

State Factsheet: **Karnataka**



Total Population
67 million



Urban population
38.67%



People consuming alcohol
9.45 million
 (NFHS 2015-16)



Minimum legal age of drinking
21 years



Minimum price of IMFL
Rs 80/litre
 (NSSO data)



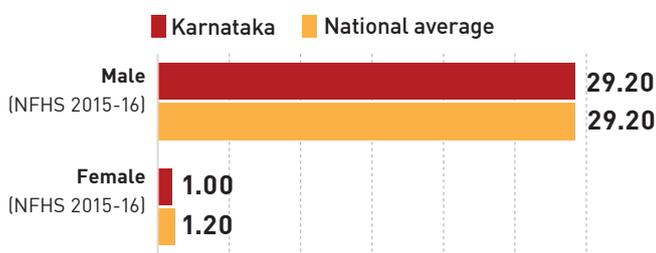
Per household mean consumption
1.29 litres/month
 (NSSO data)

CONSUMPTION

How many men drink?

- Proportion of males consuming alcohol increased from 28.3% to 29.2% between 2005-06 and 2015-16.
- Proportion of females consuming alcohol decreased from 1.2% to 1% between 2005-06 and 2015-16.
- The frequency of drinking has increased. In 2005, about 19% of alcohol consumers reported drinking everyday, which increased to 22% in 2015.

Chart 1: Proportion of Alcohol Consumers



Source: Authors' estimate.

Who are they?

Proportion of male consumers is higher in >21 years age group (34%) and among low education groups (38%). No stark differences observed across various income groups.

What do they prefer to drink?

As per National Family Health Survey (NFHS) 2015-16 data, in Karnataka, Beer (27%) and Hard Liquor (25%) are the most commonly used alcohol, followed by Wine.

How much do they drink?

Alcohol consumption data for Karnataka is obtained at the household level from NSSO 2011-12. On an average, the self-reported mean consumption level of Indian Made Foreign Liquor (IMFL) is 1.29 litres/month/household, with the maximum limit reported to be 15 litres/month.

Chart 2: Profile of male drinkers

Share of consumers in male population cohort (%)

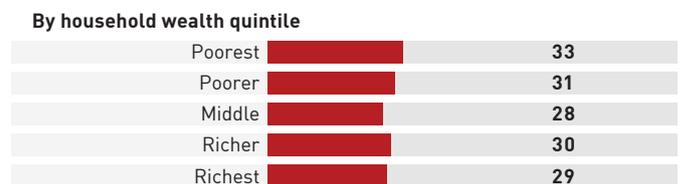
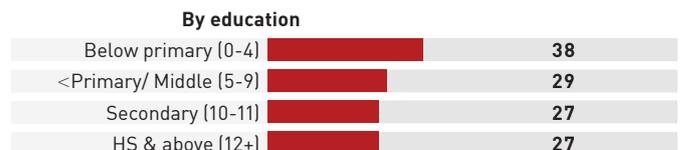
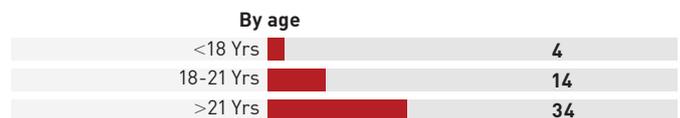
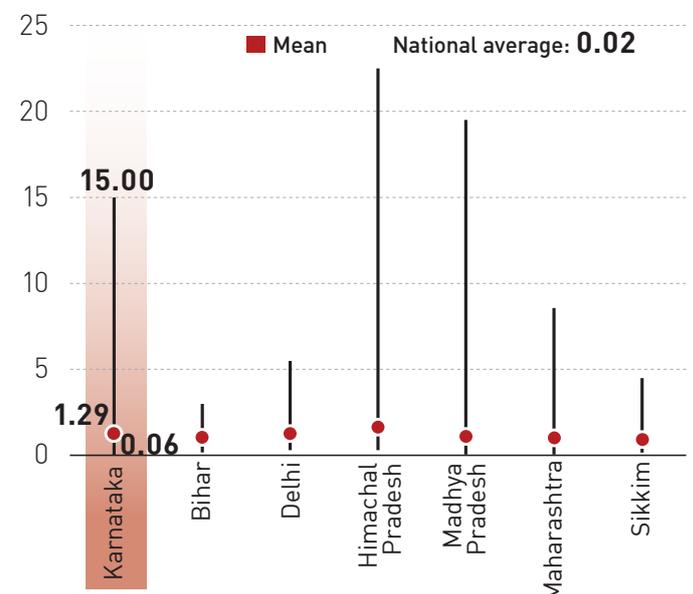


Chart 3: Household Consumption of IMFL (litres/month)



Source: Authors' estimate from NSSO 2011-12.

How much do they spend?

- Poorest households in Karnataka spend Rs 285 per month on alcohol; nearly double of the average of the seven states chosen for the study. This accounts for 5% of their total monthly expenditure which is also highest of all the states.
- Households of the richest income quintiles spend Rs 621 which is 2 times more than what is spent by the poorest households.

What do they forgo?

Compared to the non-consuming households, alcohol consuming households are seen to spend less in Food, Medical, and Education, which indicates a public health concern.

Chart 4: Share of monthly HH Expenditure

	Karnataka		All 7 states	
	C	NC	C	NC
Food	39%	38%	44%	43%
Education	2%	3%	3%	4%
Medical	4%	7%	5%	6%
Fuel	6%	7%	9%	9%
Alcohol	5%	-	4%	-
Other intoxicants	2%	1%	2%	1%

C: Alcohol Consuming HH

NC: Alcohol Non Consuming HH

Source: Authors' estimate.

TAX AND REVENUES

How much revenue is generated from IMFL?

- Revenue receipt from IMFL went up from Rs 37,618 lakhs in 2000-01 to Rs 15,45,100 lakhs in 2017-18 (current prices). A surge was recorded between 2006-07 and 2007-08, when receipts almost doubled.
- The surge came after the arrack ban in 2006-07. Country liquor's share was at 65% in 2000-01, but has seen a steady decline since its ban. IMFL's share has increased from 25% in 2000-01 to 91% in 2008-09.

Chart 5: Revenue Receipt from IMFL and Revenue Growth

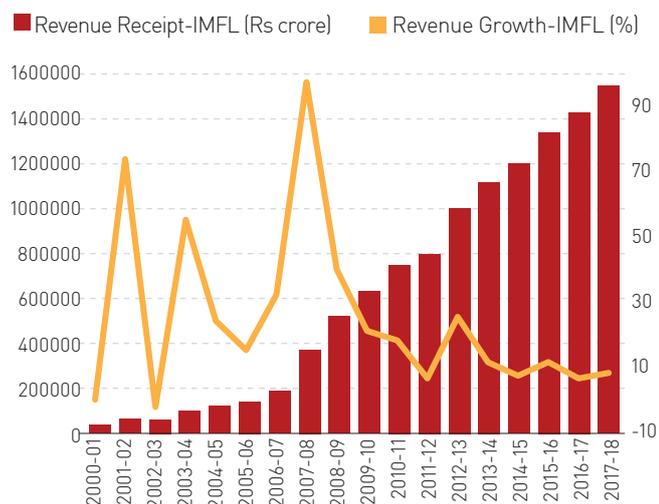
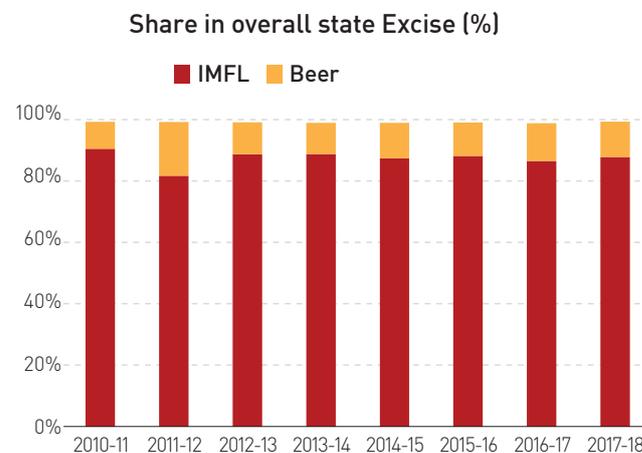


Chart 6: Share of IMFL and Beer in overall state Excise



How much revenue is generated from alcohol?

Alcohol revenue consists almost entire of state's excise revenue and 19% of State's Own Tax Revenue in 2017-18.

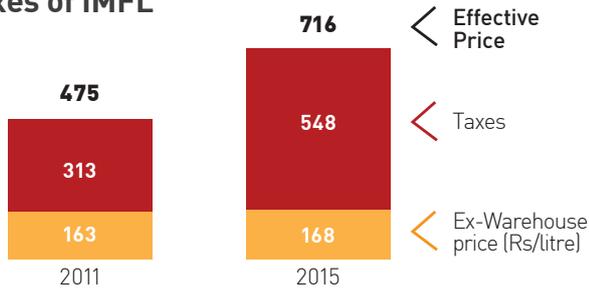
Tax: What is the structure of alcohol tax rate?

- The tax information for IMFL is obtained from Karnataka Excise State Department.
- Data obtained are Excise Duty (ED), Additional Excise Duty (AED) by Ex Warehouse Price (EWP)

Chart 7: Structure of alcohol tax rate

	Ex-Warehouse Price (Rs)	Additional Excise Duty (Rs)	Excise Duty (Rs)
Karnataka	✓ / Case	✓ / Litre	✓ / Bulk Litre
Himachal Pradesh	✓ / Case	✗	✓ / Proof Litre
Sikkim	✓ / Case	✗	✓ / Percentage of EWP
Maharashtra	✗	✗	✓ / Percentage of EWP
MP	✓ / 12 quart bottles or equivalent	✗	✓ / Proof Litre
Bihar	✓ / Case	✓ / Bulk Litre	✓ / Bulk Litre
Delhi	Brand Wise Information/ WSP ; VAT; Sales Price; Retail Margin		

Chart 8: Prices, Ex-Warehouse Prices, and Taxes of IMFL



range for 2007-08 - 2019-20.

- ED remained same to the amount of Rs 45/BL from 2008 to 2015. It increased to Rs 50/ BL from 2016 to 2019. The AED was in the range of Rs 60/litre to Rs 338 /litre in 2008 which increased to Rs 144/litre to Rs 3370/litre in 2019.
- All these different units of taxation are converted in per litre terms before using them for price calculation.

Different states have different taxation structure of IMFL. The Ex-warehouse prices, excise, and additional excise duties varies by states. This makes it inherently difficult to come up with a state specific representative price of IMFL.

Unavailability of any such national data on IMFL prices motivated us to derive our own pricing methodology. We exploit the tax structure data obtained from excise departments to arrive at a representative state-specific price of IMFL for the year 2011.

PRICING METHODOLOGY

How did we calculate Price of IMFL?

Our Pricing Methodology involves two steps:

- The first step is calculating the Unweighted Prices of IMFL for each range of EWP by summing the EWP, ED, and AED. This gives us a consumer facing price for the given range of EWP.
- In the second step, we find the proportion of households consuming alcohol in that interval of unweighted price from NSSO 2011-12. The weighted average of prices from step 1 is our effective price. Weights are the proportion of people consuming alcohol in that interval of prices.

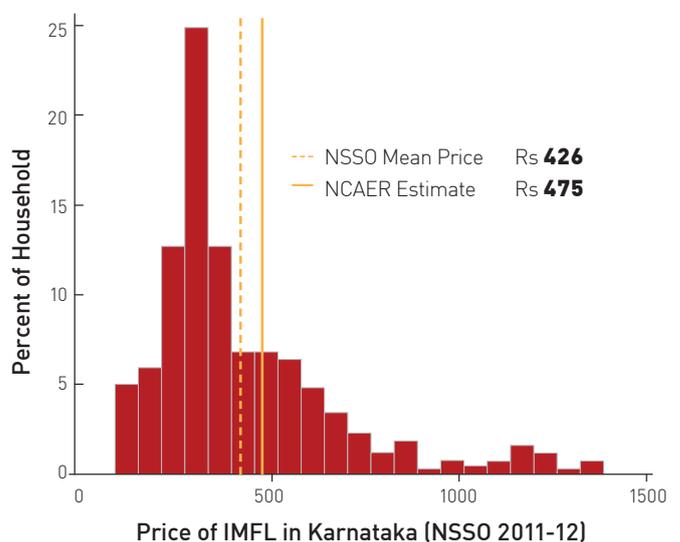
What prices we obtained from NSSO?

In order to complement and check the validity of Our Method, we also calculate the NSSO Unit prices of IMFL. NSSO prices are calculated for the year 2011 by dividing the total monthly Household expenditure incurred on IMFL with the quantity of IMFL consumed by the households during the last 30 days.

Comparing our prices and NSSO prices

Using Our Method, the mean representative price of IMFL for Karnataka came out to be Rs 475/litre. This is Rs 426/litre according to the NSSO Unit Price. Our estimated price is not only close but also falls within the NSSO price minimum and maximum price ranges.

Chart 9: Price of IMFL (per litre): Distribution of NSSO prices compared to NCAER estimate



RESPONSIVENESS OF DEMAND TO PRICING

What happens when price or tax on IMFL increase?

- People will not start drinking
- People will drink less IMFL
- Increase in government's revenue
- People can switch to other alcohol products

What did we find?

- For all seven states, we found that, a 10% increase in price prevents 11 men out of 1000 from initiating alcohol consumption.
- For all seven states, we found that household demand is less responsive to price. For a 10% rise in prices, alcohol consumption is seen to be reducing by only 0.57%.
- For Karnataka in specific and using NSSO unit prices, we see that for 10% rise in prices, IMFL consumption will reduce by 8.1%.

Two things to note from the above points: The responsiveness of demand to price is found to be relatively

greater compared to what we have seen in the seven state figures above.

- For all seven states, we found a 10% increase in TAX prevents nearly 14 men out of 1000 from consuming alcohol. For women, this value is only 5 out of 1000.
- Computation of tax as effective price minus EWP.
- We also see that a 10% increase in tax reduce alcohol consumption by 1.4%.
- In understanding the relationship between tax rate and tax revenue, we see that an increase in tax rate of 10% will increase tax revenue by 8.4%.

Chart 10: Elasticity estimates

Elasticity of participation (All 7 states)	Elasticity of consumption (All 7 states)	Elasticity of consumption (Karnataka)
-0.114***	-0.057***	-0.818***
-0.006	-0.002	-0.001
NFHS	NSSO	NSSO

*** Denotes significance at 1% level.
Source: Authors' estimate.

RECOMMENDATIONS FROM THE STUDY

1 Progressive increase in tax is required to decrease prevalence and amount of alcohol consumption over the years.

3 State-level interventions need to be contextualized considering the patterns and types of alcohol consumed in the state.

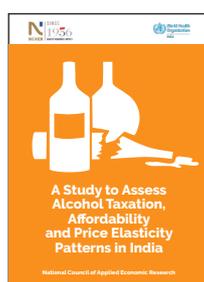
5 The strategies indicated in the WHO-SAFER framework should be implemented for added effects.



2 There should be more investment in data reporting structure so that comparable alcohol pricing, consumption and sales data across States is available.

4 Uniform and strict enforcement of minimum legal age of drinking across states is recommended

6 It is recommended to assess the relative merits of different taxation regimes so that optimal mode of taxation and distribution for alcohol is understood.



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The findings, interpretations, and conclusions expressed are those of the authors and do not necessarily reflect the views of NCAER or WHO.