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AN ABRIDGED BEEDI TAX REPORT: NAVIGATING THE IMPLICATIONS OF BEEDI REGULATION AND TAXATION

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AIIMS Jodhpur

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ABOUT THE INSTITUTIONS

SCHOOL OF PUBLIC HEALTH, ALL INDIA INSTITUTE OF MEDICAL SCIENCES (AIIMS) JODHPUR

All India Institute of Medical Sciences, Jodhpur is a central government healthcare and research institute of national importance, founded under the Pradhan Mantri Swasthya Suraksha Yojna (PMSSY) by the Ministry of Health & Family Welfare, Government of India. AIIMS Jodhpur was established with the objective of overcoming the regional disparity in healthcare in the country.

School of Public Health (SPH) at AIIMS Jodhpur was founded in 2017 to deliver excellence in public health education, research, and training along with the best level of care to the community. Many initiatives in the field of tobacco control have been conducted by the institution, such as sensitization of urban slums, hospital OPD and schools against the adverse consequences of tobacco use. Tobacco control is also a key aspect of the School Health Promotion Program, which has been a flagship initiative at SPH AIIMS Jodhpur since 2019. In September 2020, the faculty were identified as Nodal Persons for the scientific group of the National Tobacco Testing Laboratory (NTTL) under the Ministry of Health and Family Welfare, Government of India.

THE INTERNATIONAL UNION AGAINST TUBERCULOSIS AND LUNG DISEASE (THE UNION)

The Union was established in 1920 with the goal of delivering innovative expertise and advanced preventative care to mitigate the suffering caused on by lung and TB infections. By addressing health issues in low- and middle-income people, it seeks to achieve this objective. The Union is committed to scientific research with a focus on TB, HIV, lung health, tobacco control, and non-communicable diseases. Its mission is to generate, disseminate, and implement knowledge to policy and practice.

Since 2006, The Union has worked in South-East Asia, supporting organisations engaged in tobacco control initiatives with financial grants and technical assistance through the Bloomberg Initiative to Reduce Tobacco Use (BI) Grants Program. Tobacco and non-communicable disease (NCD) control initiatives are established and strengthened by the Union South-East Asia Office in close collaboration with ministries of health, NGOs, and academic institutions.

Through collaborations and programmes that reach out to more than 500 districts and more than 750 million people nationwide, The Union in India supports the National Tobacco Control Programme and other activities in more than 30 states and union territories.

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We acknowledge the technical and financial support by The International Union Against Tuberculosis and Lung Diseases (The UNION) & Vital Strategies under the Bloomberg Initiative to Reduce Tobacco Use.

FOREWORD

I am happy to present this report which highlights revenue projections at different levels of beedi regulations. Beedi smoking has been linked to various health problems, including lung cancer, heart disease, and respiratory illnesses.

However, the beedi industry in India has been plagued by a range of issues, including exploitation of workers, poor working conditions, and inadequate regulation. Alternatively, beedi industry recognised as cottage industry is exempted from many taxes that are otherwise imposed on other tobacco products.

The dismal taxation of beedi industry encourages it use among low and middle class. Hence, increasing taxes will increase their price, making them less affordable and therefore less appealing to its users. In addition to reducing tobacco use, beedi taxation will also generate significant revenue for governments, which can be used to fund public health programs and other essential services.

This report provides a comprehensive analysis of beedi taxation and possible revenue gain along with life years saved. I believe this report will be of interest to policy-makers, public health professionals, researchers, and advocates working on tobacco control issues.

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FOREWORD

I am pleased to introduce this report which brings into light an important tool for tobacco control – taxation to reduce tobacco use. Tobacco use is linked to various communicable and non-communicable diseases. It is also a common risk factor for high level of NCD induced mortality. Beedi smoking, is one of the major causes of lung cancer related deaths similar to cigarette, yet taxation as a tool to control the beedi smoking prevalence largely remains underutilized.

This report provides projections and scenarios where beedi related morbidity could be controlled by a simple measure of taxation equivalent to other tobacco products and yet raise the government revenue to tremendous proportions.

I believe that the empirical evidences presented in this report will help the government undertake many important policy reforms for better health outcomes, especially for the lowest socio-economic strata of the country, which is the worst affected segment due to beedi consumption.

Dr. Dheeraj Shah
Director
National Institute of Health and Family Welfare (NIHFW)
New Delhi

FOREWORD

It gives me great pleasure to present this report which very intricately highlights a huge and largely ignored issue of public health concern in the country – the unregulated beedi industry.

Beedi consumption has emerged as an epidemic in the lowest socio-economic strata, affecting the Indian youth and adults alike. The highly unorganized and unregulated nature of the beedi industry makes the case even worse with poorly visible pictorial health warnings, illicit circulation, lack of quality control and standardization and sale of sticks without appropriate checks by the vendors. Beedi industry enjoys the status of being called a cottage industry and less than a quarter of the manufactured sticks contribute to the government revenue, even with proven evidences of associated health hazards.

This report describes the impact of regulation of the industry in terms of revenue gains and prevalence reduction leading to aversion of thousands of life years which are otherwise lost due to its consumption amongst the Indian population. Such projections will play a key role in in helping stakeholder advocacy and consumer sensitization by the academicians and civil society organizations. Furthermore, such data could help in countering many misleading narratives of tobacco industry.

It is my belief and wishes that this report will give a big push to government's National Tobacco Control Program (NTCP) and bring the issue of Beedi smoking to agenda.

Dr. Umesh Kapil
President, Epidemiology Foundation of India
Secretary, National Academy of Medical Sciences
Professor and Head Department of Gastroenterology and Human Nutrition,
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PREFACE

We are delighted to present 'An Abridged Beedi Tax Report: Navigating the Implications of Beedi Regulation and Taxation'. This report has been prepared as a part of the Bloomberg Initiative to Reduce Tobacco Use grant to assess the health and economic burden due to bidi consumption in the country and is a joint effort of School of Public Health, All India Institute of Medical Sciences, Jodhpur, and International Union Against Tuberculosis and Lung Disease, South East Asia.

Beedi consumption remains one of the neglected areas in tobacco research. According to the Global Adult Tobacco Survey (GATS), there are over 7.7% beedi users in India. Beedis are hand-rolled traditional Indian Cigarillos made of unprocessed dried tobacco wrapped in tendu leaves, acting as a cheap alternative to cigarettes. Despite the significant toll on health and heavy economic burden, the industry is considered to be a cottage industry, employing home based labour force, majority being women and children. The cottage industry status of the beedi units has been a factor in the limited regulation of the industry, with many small-scale producers operating outside the formal sector and evading taxes and regulations.

Currently only 20.6% of the beedi industry is regulated with taxes as low as 22% of the retail MRP. One of the most effective ways of discouraging tobacco use remains highly underutilized when it comes to beedi control and this arises the urgent need to expand the tobacco taxation policies to bring beedi industry under its regulation. This report classifies the methodology to regulate beedi industry at various levels: introduction of Ad Valorem tax, taxation equivalent to cigarettes and taxation according to WHO/ FCTC recommendation. For each category of taxation, outcomes in form of possible revenue gain along with potential life years averted, which would otherwise be lost due to beedi smoking, have been estimated.

I congratulate the whole team involved in this project for successfully completing this report. The framework mapped out for beedi taxation and projection of revenue gained by the government in this report can guide policy amendments and better implementation of NTCP program. It will also help public health professionals and policy makers to devise effective beedi taxation policies in the country.

Dr. Pankaj Bhardwaj
Academic Head, School of Public Health
All India Institute of Medical Sciences, Jodhpur

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Executive Summary

Beedi smoking, often referred to as poor man's pleasure is a low cost alternative to cigarettes, with similar or at times even more harmful effects that other forms of tobacco. Due to its treatment as a cottage industry, it is subjected to minimal taxation and a huge segment goes unregulated and untaxed. In stark contradiction the WHO FCTC recommendation of 75% taxation of all tobacco products, beedi taxation reaches only 22%, while being enforced only on 20.6% of the market share. This report presents revenue implications and potential reduction in beedi associated mortality, if tax and regulation measures are imposed on the beedi industry in line with other tobacco products and as per the global recommendations.

Considering the price elasticity and resultant demand reduction, the results in this report are presented in form of 6 scenarios, which may be viewed as phased to gradually reduce the beedi use in the country. Introduction of a simple 5% Ad Valorem will increase the revenue by 15.82% with reduction in premature loss of life years by 0.35%. Introduction of taxes similar to cigarettes will raise the revenue by 181.9% and averting 5.5% more lost life years. Taxes similar to WHO recommendation with although reduced the revenue by 7.6% but at the same time this less than 10% reduction will be association with averting 18.8% life years that would otherwise be lost a result of beedi consumption. Further, tax increase associated with increased regulation will bring more revenue to government as more an more beedi sticks will come under the purview of taxation raising the revenue to as high as INR 51.07 billion from the current INR 4.74 billion.

This report not only provides empirical tools to assist policy related decisions, but also serves as the answer to tobacco industry counter narratives against regulation and taxation of industry. Coupled with earmarking of funds towards vocational rehabilitation of beedi workers, a significant progress may be achieved towards the ultimate goal of elimination of beedi associated health burden while contributing significantly to the government exchequer.

WHY PRIORITIZE BEEDI

Beedi is a low-cost alternative to cigarettes. While beedi smoking causes similar, if not more, detrimental effects on health of its user, yet the industry escapes many regulations and are subjected to far less taxation. Being treated largely as a cottage industry, only a nominal tax of 28% GST, Rs 1.02 NCCD and Rs 0.05 Excise per 1000 sticks is levied on manufactured beedi packs.[1] The resultant taxation marks the final MRP with only 22% proportion of tax, in stark contrast to other tobacco products at 52% (Cigarettes) and 64% (Smokeless Tobacco), while, the value recommended by the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) remains at 75%.[2] Furthermore, manufacturers with a production value of less than INR 4 million per year are traditionally exempted from taxation.[3]

Any attempt to regulate the largely unregulated industry, and imposition of taxes in line with other tobacco products are largely met by two counter narratives of the industry, stating beedis as “less harmful” by citing the “organic” origin of the product, and quoting the large amounts of revenue contributed to the countries exchequer. It may thus be contradicted by the fact that annually, over 500 thousand deaths are attributed to beedi smoking in India while costing over 10.5 million premature loss of life years, marking them just as harmful as any other tobacco product.[4]

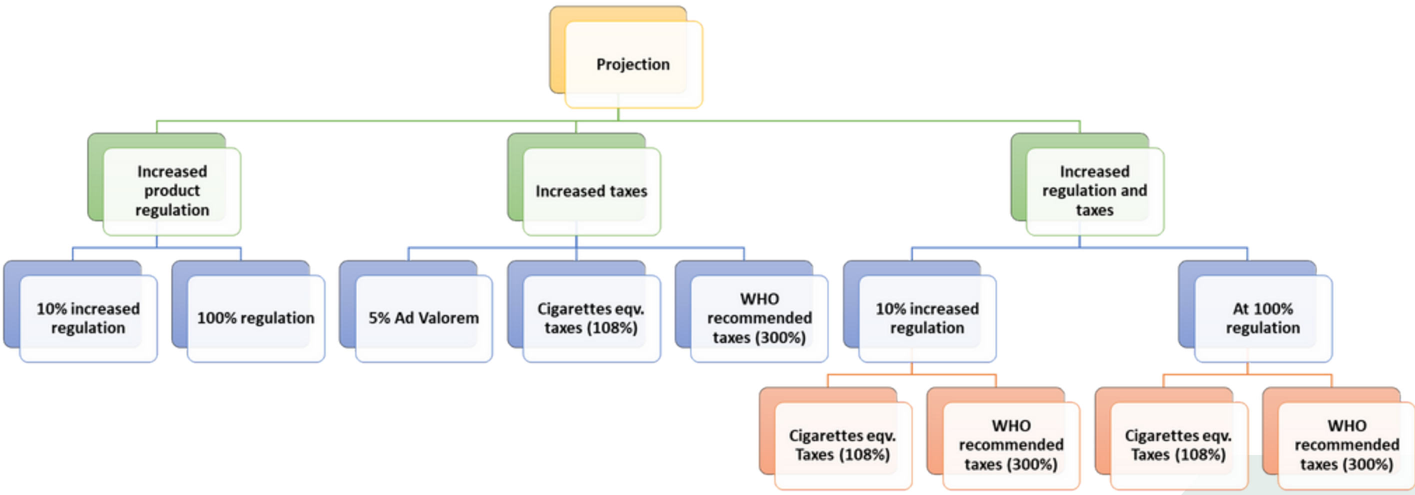
Hence, **this report attempts to estimate the revenue implications to the government and potential loss of life years that could be averted, if the beedi industry is subjected to increased regulations and taxation.**

METHODOLOGY

For the purpose of data modelling, the total number of beedi sticks consumed in the country were gathered through GATS – 2 (2016-17) survey,[5] while the number of regulated beedi sticks were obtained gathered from the Annual Report of Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry (2020-21).[6] Revenue gained from those regulated sticks and price elasticity data was gathered using government reports and published literature, while these were simultaneously verified through consultations with officials from the Government Departments such as Goods and Service Tax (GST) department, Micro, Small and Medical Enterprises (MSME) Department and Arid Forest Research Institute (AFRI).[7-10]

For estimation of the revenue projections, a twofold method was adapted, wherein, **revenue was projected considering an increase of 10% in regulation, and considering a 100% regulation of the product. Next, projections were made for tax increase equivalent to cigarettes and the WHO recommended value considering the price elasticity for the beedi consumers.**[9]

Figure 1: Methods of Revenue projections used in the study



While increase in the prices as a result of increased taxes would be associated with decrease in demand and consumption prevalence, the same was calculated using the price elasticity value gathered from available literature. A price elasticity for the poorest tertile of consumers was considered at -0.43 for calculations in prevalence implications.[9] In this context, price elasticity of -0.43 means that a change of 1 percent price in beedi will reduce the beedi users by 0.43 units. Thus, with increase in price of beedi, the prevalence reduces.

For the calculations, percentage increase in tax on the base price was used to determine the revenue gain, while the resultant percentage increased product MRP was used to determine the potential decrease in demand of beedi. This reduction in demand was theoretically calculated based on two separate fractions of the product available in the market, one that is currently regulated and is taxed at 22%, while the other, which is exempted from taxation or is unregulated, constituting the proportion of tax in the MRP as 0%.

Price Elasticity

Price elasticity is a measure of how responsive the quantity demanded for a good or service is to a change in its price. It is calculated as the percentage change in quantity demanded divided by the percentage change in price.

KEY FINDINGS

1. *1.Projection 1: Increasing the product regulation*

With the current annual beedi production of 39,500 crores (395 billion), only 20.6% (8150 crore sticks) are regulated and are subject to taxes. Thus, the resulting revenue received by the government remains at INR 474 crores.[7]

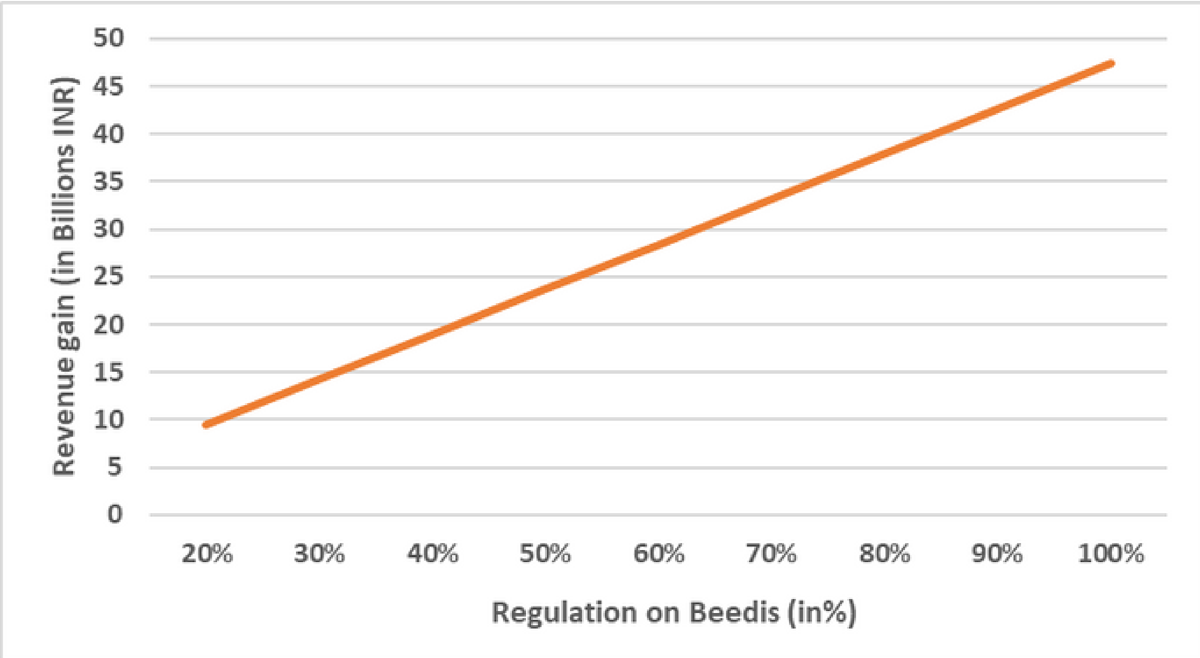
- At 10% increase in regulation:
  If the regulation is increased by just 10%
  - Number of regulated sticks increase to 8,967 crores (22.7%)
  - Revenue (not considering elasticity) increases to INR 521 crores
- Complete (100%) regulation:
  In a scenario where all the beedi sticks are regulated,
  - Number of regulated sticks 39,500 crores (100%)
  - Government revenue gets increased to INR 2,299 crores per annum.

Added to the revenue by tendu patta (INR 36.12 billion), the revenue projects from the current INR 40.86 billion to 41.33 billion (at 10% increase regulation) and 59.11 billion (at 100% regulation). These values are however, not adjusted according to price and demand elasticity, which will be discussed in the subsequent sections.

Table 1. Projection of revenue gained from Beedi trade with increased regulation

	Current regulation @20.6%	At 10% increase @22.7%	100% regulation @100%
Number of regulated Beedi sticks (in billions)	81.5	89.67	395.00
Revenue gain (in Billion INR)	4.74	5.21	22.99
Revenue from *Tendu Patta* (in Billion INR)	36.12	36.12	36.12
Total revenue from the Beedi Industry (in Billion INR)	40.86	41.33	59.11

Figure 2 : Revenue projections from Beedis trade at progressively increasing regulations



2. ***Projection 2 : Increasing the taxes***

The current tax on base price of beedi is 28%, making the proportion of tax in MRP as 22%.

"Tax increase in base price drives the revenue gain, while increased MRP will determine the decrease in demand."

Considering the price elasticity of -0.43, projections were created for the following three scenarios to aid the policy decisions and tax revisions: (Table 2)

1. If the current tax is increased by addition of Ad Valorem (5%),
2. If the total tax equivalent to Cigarettes (108%) is imposed, and
3. If the taxes as per the WHO FCTC recommendation (300%) were imposed.

Table 2. Revenue and prevalence implications as a result of tax increase on beedi

At current regulation (20.6%)			
Current percentage tax on base price			28
Proportion (%) of tax in MRP			22
Current revenue gain (in Billion)			**4.74**
Price elasticity			-0.43
Premature life years lost (due to regulated fraction of consumed beedis)			2,199,230
At increased taxation	**Introducing Ad Valorem (5%)**	**Similar to Cigarettes (108.3%)**	**WHO Recommended (300%)**
Proportional tax in MRP (%)	**25**	**52**	**75**
Proposed total tax on base price (%)	33	108	300
Increased tax on base price (%)	5	80	272
Proposed % Increase in tax	**17.86**	**285.71**	**971.43**
% Increase in MRP	3.91	62.50	212.50
Decrease in prevalence (%)	**1.68**	**26.88**	**91.38**
% of original beedi consumption	98.32	73.13	8.63
Revenue generated (in Billion INR)	**5.49**	**13.36**	**4.38**
Potential Life years saved	**36,947**	**591,153**	**2,009,657**

Scenario A

- Introduction of Ad Valorem (5% tax):
  - Projected reduction in Beedi prevalence/consumption by 1.68%
  - Projected Revenue rise to INR 5.49 billion
  - Potential Life Years Saved: 36,947

Scenario B

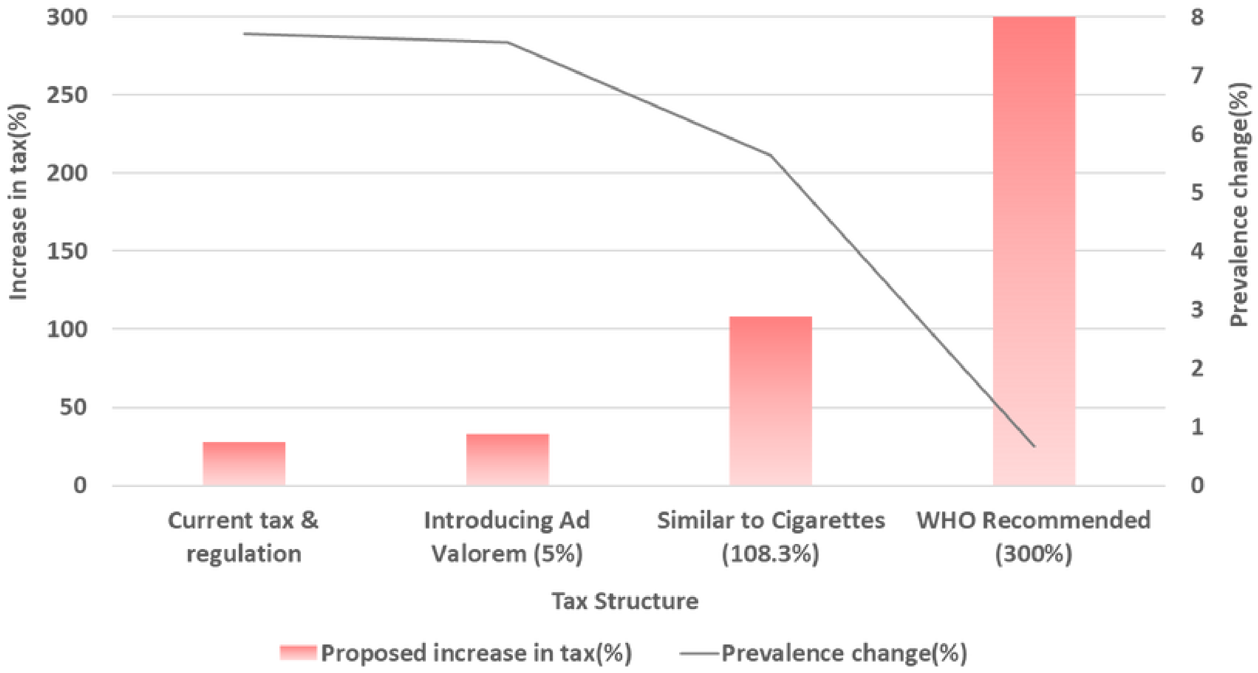
- Tax similar to cigarettes (108% tax):
  - Projected reduction in Beedi prevalence/consumption by 26.88%
  - Projected Revenue rise to INR 13.36 billion
  - Potential Life Years Saved: 591,153

Scenario C

- Tax similar to WHO/FCTC recommendation (300% tax):
  - Projected reduction in Beedi prevalence/consumption by 91.38%
  - Projected Revenue decreases to INR 4.38 billion
  - Potential Life Years Saved: 2,009,657

At the current regulation, the resultant rise in taxation has the potential to save over **2 million premature life years**, that would otherwise be lost due to beedi consumption.

Figure 3: Trends in beedi prevalence as a result of change in taxes



3. *Projection 3: Increasing the regulation along with tax impositions*

When the taxes on beedis is increased similar to Cigarettes (total tax = 108%; proportion in MRP = 52%) and WHO recommended level (total tax = 300%; proportion in MRP = 75%), and is consequently projected at an increased regulation of 10% of the current regulation, and at 100% regulation:

- Demand/consumption for the newer regulated sticks declines by 46.44% (Cigarette equivalent) and 129% (WHO equivalent.), while,
- The demand for previously regulated sticks remains in accordance with table 2 (Reduction at Cig. eqv. = 26.88%; reduction at WHO eqv. = 91.38%). (Table 3)

Scenario D: 10% increased regulation and taxes equal to cigarettes:

- Net revenue increase to INR 14.34 billion
- Prematurely lost life years saved: 695,159

Scenario E: 100% regulation and taxes equal to cigarettes:

- Net revenue increases to INR 51.07 billion
- Prematurely lost life years saved: 4,527,597

Scenario F: Taxes as per the WHO FCTC recommendation

- Beedi demand/prevalence decreases more than 100%, effectively eliminating consumption of **previously unregulated fraction of beedi sticks.**
- Revenue will be generated from the previously regulated fraction computing to INR 4.38 billion.
- Prematurely lost life years saved at 10% increased regulation: 2,233,740
- Prematurely lost life years saved at 100% regulation: 10,486,192

Table 3. Revenue and prevalence implications as a result of tax and regulation on beedi

Regulation level	At 10% increase of Current Regulation		At 100% Regulation	
	Cigarette eq.	WHO Recommended	Cigarette eq.	WHO Recommended
Newly regulated sticks (%)	2.1	2.1	79.4	79.4
Percentage tax on base price	108	300	108	300
Proportion (%) of tax in MRP	52	75	52	75
Current price elasticity	-0.43			
Increased in MRP (%)	108	300	108	300
Decrease in prevalence (%)	**46.44**	**129**	**46.44**	**129**
% of original beedi consumption	53.56	0	53.56	0
Revenue (newly regulated sticks) (in Billion INR)	**0.98**	**0**	**37.71**	**0**
Revenue (prev regulated sticks – table 2) (in Billion INR)	13.36	4.38	13.36	4.38
Net Revenue (in Billion INR)	**14.34**	**4.38**	**51.07**	**4.38**
Potential Life Years Saved	**695,159**	**2,233,740**	**4,527,597**	**10,486,192**

Discussion and Conclusion

The study uses the economic principal of price elasticity for all the estimations presented, the value of which has been previously validated by researchers. The higher value is justified because the majority of beedi consumers belong to the poorest tertile of the population and are highly sensitive to price fluctuations.

The findings have been presented as 6 different scenarios, which may be considered by the eminent policy makers as gradual stages of implementation. Beginning with expansion of the regulation by lessening the threshold of 4 million sticks and slowly eliminating the threshold completely as first phase. This could be followed by introduction of ad valorum, followed by excise and NCCD equivalent to cigarettes as phase two and finally increments to the WHO recommended value as the final phase.

This phase wise shift associated could be coupled with earmarking of the surplus revenue towards vocational rehabilitation and provision of better livelihoods of the suffering beedi workers. Thus, becoming an answer to another counter narrative posed by tobacco industry front groups concerning employment opportunities.

Throughout the report, estimations suggest that using the currently underutilised tool of taxation, manifold increase in revenue may be achieved coupled with tremendous aversion of disease and disability as a result of beedi consumption. The theoretical figures appear even more practically accurate at the WHO recommended tax value, where the beedi demand drops to zero by a huge fraction of consumers. With an insignificant drop in revenue of less than 10% (7.6% less revenue), more than 2 million premature loss of life years may be achieved at 10% increased regulation and nearly 10.5 million life year loss may be averted at a complete regulation of the product.

Recommendations

1. Considering the health, environmental and economic burden due to the beedi consumption to its users, beedi industry should lose the status of “Cottage Industry” and the associated regulation and taxation benefits the manufacturers enjoy.

2. Reduction and finally elimination of the production volume threshold for taxation of beedi industry through annual reductions by the year 2030.

3. Increased taxation of the beedi sticks, initially to include ad valorem and other taxes equal to other tobacco products, while targeting WHO recommended taxation, through annual increments by the year 2040.

4. Extension of laws on cigarettes to include beedi, such as ban on sale of loose sticks and enforcement of tobacco vendor licensing norms to reduce black marketing and illegal circulation, so that 100% regulation may be achieved in a longer run.

5. Earmarking a fixed proportion of increased revenue for rehabilitation of workers associated in the beedi lifecycle, such as tobacco farmers, beedi rollers, middle-man and distributors, and beedi industry workers. While the harmful effects to the health are well documented for these workers, in sufficient access to alternative livelihood options refrain them from rehabilitating. The inflow of surplus revenue may be used for upliftment of this vulnerable sect of the population.

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