 52,717 | 16 |
| **Odisha** | 29 | 24 | 42 | 24 | 352 | 11 | 344 | 14 | 285 | 19 | 35,395 | 27 |
| **Punjab** | 42 | 22 | 20 | 28 | 54 | 24 | 790 | 4 | 416 | 16 | 63,777 | 6 |
| **Rajasthan** | **438** | **1** | 57 | 18 | 455 | 6 | 242 | 19 | 417 | 15 | 51,158 | 18 |
| **Sikkim** | 40 | 23 | 1,225 | 2 | 447 | 7 | 413 | 13 | 3,046 | 2 | **92,771** | **1** |
| **Tamil Nadu** | 97 | 18 | 266 | 10 | 43 | 26 | 27 | 29 | 1,901 | 5 | 63,724 | 7 |
| **Telangana** | 105 | 17 | 415 | 5 | 124 | 20 | 518 | 11 | **3,061** | **1** | 57,627 | 13 |
| **Tripura** | 249 | 7 | 313 | 8 | 281 | 13 | 566 | 9 | 1178 | 9 | 62,475 | 10 |
| **Uttar Pradesh** | 137 | 12 | 39 | 25 | 364 | 10 | 301 | 18 | 197 | 22 | 38,292 | 25 |
| **Uttarakhand** | 308 | 4 | 204 | 12 | 180 | 17 | 712 | 6 | 1,782 | 6 | 55,691 | 14 |
| **West Bengal** | 280 | 6 | 159 | 15 | 142 | 19 | 217 | 21 | 243 | 20 | 38,870 | 24 |
| All-India | **138** | | **113** | | **327** | | **313** | | **486** | | **45,277** | |

***Source:*** Compiled by authors based on NSSO HCES (2022-23)

**Table A7: Average** Annual Per Capita Expenditure on Intoxicants across Indian States (in INR): Urban India (2022-23)

| State Name | Bidi | Rank | Cigarette | Rank | Gutka and Leaf Tobacco | Rank | Country Liquor and Toddy | Rank | Foreign Liquor and Beer | Rank | Total Consumption Expenditure | Rank |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Andhra Pradesh** | 37 | 17 | 392 | 13 | 52 | 25 | 27 | 28 | 1,190 | 12 | 81,381 | 15 |
| **Arunachal Pradesh** | 82 | 12 | 912 | 3 | 650 | 2 | 621 | 3 | 3,458 | 2 | 103,626 | 3 |
| **Assam** | 31 | 18 | 487 | 9 | 500 | 4 | 192 | 14 | 1,508 | 8 | 73,626 | 20 |
| **Bihar** | 3 | 28 | 91 | 24 | 363 | 8 | 68 | 26 | 0 | 29 | 57,212 | 28 |
| **Chhattisgarh** | 18 | 21 | 128 | 22 | 294 | 10 | 562 | 4 | 725 | 17 | 53,797 | 29 |
| **Delhi** | 132 | 7 | 617 | 7 | 221 | 14 | 320 | 10 | 1,935 | 6 | 98,610 | 4 |
| **Goa** | 0 | 29 | 35 | 29 | 80 | 22 | 151 | 17 | 1,334 | 10 | 104,806 | 2 |
| **Gujarat** | 49 | 13 | 68 | 27 | 409 | 7 | 28 | 27 | 32 | 28 | 79,449 | 17 |
| **Haryana** | **277** | **1** | 441 | 11 | 188 | 17 | 396 | 9 | 1,916 | 7 | 94,926 | 7 |
| **Himachal Pradesh** | 186 | 2 | 228 | 18 | 95 | 21 | 542 | 5 | 984 | 14 | 96,903 | 6 |
| **Jharkhand** | 6 | 26 | 76 | 25 | 216 | 15 | 186 | 15 | 379 | 23 | 59,172 | 26 |
| **Karnataka** | 29 | 19 | 491 | 8 | 198 | 16 | 72 | 25 | 1,275 | 11 | 91,990 | 8 |
| **Kerala** | 38 | 16 | 222 | 19 | 3 | 29 | 89 | 22 | 783 | 15 | 84,939 | 13 |
| **Madhya Pradesh** | 88 | 11 | 177 | 20 | **735** | **1** | 225 | 12 | 765 | 16 | 59,847 | 25 |
| **Maharashtra** | 8 | 24 | 74 | 26 | 238 | 13 | 104 | 21 | 343 | 27 | 79,884 | 16 |
| **Manipur** | 6 | 25 | 284 | 15 | 32 | 27 | **694** | **1** | 345 | 26 | 58,566 | 27 |
| **Meghalaya** | 90 | 10 | 775 | 5 | 51 | 26 | 77 | 24 | 1,092 | 13 | 77,200 | 19 |
| **Mizoram** | 16 | 22 | 1,514 | 2 | 73 | 23 | 400 | 8 | 680 | 18 | 91,860 | 9 |
| **Nagaland** | 131 | 8 | 402 | 12 | 628 | 3 | 402 | 7 | 378 | 24 | 85,173 | 12 |
| **Odisha** | 21 | 20 | 137 | 21 | 282 | 11 | 253 | 11 | 552 | 20 | 62,249 | 23 |
| **Punjab** | 44 | 15 | 49 | 28 | 58 | 24 | 630 | 2 | 438 | 22 | 78,522 | 18 |
| **Rajasthan** | 153 | 4 | 105 | 23 | 456 | 6 | 115 | 20 | 363 | 25 | 70,957 | 21 |
| **Sikkim** | 3 | 27 | **1,719** | **1** | 481 | 5 | 123 | 19 | **4,232** | **1** | 145,261 | 1 |
| **Tamil Nadu** | 46 | 14 | 293 | 14 | 19 | 28 | 14 | 29 | 1,346 | 9 | 91,560 | 10 |
| **Telangana** | 15 | 23 | 624 | 6 | 114 | 20 | 87 | 23 | 2,926 | 3 | 97,901 | 5 |
| **Tripura** | 140 | 6 | 804 | 4 | 254 | 12 | 167 | 16 | 2,167 | 5 | 88,856 | 11 |
| **Uttar Pradesh** | 98 | 9 | 230 | 17 | 334 | 9 | 210 | 13 | 617 | 19 | 60,485 | 24 |
| **Uttarakhand** | 152 | 5 | 276 | 16 | 153 | 18 | 501 | 6 | 2,664 | 4 | 84,052 | 14 |
| **West Bengal** | 160 | 3 | 486 | 10 | 150 | 19 | 145 | 18 | 548 | 21 | 63,206 | 22 |
| All-India | **67** | | **272** | | **241** | | **154** | | **880** | | **77,504** | |

***Source:*** Compiled by authors based on NSSO HCES (2022-23)

## MORE IN THE SERIES

- Jadhav Vivek and Sacchidananda Mukherjee (2025). Price Elasticity of Demand for Alcoholic Beverages in India: Analysis based on the NSSO's Household Consumption Expenditure Survey of 2022-23 and 2023-24, WP No. 431 (July).
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Shivani Badola, Research Fellow, NIPFP,
E-mail: Shivani.badola@nipfp.org.in

Sacchidananda Mukherjee, Professor, NIPFP,
Email:
sacchidananda.mukherjee@nipfp.org.in

National Institute of Public Finance and Policy,
18/2, Satsang Vihar Marg,
Special Institutional Area (Near JNU),
New Delhi 110067
Tel. No. 26569303, 26569780, 26569784
Fax: 91-11-26852548
www.nipfp.org.in