Impact of the Economic Crisis on Smoking Behavior of the Male Population Aged 15 Years and Above in Sri Lanka; A Qualitative Study.

Alcohol and Drug Information Centre, Sri Lanka
www.adicsrilanka.org

Table of Content

Contributors

Dr. Manuja Perera

(Head of the Department – Department of Public Health, University of Kelaniya, Editor - Centre for Combating Tobacco)

Conceptualization, Methodology, Formal Analysis, Project Administration, Supervision, Writing – original draft, Writing – review and editing

Hasini Siyambalapitiya

(Documentation and information Management officer, ADIC)

Project administration, Supervision, Writing – original draft

Sampath De Seram

(Executive Director, ADIC)

Conceptualization, Methodology, Project administration, Supervision, Writing – review and editing

Nidarshana Selladurai

(Programme Officer, ADIC)

Project administration, Supervision, Formal analysis, Writing – review and editing.

1. Abstract

1.1 Background: Sri Lanka is currently facing a severe economic crisis, profoundly affecting the lives of people. There is lack of available data on how this fiscal crisis has influenced smoking behavior of individuals. In response to this gap, the present study aimed to investigate the impact of the economic crisis on smoking behavior among the male population aged 15 years and above in Sri Lanka.

1.2 Methods: The annual trend survey of Alcohol & Drug Information Centre (ADIC), Sri Lanka was conducted as a cross-sectional study, coupled with a qualitative study design on 55 selected males above 15 years from 11 districts of the country. The qualitative analysis focused on identifying the change in smoking behavior of the study population during the economic crisis, based on smoking status prior to six months of the study and reasons for change in their smoking patterns. Data was analyzed using thematic analysis to examine the impact of the economic crisis on smoking behaviours of the study participants.

1.3 Results: A significant reduction was observed in the smoking behavior (67.3%) in the cohort (n=55) of males in the age category 15 years and above within the six months prior to the survey, while 14.3% have entirely stopped smoking. Of the study population, 18.4% have reported that there had been no change in their smoking status. Thematic analysis revealed that reduced affordability due to job loss and income reduction, concerns regarding children and health issues were main causes for reduced smoking. Reduced affordability, children, reduced time and chances and health issues were reasons for smoking cessation. Addiction, loneliness and increased time and chances were the reasons for no change in the smoking behavior of the rest of the study participants.

1.4 Conclusion: The economic crisis has inadvertently led to a reduction in smoking among the majority of the study population due to reduced affordability of tobacco products. Without government involvement for effective implementation of tobacco control policies, affordability of tobacco products was reduced for the majority of the study population, due to the prevailing economic issues. Therefore, to maintain and build on this positive trend, it is imperative that the government takes action in implementing and enforcing effective tobacco control policies. This proactive approach can not only reduce tobacco use but also mitigate the associated health and economic burdens on society.

Strengths and limitations of the study: The study lays a solid foundation to address the significance of tobacco control policies. By highlighting the importance of reducing the affordability of tobacco products, the study emphasizes the need for tobacco control policy interventions. When considering the limitations of the study, the majority of the study population consists of people who smoke, hence, the findings must be interpreted with caution. Furthermore, our findings are based on the potential effects of an economic crisis on the change in smoking behaviour of individuals, but the situation might differ in different settings. Therefore, being cautious is important when generalizing these findings to other similar situations.

2. Introduction

Being a middle-income country, Sri Lanka's Gross Domestic Product (GDP) was $74.4 billion in 2022. This was a decline of 16% from the GDP of $88.5 billion in 2021,1 which exceeded the expected decline of 9.2% by the World Bank.2 The recent decline in the GDP resulted in the emergence of an acute and distinctive crisis situation, giving cause for Sri Lanka to be declared as one of the highest inflated countries, as the inflation rate reached an all-time high of 67.40% in September 2022.[3] This multifaceted crisis was driven by a number of factors including economic mismanagement, tax reductions, uncontrolled money creation and a shift in national policy towards organic and biological farming. The Easter bomb attacks, and the outbreak of the COVID-19 virus further contributed to the exacerbation of the economic difficulties in the country.[4] The contraction in the economy has had a profound impact, particularly on low-income households, as they were disproportionately affected by factors such as soaring food inflation, widespread job losses, restricted fertilizer supply, and a significant drop in remittances.5 Amidst the crisis, scarcities of essential items such as food, fuel, medication, and other vital necessities have led to intensified issues within the country.[6]

Tobacco smoking and its changing patterns are significant aspects which require attention during an economic crisis. In 2020, among individuals above 15 years in Sri Lanka, 19.4% were current tobacco users, out of which 36.2% were men and 4.9% were women. In relation to tobacco smoking, 9.1% were current tobacco smokers, out of which 19.7% were men and less than 0.1% were women.[7]

In parallel situations around the world, studies have been undertaken to identify and analyze the implications of the economic crises on smoking behavior. Through analogous studies conducted worldwide, several important findings have emerged, indicating that the prevalence of smoking may either increase or decrease during periods of crises.8 A study conducted in the USA, which was aimed at investigating the effects of the 2007–2008 economic crisis on smoking prevalence and number of smokers in the USA reported no significant changes in smoking prevalence trends over a period of five years from 2005–2010.6 In another study which examined the associations between the 2008 economic collapse in Iceland and smoking behaviour at the national and individual levels, it was identified that there was a significant reduction in the prevalence of smoking from 2007 (pre-economic collapse) to 2009 (post-collapse) in both males and females.9 A similar study which was conducted to determine the effect of the 2014 economic crisis on the smoking prevalence trends among the overall and in different groups of the Brazilian population showed that the smoking rates decreased between 2006 and 2018, decelerating after the crisis onset.10 Contrarily, a study on the smoking behaviour in Italy during 2008-2009 reported that there was a significant increase in smoking prevalence within the study period, overall (22.0% in 2008 and 25.4% in 2009) and in both men and women (26.4% in 2008 and 28.9% in 2009 among men, 17.9% in 2008 and 22.3% in 2009 among women). The notable surge in smoking prevalence after several decades has been attributed to the relapse induced by psychosocial stress associated with the economic crisis.[11]

The prevailing economic crisis in Sri Lanka presented a distinctive opportunity to engage in identifying the impact of the economic situation on smoking patterns. Alcohol & Drug Information Centre (ADIC), Sri Lanka conducts annual trend surveys since 1998, on smoking patterns, with four main objectives: (1) to determine different trends of smoking

within the country in terms of different products, age groups and districts; (2) to analyze the trends of smoking and compare the results with surveys conducted in previous years; (3) to identify the underlying attitudes and reasons for smoking among different age groups and districts; and (4) to determine the age of initiating smoking.12 This annual trend survey is both unique and distinctive, with the primary focus on individuals who are particularly susceptible to being exposed to tobacco in the selected locations. In parallel to the 2022 trend survey which was conducted for the fourteenth time, the current study aimed to investigate the repercussions of the economic crisis on the smoking behavior among males aged 15 years and above in Sri Lanka.

3. Methods

3.1 Study design & setting

A cross-sectional study was conducted, coupled with a qualitative study design on selected participants from the quantitative survey. The study spanned across 11 districts in Sri Lanka, namely, Colombo, Kilinochchi, Puttalam, Kalutara, Polonnaruwa, Nuwara Eliya, Rathnapura, Trincomalee, Monaragala, Matara and Jaffna. The selection of these districts was carried out based on the criteria established to fulfill the requirements of the annual trend analysis of ADIC, Sri Lanka. These incorporated urban, rural and estate populations as well as all ethnicities living in the country.

3.2 Study population

Males above 15 years of age living in the selected districts in Sri Lanka were included in the study. Nonconsenting participants and participants with hearing or speech impairment were excluded from the study.

3.3 Sample size and sampling

The sample size traditionally used for the trend survey was 250 per district, the total sample size amounting to 2750, which was calculated based on the parameters required for trend analysis. The trend survey participants were recruited using a multi-stage sample design, that incorporated stratified and systematic sampling methods.

For the qualitative analysis, five respondents from the trend survey sample were randomly selected from each district, with the total sample size being 55.

3.4 Ethical requirements

The study was conducted as an audit study. Furthermore, before initiating the interview, the study was explained to all the participants. Verbal consent was obtained from each interviewee regarding their participation in the study. The questionnaire was administered only to those who agreed to participate in the study. No personally identifiable information was obtained from the study participants during data collection.

3.5 Data collection and analysis

Trend survey data were collected by trained interviewers using a validated questionnaire. The ADIC trend survey is a unique survey that approaches participants in public places of the selected districts. This is to ensure high coverage of males who have a tendency to smoke so that results will not be an underestimate of actual smoking rates in the country. The questionnaire was prepared in both native (Sinhala and Tamil) languages and was administered in the field according to the language preference of the respondents.

In the trend survey results, five data are missing from the obtained responses, including three data from the smoking status as the respondents were unwilling to share the details, and two data from the job category, as they were daily paid workers and did not belong to the specified job categories. Therefore, the total number of responses was considered as 2745 when elaborating the trend survey results.

For the qualitative study, the selected five participants were interviewed by the same interviewers using a separate interview guide. The data were analyzed using thematic analysis to examine the impact of the economic crisis on their smoking behaviours.

3.6 Patient and public involvement

The public was not involved in the design, conduct, reporting or dissemination plans of the study.

4. Results

4.1 Trend survey results

Table 1 presents the distribution of the trend survey population according to their demographic and socioeconomic characteristics and smoking status in 2022, during the emergence of the economic crisis.

From the data obtained from 2745 respondents, the majority consisting of 47% (n=1291) belonged to the age category 25-39 years, while the minority of 18.8% (n=516) were in the age category 40 years and above. The majority of the study population consisting of 90.7% (n=2491) have completed their secondary education. When considering the employment status of the participants, the majority consisting of 36.9% (n=1014) were self-employed, while 20.9% (n=573) were students.

When considering the smoking status of the study population, more than half of the participants, which was 63.0% (n=1730) have never smoked within their lifetime, while 25.5% (n=699) have smoked within the last 30 days prior to the survey. From the participants, 11.5% (n=316) have not smoked within the last 30 days prior to the survey.

Caracteristics		Count	(%)
Age	15-24 Years	938	34.2
	25 - 39 Years	1291	47.0
	40 Years and above	516	18.8
Education level	No education	4	0.2
	Primary education (grade 1-5)	132	4.8
	Secondary education (grade 6-13)	2491	90.7
	Tertiary education (degree/ diploma/ vocational training)	118	4.3
Employment status	Government	270	9.8
	Private	888	32.4
	Self-employed	1014	36.9
	Students	573	20.9
Smoking status	Participants who have never smoked.	1730	63.0
	Participants who have smoked within the last 30 days prior to the survey.	699	25.5
	Participants who have not smoked during the last 30 days prior to the survey.	316	11.5
Total number of responses		**2745**	

Table 1: Percentage distribution of 2745 Sri Lankan males above the age of 15 years according to selected demographic and socioeconomic characteristics and smoking status.

Figure 1 is a representation of the smoking trend within the last 10 years, from 2012-2022, among the male population aged 15 years and above in Sri Lanka.

An overall decline was observed in the smoking trend in Sri Lanka. When considering the percentage of current smokers over a period of 10 years, during recent times, the highest dip was observed in 2017, which marked the year following the major tobacco tax reformation that increased the price of cigarettes in a significant amount. However, the lowest prevalence rate observed through the trend survey was reported in 2020, the year in which the COVID-19 pandemic was active with mobility restrictions and reduced accessibility to cigarettes. In the two years that followed, a slight increase can be observed in smoking, the percentage of current smokers in year 2022 being 25.4% and 24.2% in 2021.

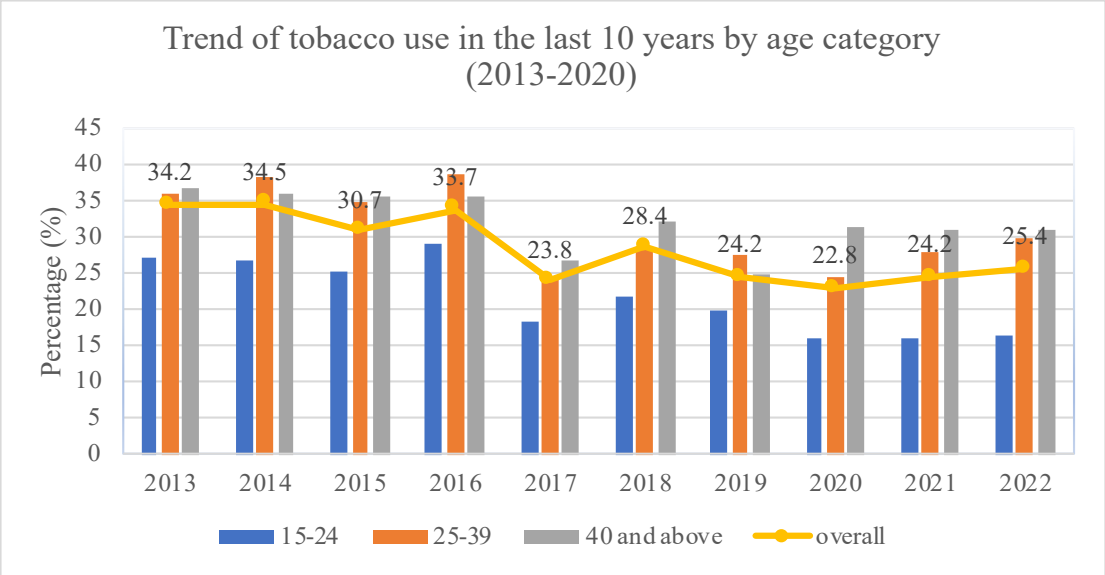

Figure 1: *Trend of tobacco use in the last 10 years based on the age category of respondents.*

4.2 Qualitative study results

Table 2 presents the distribution of the total qualitative study population according to their demographic and socioeconomic characteristics and smoking status during the emergence of the economic crisis.

From the total study population of 55, the majority consisting of 50.9% (n=28) were in the age category 25-39 years. When considering the income level of the participants, the majority consisting of 69.1% (n=38) were in the income category 25,001-50,000 LKR. Based on the smoking status of the study participants, the majority, which was 72.7% (n=40) have smoked within the last 30 days prior to the study, while 9.1% (n=5) have never smoked in their lifetime. When inquired about the status of smoking within the last 6 months prior to the survey, 66% (n=33) of the users have responded that their smoking has been reduced, while 16% (n=8) have entirely stopped smoking. Of the users, 18% (n=9) have reported that there had been no change in their smoking status within the last 6 months prior to the survey.

Caracteristics		Count	(%)
Age	15 - 24 Years	5	9.1
	25 - 39 Years	28	50.9
	40 Years and above	22	40

Income level (During the period of data collection, the exchange rate was 362.90 LKR = 1 USD)	0 - 25,000 LKR	7	12.7
	25,001 - 50,000 LKR	38	69.1
	50,001 - 75,000 LKR	4	7.3
	75,000 - 100,000 LKR	6	10.9
Smoking status			
Usage	Participants who have never smoked.	5	9.1
	Participants who have smoked within the last 30 days prior to the survey.	40	72.7
	Participants who have not smoked during the last 30 days prior to the survey.	10	18.2
Smoking status within the six months prior to the survey	Reduced	33	66
	Stopped	8	16
	No change	9	18
Total number of responses		**55**	

Table 2: Percentage distribution of 55 Sri Lankan males above the age of 15 years according to selected demographic and socioeconomic characteristics and smoking status.

Table 3 presents the thematic analysis of the reasons reported by the study participants regarding the change in their smoking behavior during the 6 months prior to the study, with example quotes, demonstrating participants' experiences.

Based on the responses obtained from the study participants who have reduced their smoking during the six months prior to the survey, reduced affordability due to job loss and income reduction, concerns regarding their children and advice by health professionals were the main causes for the change in smoking patterns.

According to the study participants who have reported that they have stopped smoking during the six months prior to the survey, reduced affordability, concern about their children's wellbeing, restricted environment and advice by health professionals were identified as the main thematic areas for the change in their smoking behavior.

The individuals who had made no change in their smoking behavior have explained addiction, loneliness and high availability as the causes for this situation. According to their statements, they have easy access to cigarettes through other parties such as friends and workplace, which has caused no change in their smoking behavior even if difficulties have developed with the prevailing economic crisis.

Thematic areas	Example quotes from the study participants
Reduced smoking	
Reduced affordability	"I'm a three-wheel driver and as there aren't many hires due to the fuel shortage and other economic difficulties to people. My income has largely reduced. Earlier, I used to smoke about five times a day, but now I've reduced it to one, and some days I do not smoke at all, because I cannot afford to smoke as often as I used to anymore." –Jaffna district, 33 years "I used to be a contractor, but I have lost my job as I do not receive work anymore, so I'm currently working in a shop with daily wages. The income is not even sufficient to cover my daily needs. I used to smoke about 8 times a day, but now I have reduced smoking because I cannot afford to smoke with the reduced income." – Kilinochchi district, 37 years
Concerns about children	"I have two daughters, and the cost for their education is unbearably high with the increased prices of school materials and other necessities. But my wish is to give them a good education, so I've decided to reduce smoking and spend my money on their education and other needs." –Puttalam district, 36 years "My daughter is in the Advanced Level class, and I have to spend a lot on her education, especially on tuition and educational material. So, I have reduced smoking with the expectation of spending more on my daughter's education." – Kalutara district, 42 years

Advice by health professional	"I've reduced smoking after I was hospitalized with a heart attack a couple of months ago. Following the doctor's advice, I decided to reduce smoking as it was risky for my health." – Monaragala district, 41 years "As I'm a diabetic patient, my doctors strictly advised me to stop smoking. Earlier I used to smoke about 8 times a day, but I have reduced smoking." – Matara district, 35 years
Stopped smoking	
Reduced affordability	"With the increased prices of essential goods, the financial problems at home have also increased. Also, with the high prices of cigarettes, I cannot afford to smoke anymore. Therefore, I decided to stop smoking entirely, and focus more on family needs." – Polonnaruwa district, 31 years "My job is selling tickets, and the income has been reduced during this period of crisis. At present, the money I earn is not enough even to cover the household expenses. So, I have stopped smoking." – Kalutara district, 4 years
Children	"After 6 years of marriage, me and my wife were blessed with a baby. I stopped smoking on the day she was born and haven't smoked since. I believe that smoking was a cause of not having children all this time." – Polonnaruwa district, 31 years
Restricted environment	"I'm a three-wheel driver and due to the fuel shortages, I do not get passengers more often. I was staying at my parents' house and therefore, did not have the chance to smoke anymore. With that situation, I completely stopped smoking." – Colombo district, 27 years
Advice by health professional	"After I became a stroke patient, the doctors strictly advised me to stop smoking. Due to the health risks associated with smoking, I decided to stop smoking, following my doctor's advice." – Puttalam district, 50 years "Becoming a diabetic patient and the constant advice from my doctors caused me to stop smoking." – Matara district, 52 years
No change in smoking	

Addiction	"I am the only member left in my family, and even if I want to, I cannot stop the habit of smoking. I earn a living by selling flowers near the temple and this income is sufficient for me to spend on cigarettes." – Kalutara district, 30 years "I cannot stop the habit of smoking now even if I want to. I'm not worried about the health concerns, or the expenses related to smoking. I'm ready to accept the end results of smoking." – Nuwara Eliya district, 28 years
Loneliness	"After my wife left me, I've felt quite lonely, and therefore, I fell into the habit of smoking to overcome the loneliness." – Polonnaruwa district, 45 years
High availability	"As I'm a shop owner, cigarettes are always available at the shop. Therefore, I feel like smoking, and I do not see any need to stop." – Monaragala district, 33 years "I'm working at a restaurant near the beach and almost everyone who comes to the restaurant smokes. Therefore, I too have access to cigarettes all the time. There is no need for me to stop smoking as my friends bring cigarettes to share with me every time they come to visit." – Matara district, 38 years

5. Discussion

This qualitative study which was conducted in parallel with the annual trend survey carried out by the Alcohol and Drug Information Centre (ADIC), Sri lanka, analyzed the impact of the economic crisis on smoking behavior of the male population aged 15 years and above in Sri Lanka. Based on the responses obtained from the study participants, the majority of the study population have reduced their smoking (66%), while 16% have completely stopped smoking within the period of six months prior to the survey. In 18% of the study population, there was no change in their smoking pattern.

Our study findings corroborate those reported by de Souza et al. where a decrease in smoking rates was identified among all age groups of the study population in varied patterns, during the economic downturn in Brazil.10 However, contrasting results have been reported by Gallus et al. where the economic crisis in the USA has resulted in an increase in the number of smokers by 0.6 million in the overall US adult population.8 Another study by Idris et al. reported similar negative effect of the Syrian war and economic crisis on smoking behaviour among the university students' population, presenting a significant increase in the number of cigarettes smoked daily during the crisis period.[13] Even though both studies report similar situations, the context in Sri Lanka is unique, where the affordability of cigarettes have reduced significantly through various consequences of the crisis, resulting in reduced smoking among the study population.

The thematic analysis of the reasons provided by the study participants is an interesting topic for discussion. Reduced affordability of cigarettes, occurring from income reduction or job loss due to the crisis was identified as the main causal factor for reduced smoking or individuals stopping their smoking habit entirely. Unemployment and poverty were commonly observed outcomes of the economic crisis which had resulted within many families due to the job loss or income reduction of the main income provider. The crisis has led to the poverty rate to be doubled from 13.1% to 25.6% between 2021 and 2022, increasing the number of people below the poverty line by 2.7 million, while the country was experiencing its highest poverty rate since 2009. With an overall loss of approximately half a million jobs, the real value of the earnings of those who were still employed was expected to decline by over 15% within this period.2 In addition, the prices of essential goods and services including the locally produced ones have drastically increased, leading to increased economic difficulties within families, while food inflation has resulted in serious food insecurities within families. Amidst this crisis situation, George et al. has revealed that the overall rate of inflation for February 2022 was 17.5%, while the year-on-year increase in food inflation was reported as 24.7%, and this value for non-food items was 11% at the time.4 Most of the citizens were coping with their daily struggles to provide basic needs for their family members, and this unique situation has led to reduced affordability of cigarettes to many, resulting in reduced or stopped smoking among the majority of the study population. These study findings strongly facilitate the need for effective tobacco control policies within the country to further reduce the affordability of cigarettes, which will lead to increased prices and ultimately result in further reduction of smoking among the country's population. Conforming these facts, a study by Nargis et al. has presented results that contribute to the existing evidence, stating that the price elasticity of cigarette use is negative and statistically significant. This explains that tobacco tax increases resulting in tobacco price increases is a direct cause for reduced tobacco usage among populations.[14]

Concerns regarding their children's well-being and advice by health professionals were two more important reasons stated by the study participants for reduced or stopped smoking. The well-being of children being a main concern of some study participants, they have reduced or stopped smoking as they were genuinely concerned about spending their limited earnings on the betterment of their children's future. With the economic difficulties, they could not afford to spend their earnings on cigarettes, as the costs to fulfill the basic needs of their children have increased as a consequence of the economic crisis. Moreover, individuals who have become victims of health issues such as diabetes, stroke and heart diseases had reported that the advice from their medical professionals has largely contributed to the reduction or cessation of their smoking. It is evident that obtaining a clear understanding regarding the health risks associated with smoking from a professional in the field has led to falling out of the unhealthy habit of smoking.

However, among individuals who have made no change in their smoking behavior, addiction was identified as the main factor affecting their smoking pattern being continued without any change even amidst the economic difficulties, while loneliness and high availability were also stated by some individuals. Similarly, a study by Gallus et al. among the Italian general population aged 15 years and above reported that the majority of the study population, which was 77.4% have made no change in their smoking behaviour even amidst the crisis.[15]

6. Conclusion

The economic crisis has had a significant impact on the smoking habits of the majority of the study population, resulting in a notable decrease in their smoking behavior. This shift in behavior can be attributed to several interrelated factors that collectively contribute to making tobacco products less accessible and affordable for many individuals, such as economic hardships resulting from price increases of essential goods and services, reduced income and job loss. Therefore, it is evident that the economic crisis has unintentionally contributed to reduced smoking among a significant portion of the population, mainly caused by reduced affordability of tobacco products. However, this reduction should not be viewed in isolation but rather as an opportunity to address the broader issue of tobacco usage within the country.

7. Recommendations

To maintain the positive trend of reduced tobacco use, it is crucial for the government to play an active role in effective implementation of tobacco control policies, which will result in reduced tobacco use and associated health and economic harm in the long run. Our results support the implementation of a scientific tax policy for tobacco products as a measure of reducing tobacco affordability and availability, while the government's excise revenue can also be increased through appropriate tax and pricing policies. Further, this includes a gradual increase in excise duty on tobacco products relative to inflation and income, and the introduction of a uniform tax system for all tobacco products. Therefore, at present, as a meaningful solution to the ongoing economic issues within the country, and to reduce the overall impact of tobacco usage, introducing scientific tax and pricing policies for tobacco products is largely beneficial.

9. References

1. World Bank national accounts data, and OECD National Accounts data files. Available from: https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=LK
2. Sri Lanka Development Update. Available from: https://thedocs.worldbank.org/en/doc/6c87e47ca3f08a4b13e67f79aec8fa3b-0310062022/original/Sri-Lanka-Development-Update-October-2022-final.pdf
3. Sri Lanka Inflation Rate. Available from: https://tradingeconomics.com/sri-lanka/inflation-cpi#:~:text=Inflation%20Rate%20in%20Sri%20Lanka,percent%20in%20March%20of%201995
4. Kataria A, Manur A, Pradhan S. Sri Lanka's Economic Crisis; A Brief Overview. 2022. Available from: https://www.researchgate.net/publication/361571361_Sri_Lanka's_Economic_Crisis_A_Brief_Overview/link/62ba0adc056dae24e8e75d9d/download
5. The World Bank in Sri Lanka; Overview. Available from: https://www.worldbank.org/en/country/srilanka/overview
6. Sharma DS, Anawade P, Sahu A, Sharma M. The economic crisis faced by island nation-Sri Lanka: An empirical study. Journal of Contemporary Issues in Business and Government. 28(03):2022. Available from: https://cibgp.com/
7. Global Adult Tobacco Survey. Available from: Global Adult Tobacco Survey, Fact S http://www.statistics.gov.lk/Resource/en/OtherCensusandSurveys/SurveyReports/SLK_GATS_2019_2020%20Factsheet.pdf
8. Gallus S, Ghislandi S, Muttarak R. Effects of the economic crisis on smoking prevalence and number of smokers in the USA. Tobacco Control. 2015 Jan 1;24(1):82–8.
9. Gallus S, Ghislandi S, Muttarak R. Effects of the economic crisis on smoking prevalence and number of smokers in the USA. Tobacco Control. 2015 Jan 1;24(1):82–8.
10. de Souza LE, Rasella D, Barros R, Lisboa E, Malta D, Mckee M. Smoking prevalence and economic crisis in Brazil. Revista de Saude Publica. 2021;55:1–10.
11. Gallus S, Tramacere I, Pacifici R, Zuccaro P, Colombo P, Ghislandi S, Vecchia CL. Smoking in Italy 2008–2009: A rise in prevalence related to the economic crisis? Preventive Medicine. 2011 Feb 1; 52(2):182-3
12. Annual Trend Survey on Tobacco Consumption in Sri Lanka (2022). Available from: https://adicsrilanka.org/wp-content/uploads/2023/06/Tobacco-Trend-Survey-2022-Designed.pdf
13. Idris A, Saadi T, Turk T, Alkhatib M, Zakaria M, Sawaf B, et al. Smoking behaviour and patterns among university students during the Syrian crisis. Eastern Mediterranean Health Journal. 2018 May 3;24(2):154–60.
14. Nargis N, Stoklosa M, Shang C, Drope J. Price, Income, and Affordability as the Determinants of Tobacco Consumption: A Practitioner's Guide to Tobacco Taxation. Nicotine and Tobacco Research. 2021 Jan 1;23(1):40–7.
15. Gallus S, Asciutto R, Muttarak R, Pacifici R, Vecchia CL, Lugo A. Which group of smokers is more vulnerable to the economic crisis? Public Health. 2016 Jan 2;134:34–8.