



Consumption of New and Emerging Tobacco and Nicotine Products in Zambia: Implications for Policy

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The report on this study was written by a team of researchers from the Zambia Institute for Policy Analysis and Research (ZIPAR): Shimukunku Manchishi, Edna Kabala and Mulenga Chonzi Mulenga. The findings, opinions and recommendations made in this report are those of the authors and do not necessarily reflect the views of the Foundation, its individual members or the ACBF Secretariat.



List of abbreviations

ACBF	African Capacity Building Foundation
BAT	British American Tobacco
ENDS	Electronic Nicotine Delivery Systems
FCTC	Framework Convention on Tobacco Control
FM	Factory Manufactured cigarettes
HTPs	Heated Tobacco Products
KIIs	Key Informant Interviews
MoF	Ministry of Finance
MoH	Ministry of Health
NETNPs	New and Emerging Tobacco and Nicotine Products
RYO	Roll Your Own Tobacco
WHO	World Health Organisation
ZIPAR	Zambia Institute for Policy Analysis and Research
ZRA	Zambia Revenue Authority



Executive summary

The global economy has in recent years observed a rapid increase in the consumption of New and Emerging Tobacco and Nicotine Products (NETNPs). Consumers of the NETNPs in Zambia and elsewhere justify consumption of these products on grounds that they are less harmful and expose them to fewer health risks compared to traditional tobacco smoke. However, studies have shown that these NETNPs do not entirely filter out harmful chemicals from tobacco as presumed by many people, and in some cases may even expose smokers to more smoke over longer periods of time as is the case of water pipe (shisha).

This study investigated the consumption and taxation of NETNPs in Zambia to generate knowledge and come up with evidence-based policy recommendations aimed at informing appropriate stakeholders on the consumption and taxation of NETNPs. The study employed a mixed methodology encompassing a desk review, a survey of 400 respondents and key informant interviews.

In terms of the consumption of NETNPs, the study revealed that a majority of those surveyed consume water pipe, which ranked highest among the NETNPs consumed in Zambia. Other NETNPs commonly consumed include bidis, e-cigarettes and dry snuff (nsunko). The consumption of these products varied according to the economic status of the consumers, with products such as snus and e-cigarettes being much more preferred and consumed by those in employment because they can afford more costly products. Meanwhile, products such as water pipe and bidis were the products of choice among those not employed and this could also be attributed to the relatively lower cost of the products.

Regarding the socio-demographic characteristics of the surveyed sample, the study established that most of the consumers of NETNPs were young, unmarried males. A notable finding in the study was that those who had attained tertiary level of education were the biggest consumers of NETNPs.

With regards to taxation of NETNPs, the study has found that there is potential to increase taxes substantially based on consumers' willingness to pay which would require very high tax levels to deter consumption. This would require the government to considerably increase excise taxes on these products which would ultimately increase their price and hence curtail their consumption.

The study has established that the taxation of all tobacco products in Zambia is the sole responsibility of the ZRA which draws its mandate from various provisions of the Zambian law. Broadly there are eight categories used to classify tobacco and nicotine products based on the HS codes. This broad classification forms the basis for taxation of tobacco and nicotine products in Zambia. The study has established that there are four main taxes applied on tobacco products in Zambia, these include: a 25% customs duty levied on the value of the product imported; a VAT of 16% on the value of the product; a 5% surtax; and excise duty of 145% of the value for duty purposes (VDP) or K355 per kg for all tobacco products.

The study makes the following recommendations for policy:

- **Gender specific tobacco prevention interventions:** The higher prevalence of males using new and emerging products compared to females is an indication of the need to devise policies that are more gender specific to tackle the scourge. The interventions should target reduction of consumption among men who were found to be the biggest consumers of NETNPs. The interventions could take the form of mass reach health communication campaigns, tailor made counselling programmes for males and creation of toll-free lines to assist males engaged in consumption of these products.
- **Tobacco control awareness campaigns:** The increased consumption of new and emerging products in Zambia and elsewhere has been justified on grounds that they are less harmful and expose consumers to fewer health risks compared to traditional tobacco smoke. This is a clear indication that there has been very little information dispelling these assertions. Therefore, there is need to embark on concerted awareness campaigns, particularly



among the youthful population and the educated. The awareness campaigns can seek to educate them that, contrary to assertions, these new and emerging products have devastating health risks as they do not filter out harmful chemicals from tobacco. At the same time, they may even expose them to more smoke over longer periods of time as is the case of water pipe (shisha).

- **Increasing taxes:** To reduce the consumption of new and emerging products which have far higher devastating health risks, there is need to consider increasing taxes on these products by at least 50%. As is evident from this study, substantial increases in the excise tax rate would be required to get people to stop using these products.
- **Removal of differentiated tax rates:** The effectiveness of the preceding recommendation is contingent on a further recommendation, namely removal of differentiated tax rates for locally manufactured and imported tobacco and nicotine products. This is because differentiated taxation goes against the principles of National Treatment as espoused under WTO law. Further, irrespective of the exceptions that can be used to circumvent this law, the special treatment accorded to locally manufactured products then becomes a hindrance to tobacco control policies as there is potential for consumers to simply substitute imported products for locally manufactured ones.
- **Formulation of policies on NETNPs.** Currently, Zambia lacks a clear policy on NETNPs, and this may derail any efforts to control the consumption of these products. Therefore, the Government must begin to devise policies and strategies aimed at curbing the growing trend in consumption of NETNPs.



1. Introduction

There is general consensus across public health and economic experts that debate on imposition of taxes on tobacco products is a critical tool for controlling tobacco consumption among consumers. Substantial evidence suggests that increases in the prices of tobacco products discourages consumption especially among young and poor people. Price hikes of tobacco products through tax impositions also generates government revenue, reduces non-communicable diseases associated with consumption of tobacco products and promotes the highest standards of public health (Stoklosa, *et al.*, 2019; Van Walbeek, 2015; WHO, 2021; WHO, 2004).

Proponents of global health and sustainable development have thus advocated for higher tobacco taxation as the most effective way to prevent and reduce tobacco use. Considerable evidence originating from low and middle-income countries broadly advances that raising tobacco taxes influences increases in the price of tobacco products borne by consumers. Higher tobacco product prices encourage tobacco users to quit, sustain cessation, prevent youth initiation, and reduce consumption among those who continue to use tobacco. Moreover, the revenue generated through taxation of tobacco products provides the much-needed financing for comprehensive tobacco control programs (Morris, 1985; Stoklosa, 2018; Stoklosa *et al.*, 2019; U.S National Cancer Institute & World Health Organization, 2016; Van Walbeek, 2015). Yet, in countries such as Zambia, the emergence of New and Emerging Tobacco and Nicotine Products (NETNPs) presents unclear pricing and taxation dynamics. This is coupled with limited evidence on the situational nature of NETNPs consumption control and taxation. Furthermore, the lack of clarity in the pricing and taxation of new age tobacco products is exacerbated by lack of data on the actual types of NETNPs that have gained wide acceptance among consumers who consider these products to be less harmful relative to ordinary cigarettes, among other tobacco products.

This report is a contribution to emerging knowledge on the consumption and taxation of NETNPs in Zambia. The rest of the report is organised as follows: Section two presents the background and rationale of the study while section three avails the objectives of the study. The literature relating to tobacco control in the global

and regional context is presented in section four of the report. Section five highlights the methodology that was adopted in the study. This is followed by section six with results of the study. Section seven delivers the conclusion and recommendations that the study makes based on findings from the research. Finally, section eight highlights the limitations of the study.

2. Background and Rationale

The devastating consequences of tobacco consumption have been widely researched (Stoklosa *et al.*, 2019; Stoklosa, 2018; U.S National Cancer Institute & World Health Organization, 2016). According to the World Health Organisation (WHO), tobacco costs households and national governments over \$1.4 trillion in healthcare and lost productivity. Tobacco consumption intensifies poverty and undermines gains in economic productivity. Globally, people in low- and middle-income countries spend a large proportion of their income on mitigating the negative effects of tobacco consumption thereby reducing expenditure on crucial needs such as food, education, and health care (Stoklosa, *et al.*, 2019; WHO, 2004). For smokers with limited income, tobacco may take up a large share of their income, thereby also limiting capacity to channel income towards productive income-generating or investment activities.

In Zambia, tobacco use does not only bear significant burden on economic productivity but also on public health outcomes (Stoklosa, *et al.*, 2019). Data shows that tobacco consumption poses major negative health implications. For instance, tobacco-related deaths in Zambia increased from 3,000 per year (43 per 100,000) in 1990 to 8,000 per year (46 per 100,000) in 2015 (GBD 2015 Tobacco Collaborators, 2017; Stoklosa, *et al.*, 2019). The tobacco-related death incidence has been attributed to increased consumption induced by cheap tobacco product pricing.

Over the years, a variety of tobacco products have been found in the Zambian market with roll-your-own (RYO) cigarettes being among the most popular products due to their relative affordability (Stoklosa, 2018). More recently, however, the country has witnessed a rising interest in NETNPs. Tobacco companies advance that the portfolio of these NETNPs includes non-combustible tobacco products such as electronic nicotine delivery systems (ENDS), tobacco heating



products (THP), vapour products, moist snuff and modern oral products.

For purposes of this study, the NETNPs of focus are as shown in Table 1.

Table 1: Classification of NETNPs

Tobacco Combustion	Heat Delivery	Smokeless
Cigars	E-cigarettes	Gums
Waterpipe	Heated tobacco based non-combustible cigarettes	Smokeless Tobacco
		Chewing Tobacco
		Snuff
		Snus

Source: Authors' own construction based on classification by various sources.

The arguments for the growing popularity of the NETNPs is that these products expose consumers to fewer of the health risks associated with the effects of traditional tobacco smoke (Bhatnagar *et al.*, 2021). However, there is a perception surrounding the consumption of NETNPs that these products do not necessarily filter out harmful chemicals from tobacco (Chitindi, 2019). For instance, “shisha” or water pipe – a method of tobacco consumption, where tobacco is mixed with fruit or molasses sugar and consumed through a bowl and hose or tube – may expose consumers to more smoke over a longer period than smokers of cigarettes (WHO, 2005). While cigarette smokers typically take 8-12, 40-75 ml puffs over about 5-7 minutes and inhale 0.5-0.6 litres of smoke, water pipe smokers on the other hand take 50-200 puffs over a period of 20-80 minutes inhaling about 0.15-1 litre of smoke (Djordjevic *et al.*, 2000; Shihadeh *et al.*, 2004). Furthermore, a recent meta-analysis on the health effects of water pipe smoking contends that it is significantly associated with lung cancer, low birth weight, periodontal disease and respiratory diseases in children (Akl *et al.*, 2010). The Ministry of Health (MoH) in Zambia predicts over 7,000 annual deaths in the country due to cancers and respiratory conditions related to smoking especially with the

growing consumption of NETNPs among young people (Chitindi, 2019). The overbearing consequences of tobacco consumption on health may lead to lower productivity as people take breaks to smoke during work hours, get ill from tobacco consumption and are absent from work. The adverse effects of tobacco consumption are thus regressive to the much-desired national development.

Substantial increases in the taxation of tobacco products as proposed by the WHO Framework Convention on Tobacco Control (FCTC) may be the most cost-effective option to reduce harmful tobacco usage in Zambia while increasing government revenues and securing economic productivity (Stoklosa, 2018; Stoklosa *et al.*, 2019). Yet, Zambia’s adult smoking prevalence as at 2019 is about 10%. The country further falls outside the category of the 38% of countries world over with smoking bans that could be characterised to partially or fully meet widely accepted best practices. Despite Zambia formally ratifying the WHO framework convention on tobacco control on 23rd May, 2008, the country has no smoking ban in place (WHO, 2021). Stoklosa *et al.*, (2019) contend that Zambia also has one of the lowest tobacco tax shares of the retail price of cigarettes in the world which as of 2016, comprised only 37% of the most popular cigarette brand, compared with an average of 56% globally and much lower than the 75% tax share recommended by the WHO. In 2019, Zambia’s cigarette taxation was approximately 38.8% (WHO, 2021) and had not risen much compared to the previously recorded share of the final price. Therefore, measures to increase taxes and prices are likely to be effective, especially given that young people who are key to increasing productivity in the country may be particularly responsive to these measures (Ding, 2003). Young people are most likely to reduce consumption of tobacco products at high prices as they come from low-income brackets and their income is elastic¹.

Making positive gains in safeguarding public health with evidence-based policy in controlling tobacco use is key to reducing the burden of tobacco usage on the national treasury and economic productivity. And as such, generating knowledge on NETNPs consumption patterns, as well as devising recommendations for practical tax and non-tax policies that may reduce consumption of these products is timely.

1 [Raising taxes on tobacco \(who.int\)](#); see also [BookFileMech3.indd \(who.int\)](#)



This study used a survey-based investigation of the consumption and taxation of NETNPs in Zambia. The importance of the study is that it highlights the profile of the NETNPs as well as associated consumers and their tobacco product preferences. This generates knowledge which can inform policy makers in devising effective tobacco control taxation policies in Zambia. Thus, the study primarily focused on new age products with tobacco and nicotine content. It addresses the following questions: Is there growing consumption of tobacco products other than the traditional cigarettes? What are these products? Are these products currently being taxed? If they are, what is the tax rate? If not, could this be a potential revenue source for the Government? How should they be taxed? Are there any regulations governing these products? The study is therefore important as it used research evidence to inform stakeholders on the need to devise appropriate tax policies and regulations on NETNPs in Zambia.

3. Objectives

The study sought to generate knowledge on the consumption and taxation of NETNPs in Zambia based on survey evidence.

Specifically, the research purposed to achieve the following:

- i) To generate data on the types of NETNPs consumed in Zambia and establish the preferences of these products among consumers.
- ii) To examine the socio-demographic disparities in the consumption of NETNPs.
- iii) To examine the taxation of NETNPs in Zambia.

4. Review of Literature

The consumption of NETNPs has been on the rise the world over (Lee *et al.*, 2014; Lee *et al.*, 2015), with the prevalence of these products being much higher than that of traditional cigarettes. Apart from this, studies have also shown that these NETNPs are more prominent among adolescents. In Nigeria for instance, research from the 2008 Global Youth Tobacco Survey conducted in five major cities covering 4159 students showed higher prevalence of other tobacco products (13.1% – 23.3%) compared to that of cigarette

smoking (6.2% – 2.6%) amongst youth aged 13 – 15 years (Ekanem *et al.*, 2010). Jawad & Power (2016) found that the prevalence of waterpipe smoking was high among secondary school students in the UK and was more prevalent than cigarettes. Bhatnagar *et al.* (2021), in a study in the US contended that there had been a dramatic rise in the use of new tobacco products such as electronic cigarettes (e-cigarettes) particularly among adolescents and young adults, and this was attracting youth to new avenues for nicotine addiction. In much the same way, the 2011 to 2018 National Youth Tobacco Survey conducted in the US also showed a dramatic increase in e-cigarette use in adolescent initiation. Creamer (2019) also found that the prevalence of e-cigarette and smokeless tobacco use in the US increased during the 2017–2018 period. Furthermore, Wang *et al.* (2020) showed an increase in the use of e-cigarettes amongst high school students in the US from 1.5% in 2011 to 19.6% in 2020. In contrast Ansara *et al.* (2013) in a comparative report on tobacco use by men and women in 49 countries using Demographic Health Surveys found that the use of other smoked tobacco, which includes pipes, cigars, hand-rolled cigarettes i.e., RYO, bidis, kreteks, and water pipes (e.g., qalyan, shisha, nargila, hookah), was low in the majority of the countries examined for both women and men. Stoklosa *et al.* (2019) also found that in 2014, the prevalence of smokeless tobacco in Zambia was quite low at 2.4% of adults (0.9% of men and 2.6% of women) aged 15 – 49.

Furthermore, studies have shown that the prevalence of NETNPs also tends to vary across regions, with developed or high-income countries experiencing a reduction in the prevalence levels, with the demand for tobacco and nicotine products becoming increasingly concentrated in the developing or low- and medium-income countries. WHO (2021) contends that despite reliable data not being available for all countries, the current consumption of NETNPs such as ENDS among adults varies greatly across the countries that monitor it. In higher income countries such as Great Britain for instance, the prevalence of adult ENDS decreased from 7.1% in 2017 to 6.3% in 2020 (Action on Smoking and Health, 2020). Further, McMillen *et al.*, (2012) showed that the overall current use of emerging tobacco products in the US was low and that lifetime use of these products was more common among males than females and younger adults than older adults. More recent surveys in the US have also observed a decline



in the prevalence of e-cigarette use in the population (WHO, 2021). On the other hand, a study by WHO in 2013 found that the prevalence of smokeless tobacco was high in lower and medium income countries. The study further estimated the likely increase in smoking prevalence in many developing countries in the future because of population growth, income growth, increased tobacco affordability, and aggressive marketing and political lobbying in those countries. Mendez *et al.*, (2013) estimated that smoking prevalence in the African region will increase by about 39% by 2030 without concerted action to introduce and enforce tobacco controls.

In terms of regulation of NETNPs, WHO has come up with the WHO FCTC and the MPOWER technical challenge to help countries implement demand-reduction measures by providing a measurable gold standard for their achievement and monitoring progress towards it (WHO, 2021). These MPOWER measures include smoke-free legislation, cessation services, warning labels, advertising, promotion and sponsorship bans, and tobacco taxes. In adherence to these provisions, several countries the world-over have taken steps in addressing the dangers posed by NETNPs, but they remain unregulated in much of the world. WHO (2021) contends that while around 80 countries have taken steps to address the dangers of e-cigarettes, they remain unregulated in most parts of the world. Further, a report by WHO reveals that a total of 111 countries regulate ENDS in some way. Thirty-two countries (covering 2.4 billion people) have banned the sale of ENDS, and the other 79 countries have adopted one or more legislative measures to regulate ENDS, covering 3.2 billion people (WHO, 2021). The Cancer Research of the UK reports that the UK has taken several actions since 1965 to curb the consumption of tobacco products, these include: ending the advertising of Tobacco on TV, raising taxes for tobacco products, conducting media campaigns and services to help people quit. Others are implementation of smoke-free policies across the UK, ban on smoking in cars with children and the standardization of all packs and new tax measures. Many countries have also followed suit by implementing smoke-free laws to protect the health of non-smokers which encourage smokers to quit. These measures are all in line with the WHO FCTC regulations of tobacco and nicotine consumption. However, while high income countries have been implementing these measures, low- and middle-income

countries have lagged in the enforcement of measures to curb the consumption of tobacco and nicotine products particularly more so for measures curbing the consumption of NETNPs. Moreover, while there have been several empirical studies undertaken on the prevalence of consumption and regulation of NETNPs in the developed world, there remains a dearth of literature in lower- and middle-income countries as studies so far have been contextualised in developed countries. This study therefore purposes to fill this gap in the Zambian context and provide evidence to inform policy.

5. Methodology

To achieve the set objectives, the study used a multifaceted approach comprising the following: a desk review of relevant literature and data, a survey of consumers of NETNPs, and Key Informant Interviews (KIIs).

5.1. Desk Review

A review of relevant documentation on NETNPs, and pricing in Zambia and globally was conducted. The desk review made use of domestic and external data from the WHO, Ministry of Health, Ministry of Finance, Zambia Statistics Agency, Zambia Revenue Authority (ZRA) among others to analyse trends in the consumption of NETNPs as well as the existing tax for these products. The outcome of the desk review enabled researchers to acquaint themselves with the consumption of new age tobacco products and support the actual data analysis and report writing stage. In addition, the desk review also fed into the development of field instruments.

5.2. Consumer Survey

A survey of consumers of NETNPs was undertaken to gain more insight into the socio-demographic disparities in the consumption of NETNPs. The survey was undertaken with respondents in Lusaka District and targeted 400 respondents.

5.3. Survey Design

The survey consisted of a questionnaire that was administered to consumers of NETNPs. The consumers' questionnaire captured information on the social demographics of consumers, type of NETNPs consumed and the price paid for these products among others.

5.4. Sampling framework

The sample for the study was purposively selected using a snowballing approach². The research team selected a list of 400 consumers of tobacco and alcohol products from establishments within Lusaka District and also from known lists of consumers through preliminary interviews within the research team's social and professional networks. Based on the 2018 Zambia Demographic Health survey, the population of smokers in Zambia was estimated at 1.7 million. District level disaggregation further suggests that Lusaka district accounts for 10.9% of Zambia's total smoking population, representing about 185,300 people. Using this population size and assuming a 95% confidence level, 5% margin of error and possible low response rate, the targeted sample size was 400. Once the 400 respondents were identified, interviews were conducted using a combination of virtual and physical approaches.

5.5. Key informant interviews

In addition to the consumer survey, key stakeholders from both the public and the private sectors were interviewed to provide insights and data for the study regarding trends in production, consumption

and regulation of NETNPs. Stakeholders interviewed included the Ministry of Health (MoH), Ministry of Finance (MoF) and the Zambia Revenue Authority (ZRA).

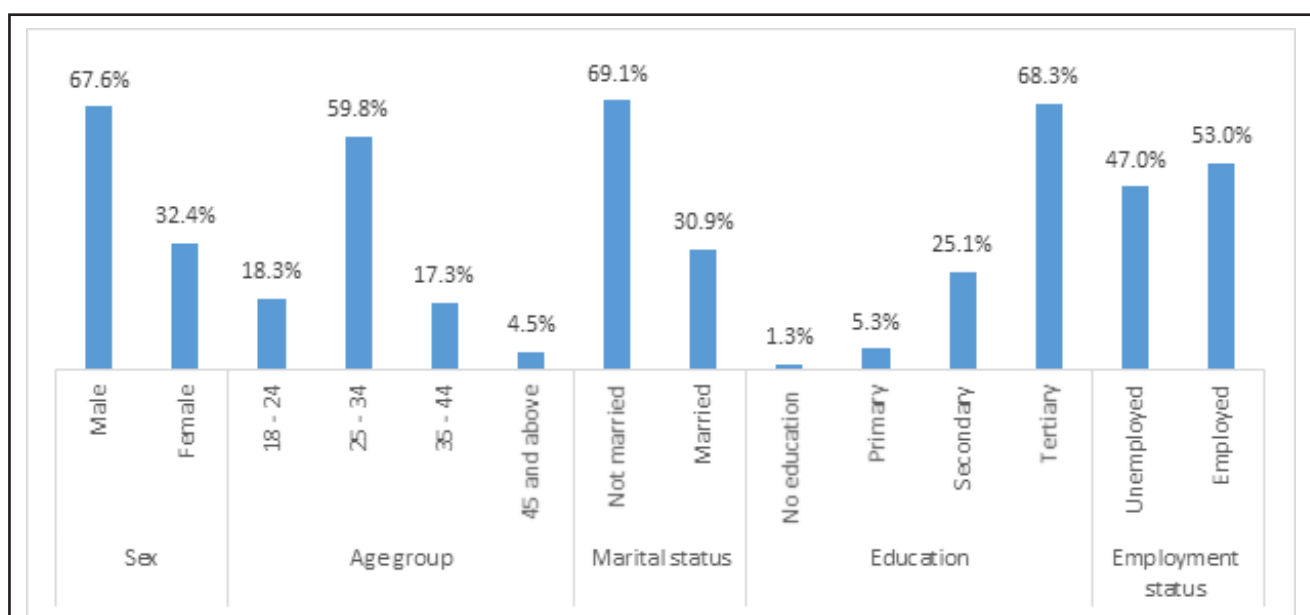
6. Results and Discussion

This section provides an analysis of the results from the survey and KIIs undertaken during the course of the study. The first part of the section addresses the key findings of the survey undertaken with consumers of NETNPs. The second part of the section highlights the key findings from KIIs conducted with respect to the current taxation structure for tobacco products in Zambia.

6.1 Survey Results

The survey of consumers of NETNPs had a target of 400 respondents of which 398 responses were received, representing a 99.5% response rate. The survey was undertaken through interviews with respondents. A structured questionnaire with various questions on consumption and taxation of NETNPs was used.

Figure 1: Sex, age, marital status, education and employment status among all survey respondents



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021

² The approach was changed due to the COVID-19 pandemic which could not allow for full interviews in establishments. As such, a mixture of physical and phone call interviews were undertaken using a purposive sample drawn from establishments that trade in NETNPs and also a list of known consumers of NETNPs. The initial sampling plan (pre-third wave) had 20 establishments selected from a sample of businesses in Zambia and 20 respondents would be randomly selected at each establishment for a total of 400 respondents overall.



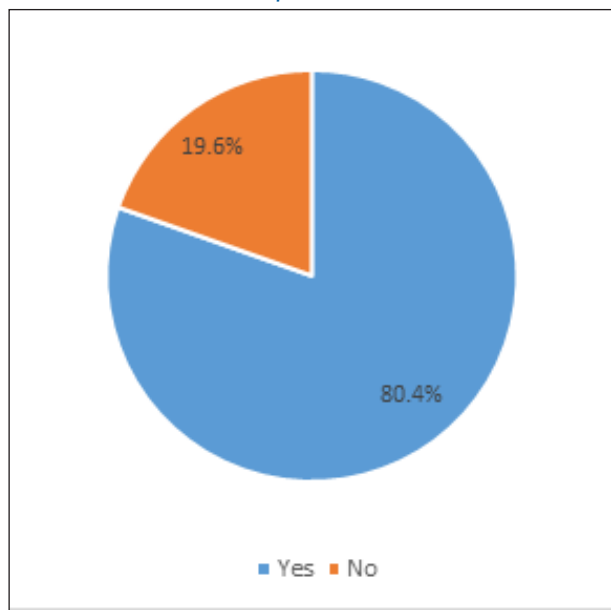
6.1.1 Social demographic characteristics of respondents

From the total number of 398 respondents, 67.6% were male while 32.4% were female. Meanwhile, in terms of age, the largest proportion of respondents were within the age bracket of 25 – 34 years representing 59.8% of respondents, followed by those in the age bracket of 18 - 24 years, 35 - 44 years and those above 45 years representing 18.3%, 17.3% and 4.5% of respondents respectively. In terms of marital status, 69.1% of the respondents indicated that they were not married while 30.9% indicated that they were married. The education status of respondents was skewed towards tertiary education with 68.3% of respondents indicating that they had attained tertiary education while 25.1% indicated that they had attained secondary education. Meanwhile, 5.3% of respondents indicated that they had attained primary education while 1.3% indicated that they had no level of education. In terms of employment status, the respondents were almost evenly matched between those who indicated that they were employed at 53% and those who indicated that they were unemployed at 47% (See Figure 1).

6.1.2 Consumption of NETNPs

Of particular interest to this study was the consumption pattern, demographics, and pricing and taxation of NETNPs in Zambia. As a starting point, respondents were asked if they consumed other tobacco products apart from the common Factory Manufactured (FM)

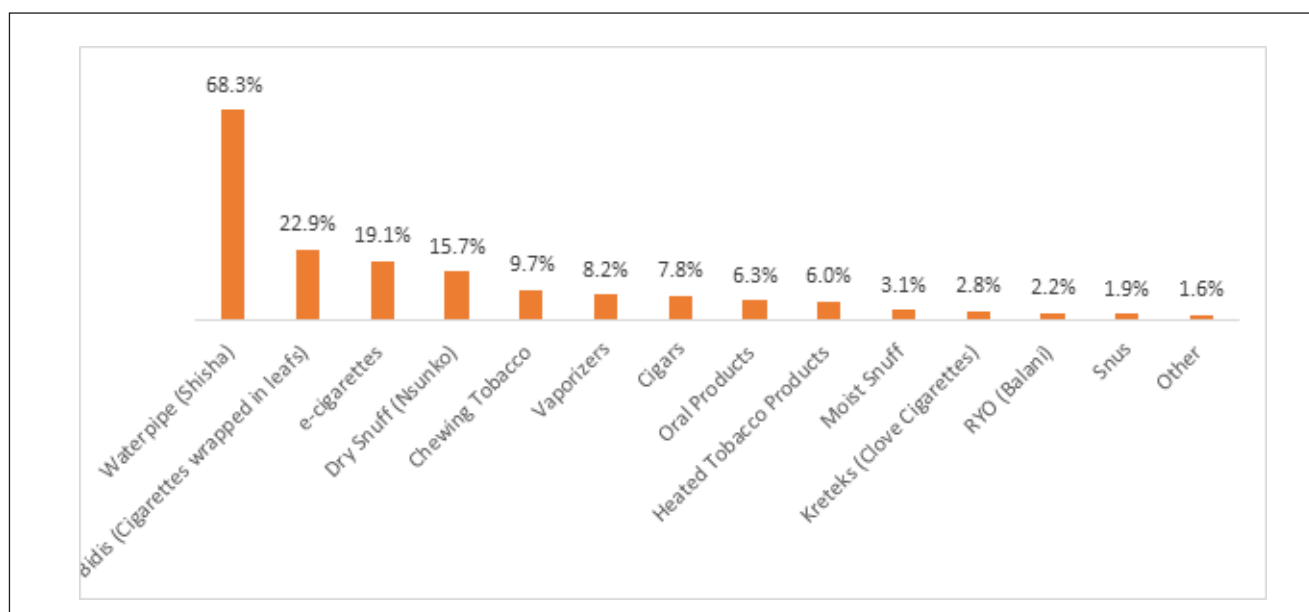
Figure 2: Consumption of other tobacco and Nicotine products



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021

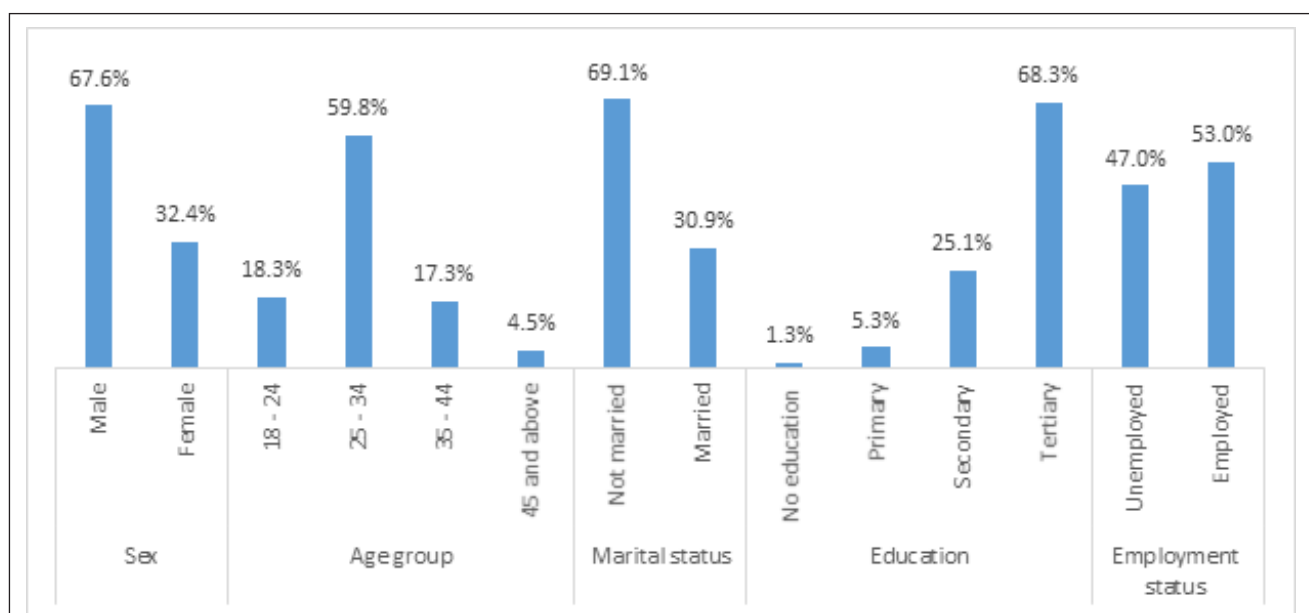
cigarettes. Overall, 80.4% of respondents indicated that they were consumers of NETNPs compared to 19.6% who indicated that they were not (See Figure 2). From the proportion of respondents who had indicated that they consumed other tobacco products, a further assessment of the specific types of tobacco products consumed was undertaken. By proportion, water pipe (shisha) ranked the highest with 68.3%. Other notable products indicated included bidis (22.9%), e-cigarettes

Figure 3: Other Tobacco and Nicotine Products consumed



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021

Figure 4: Selected demographics among consumers of NETNPs



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021

(19.1%) and *Nsunko*³ (15.7%) (See Figure 3).

6.1.3 Demographics of consumers of NETNPs

We examined various socio-demographics relating to the consumption of NETNPs focusing on sex, age, marital status, employment status and level of education attained. In terms of the sex of respondents who indicated that they were consumers of NETNPs, 65.6% were male while only 34.4% were female. This finding is consistent with the findings of Hamadeh *et al.* (2020) who found that males were more likely to be current water pipe smokers. This could be attributed to social factors which portray a low social acceptance of women smokers in Zambia. In terms of consumption of NETNPs by age, 61.3% of respondents who indicated consumption of NETNPs were between the ages 25 - 34 while 19.7%, 14.7% and 4.4% were in the age brackets of 18 - 24 years, 35 - 44 years and above 45 years old respectively. This indicates that the smoking of these products is largely prevalent among the youth. The finding is consistent with the findings of Ekanem *et al.* (2010); Jawad and Power (2016); and Bhatnager *et al.* (2019). This could be explained by the fact that generally the youth perceive smoking to be 'cool' and that they would fit-in very well in their social interactions.

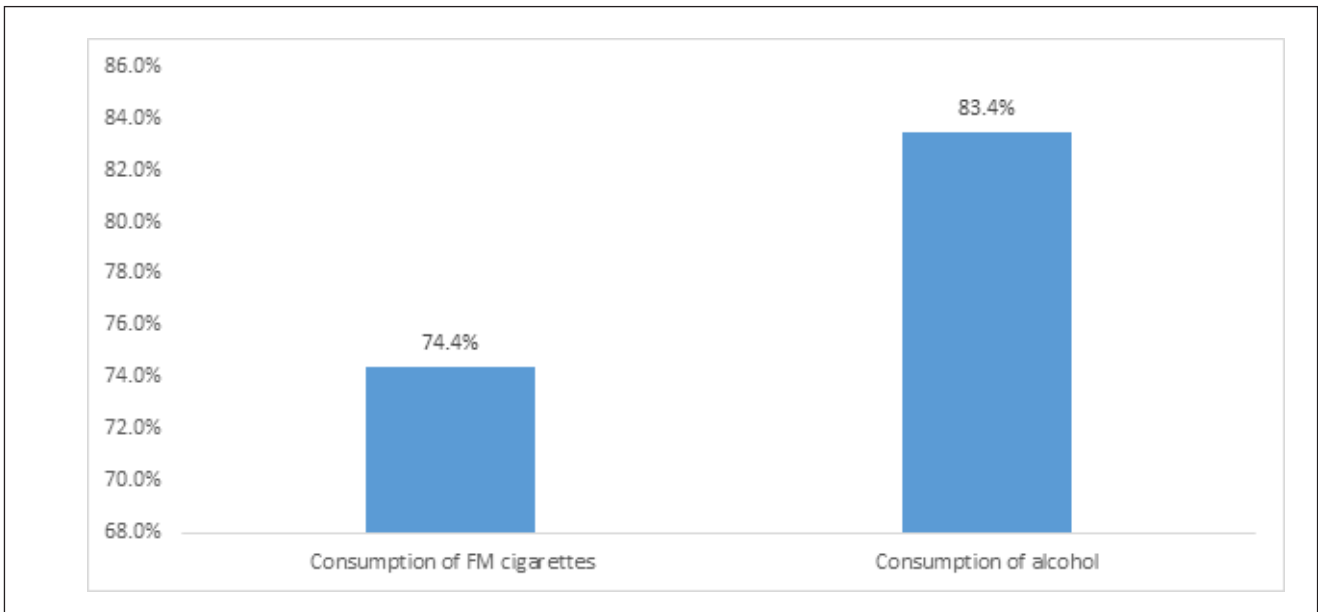
With respect to marital status, 71.6% of NETNPs consumers indicated that they were not married while 28.4% indicated otherwise. The plausible explanation could be that the not married category who include divorcees, widows, separated and never married may resort to smoking as a way of relieving stress or as a form of relaxation as highlighted by Daniels and Roman (2013). When we analysed consumption of NETNPs by the level of education attained, we found that 67.8% of consumers of NETNPs had attained tertiary education. This is quite telling in so far as the levels of enlightenment among consumers of this product is concerned. However, this could be a function of the sample which was skewed towards respondents with high tertiary attainment. The generally held view is that the higher one gets in terms of education achievement, the more information available with regards to the health risks associated with the consumption of any form of tobacco products, hence one would ideally be expected to stay away from tobacco consumption.

In terms of employment status of consumers, we found that the spread was almost evenly matched with 52.2% of NETNPs consumers indicating that they were employed while 47.8% indicated that they were not employed. The monthly income of consumers can go some way in indicating the income patterns among

³ Snuff, locally called *Nsunko*, is a form of dry, crushed tobacco which has for a long time been the preserve of the elderly women who used it as a cure for headache. It comes in both moist and dry varieties and is usually placed in the mouth between the lower lip and gum or in the cheek, where it slowly absorbs into the tissue.



Figure 5: Consumption of Factory Manufactured cigarettes and alcohol among NETNPs consumers



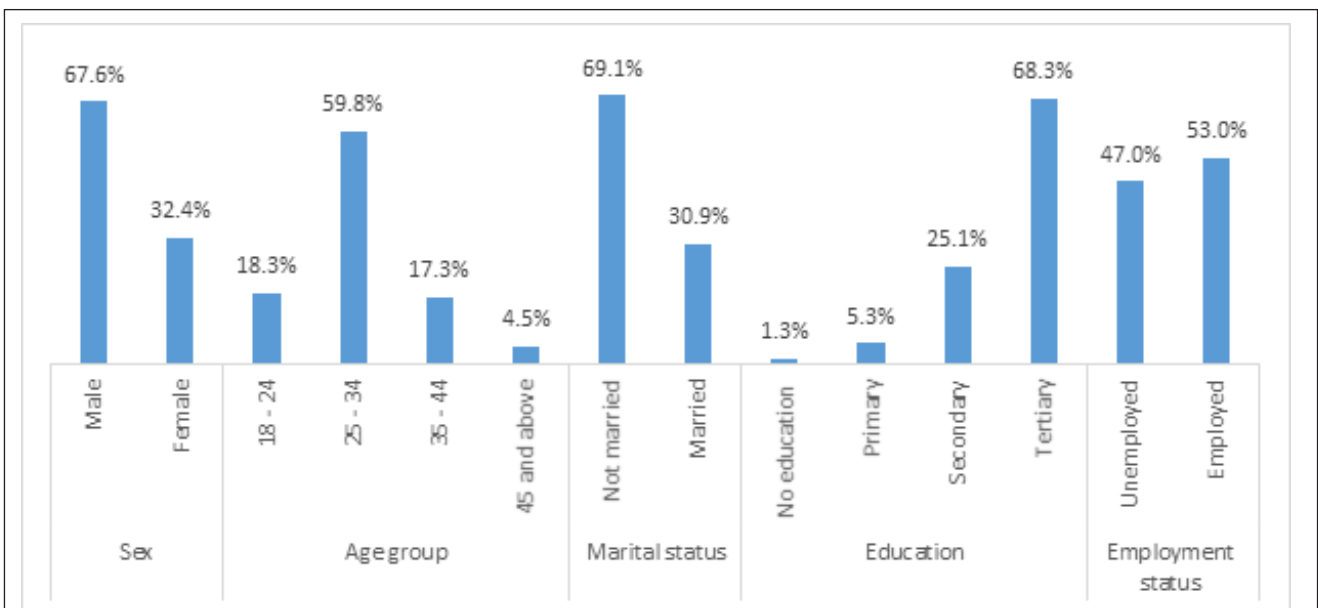
Source: Authors' construction based on consumption of New and Emerging Tobacco products survey data, Oct 2021

NETNPs consumers. In that regard, we found that the majority of NETNPs consumers (65.3%) had incomes between K0 and K5, 000 which is indicative of low incomes among consumers. This is in keeping with Zambia's 2020 Labour Force Survey (Ministry of Labour and Social Security; Zambia Statistics Agency, 2020) which showed that the average incomes for the formally employed is K5, 793 and K2, 193 for the informally employed. Therefore, the mix of the formally employed and informally employed consumers of NETNPs probably provided a low level of income on average. This finding affirms the studies such as Stoklosa, *et al.*, (2019); WHO, (2004) which contend that globally,

people in low- and middle-income countries spend a large proportion of their income on tobacco products thereby reducing expenditure on crucial needs such as food, education, and health care. (See Figure 4).

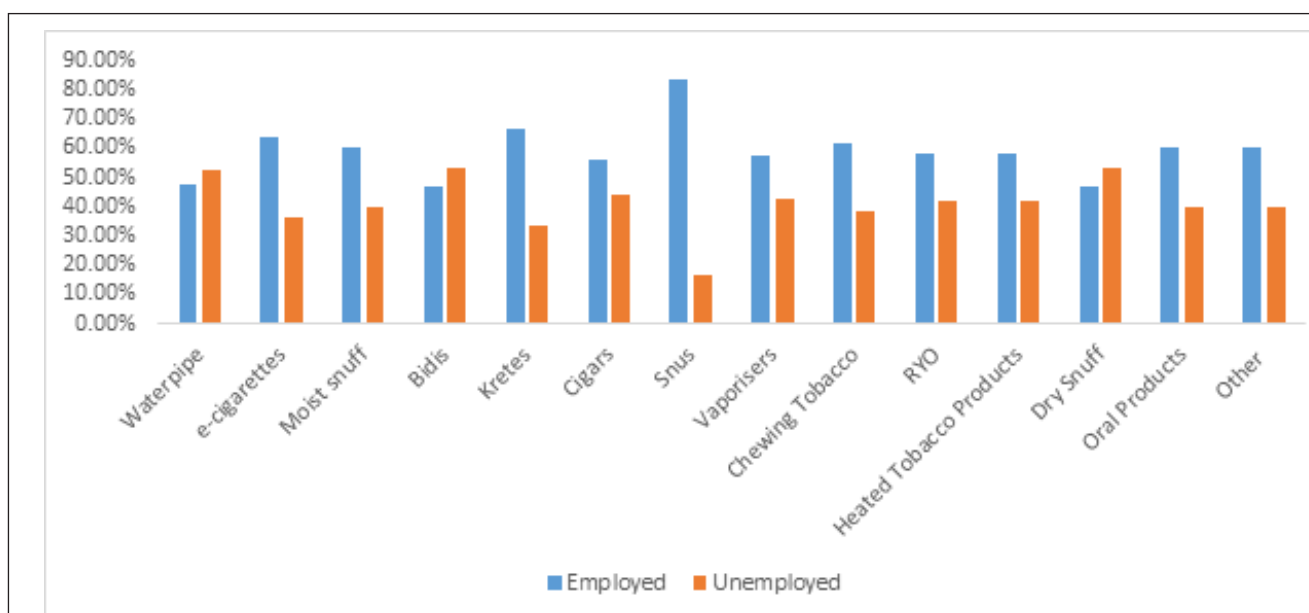
The link between consumption of NETNPs, factory manufactured cigarettes and alcohol is important when we consider the potential for complementarity and substitution among these products. This means that taxation policy should factor into consideration the relationship between and among these products. Therefore, the survey showed that 83.4% of NETNPs consumers also consumed ordinary factory

Figure 6: Frequency of consumption and expenditure on NETNPs



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021

Figure 7: Consumption of NETNPs according to employment status



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021

manufactured cigarettes. Meanwhile, in terms of alcohol consumption, 74.4% of NETNPs consumers indicated that they also consume alcohol. This demonstrates a strong link between consumption of NETNPs and alcohol (see Figure 5).

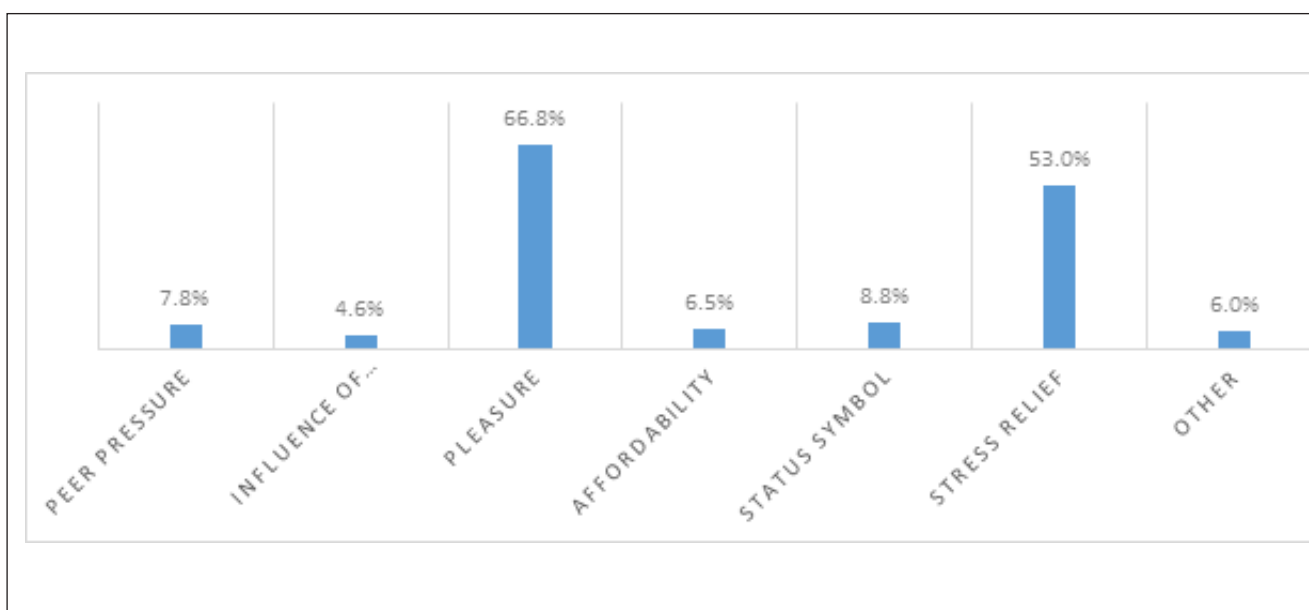
6.1.4 Frequency of consumption and expenditure patterns among NETNPs consumers

The frequency of consuming NETNPs among respondents was also assessed and the survey results show close variability with 32.9% of NETNPs consumers indicating that they consumed the

products daily while 23.2% and 21.9% indicated that they consumed the products several times a day and weekly, respectively. Meanwhile, 16.9% either did not know or indicated no response. Another critical issue for consideration was the amount of money spent on consumption of NETNPs. The survey results showed that 50.2% of NETNPs consumers spent less than K100 a week while 31% spent between K101 and K200 per week (See Figure 6). This estimate did not include the devices used for consumption.

We also assessed the most consumed products according to the employment status of consumers. The

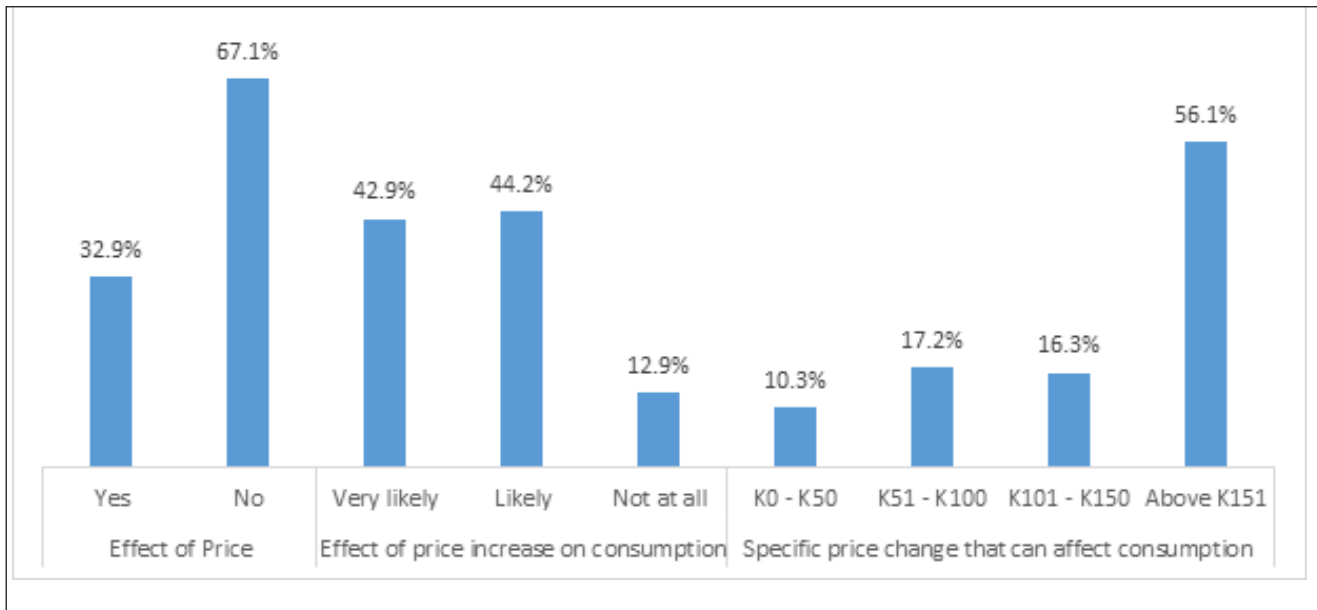
Figure 8: Factors leading to consumption of NETNPs



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021



Figure 9: Potential effect of price on NETNPs consumption patterns



Source: Authors' construction based on Consumption of New and Emerging Tobacco products survey data, Oct 2021

consumption of these products varied according to the economic status of the consumers with products such as snus and e-cigarettes being the products much more preferred and consumed by those employed as they are more costly. Meanwhile, products such as water pipe and bidis were the preferred products of choice among those not employed, which could also be attributed to the aspect of affordability (See Figure 7).

6.1.5 Reasons for the consumption of NETNPs

The survey also interrogated the respondents regarding their reason(s) for consuming NETNPs. The responses to this question were not mutually exclusive meaning that one could provide more than one response. The two most prominent reasons indicated were pleasure (66.8%) and stress relief (53.0%). This is indicative of a leisure driven approach to consumption of NETNPs (See Figure 8).

With respect to whether the price of NETNPs influences consumption of the products, the survey revealed that 67.1% of NETNPs consumers indicated that the price did not influence their consumption patterns. Further, the NETNPs consumers were asked if they would be likely to continue consuming these products if the price increased and 44.2% indicated that they were likely to continue consuming the product while 42.9% indicated that they were very likely to continue consuming

the product. This means that most consumers would probably continue consuming these products even if the price increased. On the specific increase in price that would deter them from consuming the products, 56.1% of respondents indicated that a price increase above K151 for a single product consumed would deter them from consuming the product while 17.2% and 16.3% indicated that an increase of between K51 and K100 and between K101 and K150 respectively would deter them from consuming the products (See Figure 9).

6.2 Taxation and regulation of tobacco products in Zambia

The study team undertook a series of KIIs to interrogate the taxation and regulation of tobacco products in Zambia. The KIIs sought to establish the current taxation structure for tobacco products in Zambia - the ZRA was interviewed.

In terms of taxation, the ZRA is responsible for setting tax rates and collecting the same for tobacco products. As such, tobacco products are no exception to taxation under the ZRA⁴.

The legal provisions that govern taxation of tobacco products by the ZRA are as follows:

- **Section 97** of the Customs and Excise Act which

4 Interview with Assistant Director - Research and Corporate Strategy Department, 16th November, 2021

provides for licensing of the local manufacturers;

- **Regulation 106B(1)(b)** of the Customs and Excise (General) Regulation of 2000 which provides that an importer or distributor, shall be duly registered;
- **Section 108A (1)** of the Customs and Excise Act which requires that a person who manufactures distributes or imports goods that are subject to excise duty shall affix a tax stamp; and
- The Customs and Excise (**Cigarette Tax Stamp Rules of 2006**) which among other requirements provides the procedures for one to be registered as a distributor or importer of cigarettes.

In terms of taxation of tobacco products, the ZRA uses the internationally agreed Harmonised System (HS) code classification of tobacco products. Broadly there are eight categories used to classify tobacco. These are unmanufactured tobacco or tobacco refuse; cigarettes containing tobacco; cigarettes, cigars, cheroot, cigarillos, tobacco related substitutes; smoking tobacco containing tobacco substitutes or not; water pipe tobacco; cutrag (semi-processed tobacco); homogenised or reconstituted tobacco and other cigarettes.

With respect to applicable tax rates for tobacco products, there are four main taxes applied on tobacco products in Zambia. At the point of entry into the country, a 25% customs duty is levied on the value of

the product. In addition, VAT, at 16% of the value of the product plus any taxes charged is levied while a 5% surtax is also charged on the product. Because Tobacco products are excisable, they are subjected to excise duty of 145% of the value for duty purposes (VDP) or K355 (US\$19.7)⁵ per kg or per mille⁶, for all tobacco products. The rates are also differentiated for locally manufactured products which are charged as a quarter of the rate for imported products (See Table 1) to promote local value addition. In 2022, the Government increased the specific excise duty on cigarettes from K302 per mille to K355 and increased specific excise duty on unmanufactured tobacco, tobacco refuse, smoking tobacco whether or not containing tobacco substitutes, water pipe tobacco and cutrag to K355 from K302 (see Table 2). NETNPs

6.3 Key findings from other key informant interviews

The survey team also undertook other KIIs with stakeholders from the MoF, MoH and BAT. The key findings from the KIIs were as follows:

6.3.1 British American Tobacco

The survey team interviewed BATZ Plc⁷ as part of the key informant interviews to gain some private sector perspectives on consumption of NETNPs in Zambia. BATZ is a Zambian Company listed on the Lusaka Securities Exchange and is registered under the Companies Act. The Company's core business is the manufacture and distribution of cigarettes. In 2017,

Table 2: Current taxation structure for tobacco products in Zambia

Excisable Product	Current Import excise duty rate	Current Locally manufactured rate
Unmanufactured tobacco; tobacco refuse	145% or K355/Kg	36.25% or K88.75/kg
cigarettes containing tobacco	145% or K355/mille	36.25% or K88.75/mille
cigars, cheroots, cigarillos and cigarettes, of tobacco or of tobacco substitutes	145% or K355/mille	36.25% or K88.75/mille
Smoking tobacco whether or not containing tobacco substitutes	145% or K355/kg	36.25% or K88.75/kg
Water pipe tobacco	145% or K355/kg	36.25% or K88.75/kg
Cutrag	145% or K355/kg	36.25% or K88.75/kg
Homogenised or reconstituted tobacco	145% or K355/kg	36.25% or K88.75/kg
Other cigarettes	145% or K355/kg	36.25% or K88.75/kg

Source: Authors construction based on ZRA data

5 The dollar equivalent was calculated based on the average rate in January, 2022: US\$ 1 = K18

6 A mile is defined as 1000 sticks of cigarettes

7 Interview conducted on 10th December, 2021 with the Company Secretary – British American Tobacco Zambia



the Company invested USD 25 million in a cigarette making factory at the Lusaka South Multi Facility Economic Zone. According to the company, it directly employs 68 employees and supports over 2500 people in the tobacco value chain.

According to BATZ, NETNPs do not burn tobacco. As such, they produce substantially lower levels of the toxicants in contrast to what is found in the smoke produced when tobacco is burned. They indicated some products that they classify as NETNPs such as tobacco heating products, tobacco free nicotine pouches and vaping products. Regarding the general pattern of tobacco consumption in Zambia, they indicated that the prevalence ranges between 13.7% to 23.8% among men and 0.5% to 0.7% among women. In terms of prevalence of NETNPs in Zambia, there is currently insufficient data available for the Zambian market at this point. On the impact of increased taxation of consumption of NETNPs in Zambia on company performance, the company indicated that increased taxation has the effect of preventing the development and trade of NETNPs and missing the opportunity to allow adult NETNPs consumers from having healthier alternatives. Ultimately, neither the Company nor ZRA will benefit from revenues that would have been generated by these products. Additionally, the MoH is also impacted here in as far as their mandate is concerned. The company indicated that, excessive and ill-thought-out regulation may not only be ineffective at achieving the intended objective but can also have unintended consequences such as incentivizing illicit trade or undermining the role that reduced risk products can play in tobacco harm reduction. Such issues can be overcome through proper evidence-based policy analysis, as well as thorough consultation with the tobacco value chain and associated stakeholders so that there is a clear understanding of the objectives that need to be met by the MoH, the likely impact of the relevant measure, and the operational impact on the tobacco industry and subsequently, the value chain.

6.3.2 Ministry of Health

The MoH⁸ pointed out that smoking is one of the biggest public health problems that is causing a lot of disabilities, poverty and illnesses including cancer and respiratory problems. Recent data by the MoH shows

that there is a growing trend of tobacco consumption among men, women and young people. Most smokers are either in the productive age group or are adolescents. The prevalence of smoking among 25- to 29-year-olds has also increased especially because of the introduction of new varieties such as water pipe tobacco.

With respect to the effects of tobacco consumption, MoH pointed out that financial resources tend to be channelled towards health expenditures, leading to poverty. Some effects on the health of tobacco consumers include cardiac arrest and cancer. Additionally, nicotine in tobacco causes morbidity. Unproductivity also tends to be a consequence of tobacco consumption as it also affects one's social status adversely. Nicotine which is present in tobacco causes addiction which has psychological effects and may lead to a consumer graduating to hard drugs and cannabis. Furthermore, on the effects of tobacco products on human health, MoH pointed out that nicotine causes damage as well as many other components found in tobacco that are detrimental to human health. For instance, when one is sniffing tobacco, it affects the entry point such as the mouth or the nose all the way to the lungs leaving one prone to non-communicable diseases such as respiratory diseases and cancers. Every system that filters nicotine is affected, these include the kidneys, brain, blood vessels and the heart.

On classifying tobacco products, MoH highlighted that the products that don't produce smoke that affects a third party tend to be classified as emerging products e.g., innovations such as chewing gum. The traditional products are those that are inherently used such as sniffed tobacco. On the prevalence of consumption in relation to demographics, there is a dearth of survey data on consumption of NETNPs. However, a survey was recently carried out by MoH regarding consumption of traditional tobacco products and the results are yet to be published.

On measures to curb the consumption of tobacco, MoH pointed out that the Government has come up with a road map on how to limit and contain consumption of tobacco by making efforts to push a bill through parliament since 2018. The current tobacco Act was passed in the 1960s and is obsolete. MoH further added

8 Interview with National Coordinator, Tobacco Control and mental Health – 23rd November, 2021

that with the absence of an Act, it is difficult to address challenges relating to tobacco consumption. MoH is also coordinating all ministries that are involved in the tobacco value chain such as the Ministry of Agriculture, Ministry of Finance, Ministry of Commerce, Trade and Industry and ZRA. The aim of these interventions is to develop a multi-sectoral approach among stakeholders.

6.3.3 Ministry of Finance (MoF)

The MoF⁹ indicated that the overall contribution of the tobacco industry to Zambia's economy, linkages and significance, the industry is wide and affects many other sectors. There are a lot of farmers and some companies that depend on tobacco and there's a good amount of investment into the tobacco industry.

On striking a balance between the industry's economic contribution and adverse health effects, MoF pointed out that in striking this balance, it should be noted that if the tax rate is too high, smuggling will be prevalent thereby making it difficult to regulate tobacco consumption. However, the Ministry indicated that striking a balance is key and statistics must be relied on to make an informed decision.

With respect to the basis for recent increase in the tax on tobacco products and what effect it has had on consumption, the MoF indicated that it is difficult to tell if there have been resultant changes as the Ministry does not have exact numbers on who consumes tobacco products. The Ministry also indicated that with respect to the growing consumption of NETNPs such as water pipe, especially by young people, considerations are being made with respect to the annual budget processes to curb consumption of the new products that contain tobacco, reconstituted tobacco, nicotine or nicotine substitutes. On the other ways through which consumption of tobacco can be reduced other than taxation, MoF highlighted that creation of alternative income generating activities that are commercially viable for people growing tobacco is essential. Secondly, finding alternative activities for young people to prevent them from consuming tobacco to stop generational transmission is crucial.

7. Conclusion and Policy Recommendations

The global economy has in recent years observed a rapid increase in the consumption of NETNPs. Consumers of the NETNPs in Zambia and elsewhere justify consumption of these products on grounds that they are less harmful and expose them to fewer health risks compared to traditional tobacco smoke. However, studies have shown that these NETNPs do not entirely filter out harmful chemicals from tobacco as presumed by many people, and in some cases may even expose smokers to more smoke over longer periods of time as is the case of water pipe (shisha).

The study investigated the consumption and taxation of NETNPs in Zambia to generate knowledge and come up with evidence-based policy recommendations aimed at informing appropriate stakeholders on the consumption and taxation of NETNPs.

In terms of the consumption of NETNPs, the study revealed that a majority of those surveyed consume water pipe, which ranked highest among the NETNPs consumed in Zambia. Other NETNPs commonly consumed include bidis, e-cigarettes and dry snuff (nsunko). The consumption of these products varied according to the economic status of the consumers, with products such as snus and e-cigarettes being much more preferred and consumed by those in employment because they can afford more costly products. Meanwhile, products such as water pipe and bidis were the products of choice among those not employed and this could also be attributed to the relatively lower cost of the products.

Regarding the socio-demographic characteristics of the surveyed sample, the study established that most of the consumers of NETNPs were young, unmarried males. This finding is not surprising, for instance anecdotal information shows that cultural practices in Zambia have inherently made it a taboo for women to smoke hence being the most plausible reason why smoking among men is more prevalent than among females. The finding that smoking was more prevalent among the youth could be as a result of the perception among the youth that smoking is 'cool' and that they would fit-in



9 Interview with the Principal Economist – Trade Taxes on 16th November, 2021

very well in their social interactions. However, a notable finding was that those who had attained tertiary level of education were the biggest consumers of NETNPs. While most literature suggests that those who have attained tertiary education consume less tobacco and nicotine products, this startling finding could be an indication that most people with tertiary education in the sample have fallen victim to the campaigns made by producers of these NETNPs that they are less harmful and could help them in their quest to quit the consumption of Tobacco products. A recent Cochrane Review suggests that e-cigarettes can help smokers quit (Hartmann-boyce *et al.*, 2020).

The finding that low-income sub-populations were among the highest consumers of NETNPs in Zambia was quite perplexing. This is because NETNPs are relatively more expensive than traditional tobacco products. This finding, however, shows that NETNPs are not normal goods and supports studies that contend that people in low- and middle-income countries spend a large proportion of their income on tobacco products thereby reducing expenditure on crucial needs such as food, education, and health care.

With regards to taxation of NETNPs, the study has found that there is potential to increase taxes substantially based on consumers' willingness to pay which would require very high tax levels to deter consumption. This would require the government to considerably increase excise taxes on these products which would ultimately increase their price and hence curtail their consumption.

The study has established that the taxation of all tobacco products in Zambia is the sole responsibility of the ZRA which draws its mandate from various provisions of the Zambian law. Broadly there are eight categories used to classify tobacco and nicotine products based on the HS codes. This broad classification forms the basis for taxation of tobacco and nicotine products in Zambia. The study has established that there are four main taxes applied on tobacco products in Zambia, these include: a 25% customs duty levied on the value of the product imported; a VAT of 16% on the value of the product; a 5% surtax; and excise duty of 145% of the value for duty purposes (VDP) or K355 per kg for all tobacco products.

Having established this, the study makes the following

recommendations for policy:

- **Gender specific tobacco prevention interventions:** The higher prevalence of males using new and emerging products compared to females is an indication of the need to devise policies that are more gender specific to tackle the scourge. The interventions should target reduction of consumption among men who were found to be the biggest consumers of NETNPs. The interventions could take the form of mass reach health communication campaigns, tailor made counselling programmes for males and creation of toll-free lines to assist males engaged in consumption of these products.
- **Tobacco control awareness campaigns:** The increased consumption of new and emerging products in Zambia and elsewhere has been justified on grounds that they are less harmful and expose consumers to fewer health risks compared to traditional tobacco smoke. This is a clear indication that there has been very little information dispelling these assertions. Therefore, there is need to embark on concerted awareness campaigns, particularly among the youthful population and the educated. The awareness campaigns can seek to educate them that, contrary to assertions, these new and emerging products have devastating health risks as they do not filter out harmful chemicals from tobacco. At the same time, they may even expose them to more smoke over longer periods of time as is the case of water pipe (shisha).
- **Increasing taxes:** To reduce the consumption of new and emerging products which have far higher devastating health risks, there is need to consider increasing taxes on these products by at least 50%. As is evident from this study, substantial increases in the excise tax rate would be required to get people to stop using these products.
- **Removal of differentiated tax rates:** The effectiveness of the preceding recommendation is contingent on a further recommendation, namely removal of differentiated tax rates for locally manufactured and imported tobacco and nicotine products. This is because differentiated taxation goes against the principles of National Treatment

as espoused under WTO law. Further, irrespective of the exceptions that can be used to circumvent this law, the special treatment accorded to locally manufactured products then becomes a hindrance to tobacco control policies as there is potential for consumers to simply substitute imported products for locally manufactured ones.

- **Formulation of policies on NETNPs.** Currently, Zambia lacks a clear policy on NETNPs, and this may derail any efforts to control the consumption of these products. Therefore, the Government must begin to devise policies and strategies aimed at curbing the growing trend in consumption of NETNPs.

8. Study limitations

The study had the following limitations: Firstly, the study was not nationally representative as we only surveyed 398 consumers of NETNPs in Lusaka District, hence the findings cannot be generalised to the entire population. Secondly, the study used purposive sampling techniques which are susceptible to bias.

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