An attitudinal and usage (A&U) study into The impact of excise tax on consumers and government revenues: a review of the tax authority in UAE

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Abstract

Negative health outcomes from tobacco products usage are well-evidenced through extensive research leading to the adoption of numerous initiatives to reduce and eliminate the use of tobacco products. Imposing tax is one such initiative adopted around the world. The UAE classifies tobacco products in the category of 'harmful products' for which 100% excise tax was introduced across the UAE in 2017. The purpose behind levying excise tax is to reduce consumption of unhealthy and harmful commodities while also raising revenues for the government that can be spent on beneficial public services. There has not been detailed study on the attitude and usage pattern changes in youth (18–25-year-old). The research thus aimed to investigate how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers. Investigating the issue empirically using qualitative as well as quantitative research helped in better understanding of the tobacco products' consumer's attitudes and usage especially for taxed goods. The study revealed that there is a significant difference in youth's attitudes between excised and non-excised tobacco products. Nationality was found to be playing a significant role in bringing significant difference in youth's attitudes between excised and non-excised tobacco products. Significant positive correlations between attitude factors (awareness and fairness of excise) and usage factors (motivation of quitting and social pressure) were found only for past users of tobacco. Present users showed a negative relationship. This suggests that current strategies might not be effective for present tobacco users. It is thus recommended to impose higher taxes and additional measures may be necessary to achieve desired public health outcomes. The awareness campaigns are recommended to be designed more effectively for UAE citizens. Another recommendation made to policymakers is to regulate alternative options such as sheesha and electronic vapes since these products pose serious health impact.

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List of Abbreviations

A&U	Attitudinal and usage
ET	Excise taxes
UAE	United Arab Emirates
WHO	World Health Organisation
FCTC	WHO Framework Convention on Tobacco Control
EMR	Eastern Mediterranean Region
GCC	Gulf Cooperation Council
USA	United States America
UK	United Kingdom
AED	UAE Dirham
ABC	Antecedents, Behaviour, Consequences
USFDA	United States Food and Drug Administration
IPPP	Individuals providing a positive presence
ENDS	Electronic nicotine delivery systems
VAT	Value added tax
GST	General sales tax
KPMG	Klynveld Peat Marwick Goerdeler
IARC	International agency for research on cancer
EC	European Commission
USDHHS	United States Department of Health and Human Services
APA	American Psychology Association
HAAD	Health Authority of Abu Dhabi
NCD	Non-communicable diseases
CVD	Cardiovascular diseases
COPD	Chronic obstructive pulmonary disease
ASH	Action on smoking and health
TPB	Theory of planned behaviour

CHAPTER 1 - INTRODUCTION

1.1 Introduction

Globally, countries come up with new initiatives in reducing and eliminating the use of tobacco products. This has been achieved by negating the positives of their consumption and also by penalizing through tax revenue collections by excising the products for dissuading their usage. Examples of such initiatives include public awareness campaigns and excise duty imposed in a number of countries such as USA, UK and Germany (Sheikh et al., 2023) However, the issues continue with challenges faced by the consumers, the government and stakeholders associated with the phenomenon. Dangerous negative attitudes and harmful effects of the tobacco consumption continue to pose difficulties for governments and policy makers. Reactions and responses to tobacco control interventions and conditions to alter the tobacco products attitudes and consumption differ among various segment groups (Lahiri et al., 2024)). Therefore, this study aims to understand and investigate tobacco consumption attitudes for young adults.

Tobacco taxation in the form of manufacturing tax, sales tax, excise tax, import and export duties and levies are passed on to consumers that result in higher tobacco products' prices. Taxation of such tobacco products has been noted as one of the most effective initiatives for reducing tobacco usage and its negative health consequences (WHO, 2008). When price increase and demand decrease is compared, a 10% increase in price can reduce 4% demand for tobacco products according to Jha & Chaloupka (2000). Tobacco taxes indirectly help consumers to quit tobacco consumption, as they tend to gradually reduce the overall consumption of tobacco, and put the other tobacco consumers on alert for continuing to consume. Increased taxes can positively impact non-consumers of tobacco products by making them less exposed to passive smoking. However, limited evidence exists about the effect of taxation (excise) on specific subgroups such as the young adults, more specifically in the UAE that influence and impact them as consumers for their attitudes and usage. A Better Practices Model by Moyer et al. (2004) provides a structure for integrating variable, but complementary, sources of information for enhanced understanding of complex social issues. This approach is based on the belief that "good solutions to complex problems draw upon both science and experience", which is what the study will adopt theoretically and practically.

The 'Young Adults' (18–25 years ages) considered for the study are as tobacco products' consumption appears high and on the increase in this age group irrespective of enhanced public awareness of the health risks of smoking (Bader et al., 2007). This age group is more considered at a higher risk of adopting smoking habits and progressing these habits to become strong ones (Tercyak et al., 2007). As smoking tobacco products is observed to be as a higher proportion among the range of products, the young adults have been predictive of smoking in later adulthood. Although smoking rates have decreased over the past decades for teenager and adults, young adults (18 to 24 years) are found to decrease their tobacco consumption especially in most high-income countries (Bader et al., 2011). This is a major cause of concern which this study hopes to address.

The rest of this chapter is structured as follow: section 1.2 discusses the background of this study, section 1.3 dedicated for the context of the study, section 1.4 explains the research problem, 1.5 discusses the significance of the study, 1.6 explains the theoretical framework, 1.7 presents research aim and objectives, section 1.8 outlines research questions, section 1.9 discusses the methodology adopted for the study, and lastly section 1.10 outlines the thesis structure.

1.2 Background

Tobacco usage results in morbidity and mortality that can be avoidable but remains high all over the world. It is estimated that more than 8 million lives are because of tobacco use around the world annually (WHO, 2020). WHO Framework Convention on Tobacco Control (FCTC) suggests governments to adopt tax regime to curb the tobacco usage since this would increase tobacco products prices leading to reduced consumption (WHO, 2020, article 6). Excise taxes causes smoking to be a costly habit encouraging smokers to reduce and gradually quit smoking (IARC, 2011; Bader et al. 2011; Chaloupka et al., 2012; WHO, 2018; Guindon et al., 2018). The tax initiative imposed on harmful products such as tobacco products are note to give desirable results in terms of reduced tobacco consumption and smoking cessation by some smokers as confirmed by extensive previous literature (Ho et al., 2017; Asare et al., 2018; Sharbaugh et al. 2018).

The United Arab Emirates (UAE) is a developing country that is comprised of seven emirates. The total population as in 2022 is 10.08 million of which 10.77% i.e., 1.86 million are young adults in the age group of 18 – 25 years (UAE-I&S, 2022). Tobacco use in UAE citizens is reported to be

around 24% in men and much lower in women (0.8%) (Al-Houqani et al., 2012; Hajat et al., 2012). According to WHO, tobacco consumption in the Eastern Mediterranean Region (EMR) is around 25% in comparison to the global consumption of 22.7% (WHO, 2016). In the EMR, alternative forms of tobacco products are also commonly being used. Waterpipe, (also called "shisha", "hookah" or "narghile"), is known to be used in the region since many years. "Dokha" is another alternative form of tobacco common in the region in which tobacco is smoked with herbs and in a "midwakh" pipe. However, there is lack of data on non-cigarette tobacco product use on a country-specific level within the EMR, and specifically within the Gulf Cooperation Council (GCC) including the UAE (Maziak, 2011; Al-Houqani et al., 2012; Aden et al., 2013; Al Shemmari et al., 2014; Asfour et al., 2015; Kheirallah et al., 2016; Vupputuri et al., 2016). Tobacco products usage is reported to be highest among young men between the age group of 30–39 years (28%), Arab expatriate men (31.4%) and non-Arab expatriate women (10.7%) (Al-Houqani et al., 2012; Aden et al., 2013). Smoking rates in UAE national men were highest among 20–29-year-olds (29%) and 30–39-year-olds (32%), and while smoking rates were very low among UAE women (0.7%) (Hajat et al., 2012).

Interestingly, this theme of government intervention has received very little academic attention, with the notable exception of Myat et al. (2019), Wackowski and Delnevo (2016), and Kasza et al. (2017). In Myat et al.'s (2019) study, based in Myanmar, the research focused on understanding whether consuming this product was influenced more by the associated health risks and social stigma, compared to the increasing government's taxation policy. Myat et al.'s (2019) study, concluded that there was evidence that educated individuals, particularly amongst young consumers, knew about the ill effects of tobacco. They did not know about the current government policy towards tobacco usage, and this lack of awareness had not informed their decision-making process. This finding highlighted the effectiveness of informing young consumers of the potential consequences of tobacco. This also indicated the greater need for further awareness of how government policy and regulations was also attempting to reduce smoking. What cannot be determined is whether the UAE experience is similar to that in Maynmar.

In a study focused specifically on changing trends of tobacco consumption, Labuseauterstein et al. (2014) found that young consumers in the United States were aware of the associated hazards of active smoking together with second-hand or passive smoking. Part of this awareness can be

attributed to increased public awareness through governmental campaigns, together with increased regulations to ban smoking in public spaces and shared environments. The result has been a dramatic decline in cigarette usage, but has also led to an increase in adolescent and young adult usage of new, non-cigarette tobacco and nicotine-delivery products, including e-cigarettes. This emergent trend has seen academic commentators such as Bennett et al. (2017), to call for further studies into whether additional governmental regulations and public health campaigns can reduce this new trend amongst younger consumers. Enofe et al. (2014) in studying the risks in alternative tobacco usage, found that smoking status and substance use was often linked to socio-demographics and psychosocial characteristics, which were the main motivational drivers for engaging in tobacco usage. For Enofe et al. (2014), the findings indicated that for younger users, there was a balance between considering the associated risk factors of using tobacco products, and their socio-demographic and psychosocial profile, and there was limited evidence as to the influence of governmental intervention. In an earlier study based in North America investigating young tobacco consumers, Wackowski and Delnevo (2016), concluded that while these tobacco users recognised the potential health issues, there was less concern or influence by governmental regulations and policies.

This theme of young consumers being unaware of changes to governmental policy has seen Bennett et al. (2017) call for further research. Partly addressing this call, Kasza et al. (2017), studied young North American adults' multiple usages and influences behind their usage of tobacco products, such as cigarettes, e-cigarettes, and smokeless tobacco. Also, Kasza et al. (2017), found this shift in tobacco usage was driven by social and economic influences as opposed to government policy or regulations. This theme of young consumer perception of tobacco, led Pericot-Valverde et al. (2017) to focus on the new emergence usage of e-cigarettes in the USA. Pericot-Valverde et al.'s (2017) found a current attitude to smoking and the usage of alternative tobacco products were directly influenced by the age, race/ethnicity, and educational level of the consumer, and not by governmental policy or restrictions. This was supported by Martinasek et al. (2018) who analysed the patterns, perception and behaviour towards different nicotine delivery systems used, and found gender, social and behavioural attributes, fundamentally influenced the usage of tobacco. In Martinasek et al. (2018) North American study, the young consumer considered vapouring to be less risky to health compared to conventional cigarettes, and that their peers were the primary influencer in the usage of this product.

However, contradicting the perspective that regulations were ineffective (Kasza et al., 2017; Wackowski & Delnevo, 2016; Pericot-Valverde et al., 2017), Bennett et al. (2017), found a close connection between consumption behaviour and changes in related regulations. Bennett et al. (2017) concluded that North American college-level anti-smoking policies did assist in reducing cigarette smoking among students. But the research was unclear as to the influence of government-led regulations or initiatives. Also, what cannot be established is whether this predominately North American literature has relevance in the UAE.

Based on the debate as presented above, there are several gaps in existing literature which this study intends to address. Firstly, there is clearly a lack of consensus related to the extent to which governmental intervention influences the young tobacco users (Bennett et al., 2017), but also the fact that the majority of existing studies have been conducted in North America (e.g., Enofe et al., 2014; Wackowski & Delnevo, 2016; Pericot-Valverde et al., 2017) and have not been based in the UAE. Secondly, as Kasza et al. (2017) study indicated the multiple usage of tobacco products amongst young consumers remains unclear to what extent young tobacco consumers have moved away from the traditional cigarettes, and what are the underlying influences, more specifically from the UAE perspective.

1.3 Context of the study

As the aim of this study is to examine the attitudes of young consumers in the UAE, it is very important to highlight the cultural, historical, and socioeconomic aspects of the UAE. UAE culture takes its roots from Arab culture in which smoking is considered as a socially acceptable behaviour (Al-Omari and Scheibmeir, 2009). El-Hajj et al., (2017) also confirm that hookah smoking is considered as cultural thing in Arab world. Youth in UAE have seen or heard from their elders about cultural acceptance of smoking. Smoking is ingrained in UAE culture and people have traditionally been engaged in smoking hookah along with sipping hot drinks (gahwa) in social gatherings. As time passed, youth in UAE became aware of smoking methods other than hookah. Elders could not demotivate the youth because of the consideration of ingrained cultural habit of smoking.

According to an old-World Health Organisation survey on smoking in the UAE, 14.3% of young men, 24% of adult men, 2.9% of young women, and 1% of adult women smoke at the moment

(WHO, 2010). In contrast to a comparatively recent study, the current prevalence rates of smoking in the United Arab Emirates are 0.8% for women and between 23.4% and 24.7% for males (Razzak et al., 2020). 24% prevalence of UAE amongst males is considered as high which must be addressed through appropriate measures.

Although tobacco products have, in the past three decades, become almost demonized due to the changes in public attitude to related health issues, this product still generates high tax revenue (Whitehead et al., 2018). Changes in perception towards tobacco usage has been observed with the increased awareness of health concerns and changes in social attitudes, part of which has been due to governmental initiatives. However, as a product, tobacco still remains a key income tax generator for an economy, and therefore has created a paradox. In the UAE, this paradox can be seen with the government actively increasing the level of sales tax on related tobacco products. This is a mean to generate income, which has potentially resulted in more tobacco users quitting smoking due to increased costs, as opposed to health concerns and social stigma.

Tobacco products are categorised in the 'harmful product' category in the UAE. As the excise tax was introduced in the country in 2017 on harmful products which are considered to have negative impact on human health, tobacco products also became prone to the new tax regime. Tobacco and tobacco products were included in the list within Schedule 24 of the GCC Common Customs Tariff which were supposed to be affected by the excise tax to be levied from 1 December 2019. 100% tax rate was introduced on tobacco products which meant that the prices were to be doubled. Businesses needed to register for excise tax under the UAE Federal Decree Law No. 7 of 2017 on Excise Tax These businesses included those who were engaged in: the import of excise goods, the production of excise goods to be consumed in the country and the stockpiling companies.

1.4 The research problem

The research problem is expressed as a statement about an area of concern in attitudes and usage of excise levied tobacco products, this is a view to be understood for the changes from the young adult consumers (18-25 years age) perspectives and also from the government for its policies in terms of revenue and health concerns in the UAE which hopes to be improved. The research problem is based on the fact that smoking is a culturally acceptable habit in UAE and youth in UAE are motivated indirectly from their elders and culture to smoke. This is substantiated by

around 24% prevalence of smoking in males in UAE although only 1% females were found to smoke (Razzak et al., 2020). Smoking is found to be a cause of many health issues as smokers are more at risk of heart diseases, lung cancer and stroke. Since smoking is culturally and socially acceptable, it is a problem to reduce its prevalence in the country. The federal healthcare budget allocated by the UAE Government has increased from AED 4.61 billion in 2020 to AED 5 billion in 2024 (U.AE 2024). Abu-Gheida et al., (2022) revealed that UAE Government cover the complete cost of cancer treatment of its citizens while the expatriates' treatments are covered by insurance. The authors noted that around 12% of the budget amount is spent on diseases caused by smoking which is aimed to be reduced by taking appropriate measures to reduce smoking habit in people in the country. Moreover, it is noted that smoking leads to more than 3000 deaths in the country which can be prevented with correct strategies (Rahman et al., 2020).

Following the footsteps of other countries, UAE Government has adopted several measures such as levying excise tax and running awareness campaigns to reduce consumption of tobacco in the country. The government has levied 100% excise tax in 2017. The excise taxes have been expected to have direct impact on the consumption of tobacco products in the country since the prices of the tobacco products are doubled. Indirect impact has been reduced poor impacts of smoking on people health, reduced death rates and reduced burden on healthcare infrastructure and resources. However, the impact of excise tax on consumer behaviour is yet to be assessed in order to review the excise tax measure, determine its effective and recommend any changes in the policies to enable the government achieve the above-mentioned targets.

The challenges faced as a difficulty will be attempted to be eliminated or minimized, especially if lacking in existing scholarly literature, as applicable to the UAE. The theories and the practices involved in the excising of the tobacco products to be meaningfully understood and deliberately investigated using research processes. The research problem here is posed as a phenomenon for which a solution is to found through this study. The research problem is presented in a framed research problem statement as: A challenging issue of attitudes and usage among young 18- to 25-year-old consumers perception towards excised tax tobacco products in the UAE which the government and the people concern of revenue generation and heathy living. There is lack of understanding and clarity in these areas which needs to be investigated and a solution found within theoretical and practical application in the UAE.

1.5 Significance of the problem

The significance of the research problem is multiple. Finding a solution to the problem will significantly help the in the subject of the study, especially as contribution to the topic being investigated. Firstly, it will help in better understanding of the tobacco products' consumer's attitudes and usage especially for taxed goods and services. Secondly, it will contribute to knowledge in developing and cultivating the right attitudes towards tobacco products and prevent or dissuade its consumption thereby ensuring better health and environment conditions for all around. Thirdly, it will provide input to the policy makers and the regulators in managing tobacco products and in excise revenue generation and deployment of resources. Finally, it will add to academic and practical application of the knowledge contribution in shaping the tobacco products' consumers behaviour and all the stakeholders that have an interest in the subject.

1.6 The theoretical framework for research problem-solution

Selecting an appropriate theoretical framework for any research is an important and necessary process. It allows to understand the research problem, purpose, significance, and research questions to ensure effective research outcomes. Therefore, the theoretical framework serves as the foundation for the study's work. It guides the choice of research methodology and method/s where all aspects of the research connect to the theoretical framework (Grant & Osanloo, 2014). With the above justification the theoretical framework has been described, discussed, and designed keeping in view the study at hand. The key components of the theoretical framework for this study can be considered as: Attitude Formation Theories; Consumer Consumption Theory; Economic Theory explaining Consumer Behaviour; Excise-Tax Theory.

Attitude Formation Theories - It explains the development and the reason behind the development of a person's attitude. The study will focus on attitude formation as attitudes frequently direct behaviour. The attitude formation theory has five theories commonly used to describe attitude formation: Stimulus-response and reinforcement theory; Social-judgement theory; Consistency theory; Self-perception theory; and Functional theory (Wood, 2000; Albarracín et al., 2005; Glasman & Albarracín, 2006; Cunningham & Zelazo, 2007; McEachan et al., 2011).

Consumer Consumption Theory – Is about of people spending behaviour on the basis individual preferences and budget limitations (Reisch & Zhao, 2017).

Economic Theories explaining Consumer Behaviour – Also referred to as Behavioural Economics, describes a rational buyer who in in possession of required information about the product and market and uses it to maximise value for the buying effort and money. A number of economic theories explain different aspects of buying behavior will be taken into consideration for which four major economic theories will be examined in dealing with buyer behaviour, such as: Marginal Utility Theory; Indifference Theory; Income and Savings Theory; Rising Income Theory (Dolan et al., 2010; Etzioni, 2011; Camerer et al., 2011).

Excise-Tax Theory – It is a theory of optimal excise taxation with identical consumers. The theory explains how taxation generates revenues for the government while reducing the consumption of harmful products (such as alcohol and tobacco) that consumers might overconsume in the absence of taxation (Hines, 2007).

Having listed and stated the applicable theories for the study, the following sections relate to the research aim, objectives and questions.

1.7 Research aim and objectives

The research aim is framed as a broad statement indicating the general overarching purpose. The main goal of this study is to investigate how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers.

The research objectives flow from the aim of this research are more specific. They describe what is intended in the research study to be accomplished. The following listed research objectives summarize the approach and purpose of the study to help in the focus of the research.

RO 1. To examine the attitudes towards excised tax and non-excised tax tobacco products.

RO 2. To investigate the changes amongst 18 to 25-year-old consumer attitudes to the usage of excised tax and non-excised tax tobacco products in the UAE.

RO 3. To investigate factors affecting the behaviour of 18 to 25-year-old consumers toward tobacco consumption after tax.

RO 4. To generate from the findings for the Emirate government, a model to represent how attitudes and usage amongst 18 to 25-year-old consumers have changed towards excised tax and non-excised tax tobacco products in the UAE.

1.8 The research questions

The research questions of this study expect to address the research problem and be aligned with the research aim and objectives. With an aim to find a solution to the research problem with therefore, this study is expected to answer the following research questions:

RQ 1. What is the attitude of youth towards levying excise on tobacco products over time?

RQ 2. How does excised tobacco products influence the attitude of youth towards tobacco products?

RQ 3. What are the factors affecting the behaviour of 18 to 25-year-old consumers toward tobacco consumption after tax?

RQ 4. How does excised tobacco products influence the usage pattern of youth towards tobacco products?

1.9. The research methodology and methods

The research methodology to be adopted is an exploratory sequential mixed methods design where qualitative data is first collected and analysed, and themes arrived enable to develop a quantitative data collection instrument of questionnaires for further exploring to the research problem (Teddlie & Tashakkori 2008; Onwuegbuzie et al. 2010; Creswell & Plano Clark 2011). The participants for the interviews will be the government officials responsible for excise duty of tobacco products. The survey respondents will be the young adults (18 to 25 years old), residing in the UAE. The participants are above the age of 18 years, with interview participants having no upper age limit while the questionnaire respondents will be young adults in the age group of 18 – 25 years. The interviews are semi-structured to be conducted with check-listed guidelines either face-to-face in-person or via video, while the questionnaire is structured and uploaded online for a digital survey.

The sampling design will be of 12-15 interview individual participants until data saturation is reached and over 250 respondents based on the population size, 95% confidence level and 5% margin of error. The interview data will be coded using a content analysis approach to analyse the participants viewpoints and perceptions, by using NVivo while the statistical analysis for the quantitative data will be adopting descriptive, inferential, exploratory, and causal analysis.

1.10 Structure of the thesis

The structure of the thesis consists of this chapter 1 as its introduction. Followed by the other chapters as listed, here below that are briefly stated for its contents.

Chapter 2: Literature Review - A Review of the literature where selected parameters for a literature search will be used to identify pertinent themes and concepts in the literature. The need for further research will be determined and description with construction of theoretical framework and conceptual framework.

Chapter 3: Methodology– An outlining based on research paradigm, research approach, research design for different types of data using sampling strategies and techniques to collect and analyse data. Evaluation and justification of the methodology and methods for reliability and validity with ethical considerations will be ensured.

Chapter 4: Results – Based on the research methodology the choice of data collection method will be determined with justification for the sources of obtaining data (qualitative and quantitative) by applying standard data collection procedures in terms of sampling using data collection instrument of interviews checklist guide for qualitative data and survey method's questionnaire for quantitative data. Field and desk work will be undertaken to collect the required data and the results will be presented in this chapter,

Chapter 5: Discussion - Of key findings with interpretation by addressing and answering the research questions by describing the significance of the findings and knowing more than what is already known with explanation of any new understanding or fresh insights with contribution.

Chapter 6: Conclusions and recommendations – comprising of the summary with key research findings, contribution of the study, implications of the findings, recommendations for practice

and/or policy, strengths and limitations of the study, and scope for future research. The study will include bibliographic references of citations, appendix, list of tables / figures / abbreviations and acronyms, declaration, other related documentation and finally an abstract.

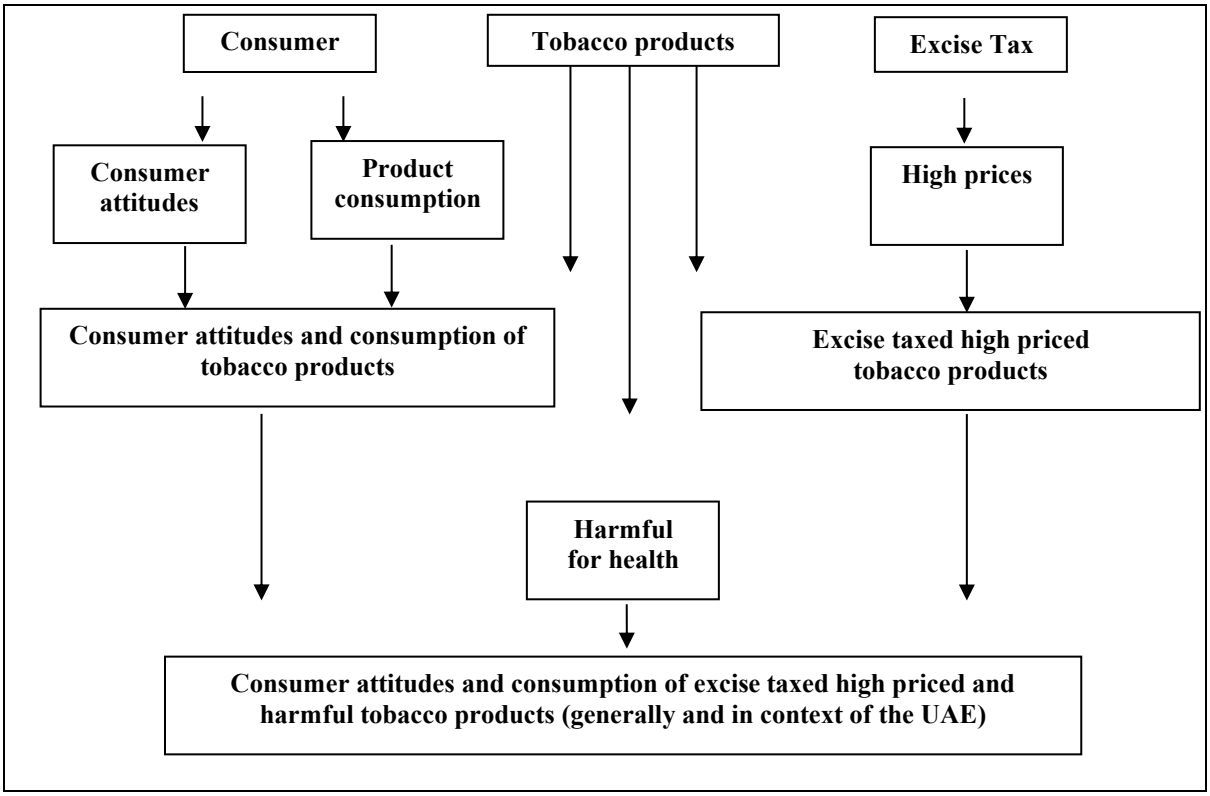
1.11 Chapter summary

The research study's topic titled "An attitudinal and usage (A&U) study into how young adults 18- to 25-year-old consumers perceive excised tax tobacco products in the UAE" for this thesis was introduced. Its background was also presented with regard to the areas of interest in the fields of Attitudes and Usage of excise taxed tobacco products by young adults in the UAE. The contextualization of the study was presented with the research problem identified as stated as: A challenging issue of attitudes and usage among young 18- to 25-year-old consumers perception towards excised tax tobacco products in the United Arab Emirates (UAE) which the government and the people concern of revenue generation and heathy living. The significance of solution for the research problem has been highlighted and a theoretical framework constructed for the study's research problem-solution by a viewing lens of theories including Attitude Formation Theories; Consumer Consumption Theory; Economic Theory explaining Consumer Behaviour; Excise-Tax Theory. Clear research aim, research objectives and research questions have been listed and stated for which appropriate research methodology and methods have been presented. The outlining of the chapters' structure of the thesis was briefly described, thus making the study proceed into the next chapter of literature review.

CHAPTER 2 - LITERATURE REVIEW

2.1 Introduction

The study aims to explore the attitude and use of excised tobacco products among consumers falling under the category of 18 to 25 years old. The previous chapter explored the topic and underlying domains, focussing on bringing clarity to the research background, problem statement, and significance of the study. In this chapter, a detailed review of the literature is conducted in the areas of the key variables i.e., consumers, consumer attitudes, consumption of goods and services, and tobacco products. This literature review demonstrates extensive and intensive readings related to the topic with a good understanding of the problem situation, aim, objectives, and questions in the study's subject area. An analysis of different points of view including identification of any strengths or weaknesses, supportive or counter-arguments found in the several studies' research methods or findings. Key databases of publications that have influenced the field and have been written by reputable authors and academicians have been reviewed for books, journal articles, websites, conference proceedings, and government reports. Following the above mapping the literature has been reviewed as follows.



Leading to review following:

- Attitudinal and usage (A & U) trends of excised tobacco products amongst 18 to 25-year-old consumers.
- Comparing changing attitudes of youth towards excise taxed and non-excised tobacco products.
- Comparing changing usage of youth towards excise taxed and non-excised tobacco products.
- Effects of pricing on youth's attitudes towards tobacco products.
- Effects of pricing on youth's usage of tobacco products.
- Effects of time-period on youth's attitudes towards tobacco products.
- Effects of time-period on youth's usage of tobacco products.
- Theories / Models / Frameworks for attitudes and usage of tobacco products.
- Research gaps identified in literature of youth's attitudes and usage of non-excised and excised tobacco products

Figure 2.1: Literature Review mapping flow chart

As the study involves consumer attitudes and usage towards high prices caused by high excise taxed tobacco products, the keywords for the literature search are considered as consumers, consumer attitudes, product (goods and services) consumption, tobacco products, high prices, high excise taxes (ET) and the UAE. The themes that will be literature reviewed are composed of consumer attitudes and usage of high excised and high-priced tobacco products specific to a place in the UAE. The above figure indicates the literature review map that will be used as a pathway to examine the existing body of knowledge.

The rest of the chapter constructed as follow: section 2.2 reviewed literature related to consumers, section 2.3 reviewed literature related to tobacco, 2,4 discusses excise taxed high prices tobacco

products, 2.5 reviewed literature on Attitudinal and usage (A & U) trends of excised tobacco products amongst 18 to 25 year-old consumers**,** 2.6 discussed Longitudinal studies on excise taxes and youth tobacco attitudes and consumption, 2.7 compared changing attitudes of youth towards excised tax and non-excised tax tobacco products, 2.8 compared changing usage of youth towards excised tax and non-excised tax tobacco products, 2.9 reviewed literature on factors affecting youth's attitude and usage of tobacco products and lastly 2.10 explained theories/ models/ frameworks of attitudes and usage of tobacco products

2.2 Consumers

This section will shed light on the review of "consumer" to sufficiently comprehend the research topic. Initiating with the examination of its definition and exploring the significance of consumers, this section will also review the focus of consumers, the context of the application, and its prominence.

The consumers include households, industries, and institutions as highlighted by Lang, Stanton, and Qu (2014). Households are the places that individuals reside and consume products either individually or with and for others (Xiao and Tao, 2021). Business use resources to prepare commodities or services ready for sale in the market. An institution is an organisation that delivers a public service which may include the central government departments, local authorities, universities, schools, hospitals, and charities among others (Salvia et al. 2017). In this regard in the study since it is research affecting individuals it will involve consumers who are not industries or large institutions, but are part of the household. A consumer is defined as an individual or a group of people that purchase or uses products and services in order to meet the personal, group, family, household and other needs not connected with business enterprises (Xiao and Tao, 2021; Kardes et al., 2011). A consumer can be defined as a person who purchases and or utilizes products with a view of using them as from the time of purchase and not for business activities. Consumer as a study defines it as the processes consumers go through in the course of making decisions on acquiring goods, services, ideas, experiences or any other stuff that can fulfil their needs and wants (Kuzina & Dodd, 2014). They are those individuals or groups that look for goods and services that meet their needs and then acquire, utilize, appraise and discard them (Schiffman, 2007).

With this basic literature review of a consumer as applicable to the nature of the study, it is important to understand the consumer attitude and theories and models explain such attitude as will be explained in the following sub-sections.

2.2.1 Consumer attitudes

In this section, the concept of consumer attitude is reviewed. The meaning of the term, the theories underpinning the concept, and the link between consumer attitude and consumption of excised high-priced tobacco products are presented. Consumer attitude is one of the variables to be explored in the study, exploring it is crucial in availing insights into the perceptions, influences, and motivation that drive the consumption behavior of young adults about high-priced tobacco products.

According to Gerard J. Tellis and Talia R. Skower, consumer attitude may be described as "favouring or not favouring" by an individual towards a product – good/s or service/s (Ajzen, 2018). Individuals have positive, neutral and negative attitudes towards buying / using, postponing / not deciding or not buying and not using the product (Nguyen et al., 2019). This attitude has been justified and explained by several theories and models in the academic literature as it will be illustrated in the following sub-section.

2.2.2 Theories explain consumer attitude

Several theories and models tried to understand and explain consumer attitude from different perspectives. The attitude theories trace its origin to the functional theory of attitudes by Katz (1960) explaining how social behaviour is facilitated by attitudes. Çavuşoğlu et al., (2023) took the functional approach further by classifying and defining it as: Instrumental function – The purpose of the attitude is to gain a desired return on the object; Ego-defensive function – The attitude serves to guard against internal and external threats; Value-expressive function – It is the opposite of ego-defensive in that the drive is based on the urgency to express oneself; Knowledge function – The drive towards understanding and categorization. Consumer attitude simply includes beliefs regarding, feelings regarding, and specific intentions to behave regarding some objects (Ajzen, 2018). There are theories in consumer behaviour that are concerned with consumer attitudes for example Festinger (1957) cognitive dissonance theory posited that the psychological

discomfort ensuing from the existence of what he referred to as a 'cognitive inconsistency' is similar to the drive that hunger or thirst puts on one to finding food or water. A study by Keskindağ (2023) applying the theory of cognitive dissonance found that smoking consumers adjust their beliefs when they try to quit smoking, caused by the dissonance stemmed against the habit of smoking and the acknowledgement of the harm induced from it. Critcher and Gilovich (2010) proposed the self-perception theory to examine link between self-perception and mind-wandering to prove the notion that people know their attitude and preference based on what the behaviour means. Especially the unobservable behaviour of mind-wandering is used when drawing conclusions about people's attitudes and preferences about products. (He, 2020). A study by Sood et al., (2019) there self-perception behaviour varies between men and women who engage in consumption of tobacco products, with women inclined towards healthy diet and men towards physical health. The Social Judgement Theory by Meyers-Levy and Sternthal (1993) assumed that people assimilate new information about attitude objects of what they already know or feel, such initial attitude acts as a frame of reference to categorize new information in terms of this existing standard (Ustaahmetoğlu, 2020).

The congruity theory is one of the consistency theories of attitude change. developed by Osgood and Tannenbaum (1955). As implied by Zhu et al. (2019), it is explicitly oriented to communication and persuasion that concerns situations in which a source asserts a concept and the audience has positive/associative impression of the source and positive/dissociative impression of the concept. On the other hand, Heider's Balance Theory (1946) is about relationships among elements of thoughts in a triangle, with the person (or perceiver), the other person (or observer), and the attitude of the object (Yun et al., 2019). Heider represented the relationships between these three elements as a balanced triad of a number of plus signs as pleasant; imbalanced triads have a number of minus signs as unpleasant, to change thoughts making the triad balance. The theory of reasoned action developed due to multiple contributions of Shimp and Kavas (1984) and Holbrook and Havlena (1988) that predicts consumer behaviour of attitudes based on social behaviours and attitude towards buying as a performance of a voluntary act and measures behavioural intentions that consumers are actively thinking ahead and planning future behaviours (Ajzen, 2018; LaCaille, 2020). A study by Gadiyar et al. (2018) applied the concept of consumer behaviour of attitudes to examine if there exists a relationship between tobacco consumption and anti-tobacco advertising. They found that consumer behaviour can be influenced by social attitude leading to change in

behavioural intentions displayed by the consumer. The theory of trying suggests that the criterion of behaviour should be replaced by 'trying to achieve a goal with intervening factors between intention and performance, personal and environmental obstacles may hinder the person from achieving the goal. The theory subcategories that try to address the often-confounding contexts that, at one time, facilitate and, at other times, undermine the realisation of intentions. These involve the degree of participation the person has in the decision; the probability of success or failure in realizing the goal; the culture's approach to successful or unsuccessful realization of the goal; and the individual's attitude towards the effort. To predict using some key factors and issues of: The process; magnitude of outcome and expectancy of risk; attitudes toward effort; propensity; time; perception; assessment of outcome (Madichie, 2012).

Having reviewed the key theories associated with consumer attitudes, the next is to review models, with ABC Model of attitudes (Ostrom, 1969) being in the forefront. Its key components are knowing, feeling, and doing, as suggested by Lau et al., (2023) All or any of them are crucial; though the precedence differs in reaction to a consumer's level of usage, be them a light, mid-endorsement or heavy-weight consumer. Researchers studying attitude the work out on the possibility of a hierarchy of effects to express the relative influence of the three constituents of the concept. However, the ABC model attempts to outline the various factors that may combine to affect the consumers' judgments of attitude objects. There are Customer Attitude and Multi-attribute Attitude Model by Holbrook & Hulbert (1975) were also incorporated (Ajzen, 2018). Kumari (2020) in her study observed that consumer attitude toward an attitude object consists of perceptions that consumer hold regarding the several attributes of it to arrive at measure if the consumer attitude. The basic multi-attribute model specifies three elements: This relationship is defined by: (i) Attributes as characteristics, (ii) Beliefs as cognitions and (iii) Importance weights reflecting the preference of the consumer toward an attribute.

The Fishbein model, also called theory of planned behaviour or theory of reasoned action, is a multi-attribute model having three components of attitude: (i) Perceived beliefs of the consumer about the product (ii) Links between the product and its attributes (iii) Attitudinal evaluation of each of the important attribute (Ajzen, 2018). In this model, measures on the overall attitude towards the object are used to explain the rationality of choice of the product by the consumer. It is useful to comprehend consumer decision making process and can propose various strategies to

affect it. Combined, Fishbein and Ajzen (1973) developed the model by considering (i) customer attitude towards a specific object, (ii) undue beliefs that this particular object possesses certain attributes, values, benefits or functions and (iii) perceived values of the Hei desirable attributes and favourable consequences of possessing this object. Priester et al. (2004) studied consumers to have three levels of commitment that shape their attitudes: Compliance attitude, is at the low level of involvement, a shallow, formal attitude towards the product that aids in receiving reinforcement from others. High chance of altering the attitude: (2) Identification attitude: medium level of involvement that occurs in purchase situations where one aims at conforming to other people's expectations, opinions or influence; (3) Internalization attitude: high involvement level wherein the consumer includes such attitudes as part of the values system. Consumer self-Image attitudes are very resistant to change because they are significant to the consumer.

As consumers undergo various levels of hierarchy that develops the attitudes, a review of such hierarchy becomes essential. A standard learning hierarchy (Zinkhan & Fornell, 1989) assumes that a consumer is highly involved in making a purchase decision and is motivated to seek information by weighing alternatives and arrive at a well thought decision (Choudhury, Mukherjee & Datta, 2019). Then there is the experiential hierarchy of effects (Lavidge and Steiner, 1961) of attitudes are the behaviours associated with the hierarchy-of-effects theory which in effect are to "think," "feel," and "do," or cognitive, affective and conative behaviours (Kranzbühler et al., 2018). It refers to behaviours and orientations that are self-generated and are based solely on the consumer's emotions towards an object or idea. Emotions drive the decision while thinking and attitudes acts as post-purchase events that either enhance or weaken the emotions (Hazel & Kang, 2018). According to the attitude theory, when the consumers react mechanically, emotional reactions and concerns are deemed as a core component of an attitude Teichert et al., (2018).

Being relative to the consumers, the attitudes are tendencies that can shift, depending on characteristics, future that is pictured, and potential change agents (Maio et al., 2018). Attitude reinforcement and / or change can cross over between products as behaviour change is not easy to introduce ad sustain, even where there are heightened levels of information, (Ibáñez-Sánchez et al., 2022). From this work it was concluded that successful interventions, where the measure of success is changed behave acceptable, affordable, effective, sustainable and generalizable can do so since attitude reinforcement and / or change cannot be separated from the notion of satisfied or

dissatisfied consumer (Xu et al., 2022). The reinforcement process may take place with satisfied consumers when they continue positive in their attitude towards a specific product, an advert or experience. They are also sure to produce consumer loyalty; all the positive reinforcements that are certain to get themselves circulated within the targeted consumer domain are sure to product consumer loyalty (Teichert et al., 2018; Voinea & Filip 2011).

This section discussed consumer attitudes especially with an emphasis on the consumption of excised high-priced tobacco products. Consumer attitudes are therefore the favourable or unfavourable disposition that a consumer has towards a product based on beliefs, emotions and behavioural intentions. Theories like Katz's functional theory of attitudes, Festinger's cognitive dissonance, Fishbein's theory of reasoned action are explained, which shows the psychological and social aspect of consumer behaviour. Also, there are models that help to explain the formation and change of attitudes such as the ABC model and the Multi-attribute Attitude Model. The section concludes by stressing that consumer attitudes are not fixed but are influenced by internal and external factors and are therefore essential in explaining consumption behaviours especially in the case of expensive tobacco products among young adults. This review lays the foundation for the subsequent discussion of the consumption trends in the subsequent section. Having adequately reviewed literature on consumer attitude, its applicability in context of the study will be related with other literature reviews of consumer usage as in the next section.

2.2.3 Attitude toward product goods and services consumption

To understand consumption, it is important to recognise the complexities of consumer behaviour. In this section, the complexities of human consumption behaviour are unravelled. The review focuses on exploring how the target participants approach, engage and make various decisions regarding the consumption of goods and services. Understanding consumption behaviour avails more insights into the factors that shape the consumer attitudes and use of high-priced tobacco products.

An individual has the urge to get the highest level of satisfaction from the products consumed since the behaviour is influenced internally by beliefs, perception, and skills as well as from the outside environment (Sharot & Sunstein, 2020). Each individual consumes differently depending on demographics, psychographics, socio-graphics geographic areas, timing, and situations (Di Crosta

et al., 2021). Consumption from the viewpoint of neoclassical economics is a basic understanding of consumption decisions made and acted upon and takes the form of cost-benefit (Knickmeyer, 2020). Factors such as perceived value and price sensitivity are crucial in influencing the consumption behaviour of individuals. Also, brand preferences play a significant role in influencing consumer behaviour.

While consumers make rational choices to fulfil their needs at the minimal possible cost, behavioural economics views and takes the psychological and social conditions of consumption. Based on this view, consumption decisions can be made by receiving instant positive feedback, personal experience, and perceiving some forms of behaviour as socially unacceptable, e.g., tobacco consumption (Di Crosta et al., 2021). Soofi, Najafi, and Karami-Matin (2020) have also asserted that psychological factors such as motivation, prompt consumers to purchase products that align with their desires and needs. Personality is an enduring trait that defines consumers and also influences their product choices (Di Crosta et al., 2021). This is also linked with emotions which is a subjective and affective state that shapes the overall perceptions about the product.

Besides the psychological and social conditions, the complexity of 'why' and 'how' people consume various products, can also be explained by other factors. However, these factors may be difficult to uncover due to the cultural differences and identities that shape the varying consumers and their groups (Saari et al., 2021). Consumption theories derived from disciplines such as psychology or sociology have challenged consumption understandings that are economics-based primarily at the level of individual/household (ElHaffar, Durif & Dubé, 2020). Some consumption theorists have questioned the assumption that individuals only act for self-interest, along with the existence of non-rational factors for consuming goods and services affecting people feelings on themselves and one other (Szmigin and Piacentini, 2018; Yi et al. 2004). Within this context, Musari (2018) reviewed the need to understanding consumer behaviour with regards to tobacco consumption, applying the micro-economic theory, focussing on reducing the harm caused to be consumer. Whereas, Srivastave et al., (2020) identified that customers apply aspirational behaviour which effects their consumption behaviour, especially in customers at the bottom of the pyramid. Policies for behaviour change to alter consumption habits were not found to be necessarily effective, as their lies a gap between the stated intention & the generated action caused by circumstantial factors and personal attitudes. These result in no alteration in behaviour or even

giving contradictory effects as explained in the social practice theory (Spangenberg and Lorek, 2019; White et al., 2019).

Decision-making can be explained by the exploration of how social, economic, and environmental values can affect the decisions of consumption and suggest the pointers for effective interventions to shape consumption and promote sustainable consumption (While at al., 2019). How individuals value products are complex from the perspective of consumption is shaped mostly by the relationship between quality & price, with price as a valuation reference with quality being associated with performance / functional reliability and usage/durability (Lina, 2022; Ghali-Zinoubi and Toukabri, 2019). Since value as a concept goes beyond financial worth upon being linked to the definition that people attach to the products, that would include social or emotional value in addition to family, socio-cultural or personal values (Tanrikulu, 2021). These values influence consumption, especially through the product-based attitudes can alter over time that are influenced by feelings on the performance of the product not meeting the users' expectations upon consumption

This section expands on the analysis of consumer behaviour and their consumption patterns of products and services, including the expensive tobacco products. This underlines the fact that consumers' decision-making process is influenced by both intrinsic factors including values, attitudes and habits and extrinsic factors including environment and social factors. Neoclassical and behavioural theories are explained and examples are given on how perceived value, price sensitivity and brand loyalty influence consumption. Motivational, personality, and emotional factors also affect the choices of products available in the market. The section also expands on how cultural factors and cultural self-identities make it difficult to understand consumers. Furthermore, it also questions the economic-based theories, the role of affective emotions in consumption and the impossibilities of modifying the consumers' behaviour through policies. Last but not least, the section deals with the role of economic, social and emotional values in the consumption process and the dynamics of these values depending on the product performance and user satisfaction. Having reviewed literature on consumer and consumer attitudes and consumption, the next is to examine the product category concerned in the study.

2.3 Tobacco products

In this section, the review focuses on defining the different categories of tobacco products. The classification of the product is described, and its features are highlighted. Such a detailed description of the product is needed since, the study seeks to establish the consumer's perceptions and attitude towards it, as well as the consumption patterns and usage of the product.

Tobacco is an agricultural product of the plant leaves containing a natural species of addictive drug named 'nicotine' which has stimulant and sedative properties and has its effects on the persons consuming it, hence can be highly addictive (Lee, 2020). The commercial scale of tobacco is derived from the species Nicotiana tabacum while globally in other species of Nicotiana alata, Nicotiana clevelandii, Nicotiana longiflora, Nicotiana rustica, among others, depending upon the natural environments they are grown traditionally and used for various purposes and mainly for consumption (West & Shiffman, 2016). Another large-scale use is to create pesticides. Nicotine, a chemical compound found in tobacco has been traditionally used for the production of pesticides. However, its use in this line is not very popular (López Dávila et al., 2020). This study focuses on the consumption of tobacco products by human beings. Consequently, the definition is restricted to the product category as an individual/household personal consumer product.

From the raw stage of tobacco leaves that are grown, harvested, cured, and processed, they are converted to a number of different product classes as consumable in many forms (Gately, 2003; Padhiary et al., 2021). Tobacco products are generally divided into two types: (a) smoked tobacco – consumed through a practice of burning tobacco and ingesting the smoke that is produced by inhaling via cigarettes, or done with pipes and cigars and exhaled by releasing the smoke. (b) smokeless tobacco – a tobacco product type which is used other than by smoking, and involves holding or placing between the cheeks and gums, or sniffing. Smokeless tobacco is in several ways in which it is chewed, sniffed, snused, and dissolved with other items and chemicals (Conway et al., 2018; Lund et al. 2017; Britton, 2009;), Smokeless tobacco products typically contain over 3000 constituents (Gray, 2006). A study by Delnevo et al., (2021) the market trends in smokeless tobacco sales found that new tobacco products have received steady growth during 2011 to 2019 in the United States. A review of tobacco products as a product category reveals a range of product classes. The classification of the tobacco products being (1) Cigarettes; (2) Cigars / Little Cigars / Cigarillos; (3) Dissolvable itemed; (4) Electronic itemed (Vape Pen, e-Hookah, Hookah Pen); (5)

Water-piped (Hookah, Shisha, Narghile, Argileh); (6) Traditional / Smokeless Tobacco Products (USFDA, 2019), (Casseus et al. 2016). IPPP (2018) classified tobacco products as: tobacco; tobacco products; tobacco; cigarettes; cigars; Electronic cigarettes and oral vaporizer for smokers; Tobacco substitutes, tobacco flavouring, components and materials used in electronic cigarette, oral vaporizer for smokers; herbs for smoking; and snuff. Across the globe, various countries classify tobacco products differently as: tobacco products (or imitation/derivative/substitute products), medicinal / drugs / pharmaceutical products, consumer products, tobacco / nicotine delivery systems (ENDS) / e-cigarettes or poisons or harmful / hazardous substances (GTC, 2019).

This section provided a detailed overview of the various categories of tobacco products, emphasizing the need to understand their classification and features to explore consumer perceptions, attitudes, and usage patterns. Having literature reviewed for consumer, consumer attitudes and consumption, and for tobacco products, the next section provides a historical context of tobacco regulation highlights the evolution of excise taxes as a key strategy for reducing tobacco consumption, especially among youth.

2.3.1 Historical context of tobacco regulation

Tobacco products have been a subject of regulation for a long time, which can be attributed to many forces, but with emphasis on the ultimate force of public health particularly emphasizing the negative impact of tobacco products. Tobacco control strategies worldwide have in the recent past named excise taxes as key and important strategies. This section critically analyses the development of tobacco regulation especially with concern to excise taxes from the year 2010 to the current period. It is assumed that the historical analysis of these policies can help to explain the efficacy of such policies when it comes to influencing consumption and specifically consumption of youths.

There is evidence to the fact that tobacco use has been associated with certain diseases and ill-health, including; cancer, respiratory diseases and cardiovascular diseases have seen a change in regulation owing to the overwhelming evidence. Originally, tobacco control aimed to ban advertisement, put stamps and labels on the packaging, and smoking in certain areas. Although, excise taxes have come to be accepted as a measure of shielding the economy from the vices of tobacco in as much as it acts as a means of making tobacco products expensive.

Internationally the WHO has had a voice in the promotion of measures against tobacco under the FCTC which was signed in 2003. According to Article 6 of the FCTC, price and tax strategies are encouraged to reduce tobacco demand, identifying excise taxes as optimal to decrease utilization (WHO, 2010). Tobacco control policies that involve higher taxes as a form of excise taxes to its consumers have been found to reduce tobacco usage in the different countries especially among the groups that are sensitive to price variations such as the youthful persons and the poor (Chaloupka et al., 2012).

Specific taxes are placed on certain products like tobacco in an endeavour to cut down the consumption while at the same time summoning government earnings. Many scientific researches have shown that excise taxes, as a rule, work and decrease tobacco usage. For instance, IARC in his study conducted in 2011, revealed that raising tobacco prices by 10% results into a proportionate decline of 4% in high income countries and a much higher decline in low- and middle-income countries. In the UAE, the government has implemented excise tax of 100% on tobacco in 2017, which was a big leap towards minimising consumption of tobacco (Kronfol, 2019). This policy also corresponds to the international practice where excise taxes are applied not only as a source of revenues but also to regulate the health of the population. The use of such taxes in the UAE is in align with modern trends in using evidence-based approaches to enhance population's health and to reduce the burden of diseases attributable to tobacco consumption. But similar to any channels of indirect taxation, the efficiency of excise taxes is not without its drawbacks. Opponents assert that high levels of excise taxes could cause adverse side effects: emergence of contraband tobacco products. Gallagher et al. (2020) stated that illicit trade in tobacco products erode the excise taxes for the same reason they dilute the impact of taxation by offering cheaper products in the market.

Excise taxes have remained contentious because of the several negative criticisms that have been directed towards the policy most of which has been initiated by the tobacco industry despite the positive effects of the policy in the reduction of tobacco use. The industry has not been shy to employ some actions like litigation, lobbying, and public relation campaigns against taxation increase which they believe will affect their businesses (Gilmore et al., 2015). Also, there is an impression that such taxes as excise taxes put a severe pressure on the weak monetized income smoker aggregate without necessarily provoking a reduction in consumption (Remler, 2004).

The expropriative role also depends on the complementary activities in use and enforcement of the excise taxes. For instance, Scollo and Bayly stated that as found in other fields, policy review and update should be conducted routinely, to cover for emerging gaps in the efficiency of tax policies in the assertion of usage of tobacco. Also, the use of public awareness and smoking cessation programs assists those individuals who would like to quit smoking significantly.

Excise taxes as one of the approaches in curbing tobacco use are illustrated well in the historical analysis of the regulation of tobacco. Some of the drawbacks of the excise taxes include the following; In spite of successes such as reduction in tobacco usage and or usage by youths in specific regions of the world, there are certain factors that act as drawbacks of excise taxes. Policies should target these issues some other ways in combating tobacco via the policy arsenal via taxation, education, and enforcement mechanisms. The example of such countries as the UAE shows that if applied consistently, excise taxes can help to achieve the desired positive effects in the field of public health but the continuous work on it is required.

2.3.2 Global tobacco control efforts and their impact on youth

Policies targeting the use of tobacco have attracted mixed results in different countries; some countries have upheld strict measures while the others' have been very 'relaxed'. These policies have been proclaimed and applied in the pioneering countries such as Australia, Canada and the United Kingdom which does not exclude highly effective excise taxes, plain packaging and numerous campaigns. These measures have helped to reduce the levels of smoking among the youths to considerable low levels. For example, after Australia adopted plain packaging, an absolute reduction in tobacco use was recorded among youths as from 2012 (Wakefield et al., 2015). Thus, the countries with relatively timid anti-tobacco legislation remain the leaders of young smokers, such as Indonesia and Russia. In Indonesia for instance where tobacco is an integral part of the society and where restrictions on advertising are relatively low, youth smoking continues to rise (Ng et al., 2014). The findings depicted in this paper show that emerging tobacco regulations need to balance the tobacco promotion effects to young people and put in place stronger regulatory measures within this end.

In this section, the historical background of tobacco regulation is examined with specific reference to excise taxes as a major approach in implementing the global tobacco control since 2010. The

section also explains how regulations were changed with time because of emerging evidence on the link between tobacco and diseases such as cancer and cardiovascular diseases. While the early policies were mainly on advertising bans and labelling, policies have now evolved to excise taxes as a way of reducing the use of tobacco products especially among the vulnerable groups like the youths and the poor. The section also looks at the impact of these taxes, issues like evasion and the tobacco industry's attitude towards taxation. Last but not the least it also highlights the need for other strategies such as public education and smoking cessation to support the role of excise taxes in reducing tobacco consumption.

2.3.3 Excise Tax on Tobacco in the UAE

On comparing the current scenario in UAE with developed countries such as Australia or the UK, little discrepancy could be observed regarding the approaches made for tobacco control and its resultant impact. There are several approaches that have been used in the UAE, including the 100% tax on excise goods like the tobacco products; nevertheless, more needs to be done towards tackling youth smoking. Kronfol (2019) in his study on the UAE's tax policies also found that though the country's taxation policies are broadly aligned with the best practices in the world, measures such as taxes may not be sufficient alone in minimizing the level of tobacco use among the youths. Further, the culture prevailing in the UAE is dissimilar to other international locations particularly the developed countries of the West. Surveying the position of the UAE it can be stated that social expectations and pressure have a significant impact on youth perception of smoking. Another comparative work by Maziak, et al. (2019) confirmed that people in the Middle East including the UAE are more likely to accept smoking from peers than people in western society societies where smoking is viewed negatively. Such cultural difference means that just applying Western like tobacco control measures may not significantly differ the result fetched here among youths.

Singapore and Japan, in particular, have important lessons for the emulation of the UAE. Singapore has also used high excise taxes on cigarettes, complete ban on advertising, appealing anti-smoking images and adverts for the youths. The outcome has been a steady reduction of smoking rates among youths, complimented by one of the lowest smoking prevalence rates in the world (Ho etal., 2017). The Singapore case therefore shows that successful anti-tax competition policy must utilise

a range of instruments that go beyond the fiscal. On the contrary, Japan provides an excellent case of illustrating how anti-tobacco campaigns should be integrated with particular reference to the context of the country in question. One of the largest tobacco markets globally is Japan, but the rate of smoking has dropped through measures that have been adopted to include harm reduction like the use of heated tobacco products (Tabuchi et al., 2019). This approach might be relevant for the UAE as there is the emergence of a market for 'reduced risk' tobacco products.

Comparative analysis is very useful in this respect; still, the fact should be stressed that many such comparisons are valuable to some extent only. It remains a fact that owing to differences of culture, economics, and political systems, what has been effective in one country may not be effective in the other. Further, the data and quality and rigor of the studies might also differ between countries, so providing global percentage might partially over- or underestimate the reality (Bilano et al., 2015). For instance, where high excise taxes have contributed to the reduction of youth smoking in high income nations, the picture has been somewhat different in the low- and middle-income countries (LMICs). The impact of Excise taxes may be less effective in LMICs where there is a high level of the informal economy and Illegal trade of tobacco products (Gallagher et al., 2020). Implications of this are that there is need to understand the local economics and enforcement structures in an effort to proscribe an effective technique to use.

The comparison of youth tobacco attitudes and usage accomplished in the context of different countries confirms the necessity of country-specific tobacco control measures. The current studies present the histories of the successful smoking prevention campaigns in countries such as Australia and Singapore but the UAE is different. It has a different background Different cultures and economic problems have to be discussed. The case of UAE needs more complex approach. International experiences could be adopted in policies in the UAE but this must also be in relation to the context of the country bearing in mind the effects of social norms, enforcement issues and changes in the tobacco products.

In the next section, an examination of the excise tax as a signification cost in the high pricing of tobacco products is conducted.

2.4 Excise-taxed high-priced tobacco products

In this section, the review of previous data on excise-taxed high-priced tobacco products is presented. The review focuses on the definition of the terms, the types of taxation, and their implications. It is important to understand the nature of these products to be able to establish the perceptions, attitudes, and usage behaviour amongst the consumers.

Although there are a mix of terms used for excise as excise duty and excise tax, for purpose of this study excise tax as a term will be used since the study is being conducted in the UAE for tobacco products. Excise taxes are internal taxes levied on the production-related activities and or sale of specific goods and services, one of them being the category of tobacco products (Kengadaran and Anusha, 2020; Ray & Gupta, 2009). It is an indirect tax that is not paid by the consumers directly but instead, it is imposed on the supplier or the producer, who then includes it in the product price (Habib et al., 2020). Excise taxes are imposed by government authorities – federal, state, province, emirate, local. It is applied either as a percentage of the total cost of a product or service or as a fixed amount, in some cases on the retail marked selling price (Kengadaran and Anusha, 2020). The channels and networks involved in the dealing of tobacco products are responsible to collect and pay the taxes to appropriate authorities. Often this may not have an impact on the profit margins of those dealing with the product but it does increase the price of the product, which could affect the demand (Nguyen and Nguyen, 2022).

The proceeds of the excise taxes collected fund government and public projects to recover past, present and future investments and expenditures (West, 2017). Majority of customers as buyers, users and consumers do not realize the cost component of excise tax in the price paid as it is factored into the product rather than separately notified (Kengadaran and Anusha, 2020). As for the type of excise taxes there are two of them – specific and ad valorem. An example of a specific excise tax is the monetary value o per pack, weight, carton or piece of tobacco products. Ad valorem excise tax is imposed based on the percentage of value of the tobacco products (Shah et al., 2020). Those excise tax and overall tax consumer amounts that consumers directly face and consumption taxes (VAT, consumption tax or GST, Trading tax, import/export custom duties) are between 50% and 80% across the grouped countries by income and region (Santoso and Erlando, 2020). Thus, making the product category among the highest taxed across the globe for the size of procurement, processing, production, market operations and consumption. With cigarettes

taking the lead, the other tobacco products too have similar range of proportions e.g., 'bidis' in South Asia, 'water-pipes' in the Arabian and Easter Mediterranean regions, smokeless tobacco products across central Asia, Africa, South America and Central and Easter Europe, with E-products emerging in the developed countries across the globe (Chaloupka and Tauras, 2020; EC, 2018; KPMG, 2015).

Design and implementation of tobacco taxation varies based on quantity by number-count and by weight, form, cost/price, method of processing and producing, ad-valorem value, product; packing; branding; size & and design characteristics, quality (excluding the health aspect) and other variations (Hoe et al., 2019; Scollo and Branston, 2022). The two types of excise calculation modes specific and ad valorem give the tobacco policymakers in the government the leverage to adjust tobacco products' excises for managing demand. This has implications for revenues on one hand and public health on the other to the extent that they affect individual attitude and consumption (Shah et al., 2019; IARC, 2017; IFS, 2019). Governments are faced with the challenge of choosing the type of excise tax method of specific or ad valorem to be levied and at what rate for a proper balance between public health objectives and revenue target (IFS, 2019). The considerations for the choice are based on administrative requirements, ease of administration, ease of enforcement, valuation of the products, price effects, inflation, health costs and benefits, discouraging tax avoidance (Levell et al. 2016).

Both types of excise taxation are tools the governments use to control tobacco demand. By imposing higher specific tax to increase consumer prices and thereby reduce the market share of cheap cigarettes. This reduces or prevents demand among the poor and young smokers who have low disposal income. On the other hand, government can adopt an ad valorem excise tax to adjust the characteristics and variety of products to a desired level to generate more revenues (Elliott et al., 2022). There are political considerations and of timing in many countries to keep tobacco consumers either in favour or disfavour of the government (Sheikh et al., 2021). The balance has to be struck by the governments between higher excise taxes for better revenues. But it may deter consumption that will adversely impact the revenues, then comes the health aspect of higher prices leading to lower consumption and thereby lower revenues (Scollo and Branston, 2022; Sheikh et al., 2021). The problem of taxation on products is best illustrated by instances of tax over-shifting whereby when tax on a product is adjusted upwards, the price to the consumer increases by more

than the increase in tax. This makes the manufacturers and traders to hike prices beyond the tax increase (Hiscock et al. 2020). The industry and the related channels use the tax increases to take advantage by including others costs and also buffer in profit. The contradictions of public health versus tax revenues will always be challenging to the authorities.

This section provided a comprehensive analysis of excise taxed high priced tobacco products with special emphasis on definitions, types of taxation and their consequences. Excise taxes are an indirect tax levied on producers or suppliers who in turn transfer the burden to the consumers through higher prices of goods. Specific and ad valorem taxes are two major forms of excise taxes that are levied by governments to control tobacco consumption and its effects on public health as well as to raise revenue. The section also examined the issues of setting taxes in relation to public health objectives and revenue collection, as well as the issues of tax over-shifting, whereby the increase in price is higher than the actual tax. To know the consumers side of reaction to the excised taxed high-priced tobacco products the next section of literature review will be conducted.

2.4.1 Consumer attitudes and product consumption of excised taxed high priced tobacco products

In this section, the attitude and consumption behaviour of consumers towards high priced tobacco product is explored. Specifically, the literature review explores the role of taxation on tobacco products pricing and the resulting effects of price changes on the attitudes and consumption decisions of consumers of tobacco products. The focus is to identify the relation between attitude, consumption behaviour and pricing of tobacco products.

Tobacco taxation is an overall tobacco management strategy that is adopted to limit its purchase amongst the consumers (Hiscock et al., 2021). Differential effects of taxation and price have varying impacts on the consumers based on age, gender, socio-economic class and other segments (Chaloupka & Tauras, 2020). It is found that raising tobacco products prices through increased taxes is a highly effective measure for reducing tobacco consumption (Hiscock et al., 2020; Nazar et al., 2021). However limited literature exists to understand the consumer attitudes that lead to consumption which in turn will assist in formulating tobacco taxation as a key policy measure for driving success found. On average, an increase in price by 10% on tobacco products reduces demand for by about 4% and concluded that tobacco taxes can support smokers who quit thereby

saving expenditure, reducing the consumption of tobacco, and continue to tax those who continue to consume (Nazar et al., 2021; Hiscock et al., 2021). It is also found that high taxes to have a positive effect on non-tobacco consumers as passive exposure will decline (Nazar et al., 2021).

Some researchers have focused on different segments to study the consumer behaviour in terms of attitudes and consumption of tobacco products vis-à-vis its taxed high prices. Vladisavljević et al., (2021) opined that majority of the adult smoker have had their first cigarette before the age of 20 years that is why one can grow up and never smoke and therefore, drastically cutting his/her chances of taking to smoking. Another reason pointed out by Ranabhat et al. (2019) is that sufficient cessation strategies have not been effective for youth therefore more needs to be done with regards to legislation, programming and taxation. Isip and Calvert (2020) in study on Nigerian youth experience of tobacco smoking revealed that youth smoking is predicated mostly from initiation and escalation to higher levels of smoking use and less so of reduced smoking initiation. Getachew et al. (2018) and Jarlstrup et al (2018) concentrated only on youth and common findings supported that youth is two to three times more sensitive to price changes than the general population. Although the magnitude of the price elasticity estimates differs from study to study, but all studies have revealed that raise in price reduces both smoking initiation and consumption.

Nazar et al., (2021) and Ranabhat et al. (2019) acknowledge that young people are not a homogeneous group, so that price influence smoking behaviour depends on age, gender, income, peer and family, school status and setting. Other studies by Tapera et al. (2020), Hébert et al (2018) and McKelvey et al. (2018) revealed that it was agreed that young people who are users of experimental cigarettes are not sensitive to price and that those who are older users of cigarettes are sensitive to price more so given that different levels of addition exist by experimental and by regular consumers. The studies carried out by Getachew et al. Tunstall et al. in their other studies (2018) & Pesko et al. (2018) also did observe that price reduces both the smoking participation and the consumer quantity because price affects the stoppage, but for youths, the influence of price on smoking initiation is not visible, rather ambiguous. In a study by Magid and colleagues, 2020 transition in the level of tobacco use from lower to higher among youths depend on both the price and the locally available substitutes in the retail outlets.

Another large segment that gets affected due to tobacco high prices and price increases are the low socio-economic strata. The consumer groups which Mohan et al. (2018) and Schultz et al. (2018) investigated make low-income consumers to be more responsive to price than the other groups or equally responsive to price as the other consumers, whereby applying a higher price seems to benefit all groups of the consumers in the same proportion regarding smoking participation, and consumption. Some authors such as Osman et al. (2019) and Ranabhat et al. (2019) have argued that from a tax equity perspective, the higher taxes can affect low SES groups because it can be considered as regressive in that poor consumers end up paying more tobacco taxes than the higher income consumers with proportionally taxes component being larger than higher incomed consumers by the poor paying the tobacco tax than do higher income consumers.

Mohan et al. (2018) analysed that as people at low socio-economic status have higher smoking indices and they contribute more tobacco tax than people belonging to high socio-economic status. However, Magid et al. (2020) and McKelvey et al. (2018) pointed out that raising taxes is not regressive because it brings relative smoking behavioural changes intended for a cessation or a reduction in their rates compared to the general population. Isip and Calvert (2020) pertinent proposed that increasing tobacco taxes is progressive at macro-level because of the possibly higher accrued and cumulative health benefits of controlling tobacco usage. Jarlstrup et al. (2018) have confirmed the policy of higher taxes for increasing prices means significant equity connotations that support the increase of taxes need measures. This is to support those who continue consuming by reducing consumption in response to higher taxes while mitigating adverse effects and consequences of the taxes to the lower socio-economic strata. Other important segments of consumers are the dual diagnosis that have other disorders like drugs, alcohol intake and having metal disturbed state by Tekin et al. (2009) and heavily dependent smokers with dual diagnosis were equally sensitive to changes in price but in contrast to our findings, Cawley et al. (2006) stated that an increase in price did have an effect on smoking participation.

Hébert et al. (2018) identified that at least as responsive to price among adolescent smokers was the group with emotional or behavioural problems compared to others. Levy et al., (2005) in his study in the level and duration of consumption determined the probability impacts of price for quitting smoking by smoker intensity; The results showed that high smoker intensities had the most relation with attempting to quit while high price was not related in not Macan consumption

for long. There is an interesting segment of consumers that use tobacco products for traditional purposes impact of price on smoking behaviour. A study by Tunstall et al. (2018) found no significant change in consumption behaviour except for a temporary period in which there was some reduction which resumed later to the earlier level. This shows that price acting alone is not sufficient in reducing consumption because the indirect effect is to double the price elasticity where tradition is considered as more paramount than other factors.

There are other effects that tobacco taxation causes inadvertently, such as contraband, smuggled and spurious products thereby devoid the government of tax revenues due to the illegal growing, processing, manufacturing and marketing. Compensatory smoking behaviour which they raise their doses of toxicants per cigarette in the belief that if they took more frequent puffs, or deeper or longer inhalation on each cigarette to offset the cigarette idling while burning (Smith et al., 2020; Sweitzer et al., 2021). Studies by Gjika et al. (2020) and Puljević et al., (2022) found that higher prices of tobacco products resulted in greater demand for spurious goods, especially among low socio-economic status. Furthermore, Kajić and Tosza (2022) found that heavy tobacco products' users shift and have tendencies to consume contraband and illicit goods. This leads to the conclusion that price increases have a major effect on reducing both smoking prevalence and consumption.

Specific excises are not probable for switching from the higher to the lower priced switching down of tobacco products but does cut short the consumption of their preferred brand or may "switch down" when facing tax or price increases (Nguyen and Nguyen, 2022). An increase of price as a result of increased taxes, actually leads to a reduction of consumption but it is not in proportion to the increase in price. When a uniform specific tax applies to the whole product class, an increase of the above excise shrinks the distance between the premium and lower-priced product versions (Crespi et al., 2021). That change in relative price decreases the incentives for the consumer to downgrade in substitution. There is the possibility of a substitute downwards from the higher end and from middle order of the price levels to the lower order (Nguyen and Nguyen, 2022). Concerning ad valorem taxation, it is as explained; since the basis is the value of the product, uniformity in tax makes relative prices constant (Divino et al., 2021).

While an upwards substitutability may happen if the price differential between high and low-price substitutes decreases or the price rise because of higher taxation alters the willingness of consumers to pay for their preferred product or brand depending on income level (Vo et al., 2023). Analysing the hypothesis, the empirical data show that the market share of lower-priced tobacco products decreases when certain excise taxes rise because the ratio of the price of higher and lower priced products changes (Gendall et al., 2022). In their study, Dauchy and Shang have discovered that rise in specific taxes has the effect of decreasing the market share inherent in low and generic priced products and brands substantially. The European Commission (EC) has a blend of two arrangements, basically the specific and ad valorem or, in other words, sets a specific tax to cost lower products and brands through a ground of a minimum specific tax level as well as applies an ad valorem tax on the expensive ones (Papageorgiou et al., 2021). The taxes enable parity among the manufacturers to reduce the disproportion and have an equal ground. Further, therefore, the two types of excise taxes have distinct effects on public health in as much as they influence individual consumption through characteristics of so called 'quality', variety and prices (Dauchy & Shang, 2023). Both types of excise taxation modes have their advantages and limitations. It is the modality of the rates between 'uniform' rate and 'differential' rate of excise tax system that will work better in a particular situation. Most importantly, a uniform excise tax rate system being more appropriate for reducing smoking and for effective administration, while simultaneously resulting in a more effective tax administration and higher tax revenues (Pinto Hernández et al., 2023; WHO, 2010). On the other hand, a unit-rate excise tax system would deter product substitution among different tobacco products and brands, reduce evasion, and eliminate all extra incentives for various strategic pricing schemes by manufacturers to minimize their tax burden (Gendall et al., 2022). Currently, the governments of the world move towards the de-penetration of their excise tax systems although there remain numerous countries that tend to differentiate between brands and products> It is achieved through taxing them at different rates as well as levying different types of excises so that they'd change demand and regulate consumption of tobacco products (Laverty et al., 2023). The conclusion therefore is that high specific excise taxes raise relative price and price sensitive consumers will cut down their consumption relative more. Besides, it minimises consumers' temptation to switch from expensive brands to cheaper ones particularly when the addicted and habituated consumers find it unbearable to stop or cut or switch

consumption after a tax hike and therefore has a quantitative higher impact on low socio-economic group, poor, and youths' consumption patterns within their purchase power par.

This section focused on consumer perception and consumption pattern of high-priced tobacco products especially in respect of excise taxation. The literature review shows that the use of taxes as a mechanism of increasing the prices of tobacco products is one of the most effective methods of reducing tobacco consumption depending on the age, gender, and socio-economic status of the consumers. This study also shows that youths and low income are more sensitive to price changes and increased taxes will decrease smoking participation and consumption. However, questions are raised on the negative impact of such taxes on the poor population of the country. Furthermore, the literature also explains that high prices can have negative effects including the following: increased demand for illicit or fake tobacco products. The discussion examines the various effects of specific and ad valorem excise taxes and the challenges of developing tax systems that can achieve public health objectives while at the same time meeting the revenue objectives and influencing consumer behaviour. The general conclusion is that although excise taxes are effective in decreasing the use of tobacco products, they are most effective in a group of customers who are sensitive to the price changes especially within the vulnerable group. From the literature reviewed, there is lack of material existing to link excise taxed high priced tobacco products to consumer attitudes and the product consumption thereof.

2.4.2 Tobacco products consumption and harmful health effects

This section reviews literature on the effects of tobacco consumption on health. The review focuses on exploring the accounts of previous scholars on the impacts of tobacco consumption on human health. Examining the use of tobacco requires an understanding of its impacts, justifying the relevance of this section.

Harmful health effects of tobacco have been evidenced for over two centuries, however, it is only in the mid-1900s that the interest gained acceleration when medical evidences were able to directly link tobacco products consumption to specific diseases (Marques et al., 2021; Flor et al., 2021). The characteristics and features possessed by tobacco products have basically four traits' effects, namely: Addiction by dependence; Susceptibility by variation; Relationship relative to dose and duration; and Time-lagging (USDHHS, 1994; APA, 1994; WHO, 1996). Nicotine dependence

depends on the level of tolerance, despite using sizable amounts of nicotine and dependence during withdrawal syndromes are diseases of the mind that lead to unregulated nicotine intake where tobacco users then tend to use other drugs (Picciotto and Kenny, 2021). Tobacco addiction sooner than later leads to a poor quality of life, decreases life expectancy, paving ways to higher morbidity affecting almost all organs leading to premature death (Rigotti et al., 2022). It is estimated that minimum 30% & maximum 50% of people starting to consume tobacco products become addicted with others being susceptible due to genetic factors (Milic et al., 2020; Picciotto and Kenny, 2021).

Other products of tobacco include snuff or snuff that is not burned whether chewed or inhaled contains nicotine and other carcinogens. These affect oral cavity with leucoplakia, periodontal tooth and tooth lesions, including oral tender of check and gum, even nasal, oesophageal, laryngeal or stomach cancer (WHO, 2008; IARC, 2005; Benowitz, 2008). Smokeless tobacco causes systemic change through a positive change in blood pressure and increased rate of heart beating (Oguanobi et al., 2023). According to Bongongo et al., (2022) on the current knowledge of health hazards related to smokeless tobacco, hypertension was higher among nasal and oral snuff users with elevated risks in rare users of cardiovascular diseases up to three times those who had no use of smokeless tobacco. Side effects of smokeless tobacco are broadly associated with the inflammatory effect of nicotine and with the carcinogenic effect of carcinogens. This is similar to those produced by cigarette smoking with systemic impact in the form of cardio-vascular impacts associated with the blood nicotine concentration (Sajid et al., 2021).

Since most of the tobacco products are consumed by cigarette smoking, the adverse health effects are inevitably grave in the main part (Flor et al., 2021). According to WHO (2020), tobacco caused the death of virtually half of its consumers which is approximately 8 million people annually. Of those, more than 7 million deaths are due to direct tobacco use, and around 1.2 million are due to exposure to second-hand smoke. More than 80% of the world's 1.3 billion tobacco users reside in low- and middle-income countries. Second hand smoking touches up to 80% of all the he people around the world Which give almost everyone a poor quality of life (IARC, 2016). There are various ill effects of environmental tobacco smoke as stated by Gould et al., 2020 & Jain, 2020. These risks include respiratory tract irritation of eyes, nose and throat, worsening of asthma, increased frequency of lower respiratory tract infections in children, increased frequency of upper respiratory tract infections in children, increased frequency of angina in coronary heart disease

patients, increased frequency of episodes of phlegm in adults, and acute fall in lung function in adults. Also, its long-term effect in adult includes; it evokes risk of lung cancer in non-smoking adults, it intensifies respiratory symptoms in adults, it also intensifies risk of cardiovascular disease in long- term use, it reduces lung function in adults in long-term use and also escalates risk of non-respiratory cancers. In children, PM2.5 has long-term effects such as increased respiratory complaints raised risk of an additional bout of asthma, ear infections including otitis media/middle ear effusion, sudden infant death risk, prematurity, and childhood leukaemia (Jain, 2020; Rigotti et al., 2022).

This section looked at the numerous studies that have documented the negative health consequences of tobacco use. It has been established that tobacco use is associated with a myriad of diseases and this knowledge has been around for more than two centuries, but the progress in understanding the effects of tobacco was realized mid-1900s. Tobacco products possess four key traits affecting health: These include addiction, susceptibility, dose-response relationship and time lag effects. The findings presented above show that tobacco use leads to various health problems, and therefore, there is a need to implement measures that would help decrease the prevalence of tobacco use. In the next section, a review on the customer attitudes and consumption is conducted in the light of excise taxed high prices of tobacco products and the effect it renders on user health.

2.4.3 The UAE consumers' attitudes and consumption of excise taxed high prices tobacco products and its harmful effects on health

In this section, the focus is on the UAE with regard to its consumers' attitudes and consumption of excise taxed high priced tobacco products and its harmful effects on health. The statistics show that the UAE ranks high in tobacco product usage not only for cigarettes but other products also (WHO. 2020). But little is known about specific behaviour in terms of consumer attitudes and the consumption patterns as evidenced in the literature available.

Tobacco use in various products is a leading public health concern and is responsible for the highest number of deaths through preventable diseases (Ahmed et al., 2021). Tobacco use, including passive/secondary smoking is a significant cause of morbidity and mortality in the UAE (Razzak et al., 2020; Cahill et al. 2013). The tobacco usage, as per World Health organizational, in Eastern Mediterranean Region (EMR) is approximately 24.5 % in contrast to in the global rate

of 22.7% (WHO 2019). Specific to the region and the UAE is the use of waterpipe as a delivery gadget locally known as 'shisha', 'hookah' or 'narghile these have been traditionally used for many decades and has recently gained more popularity (Razzak, Harbi, and Ahli, 2020). Another alternate form being 'dokha' consisting of tobacco mixed with herbs and smoked with a pipe known as 'midwakh' (Vupputuri et al. 2016). Less literature exists in the non-smoke forms of tobacco and also the data is scarce, which gives scope for research.

Despite UAE has improved its health care system, still the chronic diseases rate is very high in UAE. In 2017, cardiovascular disease was the cause of nearly 40% of all deaths, while cancer of the lung, bronchus, and trachea was responsible for 14% of all cancer mortalities in emirate (Mezhal et al., 2023). This can be attributed to tobacco consumption as a leading innovating factor the influence the high incidences of non-communicable diseases in the UAE (Monshi and Ibrahim, 2021; HAAD, 2016). The reported use of tobacco among UAE nationals is 24% men and under 1% women, while the expatriate's men being 29% while women being under 5% (Razzak, Harbi, and Ahli, 2020). The UAE users of cigarettes, midwakh / dokha and shisha started in their early twenties suggesting that use of tobacco actually begins much earlier (Al-Houqani et al, 2012) with over half were using midwakh / dokha (Crookes & Wolff, 2014). Poly tobacco or multiple use of varied types of tobacco products is on the rise in UAE because of variety and availability with cigarettes and overall midwakh / dokha is second most preferred tobacco product (Aden et al. 2013).

The UAE had national vision as Vision 2021 with certain objectives towards 2021 regarding non-Communicable diseases (NCDs) that include cardiovascular (CVD), cancer, diabetes, obesity and tobacco use (U.AE, 2021). This was replaced by the UAE Vision 2031 which incorporates goals contained in the Vision 2021 (U.AE, 2024). Much importance is placed by the government of UAE on eradicating / controlling the prevalence of tobacco smoking in the country. However, the current studies investigating tobacco use, influences on smoking behaviour, smoking cessation, and evaluation of anti-smoking policies; and identification of demographic and socio- economic characteristics influencing tobacco use are scarce in UAE (Mezhal et al., 2023; Ahmed et al., 2021; Razzak, Harbi and Ahli, 2020; Alblooshi et al. 2016; Aden et al. 2013).

A recent study by Razzak et al. (2022) evaluated the factors of tobacco smoking among adults in UAE with 8188 sample sizes, indicated that low- or no-income population and university level population have higher prevalence of tobacco smoking. Exploring the effect of socioeconomic determinants such as education, income and employment status, the study reviewed the current tobacco smoking trends in the sample. It was found that males in the age group 20 and 39 years were higher tobacco smokers, with 77% engaging in cigarette smoking, 6.8% in shisha smoking and 0.6 in cigar smoking. The study also coincides with the findings from WHO that indicate the poor men were more likely to smoke 2.5 times due to their socio-economic status. With migrants dominating the population of UAE, a study by Ali et al. (2020) further revealed that 28% participants conducted cigarette smoking whereas 11% engaged in smokeless tobacco smoking. The findings reveal the heavy health burden faced by the expatriate society of UAE, emphasizing on the positive correlation between tobacco smoking and age, lower education, use of alcohol and prevalent nationalities (Bangladeshi and Pakistani). The study highlighted the need for developing and implementing strict tobacco control policy in UAE, with the expatriate population in mind, along with developing smoking cessation and prevention programs.

In the study conducted by Razzak et al. (2018) show that current smoking rate was 9.1% among the selected population, and 0.8% of the respondent's used tobacco in daily basis. The smoking rates were identified to be high in people with lower education, university students and low-income individuals with 88% never smoking, and 3% as ex-Smokers. 9.1% reported smoking other forms such as: 5.8% currently uses shisha, 2.3% uses electronic cigarette, and 6.6 percent of the subjects were current Medwakh users. Smoking presence escalates to 9·7% in households that earn 15,001–20,000 AED and reduces to only 2·8% of the households earning between 5001-10,000 AED ($p = 0.42$) The study also found that the highest smoking group was aged 30-44 years (9·8%) while the lowest smoking bracket was those over 60 years (5 The total percentage of non-smoking respondents who were exposed to passive smoking either at work place or home was 2.9%. Male respondents reported higher smoking behaviour with 15.7% compared to female respondents with 2.4% Government personnel had the highest level of smoking; 13.7%, followed by semi-state with 12.6 % while the unemployed had 2.5%. Comparable percent difference that was observed in tobacco product use among single participants and the married participants was 14.6% and 8.2% respectively. Boys and girls who had university education were found to have highest prevalence of smoking in comparison to respondents from secondary levels of education.

A recent decrease in the use of tobacco smoking is due to the Tobacco Control laws and regulations across UAE, health awareness campaigns, strengthening services to quit smoking, and anti-smoking programs. This also comprises the Federal Law No. / /2009 Tobacco Control Public health law, greater representation of smoking cessation clinics, the imposition of Excise tax on Tobacco products hence the high costs among others (WHO, 2020). These outcomes are attributed in equal counterparts to a continuous monitoring in order to maintain the efficiency of tobacco control policies in the country, however, the most preferred tobacco delivery system remains led by manufactured cigarettes, followed by Shisha, Medwakh and most recently by electronic cigarettes. One of the findings derived from those studies was that the no and low-income groups consumed higher than the other income groups was attributed to more psychosocial, physical and emotional problems. Employees in the high consumption brackets include the single parent and those without adequate education and employment. This confirms general sociodemographic characteristics of the habit of tobacco use to the socioeconomic characteristics that are strongly connected with smoking in the UAE: age, sex, marital status, education level, and employment status. Smoking was most reported among people in the mid aged group (30-44 years) then those in the young adult category (19-27) years with those having university education being more involved in smoking. On the basis of income earners, the least consumers were those with low- or no-income level.

2.5 Attitudinal and usage (A & U) trends of excised tobacco products amongst 18- to 25-year-old consumers.

In this section, the attitude of consumers and their usage behaviour regarding excised tobacco products are presented. The review aims to identify the nature of attitudes and consumption patterns for highly priced tobacco products. Examining these attitudes and consumption behaviour is key to uncovering the effects of pricing on consumer behaviour and decisions.

In fact, several studies examined attitudes and consumption behaviour o uncovering the effects of pricing on consumer behaviour and decisions. Ahmed et al., (2021) revealed that social factors are closely related to smoking and e-cigarette usage among universities in the United Arab Emirates. The most used tobacco products are midwakh (7.2%), shisha (5.5%), and traditional cigarettes (5.5%), besides e-cigarettes (44%) among university students. The study was based on a survey done on college students and residents revealed that 15.1% of students who used such

products male students were more prone to smoking in comparison to females (Nasser et.al., 2020). The highest number of smokers among college students belonged to Oman (23.5%) and Syria (51.4%), followed by Tunisia (38.4%), Palestine, Jordan, Egypt and many other countries. The study also revealed that UAE residents were more prone to smoking cigarettes as compared to university students. Friends' influence and enjoyment were the most permanent reason for smoking excised tobacco products such as shisha.

The reason behind the usage of e-cigarettes was their legalization and the societal factors contributing towards the perception of e-cigarettes being less harmful. Moreover, e-cigarettes are not regulated strictly, which has recently become a major public health challenge. The behaviour of university students towards smoking is closely related to their income, household status, gender, and age. Dabbagh (2017) explained that adolescents are more likely to smoke than university students, and midwakh is a popular tobacco product in UAE. Moreover, peer pressure and the prevalence of smoking among males as social acceptability also contribute towards it. Many residents used them to quit smoking; however, the lack of health awareness has contributed to smoking usage.

Physiological, social and income factors played a major role in forming tobacco usage habits such as cigarettes among students (Sharifi et al., 2023). Ahmed et al. (2024) suggested that health education and preventive measures can reduce smoking habits among students, as many expressed a desire to quit smoking but failed to do so due to peer influence and above-mentioned factors. Naseer and Zhang (2019) suggested that married individuals were less inclined towards smoking than single individuals and that male between 19-24 were more prone to smoking than females of the same age. Dabbagh (2017) found that men were likely to be heavy smokers and use waterpipe compared to women; however, among college students, women were more prone to smoking. They also suggested that age and education were linked with cigarette use directly. The study also revealed that the males were significantly larger users of cigarettes as they perceived them to be less harmful; however, 59.9% believed they were very addictive. Alotaibi, et.al., (2019) also supported the idea that Saudi male college students were more likely to smoke than female students. It revealed that Saudi college students were more smoking-prone than current smokers aged 15 to 25. However, the male percentage was 21% higher than the female. This supported the

idea that a surveillance system that can track down the usage and behaviour of smokers and psychological and economic determines can help encourage smoking cessation if used correctly.

Abbasi et.al., (2022) found that the attitude of youth in the UAE towards e-cigarettes changed during the pandemic, and the analysis showed an increase of 17.5% in the smoking behaviour of regular smokers. The major reason for this change in the behaviour of the UAE students was less knowledge, friend and family influence, and other social factors. They also found that among the age group of 18 to 27, 43.6% of smokers prefer e-cigarettes, while 14.5% are traditional ones and 57.3% smoke Midwakh and 12.7% smoke waterpipe. The research also showed a close relationship between the attitude of the user and their behaviour with the consumption of e-cigarettes and other excised tobacco products.

El-Saharty et al., (2021) opined that tobacco use and alcohol were major causes of non-communicable diseases resulting in 1.5 million deaths in the year 2017 in Arab countries. These were related to the spread of cardiovascular disease, cancers, respiratory diseases, and other forms of non-communicable disease. Vegunta et al (2021) also supported that the metabolic, behavioural and environmental risk factors were the major concern for such cases; where tobacco use, physical inactivity, poor diet and harmful use of alcohol contributed towards the increased mortality rates. Nakkash et al. (2022) also showed that Arab countries were among the highest users and observed that one-third of adults aged 15 years or older smoke tobacco. They also witnessed dietary changes and unhealthy choices based on peer influence, which resulted in obesity, cancer, diabetes, and respiratory diseases. Ndejjo et al. (2022) also confirmed on the behavioural pattern of premature deaths in adults due to less knowledge and usage of cigarettes and alcohol. More the cultural shift in smoking habits due to it being socially acceptable has given rise to its usage. The legalization of e-cigarettes has also contributed towards the same. Thus, various aspects led to increased use of tobacco in the Arab world.

There was an upper trend in the sales of tobacco and other such products in 2016 in Arab countries; however, the sales decreased by 19.5% in 2017 after introducing the excise tax. With the increase in import duty, VAT, and other taxes, the total tax revenue will increase by 44% in the coming years, and sales are expected to fall by 5%. In the case of Saudi Arabia, there will be a direct

relation between the significant increase in the prices of cigarettes and their usage; the more the price, the less will be its usage. This will not only provide additional revenue to the government but will also foster health benefits (Al-Lawati et al., 2017). Haque et al. (2024) also confirmed that that strict tobacco tax reforms should strengthen the administration's tax and customs. These will not only help ensure efficient implementation but a close surveillance and preventive measures will help in decreasing the death rates. This will provide public health and public revenue. Delipalla et al., (2022) supported the researches that a 50% increase in cigarette price would reduce its usage by 16% and increase the tax revenue by 50%. There will be a major reduction in the death related to tobacco usage as it is a major reason for non-communicable diseases; it increases economic costs and reduces personal well-being. However, such reforms must be in collaboration with WHO with effective communication so that the resistance towards quitting tobacco must be reduced, and policy reforms will help overcome this resistance. All these researches confirmed that with the help of data collection, tax introduction and monitoring public health, the results can be positive and promising.

2.6 Longitudinal studies on excise taxes and youth tobacco attitudes and consumption

A longitudinal design that monitors change over time is effective in assessing the effects of excise taxes on youth tobacco attitude and use after many years. These studies offer information on the change of behaviour due to policy mechanisms and are useful in the establishment of new patterns that may be unnoticed in the short-term studies. This section provides a critical synthesis of the extant longitudinal research findings on youth tobacco behaviour and the role of excise taxes to inform and guide tobacco control interventions.

Longitudinal studies are especially useful in tobacco research since they depict how peoples' behavioural patterns change due to numerous factors like price changes, regulatory measures, or social factors. Compared with cross-sectional studies that only collect data at a certain time point, longitudinal studies can describe dynamic changes and thus are more suitable for assessing the sustainability of the excise taxes. For instance, Nuyts et al. (2018) studied trends in smoking among adolescents in Belgium for a period of 10years. This study also observed that consistent rise in excise taxes had a positive effect in the decrease in the number of youths who took up smoking. However, it also displayed that the drop-in smoking rates following tax hikes was not maintained in the years following, implying that other factors, including social acceptability and availability

of cessation aids, are equally important in maintaining reduced smoking trends. Following are findings from key longitudinal studies:

USA – Monitoring the Future (MTF) Study: One of the longitudinal surveys with information about youth tobacco use is the MTF study which has offered an overwhelming amount of information regarding the effectiveness of tobacco control policies in the United States. Johnston et al. (2021) noted that over the past several decades, tax increases together with the campaigns reduced smoking rates among high school students. It also pointed out levels of rejection in perceptions on the part of youths of smoking and other forms of social consumption; there is a decrease in consumption because consumers are perceiving smoking as socially less acceptable.

Australia – National Drug Strategy Household Survey (NDSHS): Australia's data collected in the NDSHS has revealed that youth smoking rates have decreased over the years due to high excise taxes, plain packaging and stringent advertisement ban. Scollo and Bayly's 2020 longitudinal study indicated that excise taxes were useful to reduce youth smoking in the short-term while success in the longer term depended on support for antismoking measures including public awareness and enforcement restrictions against sale of tobacco products to minors.

UK – Youth Smoking Survey (YSS): Similarly, cross-sectional data from the YSS in the UK reveal that excise taxes gave a positive result and reduced youth smoking especially among the low-income groups (Fidler et al., 2011). However, the study also found that young people from low SES [socioeconomic status] backgrounds were more likely to switch to illicit trade sources when prices went up hence calling for the need for more elaborate measures that entail tackling all facets of tobacco products accessibility.

New Zealand – ASH Year 10 Snapshot Survey: This annual survey monitors smoking habits in Year 10 students and had played important role in identifying the effects of New Zealand's tobacco control measures. Cross sectional surveys reveal that previous increases in taxes have resulted to reduced daily smoking as well as experimental smoking among youths (Edwards et al., 2012). Thus, according to the findings of the study, it is important to support high levels of smoking prices and persistent smoking cessation activities in order to retain the youth smoking rates at the level.

Cross-sectional studies also reveal that excise taxes are a good way of decreasing the prevalence of smoking among youths in the long run. But they also stress the need for the use of a range of interventions such as public campaigns, enforcement of laws against underage smoking, and measures against the smuggling of illicit tobacco products. For example, reduced effectiveness of excise taxes, which is revealed in some studies, indicates that utilization of taxation as the sole tool may not be enough to maintain a sustainable decline in the youths' tobacco consumption. It is recommended that tax policies should be aligned with other policies aimed at improving public health in the society, which target the social and ecological determinants of youth's behaviour. Also, the longitudinal data from the countries like UK and New Zealand suggest that to avoid any adverse effects like the increase in the use of illicit tobacco products among the disadvantaged youths, the issue of social inequalities has to be tackled adequately. This requires more special measures to reducing the availability and attractiveness of legal tobacco products to youths while at the same time ensuring that adequate assistance is given to those who wish to quit.

Cross-sectional studies are important for providing an understanding of the cross-sectional effects of excise taxes on youth tobacco. They provide evidence for the role of tax increase in smoking prevention but at the same time call for the use of other interventions to support such changes. Thus, such longitudinal research findings will enable the policymakers to develop the most effective and fair tobacco control interventions that will meet the current and future needs of youth tobacco users.

2.7 Comparing changing attitudes of youth towards excised tax and non-excised tax tobacco products

In this section, studies are conducted on the attitude of consumers towards excised taxed and non-excised taxed tobacco products. The findings obtained by the scholars on the attitude and use of these two distinct products are explored to identify the major similarities or differences. The exploration is crucial in ascertaining the impacts of excessive pricing on the attitudes, perceptions, and purchase intentions of consumers.

According to Koshchuk et al., (2020) a national excise tax was first established in the United Arab Emirates in the year 2017. Items that are deemed to be hazardous to either public health or the natural environment are the ones that are subject to an excise tax. The taxes operate on the principle

of behavioural economics, which establishes that higher prices are likely to impact the consumption behaviours of individuals. The strategy focuses on making the products very expensive, discouraging purchases and even driving the consumers to seek alternatives. Sheikh, Branston, and Gilmore (2021) also emphasize that beyond the behavioural impact of excise taxes, they are also used for revenue generation and equitable distribution of taxation. The policy is implemented with the hope of changing the consumption patterns of consumers, however, there is still a need to explore whether the expected change is achieved, prompting the need for this study.

Several goods are subjected to excised taxes. Most of these goods have varying effects on humans and the environment (Conlon & Rao, 2020). For instance, carbonated drinks include all aerated liquids, except simple carbonated water. The only exception to this rule is plain carbonated water. This category encompasses any concentrate, powder, gel, or extract that is designed to be diluted with water to produce a carbonated beverage. Also included in this category is anything that is already carbonated. A study by the World Bank Group (2019) revealed that energy drinks are defined as beverages that contain stimulant ingredients and that provide both mental and physical stimulation to the consumer. Caffeine, taurine, ginseng, and guarana are some of the compounds that might be included in this category; however, this list is not exhaustive. This includes everything that creates an effect that is identical to or equal to the one produced by those medications. This category also includes concentrates, powders, gels, and extracts that are meant to be mixed with water and eaten as energy drinks.

In the GCC Common Customs Tariff framework, the taxation of tobacco and its derivatives are encapsulated in Schedule 24. The government of the United Arab Emirates has instituted excise taxes, serving a dual purpose, dissuading the consumption of hazardous and potentially harmful products, and creating a revenue stream. The policy is focused on curbing the use of tobacco and protecting the public from harm, as well as aligning the public well-being with the fiscal policies. Lee (2020) in his study reported that one of the most effective strategies for reducing tobacco use is raising the price of tobacco products. Similar sentiments have been echoed by Franklin (2018) who stated that this is often accomplished by increases in the excise taxes levied by the state and the federal government. Recent systematic studies have shown that raising the price of cigarettes results in a reduction in the number of teenagers and young adults who smoke and in the amount of tobacco they consume. Sheikh et al., (2023) argued that an increase in the price of cigarettes

meant that young people could either give up smoking entirely, reduce their smoking to once or twice a week, or reduce their smoking intensity from high to moderate levels.

It has been shown in a number of studies that a rise in prices brought about by taxes leads to an increase in both the number of attempts to stop smoking and the chance of success among young adults and teens. Peruga (2019) stated that there is some evidence to suggest that younger people, including teens, react more strongly to rises in the price of tobacco products than do older people. This data comes from younger people. Increasing the price of cigarettes and taxes may not totally dissuade adolescents who are intrigued about the practice, but they do have a tendency to normalize smoking at younger ages. If taxes on tobacco products are raised to greater levels, there is a chance that smoking rates may decline over time.

Several studies have shown that the price of cigarettes as well as cigarette excise taxes affect the level of smoking among adolescents, both in terms of prevalence and severity. Several studies have investigated the hypothesis that various subgroups of young people may have varying degrees of sensitivity to price differences. Ribisl et al., (2022) opined that older adolescent, in comparison to their younger counterparts, have a greater awareness of cost when it comes to pricing. The income of a responder was not a reliable indicator of whether or not they were a "try it out" smoker; rather, it was a reliable indicator of whether or not they were a "established" smoker. The effect of raising the price of cigarettes is proportional to the increase in the number of teenagers who smoke. These data provide empirical support for the hypothesis that their contemporaries often supply adolescents who experiment with smoking with cigarettes by third parties, most frequently. If young people are not responsible for purchasing their own supply of cigarettes, the cost of cigarettes may not be a key issue for them when they start smoking for the first time (Delipalla et al., 2022).

Even though there is evidence demonstrating that increasing the proportion of revenue from tobacco taxes that are directed towards tobacco control and/or other health-related programmes increases political and civil society support for higher tobacco tax rates, relatively little of these monies are distributed in this manner. Yandri et al., (2020) stated that this is undoubtedly the result of popular condemnation of earmarking because it impedes fiscal flexibility, which undermines social welfare by making it less likely that resources would be allocated effectively. The argument

for this dislike is that earmarking is a practice that restricts fiscal flexibility. Because it dictates that tax profits should be used to offer benefits to the individuals who are paying the tax, the theory of benefit taxation and user fees provides the most backing for earmarking from the perspective of public finance. Charkiewicz, (2021) explained that this is because user fees are also supported by this theory. Tobacco users may be in the best position to benefit the most from the allocation of tobacco tax money to cessation and prevention programs, as well as health promotion and healthcare efforts. This is because cigarette users utilise a disproportionate amount of healthcare services.

The use of cigarettes has declined even more in regions where governments have directed the funds generated from cigarette taxes toward tobacco control programmes. Tobacco tax revenue and other monies associated with the tobacco industry are used by a number of states in the United States, for instance, to support large tobacco control programmes. Hoek et al., (2021) stated that these programs assist individuals in giving up smoking, conduct public education campaigns in the media and with government officials, and do much more. It has been shown that increased funding for these activities leads to a reduction in tobacco use in general, as well as in the rates of smoking among both adults and young people. Stakhov (2019) explained that the 2% of the money from taxes on tobacco and alcohol that is set aside for Thai Health is used to pay for a wide variety of health promotion projects. Tobacco prevention and cessation campaigns are only two examples of these programmes.

2.8 Comparing changing usage of youth towards excised tax and non-excised tax tobacco products

In this section, the usage behaviour of consumers towards excised taxed and non-excised taxed tobacco products is determined. The review focused on critiquing past papers that have tackled the consumption behaviour of the two kinds of tobacco products. The review in this section provides more insights into the differences in the consumers' decisions and consumption patterns for the excised and non-excised tobacco products.

In various countries across the world, the use of tobacco products is considered to be significantly contributed to the global prevalence related to non-communicable diseases. The excised taxation of tobacco products is believed to reduce the rate of consumption amongst the youthful population.

According to Hussain et al., (2023) exposure to tobacco products in UAE and Gulf regions like nicotine is creating a lasting effect on the brain development of adolescents and the smoking of cigarettes is also causing short of breath and less stamina in youth. However, both are affecting their athletic performance along with pursuit of other physical activities. It also results in reduced lung growth and a cardiovascular damage at an early level. The consumption of the According to World health organisation's raising taxes on tobacco products leads to an increase in the price of tobacco products which is making them less affordable. However, when a tobacco product becomes less affordable people or using it less and it can prevent youth initiation towards tobacco products. Charfeddine (2020) suggested that as both low-income groups and youth are considered rapidly responsive towards an increase in the tobacco prices, they are unreasonably enjoying the economic and health benefits of quitting tobacco products and not starting it again.

According to a rapidly growing research body of documents, the taxes specific tobacco products are known as excise taxes which is working towards reducing consumption of tobacco products and hence it is diminishing the adverse and negative health consequences on the youth. Although, these types of taxation have been initiated primarily because of revenue generation and many governments are effectively using these types of taxes for destructive and healthy consumption of tobacco products. Hussain et al., (2022) stated that generally, excise tax referred to a legislated tax implemented on specific services and goods at the time they are purchased by people. These taxes are international taxes which is imposed in the government infrastructures is compared to international taxes which is imposed all across the country borders. These taxes need to be paid through businesses and these are usually increasing the prices for consumers in an indirect manner it can be paid through a percentage or a specific cost charge by unit. Elkelish and Hussain (2022) explained that Excise tax implemented in UAE and its various regions increased the significant effect on minimising and reducing the prevalence of smoking and number of prevented smoking attributed deaths in youth.

According to the report generated by World health organisation approximately 80% of the smokers across the world live in low- and middle-income countries. Also, more than half of world's populations who are smoking lives in Asia Pacific region. Hence production of tobacco products consumption has considered to be one of the major concerns which is increasing in youth rapidly. From the study presented by Ahmed et al., (2021) It has been analysed that the elasticity of

cigarette price in low to middle income countries is range between 0.5 to 1.05 and elasticity is quite lower which is (- 0.25 to - 0.5 in the high-income countries in which the accessibility of cigarette and tobacco products tends to comparatively high. Excise taxes generally result in the higher prices for customers that reduce demand of taxes products. On the other hand, youth are rapidly using non excised tobacco products which is creating a major negative impact on their health. However, most of the categories of tobacco products like cigarettes come under excise duties but there are some products which also come under non excise duty and it can be used by youth. Razzak et al., (2022) stated that the product categories like cigars and cigarillos fine cut smoking Tobacco and other smoking tobacco are having minimum rates which can be consumed by youth at minimum prices.

According to Verma et al., (2019) it is to be considered that UAE has implemented sin tax for controlling sinful behaviour of consuming tobacco products in youth. Also, there will be a VAT charge at a flat rate of 5% except the conditions where 0% exemption also applies. This tax in UAE is introduced by following the trends of other developed countries like the UK which has implemented similar taxes by the year 2018. By applying sin tax as an excise tax on some specific goods which is considered harmful to the society. Al-Jawaldeh and Megally (2020) explained the major concept of these types of tags is to enhance the price of product for reducing its use and also increasing the revenue of government to fund various projects like social care and hospitals by contributing adversely. UAE has implemented districts for preventing youth from consuming tobacco products due to increased prices which will help in changing the behaviour of youth and improving health conditions.

According to Westgarth (2019) instead of non-excise tax which is promoting the consumption of tobacco products in youth as they are not concerned about the increase in prices of these products and hence consume rapidly. However, the imposition of these Sin Tax is paving the way of smuggling such type of products in an illegal manner and then selling them on black markets as low-income youths are looking for alternatives and various ways to evade these types of Taxes. However, the many of the critics has argued that these taxes are considered aggressive in nature and also discriminating against lower class people since the taxation of products like cigarettes and tobacco are not accounting for ability of pain hence poor people are paying a large amount of their income to these taxes. Bate et al., (2020) opined that sin taxes are failing affecting the

consumer behaviour in such a way that the taxes are exponents also the increase in youth smokers and high nicotine cigarette smokers might have been limited success. While comparing it has been analysed that excise taxes on tobacco products are contributing positively towards the reduced consumption of tobacco products and also creating positive changes in the health of youth. Bruwer (2019) stated that excise tax has helped the UAE in maintaining their competitive and advanced position along with preserving public health and their commitment towards changing the harmful consumption patterns. On the other hand, non-excise tobacco products are still diminishing the health of people and young generation along with causing diseases.

2.9 Factors affecting Youth's attitude and usage of Tobacco Products:

Excise tax result in increased pricing which is noted to impact the consumption behaviour of consumers for tobacco products. However, the factor of time is also important for excise tax to make an impact, we will discuss the effect of pricing and time on youth's attitude and usage in the following sub-sections:

2.9.1 Effect of pricing on youth's attitudes towards tobacco products

Pricing has been found to be one of the most powerful interventions in tobacco control especially when it comes to youths' perception and use of tobacco products. Using price policy interventions such as excise taxes and minimum pricing policies, young people especially teenagers are more sensitive to price changes than adults. This comparative study aims to compare the findings of recent journal articles to determine how price influences youth perception towards tobacco products. This is one of the most strongly supported facts in tobacco control research: increasing the price of tobacco products results in a decrease in tobacco use, especially among young people.

Van Hasselt et al. (2021) conducted a study in the United States to assess how state-level excise taxes affect the smoking rates among children. It also revealed that for every $1 increase in taxes on cigarettes, the percentage of students who smoke in high school reduced by 3%. This decline was mainly due to changes in perceptions, as the increased cost of cigarettes made smoking unpopular among peers. The study also found that price increase measures were most effective in the lower income earning youths who are highly sensitive to price changes. Likewise, in Australia, which has been raising tobacco excise taxes annually for the last one decade, the level of cigarette

smoking among youths has reduced substantially. Scollo and Bayly (2020) also evaluated the impact of these taxes on youth smoking attitudes whereby they noted that young people regarded smoking as an unattractive practice given the high costs. The researchers also observed that the effects of price were magnified by Australia's plain packaging legislation which further reduced the branding appeal of tobacco. In the UK, Hiscock et al. (2022) examined the impact of minimum pricing policies on the youth smoking. This study concluded that floor price policy lowered the smoking rate among young people especially those with poor background. The authors claimed that minimum pricing policies combined with excise taxes which served as the basis for the development of a negative perception towards smoking among the youths. But the study also noted that the smuggling of tobacco products is still a problem that could erode the impact of the pricing strategies.

According to Chaloupka et al., (2019) the use of tobacco along with unhealthy lifestyle habits in youth are contributing towards major health issues in the UAE. In the gulf region, the prevalence of tobacco use especially in the youth is increasing when the price of tobacco products is moderate. Due to excise duties and taxes, the price of tobacco products and smoking has been increased which has changed the attitude of youth towards tobacco products. With the increase in excise duty the price has also increased, and it has decreased the number of using tobacco products in teenagers like shisha and Dokha a popular tobacco across Persian Gulf region which is smoked through a midwakh pipe. However, dokha and its prevalence in the age group of youth is quite unknown but according to a medical report it has been identified that approximately 11.5% of medical students in Ajman UAE are using Dokha. A Study by World Health Organization (2019) also states that the young cigarette smokers situated in UAE are more than 82% who have tried the first tobacco products are cigarette is at before age of 14 years. In the previous time, the tobacco products are cheap and can be accessible easily and smoking shisha is considered an activity which has been acceptable socially as compared to smoking of cigarette in the gulf region is often considered to be less dangerous for youth.

But in the past few years the imposition of various taxes and excise duty has rapidly increased the price of tobacco products and also affects its accessibility. It has changed the attitude of youth towards using tobacco products as with the increase in prices. The low- and middle-income youth are not able to spend their money on high pricing tobacco products and hence it will lead to the

reduction in consumption of tobacco products and improving health effects. Elkelish and Hussain (2022) stated that UAE government has demonstrated the outstanding efforts by rising cost of smoking through the assessment and that is increasing various social marketing campaigns. It will ensure the routine of health professional which is advising the smokers for stopping the smoking and creating changes in the attitude and behaviour of youth. Smoking of tobacco is contributing towards various major health issues across the world along in the UAE. Novytska et al., (2020) opined that the smoking of tobacco is not causing cancer but it is also damaging approximately every organ within body of the youth and it is highly associated with the stroke and other type of severe disease. The increase in pricing of the tobacco products has been changing the attitudes and behaviour of youth towards tobacco products. Approximately 3,200 children at the age of 18 years or more are smoking their first cigarette and using tobacco products every day. According to the study, it has been analysed that 9 out of 10 smokers are starting smoking by the age of 26. Also, every adult who has been died early due to smoking which is replaced through young smokers. Mogielnicki (2019) suggested that if the young smokers are continuing at the present rate approximately 5.6 million and 1 out of 13 of the present children are ultimately dying prematurely because of smoking related diseases and illness. However, in the present time direct marketing of tobacco products has been prohibited to reduce its consumption in the youth. However, Tobacco industry in the UAE is developing rapidly along with its packaging and advertisement of products is done in attractive manner which is appealing to them.

According to Bruwer (2019) the effect of pricing is also creating major changes in the attitude of the youth towards tobacco products, also the usage of tobacco products among youth has been decreasing because of increase in price. Various studies have examined that the change and increase in the price in youth and considered to be two or three times more price responsive rather than the general population. However, the estimation of price is varied across the studies. The major consensus is that increase in price is both decreasing cigarettes and participation of smoking. A price increase in the 3 NT per packet of the cigarette is reflecting a significant consumption reduce of approximately 2.47 packets per capital. Moonesar (2022) stated that the person having low income and socio-economic status are more responsive towards the effect of price. It has been identified the impact of rise in taxes on the tobacco products has created a major impact on low and social economic status group which has changed their attitude towards tobacco products. It also has been identified that the taxes on cigarette and tobacco products are considered to be

regressive tax on the poor youth. Hussain et al., (2023) opined that a tax is considered regressive if the lower income of youth or the general population has been text proportionally more as compared to higher incomes. Hence the tobacco taxes are considered regressive in nature in the terms of percentage and as the lower income individuals are devoting a high percentage of their income towards paying tobacco tax then it is higher for the people having low income. In addition to that as people of low social economic status are having high smoking rates, they are paying more tobacco tax for capital as compared to people those who have higher incomes.

The Government of UAE has enacted various tax schemes which created a major impact on the price elasticity of tobacco products and it leads to the changing of youth attitude towards the conception of tobacco products. Koya et al., (2022) stated that from the taxes imposed on tobacco products such as excise tax and syntax the use of cigarettes and tobacco products has experienced a slowdown because of a change in the attitude of youth customers towards cigarettes. It has been identified that the change in the price of cigarette packets has shifted along with the shifting of cigarette and tobacco products has been reduced by 2.2% in the UAE.

The comparative analysis of the recent articles published in journals points to the efficiency of the pricing mechanism as the key to changing youth's attitudes of tobacco products. It is evident that increasing the prices through the use of excise taxes or minimum pricing policies will reduce the smoking prevalence and have less favourable perceptions of smoking among the youths. Nevertheless, the effect of pricing is moderated by cultural and socioeconomic factors, and there are new concerns about the availability of non-traditional tobacco products. Hence, it is suggested that policy makers should employ a strategic and broad approach to pricing that targets all the forms of tobacco use while bearing in mind factors that may affect the efficiency of the policies.

2..9.2 Effect of pricing on youth's usage of tobacco products

In this section, the impacts of tobacco pricing on the consumption of the product are discussed. Several studies have been done to explain the effects of price changes on the use of tobacco. The review is important in justifying the relevance and the effectiveness of excise taxation in influencing purchase decisions, and overly consumer behaviour.

Given that tobacco contains nicotine that causes addiction, there is an increasing demand for the products. There is a possibility that an increase in the rate of purchase and consumption of the product, for those who are addicted, will be reported. Fayokun et al., (2021) explained that it was considered for a long time that obsessive spending was an irrational habit that violated the basic laws of economics, such as the law of decreasing marginal value. However, recent research has shown that excessive spending is not illogical. Despite this, several econometric studies conducted over the course of the last several decades have shown that smoking cigarettes and other types of tobacco use do not violate any economic rules. White (2021) stated that the use of economic models of addiction takes into consideration the temporal links between different drug uses in several different investigations. In other words, the effects of tolerance, reinforcement, and withdrawal, which differentiate the use of addictive substances like cigarettes from the use of non-addictive drugs, are accounted for in economic models of addiction. These effects are what set the use of addictive substances apart from the use of non-addictive medications.

According to World Health Organization (2021), the most significant takeaway from these models is that in contrast to changes in conduct in response to price adjustments for nonaddictive products, changes in addictive behaviour would occur gradually over time. The number of people who smoke will drop considerably if there is a consistent and ongoing increase in the price of cigarettes that is also indexed to inflation. In the field of economics, the term "price elasticity of demand" refers to the percentage change in demand that happens as a result of a price change, expressed as a percentage. Al-Jawaldeh and Megally (2020) stated that this change in demand may be thought of as a response to the price change. Recent research on consumer demand for cigarettes has produced estimates of price elasticity that fall within a wide range; nonetheless, the majority of these estimates fall between -0.3 and -0.5. According to these figures, a reduction in demand for cigarettes of between 3 and 5% may be expected if the price of cigarettes increases by 10%.

In spite of the fact that less studies have been carried out on different forms of tobacco, the findings have been shown to be comparable. When the price of cigarettes goes up, not only do people smoke less of them, but the total number of people who smoke goes down by a significant amount as well. According to Thompson et al., (2021) recent estimates that use data at the person level from large, nationally representative surveys, a permanent, real increase in price of 10% results in a reduction in smoking prevalence of 1% to 2%. According to economic theory, it is projected that

the price sensitivity of cigarette demand among the young would grow with age for a number of reasons. There are a variety of explanations for this prediction. To begin, compared to adult smokers, adolescent smokers are more likely to spend a larger amount of their extra money on tobacco goods. This is the case even when controlling for other factors (Alsukait et al., 2020).

The government of the UAE has made commendable efforts to reduce tobacco use by instituting price increases, launching long-term social marketing programmes, and mandating that all healthcare providers frequently recommend that smokers quit, offering both behavioural and pharmaceutical assistance to help them kick the habit. Válek (2019) stated that these steps were taken in an effort to reduce the number of people who use tobacco products. Therefore, it is essential that future research evaluate the effectiveness of the anti-smoking measures that are now in place. If there is a positive influence of income on demand, then the price sensitivity of demand ought to grow as a percentage of money is spent on a product. This is the case if there is a relationship between income and demand. Saad et al., (2023) opined that recent research on adolescent smoking, which included precise estimations of the amount of money that teenagers have available to spend, has shown that young people who have a greater number of financial resources are more likely to smoke than those who have a lesser amount.

Second, the impact of one's peers is far more significant in the lives of younger people than it is in the lives of older people. Makeen et al., (2022) explained that when the price of cigarettes rises higher, there is a multiplicative effect, which means that overall, fewer children smoke since more of their peers give up the habit as well. Because they have only been smoking for a relatively short amount of time, young individuals have a lower risk of being addicted to the habit. Furthermore, the cost of cigarettes has a more direct influence on whether or not they choose to engage in the behaviour of smoking. Last but not least, individuals of younger generations have a reputation for having more closed minds than adults. This shows that younger individuals put less importance on the long-term impacts of smoking than do adults, and instead place a larger importance on the short-term costs, particularly the financial ones. The evidence that was evaluated revealed significant heterogeneity in the smoking prevalence at the present time (Filippov, 2019).

Chaloupka and Tauras (2020) stated that the rate of tobacco use in the United Arab Emirates (UAE) is lower than in many other Middle Eastern countries, it is still high among young people and has

been associated to a rise in smoking-related ailments. Although the rate of tobacco use in the UAE is lower than in many other Middle Eastern nations, it is still high among young people. Funding, prevention and control, health education campaigns, and monitoring are just some of the areas that have seen increasing attention and success at the national level in an effort to halt the spread of this terrible illness. Koronaiou et al., (2021) these are just some of the many areas. Information on how to stop smoking and the health risks associated with it is also made available to the general population. Previous research reveals that programmes including mass media may have a major impact on decreasing smoking beginning rates among adults and adolescents alike. There is also strong evidence in support of increasing the price of cigarettes in the UAE. Cigarettes are a major contributor to the country's health care costs. In the future, research need to investigate how successfully the UAE's anti-smoking measures fit into the overall tobacco control strategy and what impacts they have had so far Razzak et al., (2022).

2.9.3 Effect of time-period on youth's attitudes towards tobacco products

In this section, the effects of periods on the attitude of consumers toward tobacco products are explored. Period details such as the influence of various changes in societal norms, cultural shifts, and changes in public health awareness on attitudes towards tobacco products is determined. Exploring these factors is crucial for understanding the issues that influence youth attitudes towards tobacco. It provides valuable insights into the success of interventions, societal shifts, and the effectiveness of policies, contributing to evidence-based approaches in tobacco control efforts.

The epidemic of tobacco consumption is considered one of the major concerns and threats to global health at the present time. Abbasi et al., (2022) stated that the deaths related to tobacco- attributable that are in UAE are increasing because of the increase in prevalence of tobacco products. The young adults of age group 18 years to 25 years are considered the most valuable group that is using tobacco products and consuming them frequently. However, over the time period, some youths are changing their attitude towards tobacco consumption but some of young adults are attracted to utilization of tobacco products by influencing their friends, peers, relatives, and other social groups. According to the Al-Hamdani and Hopkins (2023) study of the population conducted living in UAE it has been believed that smoking is considered harmful to health and approximately 34% of young adults believe that smoking is not helping them in socializing and approximately 90% of

young adults are having a negative attitude towards starting the habit of smoking. Approximately 80% of people have a negative perception of smokers and they feel a lack of confidence. Less than two percent of the study population have a habit of smoking in young adults.

A study by Pengpid and Peltzer (2020) revealed that the change in socio-demographic transition within the UAE has also brought some of non-communicable diseases that are also creating a major concern and threat for the healthcare delivery system of UAE. With the changing times the attitude of young people is also changing towards tobacco consumption. As UAE has imposed an excised tax on tobacco products and various policies which are based on the WHO framework convention on tobacco control, it is helping the government in minimizing tobacco consumption in the younger generation and it has made a change in their attitude towards the use of tobacco products.

Barakat and Yousufzai (2021) stated that over the time period now young adults have started understanding about smoking as a major cause of various preventable deaths across the world and it has caused over 8 million deaths per year. In addition to that the attitude of youth is changing towards tobacco conception and they are not understanding the effect of consuming tobacco on health. The use of nicotine, shisha, midwakh is harming the brain of young adults and it is increasing the risk of future addiction towards other drugs in UAE. However, some of the young adults are quite vulnerable towards their smoking and tobacco addiction as they are having strong addictiveness of tobacco products and major proportions of early experimentation is also developing eventually into addictive and daily utilisation. Bangera et al., (2022) argued that in the negative perspective, many young adults are considered consuming tobacco products as a style symbol and trend to follow to demonstrate a high-profile lifestyle. These young adults are considered addictive towards the utilisation of tobacco products and their likely hood of creating addiction is based on their consumption. But it is required to understand that most of the addiction of tobacco products is developed before 21 years of age and the major issue within young adults and their tobacco consumption is that they are exploring themselves to many serious health related diseases (Nasser et al., 2020).

According to reports provided by worked health organisations the prevalence of consuming tobacco and smoking among young people has already reached up to 21.9% in UAE. It explains

that approximately 14.3% of the young men 24% of the adult men and other 2.9% of young women along with one percent of the adult females are presently considered cigarette smokers. Because of their consistent exposure towards tobacco conception at home and within public places these numbers are expected to increase highly in the future. Hamadeh et al., (2020) stated that it has been clearly indicated by the global youth tobacco survey that a challenging number of youths are having a lack of basic knowledge on serious health threats related to tobacco utilization which is changing their attitude towards tobacco products over time. Also, they are under some false impressions that the consumption of tobacco products and cigarette smoking will help them in improving their style image and making them more popular and attractive. It has been analysed that the presence of environmental conducive towards smoking is encouraging these young people towards initiating smoking at this early stage which remains to be a more significant attribute in the expansion of the serious issue (Dar-Odeh and Abu-Hammad, 2021).

According to Alhaj et al., (2021) these factors symbolise that the future of young adults is in danger if they will not able to understand the seriousness of this issue. However, over time, young adults are changing their attitude towards consumption of tobacco as they are understanding how this will affect their health and their future. The imposed taxes in policies by the UAE government are making them understand that the significance of minimising tobacco consumption will help them in maintaining their health. Also, the tax imposed on excise products is also helping the government in reduction of tobacco consumption as many young adults are considered to be in their low and middle income which is stopping them to buy the tobacco product at such higher rates. Province (2022) explained that over the time the utilisation of tobacco is not cultivated but it is majorly traded within the United Arab Emirates and they are used to be ranked in the 7th position across the world into a trade map. The approximately 80% of tobacco import are then re-exported to the various neighbouring countries and the number of factories that create cigarettes have majorly increased in the past 10 years. However, the UAE government has imposed various regulations and rules for tobacco control and these are restricted while creating tobacco products. Aziz et al., (2021) opined that with the ban in advertisements our national televisions radio stations and smoking on the board flight like gulf Air and Emirates airlines, young adults are now getting various awareness from the government along with health warning so that they can understand the seriousness of health issues they will receive when they consume tobacco products.

2.9.4 Effect of time-period on youth's usage of tobacco products

This section reviews the literature on the effects of the period on the tobacco consumption behaviour of the youths. Major changes, such as technological advancements, societal norms, cultural shifts, and economic changes are likely to impact on usage behaviour of consumers. Exploring these factors and their effects on the consumption of tobacco products is critical in uncovering more meaning about the factors influencing the use of tobacco products.

According to Al-Dahshan et al., (2019), the prevention of tobacco products and their use among youth is considered critical to ending the tobacco epidemic in the UAE and Gulf region, the flavouring comes within tobacco products which makes these products more appealing for youth and they are attracted more towards it. According to a recent study conducted in the school students of age group 10 to 20 years in Dubai have reported the prevalence rates of approximately 2.2 and 11.2 percent for consuming tobacco products and smoking shisha and cigarettes. Alraeesi et al., (2020) suggested that UAE has a higher prevalence rate of consuming tobacco products and cigarette smoking and lower prevalence rates of consuming shisha as compared to the study which is 8.8 and 6.2 respectively and it increases with the specific time period. In recent times, that is marred with societal changes, studies have also highlighted about alarming increase in the utilisation of unconventional types of tobacco that involve midwakh and shisha specifically in the gulf region. Some earlier reports have also registered that the average rate of smoking shisha in adolescents and age 13 to 15 years has increased from approximately 15% in the year 2002 to 28.2% in 2005. Hence it has been identified that the time period has created a major effect on the youth attitude towards tobacco products. With the rise in time, the prevalence of smoking cigarettes and consuming tobacco products has been increased as youth are considered it as a status symbol Economidou and Soteriades (2020).

According to the report of World health organisation (WHO) tobacco is causing more than 8 million deaths annually. However, the use of tobacco products in the eastern Mediterranean has been expected to decline from approximately 29.5% in the year 2002 17% by the year 2025. In addition to that, countries that come within the gulf region like Saudi Arabia, Qatar, Bahrain Kuwait, Oman and UAE are also expecting a slight reduction. Al-Suwaidi et al., (2021) stated that the smoking trend has been increasing more in the female youth in various countries that come

under the gulf region. Razzak et al., (2022) argued that the use of tobacco products and the attitude of youth has been changes over time, the prevalence of the midwakh smoking is considered to be 7.6, 5.5 and approximately 14. 2% for the 17, 18 and more than 19 years of age group. The study has been suggested over the time the utilisation and consumption of tobacco products has been increased as the youth are following the trend of smoking. Also, it has been identified that cigarettes are considered the most common form of tobacco products consumed by men while women prefer consuming shisha in UAE. Bashirian et al., (2021) opined that this observed difference in the smoking behaviour is not surprising according to social context in UAE as social norms might be accepting more men in smoking cigarettes.

AlMulla et al., (2021) over the time period the earth of smoking cigarettes and consuming tobacco products for women has increased as it is found in the report that demonstrates the cigarette smoking habits and smoking of shisha that has been more accepted socially in the present time. However, the government of UAE is keenly focusing towards various anti-tobacco campaigns for educating youth and creating awareness in both youth male and female that is also addressing this social context. Hence this is majorly focusing on demonstrating health risks of all the forms of tobacco products for both female and male adolescents and youths.

The use of tobacco products has been reported to be highest in the young men other than consumption of cigarettes and it has been changed over past few years. Saravanan et al., (2019) stated that for many years now the Government of UAE has witnessed a rapid use and steady rise in the number of males who are using deadly tobacco products. Now for the first time the government is seeing a decline in the male users as it is driven by government by imposing strict laws and policies and being duffer on consumption of tobacco products and increased excise duty on the tobacco in products makes it hard for tobacco industry to sale their products. According to world health organisation they are continuing working closely on various countries like UAE in maintaining this downward trend in the present time. Monshi and Ibrahim (2021) explained that in the past 2 decades the overall consumption of tobacco use at global level has fallen also in UAE it has become decreasing. In the year 2000 it is 1.397 billion and in the year 2018 it has become 1.337 billion and according to the report generated by WHO approximately 50 million people e will decline the prevalence and utilisation of tobacco products by the year 2025.

According to Chan et al., (2021) this has majorly driven through the reduction in number of the female users who are using tobacco products and over the same period of time male users have increased by approximately 40 million in tobacco consumption all across the world. However, in the positive contact according to the news it has been demonstrated that the number of male tobacco users has reduced and stopped rising along with their projected towards declining tobacco consumption in UAE. Yu et al., (2023) stated that the minimization in global tobacco used has demonstrated that countries like UAE and its government is introducing and strengthening their effective and comprehensive evidence-based action. They are protecting the well-being of community and citizens and implementing strict policies in laws for youth so that they can reduce the prevalence of tobacco consumption. However, it has been Identify that the projected decline has been demonstrated in males that is associated with the tobacco conception and it is representing the overwhelming majority of all the tobacco users. This can be built on and using accelerating efforts for reaching the global target explained by Bashirian et al., (2021).

According to various reports produced by World health organisation it has been identified that tobacco consumption has increased drastically in recent years and the number of cigarette factories has also increased. Nazir et al., (2019) explained that tobacco use in youth has been considered to be a major and significant public health concern as it is causing different forms of the smoking related diseases and health problems and also creating a gateway for the abuse. Many younger individuals started smoking and it is quite difficult for them to quit later in the life. The negative health consequences related to smoking are based on its intensity and duration of its utilisation hence the increase in risk of smoking related diseases and health problems in individuals are increasing and initiated at the time of their adolescence period. Al Katheeri and Azman (2023) stated that the rapid social and economic changes also lead to the rise in popularity of tobacco consumption. Also, despite of various acknowledgements from the ministry of UAE is considered to be rising problems among youth and some studies have focus that this is considered to be a public health issue in the present time.

2.10 Theories/ Models/ Frameworks of attitudes and usage of tobacco products

In this section, the theories and models that explain the attitude and usage of tobacco are reviewed. The literature review highlights the role of the models and theories in influencing consumer behaviour and purchase intentions. The sections begin with a description of the term theory,

followed by a discussion of various theories such as the theory of reasoned action, behavioural model of addiction, social control theory, and health belief theory that underpins the process of addiction and the consumer decisions and behaviour.

The practice of disease prevention and health promotion is supported to various concepts and theories and for understanding and explaining health behaviour and guiding the selection management and implementation of various program planners and treatments it is required to employ appropriate models and theories. A theory is a set of definitions and concepts that explains the situations that predict events through illustrating the relationship in between various variables (Barbato et al., 2023). Here theories are applicable for a wide variety of situations. In the given context the attitude and uses study is required to be conducted on how young adults 18- to 25-year-old consumers are perceiving excise tax tobacco products in the UAE. A theory is representing a systematic way of understanding situations or events. However, the use of models involves defining a variety of theories for better understanding an issue in a specific context or setting and these are not specified like theories.

The **theory of reasoned action and planned behaviour** was proposed by Icek Ajzen in 1985. It focusses on system creation of observation of the two group variables. One is attitudes that are defined as a negative or positive feeling which is related to the achievement of a goal and objective. The second is subjective norms which are considered as exact representations of a perception of an individual about the ability of products for achieving those goals and objectives (Crosby, 2022). In the context of tobacco conception and utilisation the application of theory reason action and plant behaviour has been employed that the conduct of individuals and youth has been determined by their intention towards engagement in the behaviour which is a result of individuals and young male and female attitude. Attitude is all about a belief of a person about a specific characteristic and consequences of quitting or using tobacco which is weighted and measured through their assessment of these types of consequences and characteristics. Subjective norms involve beliefs of person about disapproval or approval of tobacco utilization and consumption through important normative beliefs and these are measured through their motivation of following the wishes of other people who are important (Hussain et al., 2023). Here, the perceived behavioural control is considered to be the perception of a person of controlling over utilisation of tobacco in the absence and presents of facilitators and barriers towards quitting.

The theory of planned behaviour and reasoned action suggested that the behaviour of an individual is determined through their intention of engaging in that behaviour. In the case of tobacco consumption, the outcome of young individuals in their attitude is that the belief of individuals about attributes and result of using tobacco is measured by their assessment of these outcomes or attributes (Tornikoski and Maalaoui, 2019). Subjective norms and perceived behaviour control are other parameters in the theory of reasoned actions that demonstrate about the behaviour of a young individual about using tobacco. In general, it has been identified that according to this model the more effective and positive subjective norms and attitude are towards the situation the greater will be perceived control. It helps in creating a stronger intention of individuals towards reducing the use of tobacco consumption. The key constructs like behavioural intention and experiential attitude. It explains a belief which is using tobacco products or engaging in the cessation which is associated with specific negative or positive feelings (Ajzen and Schmidt, 2020). The other construct is an instrumental attitude which explains the type of belief that involves using or engaging in tobacco consumption and associated with specific outcomes or attitude along with values which are attached to attributes and these outcomes. According to the theory of reasoned action there are various strategies that can be used with the users who are consuming tobacco. The theory explains that by assessing a degree to which the young individuals are intended to change their tobacco use behaviours will help in identifying their attitude and utilisation towards tobacco conception.

Various studies have adopted Theory of reasoned action and planned behaviour to explain the change in consumption of tobacco through initiatives such as excise tax, awareness campaigns and peer pressure (Kung'u and Ogaga, 2024; Lee et al., 2018; Sinnasamy and Bidin, 2017). These studies adopted Theory of reasoned action and planned behaviour to explain how various initiatives such as excise tax, awareness campaigns and peer pressure act as a logical reason for reducing tobacco consumption in consumers. Price sensitivity is important since people usually cut back on or stop smoking when prices rise. The majority of respondents noted that the financial burden of growing tobacco costs greatly motivates people to reconsider their tobacco use. Theory of reasoned action and planned behaviour explains how price increase act as a barrier force affecting the consumption behaviour. Similarly, increased health awareness also results in enhancing the understanding of negative health impacts of tobacco usage leading to logical decision making of reducing the tobacco consumption as explained by Theory of reasoned action

and planned behaviour. No study negating the Theory of reasoned action and planned behaviour in the context of tobacco consumption was found.

By discussing negative and positive expectations the young clients have for consumption of tobacco the Government of UAE can identify these experiences and create their policies by taking feedback. It is required to ask the young members whether their other family members relatives and friends are supporting clear to buy consumption and by drawing attention towards social pressure they can motivate the youth to live in the UAE to quit the utilisation of tobacco and smoking (Hagger and Hamilton, 2021). The key constructs in the theory of reasoned action and planned behaviour explains about self-efficacy it says that then individuals have perceived ability of overcoming various conditions for event it might act as a barrier towards reducing tobacco consumption. It has been analysed that the health professionals of UAE can provide contact of other persons who have already quit tobacco and focus on building their self-efficacy towards quitting the use of tobacco products and staying stable in various challenging situations. The theory of planned behaviour (TPB) explained that the behavioural intention and behaviour of the individual are identified by the social pressure, their attitude and amount of the control they are perceiving to have over their behaviour (Katz et al., 2019). Theory of planned behaviour is considered as a motivational model which involves the concept of subjective norms. According to the model the behaviour of a young individual is based on social and expectation networks and various researchers have also discovered the significance of subjective norms within Juvenile behaviour. The major benefit of theory of plant behaviour is that it involves considering the impact of social factors.

According to **behavioural model of addiction** (roots from social learning theory proposed by Albert Bandura in 1960s and operant conditioning theory proposed by B.F Skinner in 1930s), addiction happens and increases over time and it is created through external rewards. There is various research conducted related to identifying reasons of addiction is still ongoing but the findings are open towards multiple interpretations. In the first model that is a moral model the addiction is considered as a moral falling along with intervention is disciplinary as compared to reconstructive (González-Roz et al., 2019). The other opposing model also known as disease model which is holding that the term addiction is a specific condition of brain which is triggered through neurobiological changes as a response towards sustained alcohol or abuse of drugs. This model

explains that addicts have no choice and control over using a substance. Over the time researchers are gaining higher awareness related to neurobiological variables and their underpinning addiction however the disease model of addiction is dominant addiction and considered as a common and public understanding of the addiction.

After these models' behaviour model of addiction has been research which explains that addiction is unfolding over time and created as an outcome of external rewards. Researches have also explored various formulated theories and addiction drivers for explaining the real cause of addiction (Hatoum et al., 2022). The increase in usage and consumption of perceived excise tax tobacco products by 18- to 25-year-old consumers is demonstrating the addiction of consumers towards tobacco products. Addiction is considered as a whole medical phenomenon which is caused through a genetic lottery or exposure towards substance abuse. However, this theory is getting more explode and it is grown into a behavioural model of addiction. The social model of addictions explains that society's negative effects and its culture leads to people are developing smoking addictions. Standards associated with smoking and consumption of tobacco products are not only considered tolerant but it is almost considered as a status symbol for youth. However, the consumption of alcohol is often portrayed as a comically and in contrast there are some societies where alcohol is considered illegal and penalized highly (Mansueto et al., 2019). The social model of addiction explains that cultural standards are leading more people within more accommodating and non-judgemental cultures for paying the price of smoking and consuming tobacco as compared to less accommodating culture.

Various researches adopted theory of addiction to explain tobacco consumption such as Mwaura et al. (2021), Kimani et al., (2020) and Hogarth and Field, 2020). Consumption of tobacco products in youth is considered to be a trend and addiction (Mwaura et al., 2021). It can be viewed as their learn behaviour because it is underpinning in positive manner for example enjoyment and pleasure is gained through a behaviour like smoking which is making it more probable that a young individual will repeat this behaviour in their future (Hogarth and Field, 2020). In the context of smoking and consuming tobacco products learning is operating at the initiation phase in which individuals start smoking initially and the maintenance phase in which these youth will become habitual tobacco consumer and smokers (Kimani et al., 2020). And then a relapsing phase has occurred in which these individuals are trying to give up or quit consuming tobacco products but

they learnt association with kind of enjoyment and pleasure make it quite difficult for them to quit smoking. No study negating the Theory of addiction in the context of tobacco consumption was found.

According to **social learning theory** (proposed by Albert Bandura in 1960s), young people are observing and imitating their role models like peers' parents and friends around them who are smoking and this vicarious strengthening leads these young individuals towards expecting positive consequences from consuming tobacco and smoking (Smith, 2021). Also, according to principles related to apparent conditions explains that any type of behaviour which is rewarded will increase in the frequency. Addictive substances like shisha, nicotine and midwakh in UAE immediately considered rewarding because they are activating various areas of brain of an individual that helps them in regulating the feeling of enjoyment and pleasure that result into a quick learning of consuming tobacco products. The maintenance phase involves negative reinforcement which will explain how to maintain the consumption of tobacco products and smoking in the context of its withdrawal symptoms. The effect of nicotine's creed various symptoms like irritation increased anxiety levels, fluctuating mood levels. After experience in such systems the person then started smoking cigarettes and using tobacco products to remove these types of symptoms which is considered as a negative support and it leads to the increase in probability of repeating this type of behaviour in the future (Cho et al., 2019). In the relapse phase the queue reactivity is considered as a learning explanation which is used for explaining relapse. This is due to the person associating with specific environmental factors, mood or situation and with the pleasure and rewarding effect received by consuming shisha, midwakh and nicotine these cues related to smoking can also trigger a relapse phase.

According to social learning theory social learning happens when young individuals start learning by observing the people around them. Various studies adopted social learning theory to explain tobacco consumption such as Liu et al. (2020) and Yılmaz et al. (2019). People might learn about addictive behaviour because of classic conditioning repairing their enjoyment and pleasure of the activities and addictive substances associated with environmental cues (Liu et al., 2020). Social learning theory is majorly focusing on the causes related to youth smoke in social environment and it is considered as a most effective and supported theory that helps in research of attitude of how young adults of 18- to 25-year-old are perceiving exercise taxed tobacco products in the UAE.

Social learning theory is majorly focusing on facilitating the impact of young adults smoking and consuming tobacco products and its exposure towards smokers who are serving as a role model. Another theory social control theory is also focusing on the constraining factors on smoking of the conventional and effective social relationships (Yılmaz et al., 2019). Social learning theory explains that the smoking done by young adults is a learned behaviour which is acquired through social support and interaction and there is broadly explained relationship between young adults smoking and their friends, siblings and sometimes parents. Social learning theory explains the adoption of smoking habits under the influence of peers as well as quitting habits through the influence of family and friendly as they make the smokers understand the negative health impact of the tobacco usage. Consumption of tobacco products and smoking is considered to be evidence towards social learning and however this is less document and the smoking in youth is considered and associated with the exposure of smoking models in the people who come in the age group of 18 to 25 years. No study negating the social learning theory in the context of tobacco consumption was found.

The **social control theory** (proposed by Travis Hirschi in 1969) explains that the tendency towards eccentricity needs to be shared universally but required to demonstrated only in the aspect of weak and in effective predictable controls that are exist in the families and other types of social groups. The social controls might be diminished through an anxious relationship like high conflict in families (Alla et al., 2020). However, the conventional bonds demonstrated through parental supervision and monitoring along with a supportive relationship of a parent and child will be able to prevent and minimise smoking in youth. These types of relationships can be understood through a perspective of a social control and as evidence for restricting the influence of a predictable bond of a parent and child. Social cognitive theory is considered to be an extension of social learning theory that explains that people are learning from each other through instruction observation or modelling. This theory expands on behaviourism through explaining behaviour as their product of a reciprocal interactions in between environmental cognitive and behavioural influences (Henneberger et al., 2021). A significant tenant related to social cognitive theory is self-efficacy or expectation or belief that a person will be successful in performing a task. The social cognitive theory explains that self-efficacy is considered to be fundamental towards any type of behavioural change. There are various studies that demonstrate effective and positive relationship between changes within smoking intention and behaviour of a young individual and self- efficacy such as

Tapera et al., (2020) and Jacobs and Jacques (2020) The research confirmed that role of social bonds (as explained by social control theory) and the role of internal processes i.e. self-efficacy (as explained by social cognitive theory) explains how tobacco usage can be reduced or quitted through various external and internal processes. Both these theories argue that strong social bonds, offering support to smokers, encouraging smokers through role models and improving their self-confidence to help them quit help significantly in reducing smoking and quitting. No study negating the social control theory and social cognitive theory in the context of tobacco consumption was found.

Like theories, various models are also focusing on analysing the consumption of tobacco and its related factors. According to the **health belief model** (proposed by Irwin M. Rosenstock, Godfrey Hochbaum, S. Stephen Kegeles, and Howard Leventhal in the 1950s), the utilisation of tobacco is identified through perception of an individual related with vulnerability of a person towards illness that is caused due tobacco use. The health effects and seriousness of tobacco is considered as a major problem and the treatment effectiveness and cost involves benefits of taking actions, barriers towards quitting tobacco use and cues for changing the behaviour of tobacco consumption (Amin et al., 2020).

The major constructs within the health belief model involves perceives benefits and risk in terms of utilization of tobacco perceived barriers self-efficacy for quitting and indications related to actions. The major construct perceived susceptibility explains about the perceived chances of tobacco users of developing smoking related health conditions like infertility, lung cancer, CVD etc. The health belief model is also used as a framework of developing various questions for survey and understanding the behaviour of young adults towards the consumption of tobacco products and their knowledge about tobacco industry (Babaei et al., 2020). The theory has six major constructs which is influencing the decision of people towards taking action to prevent screening and controlling illness. The other major construct is perceived barriers which explains the belief of an individual about psychiatric and tangible cost related to advised actions. Perceived benefits demonstrate about efficiency of action towards reducing risk of impact. cues towards actions are strategies for activating readiness.

Self-efficacy is a confidence in the ability of a person to take action. According to the health belief model a belief of a person within disease threat is combined with the belief in effectiveness of health behaviour and it will predict the possibility of a person in adopting the change within behaviour. In UAE, the female smokers are also rising and it is a major concern for the country (Aldohaian et al., 2019). The females are also facing health consequences related to smoking and its effect along with ethical norms. As in the gulf and Arab countries female smokers are considered to be non-acceptable in the society and the smoking behaviour of women is less motivated through nicotine seeking and widely determined by the environmental cues. Changes in social values in cultural shifts are considered as a direct outcome of modernisation and it will be followed through changes within the role of young males and females in the society.

There the interventions related to control of tobacco consumption are based on theories that are focusing on interventions for individuals which are designed to affect decision making. The health believe model is also based on value expectancy theory that is explain about rational choice of the assumption. The major feature of health belief model is that the young people are having choices and they are capable of understanding information when it is represented effectively and they can make good decisions about their health (Fathian-Dastgerdi et al., 2021). The young adults of 18 year to 25 years can take effective decisions about their health about whether to consume tobacco products or not. The health belief model is suggested that whether or not young individuals are taking actions of protecting their health is based on what they believe. If these people are susceptible towards the condition or that the condition are having serious consequences, the people are having course affections that is available to them and helping them in avoiding conditions and benefits of taking various actions related to cost. In the context of tobacco products consumption, the health belief model will able to predict about these young adults. They will quit smoking if their preferences need to avoid serious health conditions like heart diseases cancers and other types of smoking related illness. If they will think something suspectable about these diseases and if they have believed of not smoking will help them in achieving the goal of good health, they will quit smoking (Green et al., 2020). Pribadi and Devy (2020) applies health belief model to explain the behaviour to quit smoking by confirming that there was a significant correlation between the intention of young adult smokers to quit smoking and the perceived factors of health belief model. An older study by Renuka and Pushpajali (2014) found that aspects of health belief model helped in motivating people to enrol in tobacco cessation programs and enhancing their understanding of

factors impacting their decisions to quit tobacco usage. No study negating the health belief model in the context of tobacco consumption was found. There are various theories that demonstrate about behaviour and intentions of an individual which is shaped through the consequences. Operant conditioning (proposed by B.F Skinner in 1930s) demonstrates behaviour which is shaped through their consequences like punishment or reward. This theory explains that when a tobacco product like shisha, midwakh is inhaled by young adults in UAE it is causing a rapid release of dopamine which leads into causing various feelings of pleasures that reinforce and reward the behaviour also this support and pleasure received by inhaling tobacco drives the process of addiction with in young individuals (Henneberger et al., 2021). When a young adult gets addicted to tobacco consumption, the intention of consuming a product is changed in them and it leads to causing various health conditions.

The following table provides a comparative overview of the models and theories discussed in the context of understanding youth attitudes and usage of excised tobacco products in the UAE. Each model is linked to the thesis topic by examining its focus, relevance, and the outcomes identified.

Model/Theory Name	**Focus**	**Relation to the Topic**	**Outcome Identified**
Theory of Reasoned Action and Planned Behaviour	Focuses on the intention to engage in behaviour, shaped by attitudes, subjective norms, and perceived behavioural control.	Explains how youth's attitudes, social pressures, and perceived control influence tobacco consumption and cessation intentions.	Stronger negative attitudes and disapproval from peers can reduce tobacco use.
Behavioural Model of Addiction	Describes addiction as a behaviour that develops over time due to external rewards.	Relates to how youth develop tobacco addiction and how addiction reinforces	Addiction can increase tobacco consumption despite awareness of risks.

		tobacco consumption despite excise taxes.	
Social Control Theory	Focuses on the influence of social relationships in constraining behaviour.	Explains how strong family and social bonds can prevent youth from engaging in tobacco consumption.	Strong parental supervision and supportive relationships can reduce tobacco use among youth.
Health Belief Model	Focuses on individuals' perceptions of the threat of illness and the benefits of avoiding it.	Explains how youth perceive the health risks associated with tobacco use and how these perceptions affect their consumption.	Perceived health risks and barriers to quitting tobacco influence youth's smoking behaviour.
Social Learning Theory	Emphasizes learning through observation and imitation of others.	Explains how youth adopt tobacco consumption by observing peers and role models in their environment.	Youth are more likely to consume tobacco if they observe positive outcomes from others' smoking.
Operant Conditioning	Describes behaviour as being shaped by rewards and punishments.	Explains how the pleasure from tobacco consumption reinforces the behaviour and leads to addiction among youth.	Reinforcement of pleasurable experiences from tobacco increases the likelihood of continued use.

Social Cognitive Theory	Focuses on learning from the environment, behaviour, and cognition, emphasizing self-efficacy.	Relates to how youth's confidence in their ability to quit smoking influences their tobacco consumption behaviours.	Higher self-efficacy is associated with a greater likelihood of quitting or reducing tobacco use.

Table 2.1 Comparison of theories/ models/ frameworks

Although all theories are found to be helpful in explaining the consumption patterns of tobacco usage, theory of reasoned action and planned behaviour is considered most appropriate for this research because of its vast scope and ability to explain the impact of wider factors on the consumption and usage patterns of youth. The thesis selects theory of reasoned action and planned behaviour as a theoretical foundation to explain the findings and understand the basis of the findings.

2.11 Research gaps identified in literature of youth's attitudes and usage of non-excised and excised tobacco products.

This section details the research gaps that the current study seeks to achieve. A summary of the findings obtained from the review is presented, followed with the identification of the areas that have not been exhaustively explored. A summary of the accounts of previous scholars on specific concepts and the existing gaps are discussed below.

While researching various aspects in the literature on youth's attitudes and uses of non-excise and excised tobacco products, some research gaps have been identified in the literature. These research gaps have been identified by conducting in depth results of consumption of tobacco products and youth attitudes towards non excise and excise tobacco products. Utilization of tobacco products which is considered responsible for approximately 30% of all deaths related to cancer has been well documented and considered to be a primary cause of increasing cancer and other health related diseases (Ahmed et al., 2021). It is also linked with other preventable and major health concerns like chronic obstructive pulmonary disease (COPD) and cardiovascular diseases.

The concern of tobacco consumption by youth in UAE is largely based on their social economic status which is helping them consistently smoking at a higher rate than the average despite of a major decline in the overall tobacco utilization in UAE. However various smokers and tobacco consumers are suffering from low social economic status because of tobacco related diseases and the rise in excise tobacco products (Monshi & Ibrahim, 2021). Hence it is required to understand how these gaps in research effectively help in tobacco intervention. There is various research identified about how the conception of tobacco products is affecting young adults (Wakefield et al., 2015; Ng et al., 2014; Getachew et al., 2018; Jarlstrup et al., 2018 and Kronfol, 2019). However, there are research gaps identified that are demonstrating the effectiveness of health workers and professionals towards controlling smoking and consumption of tobacco products in young adults. Moreover, no standard eyes and effective training exists for any group. Hence this quite limited knowledge about the present tobacco termination in the young adults.

It has been analysed that minimising the consumption of tobacco and its harm from UAE is now considered as achievable goal but by realising that these goals require new and effective scientific advances. The Government of UAE is required to focus on developing their scientific practices with support in advance in tobacco control, this can be done by including advance practices in behavioural sciences. These will be relevant towards tobacco utilization the development of tobacco treatment and its delivery system policy and other related environmental changes along with public health interventions (Makeen et al., 2022). The excise duty imposed by the UAE government on the tobacco product is a major and successful aspect which is helping the Government of UAE in reduction of tobacco consumption. The research has identified a gap of properly designed aids towards tobacco control and its research and it will help in developing research priorities. There are various research priorities that requires focus and addresses various disparities in the utilisation of tobacco and its related harms. It is also required for the researchers to focus on developing novel behavioural interventions that work towards the conception of tobacco in young adults (Sulaiman et al., 2020). Researchers can utilise a chronic disease approach towards addressing the smoking behaviour across all the development of phases that involves motivation termination and observance and relapse and retrieval. By identifying an effective and innovative policies along with macro environmental approach the researcher will be able to focus on further reducing the tobacco use in the young adults.

Over the past years various National and global reviews related to priorities given to tobacco control and researching about tobacco control has been completed specifically. Many reports have focus on the need for cost effectives and budgetary interventions to be developed for prevention and controlling the tobacco consumption in young adults (Mehrotra et al., 2019). This will ultimately reduce the diseases related to tobacco and its attributes. Specific attention has also given to requirement for information on the utilisation of tobacco and impact of health, assessment of determinants of using and quitting and impact of interventions in the context of effectiveness, efficacy, cost-effectiveness. This is to identify requirements of investments institutional and human capacity for addressing the research of tobacco control and its prevention needs (Mehrotra et al., 2019). However there have been other lists of research needs, the researcher has identified a research gap in focusing on recognising minimum and specific country elements required in UAE for a successful and effective tobacco control. Though, there are various taxes imposed by the UAE government on the tobacco products they are still required to give specific attention towards developing the required policy for the tobacco consumption (Halas et al., 2020).

Since tobacco epidemic is considered as the major public health concern and threat faced by UAE and it is killing many people per year because of exposure towards second hand smoking and tobacco consumption. The other major research gap identified in the literature of youths' attitude and uses of non- excised and excised tobacco products the researcher has identified the research gap of optimising the effectiveness of interventions for tobacco control in UAE (Erinoso et al., 2021). It has been identified that impact intervention can be improved by conducting proper research in future which involves addressing various ways of increasing the demand, reach, distribution, quality, sustainability and implementation of the evidence based and effective tobacco use treatment for young adults. Likewise, the ways to reduce tobacco use in young adults also require proper research as young adults are facing major development vulnerability for tobacco utilization, initiation and its dependence. It is required to research about how their vulnerability is also possibly affected through societal changes and other changes within tobacco product and its landscape. It is also required to identify the various tobacco products and their availability in policies in UAE (Puljević et al., 2022). Effective research is required which informs along with reflecting this type of changes and improving the readers understanding of increase in vulnerabilities of these young adults and related populations which yield various strategies to prevent the development of tobacco utilization and its dependence.

2.12 Chapter summary

This literature review has highlighted the recent trends in youths' tobacco products attitudes and usage from the perspective of higher prices caused due to various duties, taxes, cesses, surcharges and other indirect costs. Particularly the tobacco products potency as an adverse health agent due to the chemicals in them. A review on the government and other authorities assigned with policy formulation and regulation to discourage and dissuade the youth from the tobacco products usage by modulating the pricing and thereby discourage its consumption through attitudinal changes of discouraging the usage. Literature clearly points to the increasing number of tobacco products abuse worldwide has caused a grave concern on the associated deleterious health impacts given that there is a lack of price control policies regulating and monitoring the production, distribution and consumption that are commercially available to the adult youth. As a result of these challenges, various methods have been suggested balance the imposition of taxes so as to generate revenue for the government and also to ensure that tobacco products usage is limited to whatever minimum levels possible. The youth being young are inherently prone to be vulnerable and despite higher prices of tobacco products are still inclined to develop positive attitudes and thereby increase usage, with efforts being made by the authorities to use taxing and pricing so as to develop negative discouraging attitudes and reduced usage. There is evidence that such an approach is gradual and takes time during which newer youth generation emerges causing newer challenges to tackle the shaping of the youths' attitudes and usage of tobacco products by managing price controls through taxation policies and other incentives. These approaches appear to be paying dividends to a significant degree, hence proven to be quite effective.

CHAPTER 3 - METHODOLOGY

3.1 Introduction

The previous chapter conducted a review of previous literature which demonstrated extensive and intensive readings related to the topic with a good understanding of the problem situation, aim, objectives and questions in the study's subject area. The review of literature has brought attention to recent trends in the attitudes and usage of tobacco products among youths, primarily focusing on the escalation of prices due to various factors such as duties, taxes, cesses, surcharges, and indirect costs. The literature extensively discusses the roles of governmental and regulatory bodies in formulating policies aimed at discouraging youth tobacco consumption by manipulating pricing to induce attitudinal shifts. While delving into the literature on the attitudes and usage of non-excise and excise tobacco products among the youth, the researcher has identified notable gaps in existing research. By conducting a thorough analysis of tobacco product consumption and youth attitudes toward both non-excise and excise tobacco items, the research has pinpointed key areas where further investigation is warranted (Ahmed et al., 2021). The literature also led to the identification off another research gap which is to maximise the outcomes of the interventions undertaken by the government to control tobacco consumption in the country (Erinoso et al., 2021). More research is thus needed to study this issue. Furthermore, literature also identified disparities between tobacco use and associated use harms have been changed in the past few decades and is found to be mostly linked with young users of tobacco products (Hamadeh et al., 2020). Thus, more research is required to assess the impact of tobacco usage on young people and their behaviour in the response of the interventions undertaken to curb smoking.

The study attempts to study how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers. Previous chapter of literature review enabled to gain key insights into the topic area and related aspect. This chapter discusses the research methodology adopted to study the attitudinal and usage (A & U) trends related to excised tobacco products among 18 to 25-year-old consumers in the UAE. The study is classified as exploratory research since it investigates research questions that have not previously been studied. The chosen methodology is designed to address the identified gaps in existing research and provide a comprehensive understanding of the factors influencing tobacco consumption patterns in this specific demographic. This chapter explains in details the selection

and justification of research philosophy, research approach, data collection method and data analysis method considered suitable to address the research objectives to fill the research gaps. The rest of the chapter will be presented as follow; section 3.2 will discuss the research philosophy, section 3.3 will be dedicated for research approach, section 3.4 will explain research method, section 3.5 will present data collection strategy, section 3.6 will explain data collection process, section 3.7 will outline sampling, section 3.8 will discuss data analysis process, section 3.9 will be dedicated for pilot study, section 3.10 will explain validity and reliability of the research instrument and section 3.11 will outline ethical considerations.

3.2 Research philosophy

Research philosophy is the assumptions made by researchers about the nature of reality, knowledge creation and the role of social actors (Tamminen and Poucher, 2020). The selection of appropriate research philosophy guides researchers in selecting methods of data collection and analysis and thus forms the underlying foundation of any research. The research aimed to investigate how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers. There was thus a need to select suitable methods for data collection and analysis so that the research aims could be achieved. Researcher was required to clarify her assumptions on the knowledge creation and nature of reality to be able to decide on the suitable research philosophy. Three key philosophies positivism, interpretivism and pragmatism were considered, compared, and examined before selecting the best research philosophy for this study. This approach helped the researcher to make informed decision and set the foundation for the research.

The research paradigm which assumes that social issues can investigated through scientific method is called positivism (Alharahsheh and Pius, 2020). A specially designed research instrument is used when positivism is adopted to collect measurable data about a social issue. Like scientific problems which are known to be best investigated through measurable methods, social issues are supposed to be studied through objective data collection and analysis methods with the help of research tools and statistical analysis methods. Using scientific and measurable methods can make the research more reliable and can achieve generalisation of the results (Park et al., 2020a). When discussed ontologically, positivism is based on the belief that there is only one reality which is not

based relied on social actors. Individual social actors do not hold importance and their collective responses are enough to reveal insights into the social issue according to positivism.

Another philosophy which can guide social research is interpretivism which is based on the assumption that social issues cannot be scientifically measured as insisted by positivism. Social issues are considered to be best investigated through non-scientific methods in order to lead to explainable discussion on the social issue (Alharahsheh and Pius, 2020). Multiple realities are found to explain the social issues since each social actor brings a unique perspective in studying the social issue. One truth is not considered sufficient when investigating social issues and multiple realities are required to effectively probe social issues. Interpretivism assumes that social reality cannot be investigated objectively and should be investigated subjectively in order to infer as many meanings as possible. Interpretivism is based on ontological position of constructivism that insists that social phenomenon and its explanation is dependent on social actors (Junjie and Yingxin, 2022). Social actors are required to convey their experiences, perceptions, and attitudes to allow researchers to investigate a social issue and thus in-depth interactions with social actors are required. Social issues are described through social actors' experiences and attitudes. Social actors are thus considered to influence social issue and thus subjective information are collected when interpretivism is adopted.

Pragmatism is the research philosophy which is based on the assumptions that knowledge is based on experience. Every person has different experiences which have profound impact on their perceptions of social issues (Kelly and Cordeiro, 2020). It is assumed that knowledge from varied sources bring unique perspectives and thus varied sources of information must be used to gather objective as well as subjective data to have in-depth information on social issues. Pragmatism is based on the assumption that collection of data and information on social issues should not be restricted to only objective or subjective methods but rather unrestricted methods should be used to achieve research aims. Pragmatism involves selecting research design which uses any data collection and analysis method which suits specific research objectives. The aim of selecting pragmatism philosophy is to choose the best suitable method for finding research answers and reach practical solutions to real life problems (Biesta, 2021). Social issues are considered to be investigated through both ontological stances i.e., objectivism and constructivism and thus this philosophy allows more flexibility for researchers. Experience is given value to ascribe meaning

to social issues and human experience is considered key source of knowledge creation. Action-oriented methods are supported in pragmatism which allow researchers to choose subjective as well as objective methods and to identify practical solutions to the social problems.

Pragmatism is considered appropriate for this research as compared to positivism and interpretivism. Positivism depends on quantitative data collection and analysis. The present study deals with attitudes, perceptions, and behaviours surrounding tobacco product usage among young consumers. These factors are often subjective, multifaceted, and cannot be fully captured through measurable, objective methods alone. Moreover, as positivism assumes that there is one objective reality (Park et al., 2020a), it is not equipped to handle the complexities of individual experiences or the complexities of social issues like changes in youth behaviour toward excised and non-excised tobacco products. The research questions developed for this research demand a deeper understanding of personal attitudes and subjective realities, which positivism tends to overlook if adopted exclusively for this research. Moreover, positivism insists on the use of structured and standardised research tools which restricts a researcher to collect insightful data on the social issue (Junjie and Yingxin, 2022). Since social issues are complex, collecting varied insights from as many sources in the form of social actors is desirable which is not possible through positivism. Positivism is also not suitable since it does not allow researcher to be flexible and did not allow to capture the complicated picture of tobacco usage in this research.

If interpretivism was solely chosen for this research, this would result in gathering vast, insightful and subjective data on the tobacco usage, behaviour and attitudes of people through collection of voluminous qualitative data (Irshaidat, 2022). On one hand, this would be beneficial for the research since it would allow to understand the issue through in-depth data and through the dissection of multiple opinions and views. However, on the other hand, it would restrict the researcher by limiting the ability to gather quantifiable data which could be generalised to develop a bigger picture of the issue being researched. For instance, to comprehend how people would change the tobacco consumption as a result of interventions, it is important to assess their opinions as well as the statistical data on the tobacco consumption and any reduction patterns. Interpretivism would also not allow generalisation of findings being focused on specific context (Sanchez et al., 2023). Since this study attempted to develop a model representing how attitudes and usage have changed among a broader demographic of 18 to 25-year-olds in the UAE, it was important to have

some generalised findings to be able to develop this model. Disregarding quantitative methods would limit the researcher to achieve a balanced approach of collecting and analysing quantifiable data along with the qualitative data which would impact the outcomes of the research.

The research gaps identified from literature review along with the research aims and objectives led to the selection of the pragmatism philosophy since this philosophy enabled to adopt flexibility in data collection and analysis methods to achieve the research goals. Previous research revealed a number of issues such as impact of various socioeconomic aspects which might impact smoking habits of youth and the effectiveness of various interventions which can be undertaken to reduce the tobacco usage in the society. Pragmatic philosophy would enable the researcher to be open about the selection of data collection and analysis method without being bound to specific type (i.e., qualitative or quantitative) and thus would be able to probe into these complicated issues more effectively. Thus, the aim of pragmatic philosophy was to focus on achieving the research goals by any means (Kaushik and Walsh, 2019; Maarouf, 2019) leading to the success of the study. Replying solely on interpretivism or positivism would not enable the researcher to achieve the research objectives due to the complexity of the research issue.

The appropriateness of pragmatism philosophy is also base on its ability to allow flexibility and adaptability (Allemang et a., 2022). As compared to other two philosophies, interpretivism and positivism, pragmatism permitted the researcher to be open in the selection of data collection and analysis method without being bound to qualitative or quantitative approach. The choice of data collection was possible according to the need of each stage of the research (Ormerod, 2021). Since the research issue was considered to be dynamic as situation might be changing with time because of the interventions adopted by the government, the need to thoroughly understand the consumption trends, how these trends get affected by the government interventions and what is lacking in achieving the results was met through adopting pragmatism philosophy. The usefulness of a research philosophy is assessed by the extent to which it allows researcher to achieve research aims (Haffsa, 2019). Different data collection and analysis approaches can be combined under pragmatic philosophy which was considered effective for the present complicated research issue situations (Borges and Revez, 2019).

The justification of pragmatism is now explained by assessing its usefulness to meet each of the research objective. The first research objective developed for this study was to critically identify and examine the attitudes towards excised tax and non-excised tax tobacco products. A flexible approach was needed to was to critically identify and examine the attitudes towards excised tax and non-excised tax tobacco products since the attitudes would be complicated to assess. Pragmatic philosophy was suitable since it allowed the flexibility (Allemang et a., 2022) in terms of asking respondents open ended questions about their attitudes and develop a new question as and when need arose to be able to probe into their attitudes. The best available techniques would be possible by adopting pragmatic philosophy in order to meet the first research objective. The combined use of qualitative and quantitative data collection methods would allow to gather insights into quantifiable data on attitudes as well as qualitative data which would be more insightful. The combined use of qualitative methods such as interviews and quantitative method such as surveys would allow the researcher to gather varied types of data to critically identify and examine the attitudes towards excised tax and non-excised tax tobacco products. Thus, pragmatism would allow to meet the first research objective.

The second objective for this study was to critically evaluate and determine the changes amongst 18 to 25-year-old consumer attitudes to the usage of excised tax and non-excised tax tobacco products in the UAE. A mixed method approach allowed by pragmatism research philosophy (Shan, 2022) was considered appropriate for this study since varied methods of data collection and analysis could be used to evaluate changes in attitudes of young consumers of tobacco products. Studying changes in attitudes is complicated due to the number of ways people can express their attitudes. Thus, combining both quantitative and qualitative methods would enable the researcher to gain qualitative insights through consumer narratives and statistical and generalised insights through a structured research tool to get a complete picture of the change.

The third objective of this study was to investigate factors affecting the behaviour of 18 to 25-year-old consumers toward tobacco consumption after tax. Pragmatism was also considered appropriate to meet this research objective due to its ability to enable investigation of multifaceted changes in consumer usage, perception and attitudes through assessing various factors. Moreover, pragmatism allows to achieve practical applicability of research findings which is the key purpose of this research to reveal the impact of excise tax on usage, perception and attitudes of 18 to 25-

year-old tobacco consumers in UAE and the factors causing these changes. The changes in usage, perception, and attitudes were considered to be best assessed through a combination of qualitative and quantitative data collection and analysis methods to understand how the initiative of excise tax affected tobacco usage amongst 18 to 25-year-old tobacco consumers in UAE.

The fourth objective developed for this research was to generate from the findings for the Emirate government, a model to represent how attitudes and usage amongst 18 to 25-year-old consumers have changed towards excised tax and non-excised tax tobacco products in the UAE. Similar to previous research objectives, pragmatism was considered suitable to meet this research objective since the final model is expected to be of practical use which is the key aim for adopting pragmatism. Integrating qualitative and quantitative methods under pragmatism would allow the researcher to develop a model which has strong theoretical foundation as well as real-life practicality. By using qualitative approach would allow to gather previously unknown insights while quantitative approach would allow to quantify and generalise the attitudes and usage amongst 18 to 25-year-old consumers. When the both insights would be combined, the end model's reliability would be enhanced. The combination of qualitative and quantitative approach under the umbrella of pragmatism. The dynamic nature of changes in usage, perception and attitudes of 18 to 25-year-old consumers on excised tax and non-excised tax tobacco products in the UAE was thus expected to be assessed through pragmatism philosophy.

Another justification for adopting pragmatism philosophy was that it has been widely used in consumer behaviour researches (Heinonen and Strandvik, 2022; Majeed, 2019; Hiller and Woodall, 2019). Because of the complexity and dynamic nature of consumer behaviour, a flexible strategy is needed. Because pragmatism accepts both qualitative and quantitative approaches, researchers can fully comprehend the attitudes, preferences, and decision-making processes of consumers (Tanrikulu, 2021). Pragmatism responds to the practical concerns of businesses and governments looking for actionable insights in the always changing landscape of consumer behaviour by emphasizing the application of research findings to real-world circumstances (Pradeep and Pradeep, 2023). This way of thinking recognizes that research is only as valuable as it can be when it comes to solving real-world problems in the consumer market.

3.3 Research approach

Since the study adopted pragmatism philosophy, the research approach was needed to be selected in alignment with the selected philosophy. Three key approaches are assessed i.e., deductive approach, inductive approach and abductive approach. Deductive approach aligns with positivism philosophy and supports quantitative method of data collection and analysis (Casula et al., 2021). When adopting deduction, the research process begins with gathering already available research, literature and theories and formulating hypotheses which are then tested and validated on specific context to assess the applicability of existing knowledge on specific contexts (Sturgis, 2020). The role of existing research and literature is thus very important and these inform the research process in the form of hypotheses development and testing.

On the contrary, no existing theories and literature guide the research when inductive approach is adopted. The research based on inductive approach remains unrestricted in terms of guidance from existing research and thus interpretivism philosophy supports inductive approach in terms of collecting qualitative data to reveal multiple realities (Gupta et al., 2022). The research is not based on hypotheses development and testing and the researcher is allowed to remain open in collecting data without any limitations as long as the research objectives are achieved theories (Hoiruddin and Urfa, 2020). Inductive approach does not involve testing and validating hypotheses and thus scientific methods of data collection are not applied. However, insightful data is analysed to develop new theory.

Abduction is an explanatory reasoning that uses inference to develop theory. The best answer is reached by using abduction to connect the dots in the data (Vila-Henninger et al., 2024). This procedure is essential to grounded theory and is widely used in daily life. Abduction is a valuable method for researchers to find fresh information. To allude to the abductive process, one uses the term theoretical coding. In contrast to other research techniques that pinpoint and characterise themes, abduction (via theoretical coding) advances grounded theory by generating comprehensive hypotheses that are both abstract and explicative (Hurley et al., 2021). Abductive approach allows researchers to collect and analyse data and infer the meaning which explains the case in the best manner.

After assessing different approaches (induction, deduction and abduction), abduction was considered appropriate for the study. The inductive method's focus on developing theories from observations makes it limited for the present study since existing theories are not assessed and hypotheses are not developed and tested. This approach would preclude the study from testing or verifying known hypotheses about the attitudes and actions of consumers, even while it would enable the discovery of new patterns and insights if inducive approach is adopted. An inductive approach can ignore significant theoretical linkages that could improve the knowledge of the attitudes towards excised and non-excised tobacco products being investigated in this research. Furthermore, inferences collected through qualitative research that are very context-specific are not based on deeper theoretical understanding.

On the other hand, this research also not benefit from a deductive approach. In deductive approach, existing theories and hypotheses are guide the research and are tested against gathered data on specific context. This can be restrictive for investigating changing and dynamic consumer view. Although developing and testing hypotheses is useful for validating existing theories, new theories are not developed when deductive approach is adopted. Since consumer behaviour is changing quickly, particularly among 18 to 25-year-olds in the UAE. a deductive approach can limit the opportunity to examine new patterns and behaviours in this research. It would also make it more difficult for the research to infer new insights required to investigate the attitudes of tobacco users in this study.

The abduction approach, which alternates between induction and deduction, provides strong support for the present research's use of a pragmatic philosophy. By transforming observations into theories and assessing them through action, pragmatism's focus on abductive reasoning makes the relationship between theory and evidence easier to understand (Sans Pinillos and Estany, 2023). When inductive goals of qualitative approaches are guided by deductive conclusions from quantitative approaches, and vice versa, this is consistent with researchers using both qualitative and quantitative methodologies as and when needed. Since pragmatism allows researchers to be flexible in choosing research methods with the aim of achieving research objectives, switching between qualitative and quantitative research methods is possible as and when need arise (King, 2022). Two different kinds of data can thus be amalgamated using this approach.

The appropriateness of abduction approach in achieving research objectives of this research is assessed to justify its selection. The first research objective was to critically identify and examine the attitudes towards excised tax and non-excised tax tobacco products. The flexibility allowed through abduction enabled the researcher to explore new themes and patterns without limiting the investigation to test the existing researches (Paavola, 2021). Since attitudes towards excised tax and non-excised tax tobacco products can be complex, keeping investigation bound through existing research would have limited the outcomes of the research. Abduction enabled to achieve the flexibility in data collection and analysis in achieving this research objective.

The second objective for this study was to critically evaluate and determine the changes amongst 18 to 25-year-old consumer attitudes to the usage of excised tax and non-excised tax tobacco products in the UAE. The dynamism of consumer attitudes (Muurinen and Satka, 2020) to the usage of excised tax and non-excised tax tobacco was considered to be best investigated by adopting abduction since it would not allow to use existing literature as a guide and be restricted in probing the consumer attitudes. The flexibility however is allowed by allowing the researcher to review the changing attitudes through inductive analysis and analysing existing theories deductively to explain these changes. A complete picture can thus be achieved by understanding the changes and what caused these changes meeting this research objective.

The third objective of this study was to investigate factors affecting the behaviour of 18 to 25-year-old consumers toward tobacco consumption after tax. The factors causing changes in behaviour were expected to be multifaceted which required a flexible and unrestricted approach to probing allowed by abduction (Bellucci, 2023). Combination of qualitative and quantitative data allow narrative and insightful qualitative data to support quantifiable data to give a complete picture of the factors affecting the behaviour of 18 to 25-year-old consumers on excised tax and non-excised tax tobacco products in the UAE. Relying solely on testing the pre-developed hypotheses would limit the researcher to reveal previously unknown themes in factors affecting the behaviour which is explained in detail through inductive methods. On the other hand, not using existing theories as guidance would restrict to explain the factors. Abduction allows amalgamation of both approaches and thus allowed to achieve this research objectives.

The fourth objective developed for this research was to generate from the findings for the Emirate government, a model to represent how attitudes and usage amongst 18 to 25-year-old consumers have changed towards excised tax and non-excised tax tobacco products in the UAE. Abduction allowed the researcher to collect and analyse varied data and develop a reliable model which is based on real-life context. The constant movement between induction and deduction as and when needed under the umbrella of abduction allowed to remain flexible and develop a comprehensive model representing how attitudes and usage amongst 18 to 25-year-old consumers have changed towards excised tax and non-excised tax tobacco products in the UAE.

Another justification for adopting abduction was that it has been widely used in consumer behaviour research (Heinonen and Strandvik, 2022; Majeed, 2019; Hiller and Woodall, 2019). Probing the research issue at hand through abduction allowed the researcher to utilise qualitative as well as quantitative data and thus explore the consumer attitudes and usage patterns by using varied data sources and adopting flexibility. The dynamic concept of consumer attitude and usage was thus believed to be best explored through abduction.

3.4 Research method

After deciding on the research philosophy and research approach, the research method was needed to be decided. The adoption of pragmatism and abduction did not bound the researcher to select specific research method and opened up the possibilities for the researcher to decide on any research method considered appropriate to address the research objectives (Sans Pinillos and Estany, 2023; Kaushik and Walsh, 2019; Maarouf, 2019). Since research methods are broadly categorised into two categories i.e., quantitative and qualitative, the researcher had the opportunity to choose one or both for the present research.

Quantitative method of data collection and analysis involves collecting numerical data through methods like survey, polls and observation. Quantitative method aligns with positivism research philosophy and deductive research approach and support investigation of social issues through scientific methods (Mohajan, 2020). Structured research instrument such as survey questionnaires allow to gather standardised data which are analysed statistically to achieve a generalised picture about the research population. Quantitative method of data collection aligns with positivism since quantitative methods are grounded in the belief that reality can be measured objectively. Positivism

insists observing and measuring the social phenomenon and insists that knowledge is derived from empirical data, which can be quantified and analysed (Jain, 2021). Quantitative method is suitable when the hypotheses is developed and tested by collecting statistical data. The existing literature is thus tested for the specific context through the quantifiable data collected and analysed statistically.

The other method of data collection and analysis is qualitative which is when the non-numerical data is collected and analysed through methods such as interviews, focus groups, and observations. The adoption of qualitative method is based on interpretivism philosophy and induction approach which requires collection of insightful and non-numerical data to probe the social issue (Lobe et al., 2020). Research tools which allow flexibility in collecting data such as interview guide support the collection of insightful data which help in revealing previously unknown themes and patterns. Quantitative research tools such as structured survey does not allow to gather insightful data as numerical data is collected through quantitative methods. Interpretivism insists on acknowledging multiple realities and qualitative method supports this notion by allowing each respondent to convey their own opinions which is individually assessed and incorporated into the research (Alam, 2021).

The sole adoption of quantitative method of data collection and analysis would not be suitable for this research. Quantitative method does not allow to capture individual opinions and thus is limited in collecting varied perspectives. Complex social issues are known to be well-understood through qualitative methods since all possible aspects can be identified through methods such as interview, focus groups and observation. Quantitative methods lack in collecting deeper insights into social issues. Standardised research tools require respondents to be limited in conveying their opinions and perceptions which restricts the researcher in revealing new themes which were unknown when developing the quantitative research instrument. The complicated patterns under the change in usage and attitudes of young people regarding tobacco usage was thus not appropriately measured through only quantitative methods.

Likewise, the adoption of only qualitative method is also not capable of meeting the research objectives effectively. Qualitative research is very context-specific and provide in-depth meaning of specific context. These methods may not offer the statistical validity and reliability needed to

identify patterns or trends across a large group of consumers. With the lack of quantitative data and its analysis, the research would not be able to demonstrate the prevalence of certain attitudes or behaviours. Moreover, the research could face challenges in validating the findings across different demographic groups.

The selection of pragmatism research philosophy and abduction research approach allowed the researcher to use multiple methods of data collection and analysis with the aim of meeting the research objectives. This along with the inherent weaknesses of qualitative and quantitative method encouraged the researcher to opt for combination of qualitative and quantitative methods so that their weaknesses can be compensation. A number of reasons justify the selection of mixed method methodology for this research. The combination of qualitative and quantitative methods supports pragmatism philosophy and abduction approach. This helped the researcher to manage the complex attitudinal and usage (A & U) trends regarding excised tobacco products among 18 to 25-year-old consumers in the UAE (Mukumbang, 2023). The ability to be practical in choosing data collection and analysis methods is insisted by pragmatism with the aim of meeting research questions (Kelly and Cordeiro, 2020). This guided the researcher to integrate qualitative and quantitative methods for better practicality in alignment with the research questions (Wang et al., 2023). Real-life problems, their investigation and solution are supported by pragmatism through selection of any method which best suits the research. Since the change in usage and attitudes were being investigated as a result of levying the excise tax on tobacco products in UAE, the selection of data collection methods which would be practical, flexible and would allow to dig deeper into the issue was imperative for this research (Andreotta et al., 2019). Quantitative method allowed to generalise the usage and attitudes while qualitative method allowed to reveal previously unknown themes.

The selection of abduction also guided the adoption of mixed method methodology for this research. Moving back and forth between induction and deduction allowed for flexibility and practicality until the research objectives are fully met (Park et al., 2020b). By not limiting to existing theories and literature, the researcher was able to probe the respondents allowing them to reveal whatever they want to reveal the information regarding their attitudes and change in attitudes. By collecting statistical data, the generalisation was made possible to get the complete picture in terms of numbers. The triangulation was made possible through the combination of

qualitative and quantitative methods enhancing the reliability (Sahin and Ozturk, 2019). The depth and new aspects revelation possible through qualitative data and the generalisation and objectivity through quantitative data together could allow the researcher to achieve the research objectives successfully through abduction approach (Proudfoot, 2023). Thus, mixed method was an appropriate method considered for this study.

The justification of mixed method methodology is now explained by assessing its usefulness to meet each of the research objective. The first research objective developed for this study was to critically identify and examine the attitudes towards excised tax and non-excised tax tobacco products. Qualitative method allowed to gather in-depth data on the consumer attitudes and the reasons of these attitudes as the extensive data collected through respondents revealed aspects which were already known as well as previously unknown aspects (Anastasiadou et al., 2020). This helped to assess the attitudes towards excised tax and non-excised tax tobacco products subjectively. The quantitative method on the other hand allowed the researcher to quantify these attitudes and analysing these through statistical methods to attain a generalised picture (Li et al., 2019).

The second objective for this study was to critically evaluate and determine the changes amongst 18 to 25-year-old consumer attitudes to the usage of excised tax and non-excised tax tobacco products in the UAE. Since investigating changing attitudes can be complex, qualitative methods allowed flexibility and unrestricted approach to probe respondents without limiting them to convey what they wanted to. This helped to provide specific context to their responses (Cakranegara et al., 2022). The changes in attitudes could be measured statistically through quantitative methods allowing to generalise these changes and gain a bigger picture otherwise not possible through adopting only qualitative method (Abuhashesh et a., 2021).

The third objective of this study was to investigate factors affecting the behaviour of 18 to 25-year-old consumers toward tobacco consumption after tax. Probing deep through open-ended interview questions allowed to uncover the factors affecting the behaviour as well as the reasons of these changes. Quantifying these incidences of these factors was considered useful through quantitative methods since this would allow generalisation of the factors affecting the behaviour

and allow to have a broader picture when considered with the insights revealed through the qualitative data. Thus, third objective would be met through mixed method.

The fourth objective developed for this research was to generate from the findings for the Emirate government, a model to represent how attitudes and usage amongst 18 to 25-year-old consumers have changed towards excised tax and non-excised tax tobacco products in the UAE. Combining qualitative as well as quantitative methods allowed to reveal previously unknown aspects in changes in usage and attitudes of 18 to 25-year-old consumers as well as quantify these changes in terms of statistical analysis. This helped to develop a reliable model which is of practical value.

Another justification for adopting mixed method methodology was that it has been widely used in consumer behaviour researches (Shi et al., 2021; Ulker-Demirel and Ciftci, 2020; Pilgrim and Bohnet-Joschko, 2019). Insightful data collected through qualitative methods is considered useful to investigate the multifaceted nature of the area of consumer behaviour since pre-identified aspects investigated through quantitative methods can limit the research outcomes. On the other hand, quantitative methods would allow to quantify the changes in consumer attitudes. Qualitative research can reveal aspects of culture, society, or psychology that quantitative measurements might be unable to record. Researchers can gather data from a bigger sample using quantitative approaches, which facilitates statistical analysis and the extrapolation of findings to a larger population. This is essential to comprehending patterns and trends and forecasting customer behaviour on a broader scale. Additionally, systematic data collecting, and thorough statistical analysis are made possible by quantitative research, which improves the validity and dependability of study findings. Establishing the generalizability and veracity of the results depends on this. It is thus justified that combining the two methods offers a comprehensive understanding of consumer behaviour. Quantitative measures are developed using qualitative insights, while qualitative discoveries are validated and made more broadly using quantitative data.

3.5 Data collection strategy

The study is classified as exploratory research since it investigates research questions that have not previously been studied in depth and hence the research philosophy (pragmatism), research approach (abduction) and research methods (combination of qualitative and quantitative) were selected and justified. Since pragmatism allowed the Researcher to adopt flexibility in data

collection, the current state of knowledge in the area of consumer behaviour related to excised and non-excised tobacco use in UAE led to the selection of sequential mixed methodology for the present research. A significant gap in research within the literature on the attitudes and utilization of non-excised and excised tobacco products pertains to enhancing the efficacy of tobacco control interventions in the UAE, as identified by the researcher (Erinoso et al., 2021). Recognizing the potential for improvement, it has been highlighted that the impact of interventions can be optimized through future research, addressing diverse aspects such as increasing demand, expanding reach, improving distribution, ensuring quality, fostering sustainability, and enhancing the implementation of evidence-based and effective treatments for tobacco use among young adults. Similarly, investigating effective strategies to diminish tobacco usage in young adults is crucial, given their susceptibility during crucial developmental stages in terms of tobacco initiation and dependence. Thus, a need was identified to conduct qualitative research first in order to identify key themes in the area and then conduct quantitative research for enhanced triangulation of the data (Othman et al., 2020).

As the investigation into tobacco use in the UAE is in its nascent stages, this study primarily adopted an exploratory sequential mixed methods design that integrates both qualitative and quantitative approaches through triangulation. Regarding the selection of the data collection methods, the Researcher assessed the research gap and research objectives, and exploratory sequential design was selected out of suggested four primary mixed method designs, including (1) the convergent parallel design, (2) the explanatory sequential design, (3) exploratory sequential design, and (4) the embedded design (Creswell and Clark, 2011). The method is justified since Achterberg (1988) confirmed that a qualitative approach should come before quantitative methods to facilitate the collection of detailed information and the development of more targeted, specific quantitative procedures. The choice of combination was guided by research objectives and the specific context. Since the researcher anticipated that findings from one method (either qualitative or quantitative) will inform a subsequent study (either quantitative or qualitative), then a sequential approach is recommended by Creswell (2003).

The reasons for conducting qualitative research first are many. Conducting qualitative research first and developing the survey instrument on the basis of the qualitative data would further enhance the reliability of the survey data. Since the research issue is based on unveiling the

complex attitudes of 18–25-year-olds toward excised and non-excised tobacco products in the UAE, qualitative research through semi-structured interviews allowed the researcher to remain open about revealing newer aspects which are not identified in any previous research. Open-ended questions guide which was developed before-hand helped the researcher to navigate the interview process while also allowing flexibility to develop and ask new questions if needed. Government officials working in excise tax department are a good source of information about the impact of excise tax on consumer attitudes and usage through official statistics and public feedback. Probing these officials through semi-structured interviews would be more beneficial in terms of collecting insightful data as compared to other methods such as structured survey.

Exploratory sequential mixed method (qualitative research followed by quantitative research) is justified for the present study since a number of consumer behaviour research were found to adopt similar research design such as Bouteraa et al. (2023), Del Chiappa et al. (2021) and Karell and Niinimäk (2020). The exploratory sequential mixed methods design initiated with a qualitative phase, encompassing the gathering and examination of qualitative data (Utami et al., 2021). Within this qualitative phase, diverse methods such as interviews, grounded theory, case studies, or thematic content analysis may be employed. The outcomes from this phase serve as a foundation for, or contribute to, the ensuing quantitative phase, which may encompass survey administration or other forms of quantitative data collection (Dawadi et al., 2021; Teddlie & Tashakkori 2008; Onwuegbuzie et al. 2010; Creswell & Plano Clark 2011).

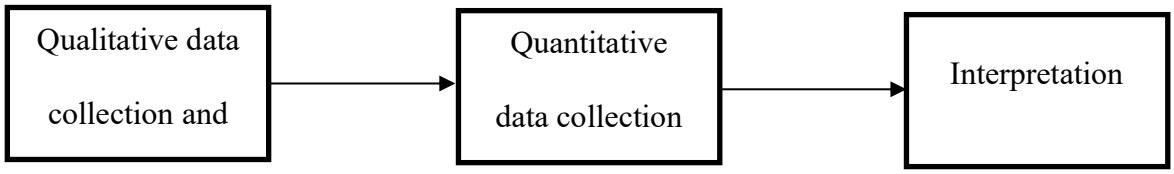


Figure 3.1 Exploratory research method

Since the study aimed to gather data on consumer attitudes towards excised tax and non-excised tax tobacco products in UAE, it was considered appropriate to first collect in-depth and insightful

data from government officials responsible for excise duty of tobacco products in UAE to identify the themes which were then planned to be used to develop the quantitative research instrument. Undertaking qualitative data collection and analysis first in this study is important because it provides a foundational understanding of the complex social issue of consumer attitudes towards excised and non-excised tobacco products in the UAE. Conducting qualitative research before quantitative research is also beneficial because this is a relatively unexplored area. As the topic has not been vastly investigated before, starting with qualitative data collection and analysis allows the researcher to explore and identify key themes, patterns, and insights that are previously unknown. Conducting qualitative research first was considered appropriate since it would allow to uncover previously unknown aspects of consumer behaviour which might not be already known from the existing research. This would help to utilise these new aspects to develop a more reliable and valid research tool for the quantitative research.

A number of qualitative methods are available such as interviews, focus groups and observation which allow to gather in-depth and extensive data regarding a social issue. These methods provide flexibility to the research participants to reveal whatever they want without being restricted through methods like close ended questions or polls. The researcher is also capable to dig deeper and unearth the issues to collect rich data which are not possible through other methods such as surveys and polls. When the qualitative method was planned to be conducted first, it was expected that the researcher would be able to find all possible aspects through qualitative research by allowing the participants to convey information based on their individual experiences, perceptions and knowledge. The quantitative research tool was thus developed to be based on real-world insights enhancing its reliability and validity. Another option would be to first conduct quantitative research based on the existing literature. Although extensive and insightful, existing research lack the contextual aspects required in relation to studying the consumer attitudes of 18–25-year-old tobacco users in the UAE. This option was thus not opted. Developing quantitative research instrument based on qualitative research ensured that the statistically significant data would be gathered from the quantitative research. Thus, the integration of qualitative and quantitative methods helped to enhance the quality of the data gathered for this research resulting in dependable research findings.

Once the sequence of the data collection was decided i.e., qualitative data to be collected and analysed before conducting quantitative research, the next decision was to decide on the methods of data collection. Out of available qualitative methods, semi-structured interviews were deemed suitable for the present study. Government officials responsible for excise tax in UAE were considered as suitable population to reveal information on the changes being observed in the attitudes and usage of 18–25-year-old regarding tobacco usage. Semi-structured interviews were opted since they allowed the researcher to probe research participants in a particular direction using a pre-developed research guide. The semi-structured interviews also allowed the research participants to convey their thoughts, opinions, views, perceptions, and experiences without any restrictions (Brown and Danaher, 2019). The flexibility of this method is terms of probing the respondents allowed to gather new insights (Ruslin et al., 2022). Focus groups on the other hand would lack the capability to allow individual participants to reveal their opinions in unrestricted manner (Dodds and Hess, 2022). Observations would also not be feasible for gathering data since consumer attitudes observation would not be possible and observing government officials would not be useful. Moreover, it was considered difficult to arrange focus group discussions and observation to collect data from government officials due to the nature of their work and work schedules and hence selection of semi-structured interviews was justified.

For the quantitative research, a number of options was available to Researcher such as survey, polls, experiments and observations. Data collected and analysed from semi-structured interviews with government officials contributed towards qualitative insights and nuances that could inform the design of survey questions. Surveys were expected to leverage the rich qualitative findings to create well-informed quantitative measures that align with the critical aspects found during interviews (Chiarini and Kumar, 2022). Another option for gathering quantitative data was poll. It was not deemed suitable for the present study as short and direct questions could only be used to gather quick responses from the respondents limiting further depth possible through a structured survey. Likewise, observation could also not be opted since it would not be feasible to observe and record the attitudes, behaviour and usage patterns of 18–25-year-old with regards to tobacco use making it resource intensive (Swiezy et al., 2021). Structured surveys were considered appropriate due to their ability to gather data from a large sample and achieve generalised findings through statistical analysis.

Using the insights collecting from the interviews with government officials to develop structured survey instrument was considered to be an appropriate strategy. Developing survey questions require key information to be asked to the respondents. The themes and patterns identified through the interviews can be transformed into specific questions for the survey. This would ensure that the quantitative research is grounded in real-world insights and is focused on validating the key findings from the qualitative phase. In short, starting with semi-structured interviews provide a strong qualitative basis that enhances the overall validity and relevance of the research. The themes identified through the interviews were used to develop survey questionnaire. This approach ensures that the next quantitative research phase is contextually appropriate and more likely to infer meaningful and actionable results.

The chosen methodology is assessed below with regards to its alignment with the research questions:

Research question	**Link of the methodology with research question**
RQ 1. What is the attitude of youth towards levying excise on tobacco products over time?	Semi-structured interviews with government officials provided in-depth insights into the historical context, changes, and factors influencing youth attitudes towards excise on tobacco products. The findings from interviews informed the development of a survey, capturing a broader perspective on youth attitudes over time.
RQ 2. How does excised tobacco products influence the attitude of youth towards tobacco products?	Semi-structured interviews explored the nuanced impact of excised tobacco products on youth attitudes, offering rich qualitative data as noted by government officials responsible for tobacco tax decisions. A survey quantified and generalize the identified influences, providing a comprehensive understanding.
RQ 3. What are the factors affecting the behaviour of 18 to 25-year-old	Semi-structured interviews with officials shed light on Factors affecting the changes in behaviour. The survey,

consumers toward tobacco consumption after tax?	informed by qualitative insights, quantitatively helped to identify the factors.
RQ 4. How does excised tobacco products influence the usage pattern of youth towards tobacco products?	Semi-structured interviews uncovered factors influencing youth usage patterns, offering qualitative insights as perceived by officials. The survey quantified these influences, allowing for statistical analysis and generalizability.

Table 3.1 Assessment of methodology chosen

It can be seen that the research methodology supports the investigation of the developed research questions. This ensures that a comprehensive investigation of youth attitudes and usage patterns related to excised tobacco products is undertaken through the adopted methodology. In order to answer the research question 1, semi-structured interviews with government officials helped to gather information about the history of excise tax in UAE and how these attitudes changed over time. The Likert scale questions regarding youth attitudes were then developed which consisted of the statements on attitudes found from the interviews. To find the answer to research question 2, the data related to the role of excise tax in changing attitudes was gathered through interviews with government officials. This helped to develop related Likert scale statements for the survey. The data related to youth usage pattern over time was gathered through interviews to answer research question 3 and then the resulted themes were used to developed the relevant section in the survey questionnaire. This ensured a robust analysis over time. Lastly, for RQ 4, the interviews helped uncover factors that influence youth usage patterns, with officials. This provided qualitative insights into these dynamics. The subsequent survey quantified these influences. This allowed for statistical analysis and enabled the generalisation of the findings to a broader population. This approach ensured that the research was thorough and well-grounded in both qualitative and quantitative data.

3.6 Data collection process

Since the research is exploratory sequential mixed method research, the first step was to develop interview questions. As the area is underexplored, it was considered helpful to interview

government officials responsible for excise duty of tobacco products in UAE to gather data, analyse it, identify key themes, use these to develop survey instrument and gather quantitative data for triangulation of data.

3.6.1 Research context

Numerous efforts have been made all over the world to discourage the use of tobacco products by discouraging their use and penalising the use of such items by excising them from the market, hence earning tax income. Consumers, the government, and other parties connected to the phenomena continue to confront difficulties, nevertheless. The unfavourable views towards tobacco products and their adverse impacts on usage persist as challenges. This study aims to understand and investigate how different segment groups respond to tobacco control interventions and conditions to change attitudes and consumption of tobacco products. Specifically, young adults, or those between the ages of 18 and 25, and the government, or the general public, from the perspectives of health and revenue, will be the focus of this investigation.

Consumers pay greater prices for tobacco goods as a result of various tobacco taxes being passed on to them. One of the most successful population-based methods for lowering tobacco use and its harmful health effects is taxing such habits and the addicting behaviour that results from using such goods (WHO, 2008). According to research, the typical adult population in high-income nations would see a 4% decrease in cigarette consumption for every 10% rise in pack price (Jha & Chaloupka, 2000). Taxes on tobacco products have an indirect positive effect on those who give up because they lower tobacco use generally and make other smokers more cautious about how much they smoke. Tax increases benefit non-consumers as well since they lessen the exposure to passive smoking. However, little is known about how taxes, or excise, affect particular demographics, such young adults, particularly in the UAE, and how this affects their views and behaviour as customers. With the belief that "good solutions to complex problems draw upon both science and experience," the Better Practices Model (Moyer et al., 2004) offers a framework for integrating varied but complementary information sources that can result in enhanced understanding. This approach is what the study will theoretically and practically adopt.

Despite widespread public knowledge of the health risks, "Young Adults" (18–25 years old) continued to smoke at high rates despite the use of tobacco products appearing to be high and on

rise (Bader et al., 2007). This made this age group to be chosen for this study. According to Tercyak et al. (2007), there is a risk of tobacco use in this age group during their developmental stage, both for starting use and moving up to greater levels. Young adults have been predictive of smoking in later adulthood, as smoking tobacco products are observed to make up a higher proportion among the range of products.

Consisting of seven emirates, the UAE is a developing nation having strategic location and importance for other countries. According to the UAE-I&S (2022), the country's population is 10.08 million as of the year 2022. Out of this population, 1.86 million, or 10.77%, were young adults in the 18–25 age range. According to Al-Houqani et al. (2012) and Hajat et al. (2012), tobacco consumption among people in UAE is about 24% for males and significantly lower for women (0.8%).

Tobacco products are categorised as "harmful products" by the UAE, and as such, an excise tax was imposed nationwide in 2017 as an indirect tax on certain goods that are generally harmful to the environment or human health. Tobacco products include all items listed in Schedule 24 of the GCC Common Customs Tariff, and as of December 1, 2017, electronic smoking devices and tools are also subject to the excise tax. For both tobacco goods and electronic smoking devices, the excise tax rate is 100%. Excise taxes are levied in an effort to decrease the use of unhealthy and hazardous goods while simultaneously increasing government revenue that may be allocated to the provision of beneficial public services. Goods that are detrimental to the environment or human health will cost more to consumers. According to UAE Federal Decree Law No. 7 of 2017 on Excise Tax, businesses involved in the following activities must register for excise tax: importing excise goods into the UAE; producing excise goods where they are marketed and distributed for consumption in the country; stockpiling excise goods in the UAE in certain circumstances; and anyone in charge of managing an excise warehouse or designated zone, such as a warehouse keeper.

Since imposing of excise tax led the manufacturers in UAE to pass on the increase cost to the consumers in the form of increase prices, this has resulted in increased pricing of tobacco products across the country since October 2017. Thus, the impact of excise tax on tobacco users in the country has been expected.

3.6.2 Interview instrument development

The interview questions were developed for government officials responsible for excise duty of tobacco products in UAE with the help of research questions developed for the study to ensure that targeted data is collected through the interviews which was then to be used for survey research instrument. Table 3.2 presents the alignment of research question with interview questions.

The first research question developed for the study was "What is the attitude of youth towards levying excise on tobacco products over time?" Two interview questions were developed to gather data related to this research question. These questions aimed to gather historical and contextual information regarding the implementation of excise duties on tobacco products. Moreover, they aimed to reveal the government officials' perceptions regarding youth attitudes towards excise tax over time.

The second research question was "How does excised tobacco products influence the attitude of youth towards tobacco products?" Two interview questions corresponded to this research question. One question attempted to reveal how excise tax affected the young people attitudes towards tobacco products. The other question aimed to know how government interacted with people regarding excise tax on tobacco products.

The third research question for this research was "What are the factors affecting the behaviour of 18 to 25-year-old consumers toward tobacco consumption after tax?" One interview question was developed to address this research question which sought to gather information on trends and patterns in the usage of excised tobacco products among young adults over time, providing insights into the behavioural aspects of youth and the factors causing the behavioural change

The fourth research question developed for the study was "How does excised tobacco products influence the usage pattern of youth towards tobacco products?" Two questions were developed which delved into the assessment of the effectiveness of excise taxes on overall usage patterns among the youth. The second question aims to capture recommendations and lessons learned based on the experience of government officials in overseeing excise duties, particularly focusing on youth engagement and behaviour.

Research question	Interview question
RQ 1. What is the attitude of youth towards levying excise on tobacco products over time?	Can you provide insights into the historical context and reasons behind the implementation of excise duties on tobacco products in the UAE?
	How have government officials perceived the attitude of youth towards levying excise on tobacco products over time?
RQ 2. How does excised tobacco products influence the attitude of youth towards tobacco products?	In your view, what factors contribute to the changing attitudes of youth towards tobacco products in the context of excise taxes?
	In your interactions with the public, have you noticed any shifts in perceptions or attitudes of young individuals towards excise taxes on tobacco products?
RQ 3. What are the factors affecting the behaviour of 18 to 25-year-old consumers toward tobacco consumption after tax?	Could you discuss any observed trends or patterns in the usage of excised tobacco products among young adults in the UAE over time?
RQ 4. How does excised tobacco products influence the usage pattern of youth towards tobacco products?	How do government officials assess the effectiveness of excise taxes in influencing the overall usage patterns of tobacco products among the youth population?
	What recommendations or lessons learned would you offer based on your experience in overseeing excise duties on tobacco products, particularly concerning youth engagement and behaviour?

Table 3.2 Interview questions and their link with research questions

3.6.3 Interview protocol

A structured interview guide was employed to facilitate the interview process, enabling the researcher to capture the central objectives of the study while maintaining the flexibility to delve into emerging themes. Despite the option of video interviews, face-to-face interviews were chosen based on participants' individual preferences. Prior to the interviews, participants were provided with a Participant Information Sheet and Consent Form, seeking their explicit consent. Detailed information about the recording of the interview and the utilization of the data in the study was conveyed to the participants. The interviews were conducted in English since all the interview respondents preferred this language. The interviews, each lasting approximately one hour, aimed to elicit comprehensive responses from the participants. The interviews were recorded to be analysed later for the study.

3.6.4 Survey instrument development

The data gathered from the interview was analysed through thematic analysis and led to the identification of key themes which were used to develop the survey instrument. The survey instrument was designed to gather comprehensive insights into the attitudes, perceptions, and behaviours of young adults (18 to 25 years old) in the UAE regarding the levying of excise on tobacco products. The questionnaire is structured into five sections, each focusing on specific aspects related to the participants' demographic information, attitudes toward excise on tobacco products, the influence of excised tobacco products on their attitudes, their usage patterns over time, and the impact of excised tobacco products on their usage patterns. The questionnaire started with a cover letter which also presented as a consent form explaining the aim of the research, why were they selected for the research, what sections were included in the questionnaire and asking their consent.

The first section captures essential demographic details such as name, position, gender, age, nationality, education level, and the participant's relationship with tobacco products (past users, present users, or non-users). In the second section, Participants are asked to convey about their attitude of youth towards levying excise on tobacco products over time. They were asked to rate their agreement on statements related to awareness, understanding, acceptance of excise, fairness, and the role of government communication on a Likert scale. This section aims to gauge the

participants' perspectives on the implementation of excise on tobacco. The third section of the questionnaire assessed the participants' views under the theme influence of excised tobacco products on the attitude of youth towards tobacco products. They were asked to rate the cost impact, health impact, and their efforts to quit tobacco consumption due to excise. It aims to understand the psychological and behavioural impact of excise policies on young adults.

Fourth section of the questionnaire contained statements related to young people usage pattern of tobacco products over time. As time passed, the attitudes might have changed resulting in their usage of tobacco products through reduced consumption or even quitting. The role of social pressure as a motivation of quitting is also investigated as revealed from an important aspect from qualitative research. The last section of the questionnaire aimed to assess the influence of excised tobacco products on the usage pattern of youth towards tobacco products. Behavioural influence, accessibility, availability, and alternative choices were reviewed to understand the impact of excise tax on these aspects.

The questionnaire is mainly based on Likert scale statements which are asked to be rated on an agreement scale ranging from "Strongly Disagree" to "Strongly Agree." A 5-point Likert scale was selected since utilizing a 5-point scale reduces obstacles to understanding and increases the likelihood that respondents who are not experts in the field will accurately convey their genuine opinions on a given topic (Taherdost, 2019).

3.6.5 Survey protocol

To ensure accessibility and convenience, the survey questionnaire, previously developed, was administered through a secure online platform. The online platform was used to upload the questionnaire and the survey link was distributed amongst potential respondent encompassing both genders and the diverse population mix of local residents/nationals and expatriates. Respondents were categorized into three distinct sets based on their tobacco usage history: past users who have stopped, present users, and non-users. Ethical considerations, including informed consent, anonymity, and voluntary participation, were emphasized throughout the survey process. The respondents were asked to visit the link and fill the questionnaire which ensured their anonymity and privacy.

3.7 Sampling

The research population comprises two main groups: government officials responsible for excise duty on tobacco products for collecting data through interviews and young adults (18 to 25 years old) residing in the UAE for collecting data through surveys.

For qualitative research consisting of semi structured interviews, the research population was decided to be government officials responsible for excise duty on tobacco products. This population was chosen since these are the policymakers and enforcers having first-hand information on the role of excise tax in reducing tobacco usage and the change in consumer attitudes. The sampling technique was selected was purposive sampling since it allowed to select research participants on the basis of their role and position related to excise tax. Snowball sampling method was also used in which the research participants were asked to refer other people for the interviews on the basis of their expertise and knowledge in this area. These sampling techniques helped to select most appropriate people for the interview who could provide useful insights regarding consumer attitudes related to tobacco excise tax (Bakkalbasioglu, 2020; Campbell et al., 2020). No age and gender limit were imposed to keep the sample diverse. The sampling size expected was around 15 in order to achieve saturation point (the point where no new information was being collected).

The survey research was planned to be conducted with consumers. Since the research is based on studying the consumer attitudes of young adults aged 18 to 25 years residing in the UAE, this age group was considered as the research population. The respondents were divided into three groups: (i) Past users of tobacco who have stopped using the product, (ii) Present users of tobacco who continue to use the product (iii) non-users of tobacco products. The sampling technique for the survey involves random sampling. This technique ensures a mix of participants (Iliyasu and Etikan, 2021) based on gender, awareness levels, and population distribution (local residents/nationals and expatriates). This technique ensured that each subgroup (gender, awareness levels, population mix) is proportionally represented. It helped in mitigating gender bias and ensures diversity in the sample and findings could be generalized to the broader population of young adults in the UAE. Random sampling enabled the researcher to gather diverse perspectives from young adults, allowing for a comprehensive examination of attitudes and behaviours toward tobacco products. It facilitated a nuanced analysis across subgroups, addressing the objective to understand the

impact of excised tobacco products on different user categories (Bhardwaj, 2019). The sample size was planned to be 100 for each sub-group.

Table 3.3 provides the justification of the selection of respondent group and the number of respondents planned initially for this research.

Participant Group	***Number of Participants***	***Contribution expected from the participants for the study and justification of their selection***
Government employees	20	Government employees provided insights into the development and implementation of excise policies on tobacco products. They are aware of the consumer behaviour and attitudes since these are used in policy decision making. Their perspectives are crucial for understanding the regulatory framework, enforcement strategies, and the rationale behind excise decisions.
Young adults (18-25 years) residing in UAE – Past users of tobacco who have stopped using the product	100	This group contributed by sharing their experiences and reasons for quitting tobacco use. Their insights will help explore the factors that influenced their decision to stop using tobacco and how excise policies may have played a role.
Young adults (18-25 years) residing in UAE – Present	100	Present users offered valuable information on their current attitudes toward excise on tobacco products, shedding light on how such policies impact their behaviour, perception,

users of tobacco who continue to use the product.		and consumption patterns.
Young adults (18-25 years) residing in UAE – Non-users of tobacco products.	100	Non-users contributed by providing a baseline perspective on their attitudes toward tobacco and excise policies. Understanding the views of those who have never used tobacco is essential for a comprehensive analysis of youth attitudes over time.

Table 3.3 Participants groups and their selection justification

3.8 Data analysis

The first phase of the study was qualitative since data was collected through interviews. The initial phase of qualitative data analysis involved data cleaning, aiming to enhance data quality and present it in a clear format. Since raw data may lack clarity, interview transcripts were generated for a coherent version. Member checking, wherein participants review and approve interview transcriptions, was crucial for data validity. Transcriptions were meticulously reviewed to identify unclear elements, and participants were consulted for clarifications. The renowned software NVivo is utilized was interview data. This tool supported systematic qualitative data analysis, facilitating data management, organization, and in-depth examination. NVivo's features, including coding and thematic analysis, enabled a comprehensive exploration of data patterns, themes, and nuanced aspects. Its use ensured a structured and organized qualitative analysis, enhancing result validity. Thematic analysis was the chosen method for data analysis, following Li et al.'s (2018) recommendations. This involved recognizing themes, patterns, and transforming them into theories. Stages included developing research themes, data coding, and pattern recognition. The coding strategy aligns with sub-themes from literature analysis, aiding data organization and reduction. Themes derived from data align with research questions. Coded data was categorized into relevant themes for the development of survey instrument and triangulation analysis purpose.

The survey led to the generation of quantitative data. The survey instrument's internal consistency was assessed using Cronbach Alpha, ensuring the reliability of data collection. Various statistical methods were then employed to analyse the questionnaire data, uncover meaningful insights, and draw conclusions. Demographic information (age, gender, nationality, education level) was scrutinized using mean and frequencies to grasp survey participant characteristics. Likert scale questions underwent frequency analysis, providing a clear and enlightening exploration of answer distribution and participants' overall attitudes and usage. Regression analysis was employed to test relationship between youth's attitudes and usage patterns of tobacco products. Once both qualitative and quantitative analysis were done, they were triangulated by comparison with each other as well as previous literature.

3.9 Pilot study

The interview questions developed for the study was piloted on two government officials. The interview questions were asked to assess the applicability of the questions to revise the wordings of the questions. Three questions were revised according to the feedback received from the interview participants which was due to incomplete nature of questions. Table 3.4 enlists the questions before and after the pilot.

Question before the pilot	Question revised after the pilot
How have government officials perceived the attitude of youth towards levying excise on tobacco products?	How have government officials perceived the attitude of youth towards levying excise on tobacco products over time?
In your view, what factors contribute to the changing attitudes of youth towards tobacco products?	In your view, what factors contribute to the changing attitudes of youth towards tobacco products in the context of excise taxes?
How do government officials assess the effectiveness of excise taxes in influencing the overall usage patterns of tobacco products?	How do government officials assess the effectiveness of excise taxes in influencing the overall usage patterns of tobacco products among the youth population?

Table 3.4 Interview questions revision resulting from pilot

The pilot study led to the identification of key themes as identified in Table 3.5 which were used in the development of survey instrument.

Theme	***Sub theme***
Attitude of youth towards levying excise on tobacco products over time	Awareness understanding and acceptance of excise
	Fairness of excise
	Role of government communication
Influence of excised tobacco products on the attitude of youth towards tobacco products	Cost impact
	Health impact
	Quitting efforts
Youth's usage pattern of excised tobacco products over time	Reduction in tobacco product usage
	Social pressure
	Motivation of quitting over time
Influence of excised tobacco products on the usage pattern of youth towards tobacco products	Behavioural influence
	Accessibility and availability
	Alternative choices

Table 3.5 Themes and sub-themes resulting from pilot

3.10 Validity and reliability

To enhance the research's validity, a pilot study was conducted as a strategic measure for both qualitative and quantitative stages. This involved implementing a small-scale research project as an experimental phase before the full-scale research. The primary goal was to evaluate the effectiveness of the chosen research method and approach and assess the extent to which anticipated outcomes are realized (Gokce et al., 2021). The pilot study was crucial for identifying strengths and weaknesses in the planned research method, enabling the researcher to make necessary adjustments by testing it on a smaller sample and gauging its effectiveness. The pilot study was scheduled after developing the interview guide, incorporating interview questions, and defining the research population. It aimed to assess whether the interview questions designed for the research can gather reliable and valid data, evaluate the clarity of question wording for respondents, and determine the research methods' effectiveness in meeting objectives. A pilot study was conducted which involved two government officials using the pre-developed interview guide. The pilot led to the revision of some interview questions enhancing their wordings and comprehension of respondents. The interview questions were also shared with thesis supervisor to ask for the feedback which also helped to improve interview questions.

The pilot was also conducted for survey with three respondents leading to the changes in the question wording making them simpler to understand. Reliability of the survey questionnaire was measured through Cronbach Alpha which helped in reviewing the extent to which variance exists in the instrument components.

3.11 Ethical considerations

The present study is significantly informed from the highest ethical standards. Since the study involved human participants, an ethical approval was sought by revealing the complete research plan and sharing support documents such as research instrument, participant information sheet, consent sheet etc. The ethical approval was based on well-explained research process planned to ensure the safety, privacy and confidentiality of research participants ensuring that research meets ethical standards (Smith et al., 2021). Potential respondents were informed about the research aim and why and how they are expected to participate in the research. The participation was voluntary and they were asked to sign a consent form before participating in the research. Sufficient time

was provided to respondents to decide about their participation in the research. A cover letter was enclosed with the survey questionnaire which also acted as the consent form. The respondents were informed about the aim of the research, why they were selected, the sections of the questionnaires and finally asking their consent.

Research participants privacy and confidentiality were ensured through keeping in place stringent measures. The data was anonymised resulting in protecting the identity of the research participants. They were ensured that the data would be used only for the academic research. Furthermore, precautions against participant harm were included in the research design. A debriefing procedure was devised to give participants access to resources and support services in the event that they encountered any discomfort during or following their participation in the study, given the delicate nature of the topic (tobacco usage).

In summary, the ethical issues raised by this sequential mixed-methods study emphasized the dedication to respecting the welfare, liberty, and dignity of participants while working to produce insightful findings on the intricate dynamics of tobacco use.

3.12 Chapter summary

The chapter detailed the methodology adopted for the present research. The chosen research methodology is justified as an exploratory sequential mixed-methods design, commencing with the collection and analysis of qualitative data. The identified themes from this qualitative phase informed the development of a quantitative data collection instrument, specifically questionnaires, to further investigate the research problem. The methodology unfolds in three stages: an initial qualitative phase, a subsequent quantitative phase, and a final integration phase aimed at connecting the two sets of data to derive exploratory findings. The interview participants were government officials responsible for the excise duty on tobacco products, while the survey respondents were young adults (18 to 25 years old) residing in the UAE. The respondent profile was categorized into three distinct sets: (i) Past users of tobacco who have ceased usage, (ii) Present users of tobacco who continue usage, and (iii) non-users of tobacco products. The interviews were planned to be semi-structured and conducted face-to-face in person, while the questionnaires were structured and administered online for a digital survey. The development of research instruments and the details of pilot study were also mentioned along with changes made

in the research instruments. The data analysis methods along with validity and reliability and ethical considerations were also detailed. The next chapter presents the research findings.

CHAPTER 4 – RESULTS AND ANALYSIS

4.1 Introduction

The previous chapter presented the methodology adopted for the present research. The chosen research methodology is justified as an exploratory sequential mixed-methods design. This led the researcher to commence collection and analysis of qualitative data through semi-structured interviews. The identified themes from this qualitative phase informed the development of a quantitative data collection instrument (questionnaires) to further investigate the research problem. The interview participants were government officials responsible for the excise duty on tobacco products, while the survey respondents were young adults (18 to 25 years old) residing in the UAE. The interviews were semi-structured and conducted face-to-face in person, while the questionnaires were structured and administered online for a digital survey.

This chapter presents the results of qualitative data gathered through interviews with government officials related to excise tax in UAE along with quantitative data gathered through surveys with users and non-users of tobacco in UAE. The chapter is divided into two parts. Section 4.2 presents qualitative data analysis while section 4.3 presents quantitative data analysis.

4.2 Qualitative Data Analysis

For this study's qualitative data collection, semi-structured interviews were conducted with ten government officials responsible for excise duty on tobacco products to gain insights into the policymaking and enforcement aspects. The analysis takes support from the direct quotes of interviewees coded by their anonymous names such as P1, P2 and so on.

The data was analysed through thematic analysis for which NVivo software was used. NVivo is a qualitative data analysis tool that is used in research to categorize, sort and analyse large amounts of qualitative data from interviews, focus groups, and surveys with open-ended questions. They help the researchers to find patterns, themes and connections in the qualitative data, which will help in better understanding of the phenomenon. NVivo is useful for examining attitudes, behaviours, and perceptions because of the software’s versatility in handling text, audio, video, and content from social media.

NVivo is suitable for this thesis that explores the perceptions and consumption of discarded tobacco products among young adults in the UAE. It will enable coding and thematic analysis of the qualitative data collected from the interviews or surveys that will reveal the patterns in youths' perceptions and behaviours concerning high-priced, excised tobacco products. Thus, the thesis will be able to use NVivo to analyse qualitative data in addition to quantitative data and, therefore, gain a better understanding of the topic under study.

A coding framework was created first (Table 4.1) which were planned to be used to categorise the data. In the next step, data was coded. The data was then analysed by identifying common patterns. The results are then interpreted and analysed.

Theme	***Sub theme***
Attitude of youth towards levying excise on tobacco products over time	Awareness understanding and acceptance of excise
	Fairness of excise
	Role of government communication
Influence of excised tobacco products on the attitude of youth towards tobacco products	Cost impact
	Health impact
	Quitting efforts
Youth's usage pattern of excised tobacco products over time	Reduction in tobacco product usage
	Social pressure
	Motivation of quitting over time
Influence of excised tobacco products on the usage pattern of youth towards tobacco products	Behavioural influence
	Accessibility and availability
	Alternative choices

Table 4.1 Coding framework

The demographic information of ten interview respondents is presented in table 2 below:

Respondent code	**Gender**	**Position title**	**Experience**
1	Male	Director General	5 years
2	Male	Head of Department – Tax and Data Analytics	4 years
3	Male	Manager Compliance	5 years
4	Male	Manager Tax Payer Services	3 years

5	Female	Manager - Tax and Data Analytics	6 years
6	Male	Tax Analyst	4 years
7	Female	Tax Advisor	3 years
8	Male	Enforcement officer	3 years
9	Male	Senior Tax Auditor	7 years
10	Male	Enforcement officer	5 years

Table 4.2 Demographic profile of interview respondents

4.2.1 Attitude of youth towards levying excise on tobacco products over time

The sub-themes identified under this theme are awareness understanding and acceptance of excise, fairness of excise and role of government communication. The findings revealed that the young people initially resisted the tobacco excise tax but eventually came to accept them. Over time, they saw a change in the views of young people, with many starting to recognise the advantages of cutting back on tobacco use and the health risks involved. Along with the excise taxes, officials pointed out that public health initiatives were essential in influencing people's opinions. Based on global trends, the data indicates that the UAE's strategic goal of reducing tobacco usage and enhancing public health led to the implementation of excise levies on tobacco products. A good change in young people's perceptions of the excise tax was noted lowering tobacco use and raising health consciousness. One respondent replied that:

"The government perceived that the implementation of higher excise taxes can be beneficial in reducing tobacco usage in youth and people through increasing awareness." (P2).

The comments from the government representatives show that young people have differing opinions about how fair the excise taxes on tobacco goods are. Due mainly to the higher expenses, there was a great deal of initial opposition and disapproval of the tax. But acceptability eventually increased as a result of the launch of many awareness programmes emphasising the dangers of tobacco use to one's health and the need for the excise tax. Respondents observed that although a few young people were initially angry about the price increases, they later realised that the tax was intended to improve their health and decrease tobacco use. All the interviewees considered excise tax to be fair. According to P (4):

"Yes, initially people were mostly angry on this tax…Now mostly people understand that excise tax is fair."

However, P3 contradicted that although there has been some change, the reduction in tobacco usage is not as expected. P3 noted that:

"Some people's ability to pay allowed them to keep buying tobacco goods, suggesting that the tax may not be enough to alter people's behaviour."

The interview responses reveal the importance of having effective communication by government to explain to the public the advantages and justification for the excise tax. The government was found to use awareness campaigns to increase youth acceptability and perceptions of the tax's fairness by openly sharing tobacco health risks. All the respondents revealed that effective communication plays a crucial role in promoting comprehension of the excise tax as a public health measure that aims to decrease tobacco usage and enhance general well-being, rather than merely a financial hardship. One respondent quoted:

"Moreover, communication from the government to the public to educate youth about the smoking harms is another factor." (P7)

In conclusion, the interview revealed that initially, there was strong opposition due to higher costs, but awareness campaigns helped increase acceptance of excise tax in youth.

4.2.2 Influence of excised tobacco products on the attitude of youth towards tobacco products

The sub-themes identified under this theme are cost impact, health impact and quitting efforts. The interviews revealed that an important aspect affecting young people's perceptions of tobacco products is higher pricing because of excise taxes. Few respondents highlighted those increased costs can effectively make youth to reduce the use of tobacco products. Youth price sensitivity is also a key factor because when faced with increased prices, they typically reduce or quit smoking. Majority of the respondents observed that youth are strongly motivated to re-evaluate their tobacco smoking by the financial burden of rising prices. However, higher buying power in UAE might not reduce their tobacco use as quoted by one respondent:

"We thought that it is human nature to avoid buying expensive things. It was expected that when there will be price increase, people will think to decide quitting tobacco. Sometimes it is not correct" (P3)

Campaigns for health awareness and educational programmes are also essential in influencing the attitudes of young people. Respondents noted that one factor contributing to the drop in tobacco usage among young people is the increased trend towards health and fitness. Public education campaigns by the government regarding the health risks of smoking are crucial in influencing public opinion as noted by all the respondents. Young people are increasingly prone to quit tobacco products and look for healthier alternatives as they become more conscious of the detrimental effects on their health. As quoted by one respondent:

"The factors which help in changing attitudes of youth towards tobacco products in the context of excise taxes include health awareness campaigns and educational initiatives." (P1)

Combining price increases with health education encourages people to give up tobacco use. Officials observed that youth quitting decisions are supported by social pressure and awareness initiatives. Governmental communication tactics, such as media campaigns, assist in educating young people about the risks associated with smoking and the advantages of giving it up. No respondent contradicted the role of awareness campaigns in reducing the tobacco use. Youth who are aware of the health problems linked with tobacco use and the rationale for the excise tax are more inclined to reduce or quit smoking. According to one respondent:

"I feel that excise tax generally has a negative feeling from consumers. But when they are informed about the logic behind implementing excise tax, they become more acceptable and then the real benefits can be seen." (P10)

In conclusion, increased prices, health consciousness, and programmes to assist people in quitting help to change young people's perceptions of tobacco products for the better.

4.2.3 Youth's usage pattern of excised tobacco products over time

The sub-themes identified under this theme are reduction in tobacco product usage, social pressure and motivation of quitting over time. Majority of government officials have noted an overall decline in tobacco use in youth after the imposition of excise tax. Even while the decline is not as large as anticipated, there is still a good trend, according to some interviewees. Some authorities proposed raising excise taxes even more in order to accomplish more significant reductions. The reason for the lower use is that tobacco products are now more expensive, which causes young

people—especially those who smoked tobacco infrequently—to re-evaluate their use. According to one respondent:

"Some reduction in tobacco usage was noted. This is because people think price has increased and they should either quit or reduce tobacco usage." (P4).

However, P3 contradicted that although there has been some change, the reduction in tobacco usage is not as expected because of higher buying power in UAE. P3 noted that:

"Some people's ability to pay allowed them to keep buying tobacco goods, suggesting that the tax may not be enough to alter people's behaviour." (P3)

The results revealed that the evolving patterns of usage are also impacted by social pressure. According to the respondents, youth who used tobacco just for fun are now more cost-conscious and quitting the fun usage. Peer pressure is also making them understand that smoking is a costly and harmful habit. In addition to these societal constraints, awareness programmes encourage youth to understand tobacco risks and help one another in reducing the use. One respondent quoted:

"Obviously price increase is the key factor in changing attitudes of youth. Other than that social pressure, awareness campaigns and health issues are other factors." (P4)

However, social and peer pressure was found to have negative impact also. For example, P5 commented that:

"Sometimes teenagers get influenced to smoke since their friends are smoking".

It was found that combination of excise taxes and health awareness initiatives has been the driving force behind the progressive decrease in tobacco usage in youth. Respondents emphasised that youth are being influenced to reduce or quit smoking by economical as well as health-related factors, even though the transition is gradual. Young people in the UAE are progressively using less tobacco due to ongoing efforts to inform and increase knowledge of the tobacco risks as well as the increased prices due to excise tax. According to one respondent:

"Youth is now inclined toward lesser consumption of tobacco because of excise and awareness campaigns in the country."

In summary, reduction in tobacco usage was observe due to increased prices, social pressure and awareness campaigns which led to motivation of quitting amongst youth over time.

4.2.4 Influence of excised tobacco products on the usage pattern of youth towards tobacco products

The sub-themes identified under this theme are behaviour influence, accessibility and availability and alternative choices. The findings revealed that since excise charges were implemented, a decrease in tobacco use amongst youth was noted. The higher price of tobacco products has made some young people, especially casual users, re-evaluate their habits. It is also found that the decrease is not as substantial as expected. The price increase, according to respondents, encourages young people to cut back on or give up tobacco consumption. As one official mentioned:

"Some reduction in tobacco usage was noted. This is because people think price has increased and they should either quit or reduce tobacco usage." (P4)

It was found that the availability and accessibility of tobacco products to young people has decreased due to a combination of rising costs, health consciousness, and educational programmes. In the UAE, youth tobacco consumption is progressively declining due to a combination of economic barriers imposed by excise taxes and continued efforts to inform and educate young people about the risks of smoking. Excise tax along with awareness campaigns help reduce the accessibility and availability of tobacco products by making them less desirable and harder to afford. One respondent quoted:

"We did not just implement excise tax. We also run many campaigns through media to make people know smoking harms. So, this is also combined with excise duty to bring changes in youth attitudes." (P9)

However, the impact is not found to be as expected since P5 contradicted that despite some reduction, more efforts are needed to further reduce tobacco use. P5 quoted that:

"There is not as much reduction as anticipated and more efforts are needed to bring change in the youth" (P5).

While officials acknowledge that excise taxes have contributed to a decrease in tobacco use, they also acknowledge that the availability of substitute options is a challenge. While there has been a noticeable decline in tobacco usage, the respondents caution that if alternatives like sheesha are not controlled, there may be a change in consumption. One respondent quoted:

"I think that we should increase awareness campaign about risks of tobacco use and the reason of excise tax so that we gain support of people. We can also increase the tax on sheesha which is a popular alternative." (P5)

In summary, since the implementation of excise taxes, there has been a noted decrease in youth tobacco use in the UAE, driven by higher prices and awareness campaigns. However, officials emphasize the need for continued education and regulation of alternatives like sheesha to sustain this reduction.

4.3 Quantitative Data Analysis

This section presents the empirical findings of the study, derived from the analysis of survey data collected from 182 respondents through a structured questionnaire. The primary objective of this section is to test the hypotheses outlined in Chapter 2 by providing a detailed quantitative analysis that empirically evaluates the proposed conceptual model of youth attitudes towards tobacco excise. The findings reported herein will serve as the basis for the discussion of policy implications in the subsequent chapter.

The analysis employed a multi-stage approach, beginning with preliminary data screening and descriptive statistics to characterize the sample and key variables. Following these initial steps, the conceptual model was tested using a series of multiple regression analyses. This method was chosen for its ability to assess the influence of multiple independent variables on a single dependent variable and to evaluate the relative strength of these relationships. Special attention was paid to testing for mediation, as posited in the model, through the use of established regression-based methods.

The structure of this chapter is as follows: Section 4.3.1 presents the demographic analysis. Section 4.3.2 presents the descriptive statistics of the study's sample and the variables. Section 4.3.3 details the preliminary analyses, including checks for scale reliability and the fulfilment of key assumptions for regression. Section 4.3.4 represents the correlation analysis. Section 4.3.5 delivers the core regression analysis. Finally, section 4.3.6 represents the mediation analysis.

4.3.1 Demographic Analysis

Most of the respondents were male, with 129 individuals making up 70.9% of the sample. Female respondents comprised 29.1% of the sample (N=53). Most respondents were 25 years old, representing 59.9% of the sample (N=109). The next largest age groups were 23 years old (13.2%, N=24) and 20 years old (8.8%, N=16). Other age groups had smaller representations. A significant majority of the respondents were expatriate residents, accounting for 71.4% of the sample (N=130). UAE citizens made up 28.6% of the respondents (N=52).
The highest educational attainment among respondents was predominantly a bachelor's degree, with 65.9% (N=120). Those with a master’s degree comprised 20.9% (N=38), and those with a

diploma made up 13.2% (N=24). There were no respondents with only a high school education or a doctorate. In terms of tobacco usage, 41.8% of the respondents were past users who have stopped using tobacco (N=76). Present users who continue using tobacco made up 36.8% (N=67), and non-users constituted 21.4% (N=39).

Table 4.3.1: Demographic Profile of Survey Respondents

		N	%	Mean	Std. Deviation
Gender	Male	129	70.9%	1.29	0.456
	Female	53	29.1%		
Age	18 years	0	0.0%	6.69	1.917
	19 years	8	4.4%		
	20 years	16	8.8%		
	21 years	6	3.3%		
	22 years	10	5.5%		
	23 years	24	13.2%		
	24 years	9	4.9%		
	25 years	109	59.9%		
Nationality	UAE citizen	52	28.6%	1.71	0.453
	Expatriate resident	130	71.4%		
Education	High school	0	0.0%	3.08	0.580
	Diploma	24	13.2%		
	Bachelor	120	65.9%		

	Master	38	20.9%		
	Doctorate	0	0.0%		
Which best describes you?	Past users of tobacco who have stopped using the product	76	41.8%	1.80	0.771
	Present users of tobacco who continue using the product	67	36.8%		
	Non-users of tobacco products	39	21.4%		

4.3.2 Descriptive Analysis

This section presents a comprehensive overview of the descriptive statistics for all key variables in the study, providing a foundational understanding of the sample's attitudes and perceptions toward tobacco excise policies. All variables were measured on a 5-point Likert scale, with response options ranging from Strongly Disagree (1) to Strongly Agree (5).

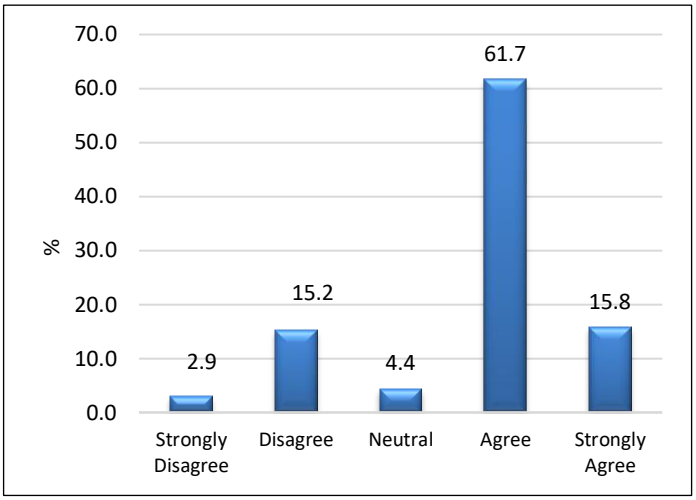
4.3.2.1 Awareness, Understanding, and Acceptance of Excise (AUAE)

This section details the descriptive statistics for a youth's foundational attitude toward tobacco excise. The composite variable AUAE (Awareness, Understanding, and Acceptance of Excise) is derived from responses to questions Q2.1, Q2.2, and Q2.3. A conceptual figure titled 'Figure 4.3.1: Distribution of Responses for AUAE' visually represents the percentage breakdown of these responses. Table 4.3.2 presents a comprehensive overview of the descriptive statistics and distribution of responses for AUAE and its sub-components.

Table 4.3.2: Descriptive Statistics and Distribution of Responses for AUAE

Variable	N	Mean	Std. Dev.	Percentage (%)				
				SD	D	N	A	SA
Q2.1: Awareness	182	3.74	0.966	3.8	11.0	24.2	45.1	15.9
Q2.2: Understanding	182	3.60	1.050	6.6	13.2	26.9	39.6	13.7
Q2.3: Acceptance	182	3.82	0.970	4.4	9.9	18.7	45.1	21.9
AUAE (Composite)	182	3.72	0.822	2.9	15.2	4.4	61.7	15.8

Figure 4.3.1: Distribution of Responses for AUAE



The descriptive analysis indicates a strong, positive overall stance among the youth toward the excise policy, as reflected in the composite AUAE mean score of 3.72. This sentiment is further supported by the high percentage of combined agreement (77.5%) for the composite score, which is a strong finding.

A more detailed examination of the sub-components reveals some subtle differences:

- Acceptance of Reasons (Q2.3) has the highest mean score (3.82) and the largest percentage of "Strongly Agree" responses (21.9%). This suggests that youth are most aligned with the core rationale of the policy.
- Awareness (Q2.1) also has a high mean score (3.74), with the majority of responses falling in the "Agree" category.
- Understanding (Q2.2), while still above the midpoint with a mean of 3.60, has the lowest mean and the highest percentage of "Neutral" and "Disagree" responses.

This indicates that while youth may agree with the policy's purpose and are aware of it, there is a greater degree of uncertainty regarding the mechanics of how the excise policy works.
The standard deviations for all variables are low, ranging from 0.822 to 1.050, which indicates that responses are somewhat clustered around the mean, confirming a consistent pattern of attitudes across the sample.

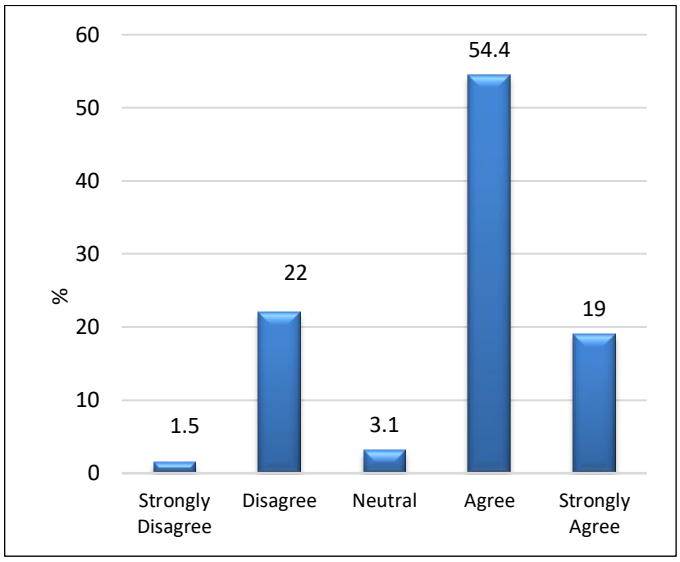
4.3.2.2 Perceptions of Fairness of Excise (FE)

This section details the descriptive statistics for a youth's perception of the fairness of the excise policy, based on the provided updated figures. The composite variable FE (Perceptions of Fairness of Excise) is derived from responses to questions Q2.4, Q2.5, and Q2.6. A conceptual figure titled 'Figure 4.3.2: Distribution of Responses for FE' visually represents the percentage breakdown of these responses. Table 4.3.2 presents a comprehensive overview of the descriptive statistics and distribution of responses for FE and its sub-components.

Table 4.3.3: Descriptive Statistics and Distribution of Responses for FE

Variable	N	Mean	Std. Dev.	Percentage (%)				
				SD	D	N	A	SA
Q2.4: Fairness	182	3.92	0.928	1.1	12.1	4.4	58.8	23.6
Q2.5: Acceptance due to fairness	182	3.97	0.916	2.2	13.7	2.7	62.1	19.2
Q2.6: Unfairness (Reversed)	182	3.29	1.169	1.1	40.1	2.2	42.3	14.3
FE (Composite)	182	3.75	0.775	1.5	22.0	3.1	54.4	19.0

Figure 4.3.2: Distribution of Responses for FE



The descriptive analysis indicates a very strong, positive sentiment among the youth toward the fairness of the excise policy, as reflected in the composite FE mean score of 3.75. This sentiment is further supported by the high percentage of combined agreement (73.4%) for the composite score.

A more detailed examination of the sub-components reveals the nuanced nature of this perception:

- Fairness (Q2.4) and Acceptance (Q2.5) have the highest mean scores (3.92 and 3.97 respectively) and the largest percentage of combined agreement (82.4% and 81.3%). This suggests that youth are highly aligned with the core concepts of fairness and its role in improving acceptance.
- Unfairness (Q2.6), negatively worded (reversed) question, has a mean score of 3.29, which is above the midpoint. The combined disagreement percentage for Q2.6 is 41.2%. This is a crucial finding, as a high disagreement rate for a negative statement indicates a strong belief in the policy's fairness.

The standard deviations for all variables are low, ranging from 0.775 to 1.169, which indicates that responses are somewhat clustered around the mean, confirming a consistent pattern of attitudes across the sample.

4.3.2.3 Acceptance of Reasons for Excise (AYE)

This section details the descriptive statistics for a youth's acceptance of the reasons for the excise policy. The composite variable AYE is a crucial component of the broader conceptual model.

Table 4.3.4: Descriptive Statistics for Acceptance of Reasons for Excise (AYE)

Variable	N	Mean	Std. Dev.	Percentage (%)				
				SD	D	N	A	SA
AYE (Composite Score)	182	3.79	1.14	6.0	10.4	13.7	40.7	29.1

The composite AYE score shows a combined agreement of 69.8%, indicating a strong acceptance of the policy's rationale. The mean score of 3.79 confirms this positive sentiment.

4.3.2.4 The Role of Government Communication (RGC)

This section details the descriptive statistics for a youth's perception of government communication regarding tobacco excise. The composite variable RGC (Role of Government Communication) is derived from responses to questions Q2.7 to Q2.10.
Table 4.3.5 presents a comprehensive overview of the descriptive statistics and distribution of responses for RGC and its sub-components.

Table 4.3.5 Descriptive Statistics and Distribution of Responses for RGC

Variable	N	Mean	Std. Dev.	Percentage (%)				
				SD	D	N	A	SA
Q2.7: Effective communication	182	3.93	1.001	1.1	14.3	3.8	51.6	29.1
Q2.8: Trust in information	182	4.05	0.985	1.1	11.5	4.4	46.7	36.3
Q2.9: Shaping views	182	3.96	1.174	4.4	13.7	3.3	39.0	39.6
Q2.10: Use of right media	182	4.02	1.040	1.1	13.7	4.9	42.3	37.9
RGC (Composite)	182	3.99	0.596	1.9	13.3	4.1	44.9	35.7

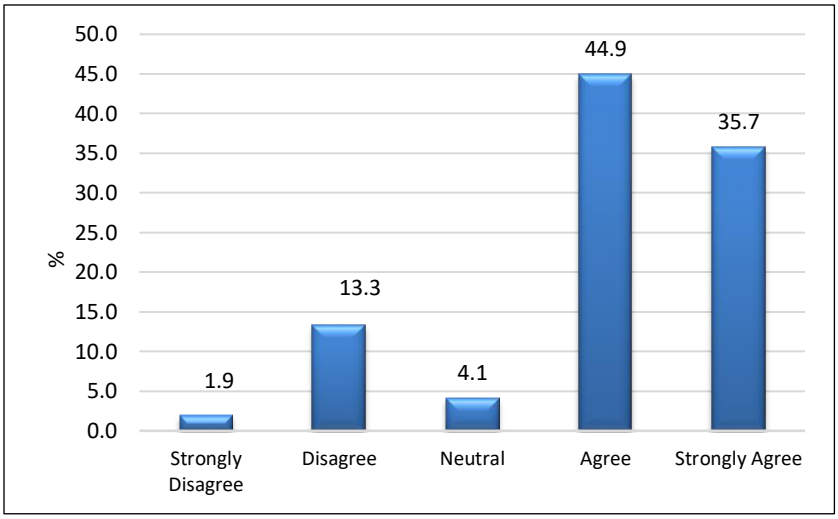
The descriptive analysis indicates a strong, positive overall stance among the youth regarding government communication, as reflected in the composite RGC mean score of 3.99.
This sentiment is further supported by the high percentage of combined agreement (80.6%) for the composite score, which is a strong finding.

A more detailed examination of the sub-components reveals some subtle differences:

- Trust in Information (Q2.8) has the highest mean score (4.05) and the largest percentage of "Strongly Agree" responses (36.3%). This suggests that youth are most aligned with the core concepts of fairness and its role in improving acceptance.
- Effective Communication (Q2.7) also has a high mean score (3.93), with most responses falling in the "Agree" category.
- Shaping Views (Q2.9), while still above the midpoint with a mean of 3.96, has the lowest percentage of "Agree" responses, suggesting a slightly lower perceived influence in this area.

The standard deviations for all variables are low, ranging from 0.596 to 1.174, which indicates that responses are somewhat clustered around the mean, confirming a consistent pattern of attitudes across the sample.

Figure 4.3.3: Distribution of Responses for RGC



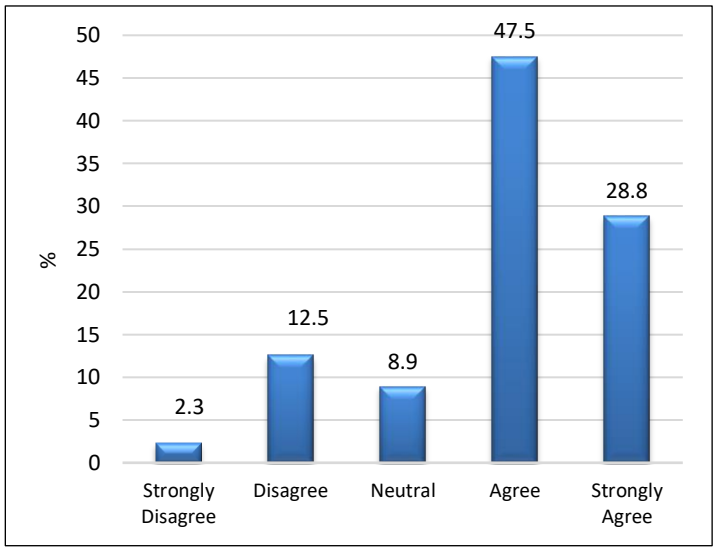
4.3.2.5 Influence on Youth Attitudes Towards Tobacco (IETPYA)

This section details the descriptive statistics for a youth's attitudinal response to excise policies. The composite variable IETPYA (Influence on Youth Attitudes Towards Tobacco) is derived from responses to sub-components related to Cost Impact (CI), Health Awareness (HI), and Motivation to Quit (QE). A conceptual figure titled 'Figure 4.3.4: Distribution of Responses for IETPYA' visually represents the percentage breakdown of these responses. Table 4.3.6 presents a comprehensive overview of the descriptive statistics and distribution of responses for IETPYA and its sub-components.

Table 4.3.6 Descriptive Statistics and Distribution of Responses for IETPYA

Variable	N	Mean	Std. Dev.	Percentage (%)				
				SD	D	N	A	SA
CI (Q3.1–Q3.5)	182	3.98	0.703	2.2	12.3	4.3	47.4	33.8
HI (Q3.6–Q3.9)	182	3.91	0.814	2.6	12.6	10.2	48.5	26.1
QE (Q3.10–Q3.13)	182	3.41	0.555	2.2	12.5	12.1	46.6	26.6
IETPYA (Composite)	182	3.75	0.639	2.3	12.5	8.9	47.5	28.8

Figure 4.3.4: Distribution of Responses for IETPYA



The descriptive analysis indicates a strong, positive overall stance among the youth, as reflected in the composite IETPYA mean score of 3.75. This sentiment is further supported by the high percentage of combined agreement (76.3%) for the composite score, which is a strong finding.
A more detailed examination of the sub-components reveals some subtle differences:

- Cost Impact (CI) has the highest mean score (3.98) and the largest percentage of "Strongly Agree" responses (33.8%). This suggests that youth perceive the financial impact of excise policies as a particularly strong influence.
- Health Awareness (HI) also has a high mean score (3.91), with a majority of responses falling in the "Agree" category.
- Motivation to Quit (QE), while still above the midpoint with a mean of 3.41, has the lowest mean and a higher percentage of "Neutral" and "Disagree" responses. This indicates that while youth acknowledge the influence of cost and health, their motivation to take action is a slightly weaker driver.

The standard deviations for all variables are low, ranging from 0.555 to 0.814, which indicates that responses are somewhat clustered around the mean, confirming a consistent pattern of attitudes across the sample.

4.3.2.6 Behavioral Intentions to Use Tobacco Products (BIETP)

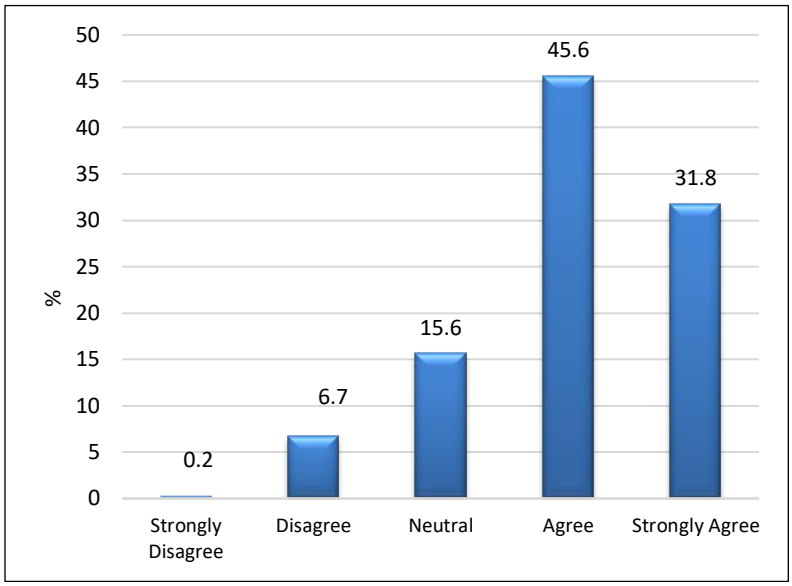
This section details the descriptive statistics for a youth's intentions and adjustments related to tobacco use. The composite variable BIETP (Behavioral Intentions to Use Tobacco Products) is an aggregation of BA (Behavioral Adjustments), AA (Accessibility and Availability), and AC (Alternative Choices). A conceptual figure titled 'Figure 4.3.5: Distribution of Responses for BIETP' visually represents the percentage breakdown of these responses. Table 4.3.7 presents a comprehensive overview of the descriptive statistics and distribution of responses for BIETP and its sub-components.

Table 4.3.7 Descriptive Statistics and Distribution of Responses for BIETP

Variable	N	Mean	Std. Dev.	Percentage (%)				
				SD	D	N	A	SA
BA	182	4.24	0.556	0.0	1.5	6.8	58.2	33.5

AA	182	4.17	0.549	0.5	1.1	13.2	50.9	34.2
AC	182	3.67	0.870	0.0	17.4	26.8	27.8	28.0
BIETP (Composite)	182	4.03	0.575	0.2	6.7	15.6	45.6	31.8

Figure 4.3.5: Distribution of Responses for BIETP



The descriptive analysis indicates a strong, positive overall stance among the youth regarding behavioral intentions, as reflected in the composite BIETP mean score of 4.03. This sentiment is further supported by the high percentage of combined agreement (77.4%) for the composite score.

A more detailed examination of the sub-components reveals some subtle differences:

- Behavioral Adjustments (BA) has the highest mean score (4.24), with a vast majority of responses falling in the "Agree" and "Strongly Agree" categories (91.7%). This suggests that youth are most aligned with making personal adjustments in response to the policy.
- Accessibility and Availability (AA) also has a high mean score (4.17), with a high level of agreement (85.1%).
- Alternative Choices (AC) has the lowest mean score (3.67) and a higher percentage of "Neutral" and "Disagree" responses. This indicates that while youth acknowledge the existence of alternatives, they are more ambivalent about them compared to making direct behavioral adjustments.

The standard deviations for all variables are low, ranging from 0.556 to 0.870, which indicates that responses are somewhat clustered around the mean, confirming a consistent pattern of attitudes across the sample.

4.3.2.7 Social Influence (SI) and Usage of Tobacco Products (UYTP)

This section details the descriptive statistics for a youth's perception of social influence and self-reported usage patterns of tobacco products.

Table 4.3.8 presents a comprehensive overview of the descriptive statistics and distribution of responses for both SI (Social Influence) and UYTP (Usage of Tobacco Products).

Table 4.3.8: Descriptive Statistics and Distribution of Responses for SI and UYTP

Variable	N	Mean	Std. Dev.	Percentage (%)				
				SD	D	N	A	SA
SI	182	3.80	0.670	0.7	9.2	19.7	50.8	19.7
UYTP	182	3.79	0.320	0.0	2.9	11.8	57.4	27.9

The descriptive analysis indicates a strong, positive overall stance among the youth regarding both social influence and their own usage patterns.

This is reflected in the high mean scores for both variables.

- Social Influence (SI): The mean score of 3.80 and a combined agreement of 70.5% suggests that youth perceive a high degree of social support for quitting or reducing tobacco use.
- Usage of Tobacco Products (UYTP): The mean score of 3.79 and a combined agreement of 85.3% indicates that youth report having a strong positive attitude toward reduced usage and are actively engaging in related behaviors.

The standard deviations for both variables are low, ranging from 0.320 to 0.670, which indicates that responses are clustered around the mean, confirming a consistent pattern of attitudes across the sample.

4.3.2.8 Discussion of Main Findings

The descriptive analysis provides a detailed and consistent picture of the sample's attitudes toward excise policies, revealing several key insights into the operationalization of the Integrated Youth Tobacco Response Model (IYTRM).

Overall Positive Perception of Policy: The mean scores for all key variables fall well above the midpoint of the 5-point Likert scale (Mean > 3), indicating a generally positive sentiment and a high degree of perceived influence of excise on youth attitudes and behaviors. This is further supported by the high percentage of combined "Agree" and "Strongly Agree" responses, which exceed 50% for every composite variable and reach over 80% for several, such as RGC (80.6%) and BA (91.7%).

Hierarchy of Perceptions: The data reveals a clear hierarchy of perceived influences:

- Strongest Perceptions: The variables with the highest mean scores are those directly related to observable actions and influences. Behavioral Adjustments (BA) (Mean = 4.24), Accessibility and Availability (AA) (Mean = 4.17), and Cost Impact (CI) (Mean = 3.98) received the highest ratings, suggesting that youth most strongly perceive the policy's influence in terms of its direct impact on their behavior and the tobacco market.
- Core Attitudes: Constructs related to core attitudes also scored highly. RGC (Mean = 3.99) and AYE (Mean = 3.79) indicate a strong belief in the effectiveness and purpose of government communication and policy rationale.
- Areas of Ambivalence: The constructs with the lowest mean scores, though still positive, point to areas of greater complexity. Perceptions of Fairness (FE) (Mean = 3.75) and Motivation to Quit (QE) (Mean = 3.41) had the most dispersed responses and a higher percentage of "Neutral" or "Disagree" ratings, suggesting that while youth may agree with the policy's purpose, the concepts of fairness and motivation are more nuanced and less consistently perceived.

Consistency and Model Alignment: The mean scores are consistently and strongly supported by the distribution of responses. For all variables, the highest percentages are concentrated in the "Agree" and "Strongly Agree" categories, which directly reflects the high mean values. These descriptive findings provide a solid empirical foundation for the inferential analyses presented in

the subsequent chapters, confirming that the variables are well-measured and that the sample holds a consistent and identifiable set of attitudes toward the excise policy. The high mean scores for variables related to behavior and market influence, in particular, set the stage for testing the model's core hypotheses regarding these relationships.

4.3.3 Preliminary Analysis and Assumption Check

4.3.3.1 Reliability

The psychometric properties of the survey instrument were rigorously assessed to ensure the validity and reliability of the data collected. The internal consistency of the scales, which operationalize the key constructs of the study, was evaluated using Cronbach's Alpha (α). This statistical measure quantifies the degree of inter-item correlation and is a widely accepted standard for determining the reliability of a scale. In the social and behavioral sciences, a Cronbach's Alpha coefficient of 0.70 or higher is generally considered indicative of an acceptable level of internal consistency (Nunnally, 1978).

The comprehensive survey, comprising a total of 46 items across four core dimensions, demonstrated a high level of overall reliability with a Cronbach's Alpha of 0.787. This finding provides confidence that the aggregate of the survey items is a dependable measure.

A detailed analysis of each individual scale, as presented in Table 4.3.9, further confirms the instrument's robustness:

Table 4.3.9: Reliability Score of the Instrument

	Cronbach's Alpha	**No of Items**
Attitude of Youth towards Levying Excise on Tobacco Products Over Time	0.74	10
Influence of excised tobacco products on the attitude of youth towards tobacco products	0.68	13
Youth's usage pattern of excised tobacco products over time	0.722	12
Influence of excised tobacco products on the usage pattern of youth towards tobacco products	0.82	11

As illustrated, three of the four scales exhibited good to acceptable reliability, with alpha coefficients of 0.740, 0.722, and 0.820. The scale measuring the "Influence of excised tobacco products on the attitude of youth towards tobacco products" recorded a Cronbach's Alpha of 0.680. While this value is marginally below the stringent 0.70 threshold, it falls within a range that is often deemed acceptable for newly developed or exploratory scales in certain research contexts (Tabachnick & Fidell, 2013). This finding does not compromise the scale's utility but rather suggests an area for potential refinement in future studies.

The confirmed reliability of the scales assures that the data collected from the 18- to 25-year-old population in the UAE accurately and consistently measures the intended constructs. This provides a credible foundation for the subsequent statistical analyses and the conclusions drawn from the survey results.

4.3.4 Correlation Analysis

This section presents the results of a Pearson correlation analysis to examine the preliminary relationships between the main variables in the conceptual model. The purpose of this analysis is to provide an initial assessment of the strength and direction of the associations between constructs and to screen for potential multicollinearity issues prior to running the regression models.

The correlation matrix in Table 4.3.10 displays the correlation coefficients for all key composite variables. All reported correlations were found to be positive and statistically significant, supporting the inter-relationships hypothesized in the IYTRM.

Table 4.3.10 Pearson Correlation Matrix

Variable	AUAE	FE	RGC	IETPYA	Redu_A	SI	UYTP	BA	AA	AC
AUAE	1.00	–	–	–	–	–	–	–	–	–
FE	0.726	1.00	–	–	–	–	–	–	–	–
RGC	0.470	0.505	1.00	–	–	–	–	–	–	–
IETPYA	0.640	0.613	0.596	1.00	–	–	–	–	–	–
Redu_A	0.591	0.518	0.563	0.854	1.00	–	–	–	–	–
SI	0.457	0.395	0.509	0.785	0.669	1.00	–	–	–	–
UYTP	0.536	0.551	0.594	0.784	0.692	0.728	1.00	–	–	–

BA	0.569	0.598	0.592	0.627	0.675	0.468	0.635	1.00	–	–
AA	0.531	0.603	0.602	0.626	0.685	0.494	0.638	0.741	1.00	–
AC	0.490	0.472	0.507	0.538	0.587	0.407	0.528	0.559	0.603	1.00

The correlation matrix reveals several key relationships, with correlations ranging from moderate to very strong. The consistency of these positive relationships provides strong preliminary support for the inter-connectedness of the constructs in your model.

1. **Policy Perceptions and Attitudinal Constructs**

- Awareness and Fairness (AUAE & FE): A very strong positive correlation exists between Awareness, Understanding, and Acceptance of Excise (AUAE) and Perceptions of Fairness of Excise (FE) (r=0.726). This indicates that youth who have a greater understanding and acceptance of the policy are also very likely to perceive it as fair.
- Communication (RGC) and Attitudes: Government Communication (RGC) shows a moderate, but significant, positive correlation with both AUAE (r=0.470) and FE (r=0.505). This suggests that perceptions of effective communication are related to more favorable attitudes towards the policy.

2. **Motivation, Social Influence, and Behavioral Outcomes**

- Motivation and Reduction (IETPYA & Redu_A): There is an exceptionally strong positive correlation between Motivation to Quit or Reduce Usage (IETPYA) and the reported Reduction in Usage (Redu_A) (r=0.854). This is the highest correlation in the matrix and suggests that a youth's internal motivation is very closely aligned with their perceived behavioral changes.
- Motivation and Usage (IETPYA & UYTP): IETPYA also shows a very strong positive correlation with Usage of Tobacco Products (UYTP) (r=0.784). This is a critical finding, as it indicates a strong relationship between motivation and usage patterns, which warrants further investigation into its nature.
- Social Influence (SI): Social Influence (SI) is strongly correlated with both IETPYA (r=0.785) and UYTP (r=0.728). This suggests that a youth's social environment is a significant factor related to both their motivation and their actual usage behaviors.

3. **Behavioral Intentions and Actual Usage**

- Behavioral Adjustments (BA & AA): The sub-components of behavioral intentions, Behavioral Adjustments (BA) and Accessibility and Availability (AA), show strong positive correlations with UYTP (r=0.635 and r=0.638, respectively). These correlations are indicative of the close link between a youth's intentions and their actual usage patterns.
- Composite Intentions (BIETP): The composite variable for intentions, BIETP, is a key predictor in the model. It shows a strong correlation with both Usage (UYTP) (r=0.784) and Social Influence (SI) (r=0.728).

The consistency and strength of these positive correlations across the model provide a solid empirical basis for the inter-relationships, which will be further tested in the subsequent regression analyses to establish predictive power and directionality.

Multicollinearity Assessment: The correlation coefficients among the independent variables in the model are all below the commonly accepted threshold of 0.80, apart from the correlation between IETPYA and Redu_A. However, IETPYA and Redu_A are conceptually distinct but highly related measures of behavioral outcomes and motivation, so this high correlation is expected and will be addressed in the subsequent regression analyses by carefully selecting which variables to include in each model. The low to moderate correlations otherwise suggest that multicollinearity is not a significant concern for the multiple regression models.

4.3.5 Regression Analysis

4.3.5.1 The Role of Government Communication on Awareness, Understanding, and Acceptance of Excise

This subsection examines the extent to which youth perceptions of the Role of Government Communication (RGC) influence their overall attitudes toward excise taxation, as measured through the Awareness, Understanding, and Acceptance of Excise (AUAE) composite index. The underlying hypothesis proposed that government communication, when perceived as clear and trustworthy, would significantly predict favorable attitudes toward excise policies.

The regression analysis produced a statistically significant model, confirming the predictive power of RGC on AUAE. The regression equation is expressed as follows:

AUAE=1.131+0.6488×RGC

The model summary is presented in Table 4.3.11.

Table 4.3.11: Summary of Regression Analysis for AUAE and RGC

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	1.131	0.366	3.09	0.002	-
RGC	0.6488	0.0908	7.15	0.000	1.00
Model Summary					
S		**R²**		**R² (adj)**	
0.727499		22.11%		21.68%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	27.04	27.04	51.10	0.000
Error	180	95.27	0.5293	-	-
Total	181	122.31	-	-	-

The model was found to be highly significant, with an F-statistic of 51.10 ($p < 0.001$). The adjusted R^2 value of 21.68% indicates that approximately one-fifth of the variation in AUAE can be attributed to perceptions of government communication.

The regression coefficient for RGC ($\beta = 0.6488$, $p < 0.001$) was positive and statistically significant, supporting the hypothesis. This suggests that for every one-unit increase in youth perceptions of effective and credible government communication, their composite score for awareness, understanding, and acceptance of excise policies is expected to increase by 0.6488 units.

These findings provide strong evidence that government communication functions as a key antecedent in shaping favorable youth attitudes toward excise taxation, reinforcing its role as an important policy instrument in influencing public perceptions.

4.3.5.2 The Role of Government Communication on Motivation to Quit or Reduce Usage

This subsection investigates the relationship between youth perceptions of Government Communication (RGC) and their Motivation to Quit or Reduce Tobacco Usage (IETPYA). The underlying hypothesis proposed that positive perceptions of government communication would significantly enhance the motivation of youth to reduce or quit tobacco consumption.

The regression analysis confirmed a statistically significant model, supporting the hypothesis that RGC influences motivational outcomes. The regression equation is presented as follows:

IETPYA=2.581+0.3069×RGC

The results are summarized in Table 4.3.12.

Table 4.3.12: Summary of Regression Analysis for IETPYA and RGC

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	2.581	0.172	14.97	0.000	-
RGC	0.3069	0.0427	7.18	0.000	1.00
Model Summary					
S		**R²**		**R² (adj)**	
0.342472		22.28%		21.85%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	6.052	6.052	51.60	0.000
Error	180	21.112	0.1173	-	-
Total	181	27.163	-	-	-

The model was statistically significant, with an F-statistic of 51.60 ($p < 0.001$). The adjusted R^2 value of 21.85% indicates that more than one-fifth of the variation in motivation to quit or reduce tobacco use can be explained by perceptions of government communication.

The regression coefficient for RGC ($\beta = 0.3069$, $p < 0.001$) was positive and highly significant. This indicates that for every one-unit increase in positive perceptions of government communication, the motivation to reduce or quit tobacco usage increases by 0.3069 units.

This finding underscores the importance of government communication as a strategic lever in shaping health-related behavioral intentions. By effectively communicating the rationale and risks associated with excise taxation, policymakers can significantly influence youth motivation to adopt healthier behavioral patterns.

4.3.5.3 The Influence of Awareness, Understanding, and Acceptance on Perceptions of Fairness

This subsection evaluates the relationship between youth Awareness, Understanding, and Acceptance of Excise (AUAE) and their Perceptions of Fairness of Excise (FE). The hypothesis tested was those higher levels of awareness, understanding, and acceptance of the policy would significantly predict stronger perceptions of fairness.

The regression analysis produced a highly significant model, confirming that AUAE is a strong predictor of perceived fairness. The regression equation is expressed as follows:

$FE=1.396+0.6843\times AUAE$

The results are presented in Table 4.3.13.

Table 4.3.13: Summary of Regression Analysis for FE and AUAE

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	1.396	0.184	7.58	0.000	-
AUAE	0.6843	0.0483	14.17	0.000	1.00
Model Summary					
S		**R²**		**R² (adj)**	
0.534226		52.72%		52.45%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	57.27	57.27	200.68	0.000

Error	180	51.37	0.2854	-	-
Total	181	108.64	-	-	-

The model was found to be highly statistically significant, with an F-statistic of 200.68 ($p < 0.001$). The adjusted R^2 value of 52.45% demonstrates that more than half of the variation in youth perceptions of fairness can be explained by their level of awareness, understanding, and acceptance of the excise tax.

The regression coefficient for AUAE ($\beta = 0.6843$, $p < 0.001$) was both positive and highly significant, confirming that stronger awareness and acceptance are associated with higher perceptions of fairness. Specifically, a one-unit increase in AUAE is expected to raise the fairness score by 0.6843 units.

These results highlight that fairness perceptions are not formed in isolation but are directly shaped by how well individuals understand and accept the underlying rationale of excise taxation. Thus, enhancing awareness and acceptance serves as a critical pathway to fostering perceptions of equity in policy measures.

4.3.5.4 The Influence of Awareness, Understanding, and Acceptance on Acceptance of Reasons

This subsection explores the extent to which youth Awareness, Understanding, and Acceptance of Excise (AUAE) predicts their Acceptance of the Reasons for Excise (AYE). The hypothesis assumed that a stronger foundational understanding of the policy would lead to greater acceptance of the rationale behind its implementation.

The regression model was statistically significant and demonstrated a strong positive relationship between AUAE and AYE. The regression equation is presented as follows:

$AYE=1.209+0.6825\times AUAE$

The results are summarized in Table 4.3.14.

Table 4.3.14: Summary of Regression Analysis for AYE and AUAE

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	1.209	0.151	8.02	0.000	-
AUAE	0.6825	0.0396	17.25	0.000	1.00
Model Summary					
S		**R^2**		**R^2 (adj)**	
0.437578		62.31%		62.10%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	56.97	56.97	297.54	0.000
Error	180	34.47	0.1915	-	-
Total	181	91.44	-	-	-

The regression model was highly significant, with an F-statistic of 297.54 ($p < 0.001$). The adjusted R^2 value of 62.10% indicates that nearly two-thirds of the variation in acceptance of the reasons for excise can be explained by AUAE.

The regression coefficient for AUAE ($\beta = 0.6825$, $p < 0.001$) was positive and strongly significant, showing that higher levels of awareness and acceptance substantially increase the likelihood of endorsing the rationale for the tax. Specifically, for every one-unit increase in AUAE, AYE is expected to increase by 0.6825 units.

These findings suggest that beyond shaping fairness perceptions (see Section 4.3.5.3), AUAE plays a pivotal role in legitimizing the underlying justifications for excise taxation. The evidence indicates that policies are more likely to be endorsed when individuals understand their intent and implications, confirming AUAE as a central construct within the conceptual model.

4.3.5.5 The Influence of Perceptions of Fairness on Motivation to Quit or Reduce Usage

This subsection assesses whether youth Perceptions of Fairness of Excise (FE) predict their Motivation to Quit or Reduce Tobacco Usage (IETPYA). The guiding hypothesis suggested that viewing the policy as fair would enhance motivation to adopt healthier behavioral changes.

The regression model was statistically significant, indicating that fairness perceptions exert a measurable influence on motivation. The regression equation is expressed as follows:

IETPYA=3.249+0.1413×FE

The results are displayed in Table 4.3.15.

Table 4.3.15: Summary of Regression Analysis for IETPYA and FE

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	3.249	0.144	22.62	0.000	-
FE	0.1413	0.0357	3.95	0.000	1.00
Model Summary					
S		**R²**		**R² (adj)**	
0.372628		7.99%		7.48%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	2.170	2.170	15.63	0.000
Error	180	24.993	0.1389	-	-
Total	181	27.163	-	-	-

The overall model was statistically significant, with an F-statistic of 15.63 ($p < 0.001$). However, the explanatory power was modest, with an adjusted R^2 value of 7.48%. This indicates that perceptions of fairness explain only a small proportion of the variance in motivation to quit or reduce tobacco usage.

The regression coefficient for FE ($\beta = 0.1413$, $p < 0.001$) was positive and significant, confirming that higher perceptions of fairness are associated with greater motivation. Specifically, a one-unit increase in FE predicts a 0.1413-unit increase in IETPYA.

While the effect size is weaker compared to the influence of government communication (see Section 4.4.2), these findings suggest that fairness considerations nonetheless contribute to motivational outcomes. Fairness thus operates as a secondary but relevant factor in shaping behavioral intent among youth.

4.3.5.6 The Influence of Acceptance of Reasons on Perceptions of Fairness

This subsection investigates whether youth Acceptance of the Reasons for Excise (AYE) serves as a predictor of their Perceptions of Fairness (FE). The underlying hypothesis was that when the rationale behind the excise policy is well understood and accepted, individuals are more likely to view the policy as fair.

The regression analysis yielded a highly significant model, with results demonstrating a strong positive relationship between AYE and FE. The regression equation is expressed as follows:

FE=0.412+0.9417×AYE

The findings are presented in Table 4.3.16.

Table 4.3.16: Summary of Regression Analysis for FE and AYE

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	0.412	0.156	2.64	0.009	-
AYE	0.9417	0.0409	23.02	0.000	1.00
Model Summary					
S		**R^2**		**R^2 (adj)**	
0.391223		74.64%		74.50%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	81.09	81.09	529.84	0.000

Error	180	27.55	0.1531	-	-
Total	181	108.64	-	-	-

The model was highly significant, with an F-statistic of 529.84 ($p < 0.001$). The explanatory power was exceptionally strong, with an adjusted R^2 value of 74.50%, indicating that nearly three-quarters of the variance in fairness perceptions can be explained by acceptance of reasons.

The regression coefficient for AYE ($\beta = 0.9417$, $p < 0.001$) was positive and highly significant, suggesting that acceptance of the policy rationale is the single most powerful driver of fairness perceptions identified thus far. Specifically, for every one-unit increase in AYE, the fairness score is expected to rise by 0.9417 units.

These results emphasize that fairness perceptions are not shaped solely by communication strategies or awareness levels but are most strongly anchored in whether the underlying justification for the tax is accepted. This underscores the centrality of policy rationale acceptance in shaping broader judgments of equity.

4.3.5.7 The Influence of Motivation to Quit or Reduce Usage on Behavioral Intentions

This subsection examines whether youth Motivation to Quit or Reduce Tobacco Usage (IETPYA) predicts their Behavioral Intentions regarding tobacco consumption (BIETP). The hypothesis proposed that stronger motivation to quit would correspond to weaker intentions to use tobacco products.

Initial Analysis: Composite Motivation (IETPYA)

The first regression model tested the direct effect of the composite motivation variable on behavioral intentions. The analysis produced a non-significant result, as reflected in the regression equation: $BIETP = 4.557 - 0.1396 \times IETPYA$

The results are summarized in Table 4.3.17.

Table 4.3.17: Regression Analysis for Composite IETPYA and BIETP

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	4.557	0.344	13.24	0.000	-
IETPYA	-0.1396	0.0900	-1.55	0.123	1.00
Model Summary					
S		**R²**		**R² (adj)**	
0.468878		1.32%		0.77%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	0.529	0.529	2.41	0.123
Error	180	39.57	0.220	-	-
Total	181	40.10	-	-	-

The model was not statistically significant ($F = 2.41$, $p = 0.123$), and the adjusted R^2 value of 0.77% indicates almost no explanatory power. This finding does not support the initial hypothesis. To explore whether the non-significant result was masking distinct effects, the composite variable was disaggregated into three subcomponents: Cost Impact (CI), Health Awareness (HI), and Efforts to Quit (QE). This post-hoc analysis produced a significant model, expressed as follows:

$$BIETP=3.943-0.0100\times CI+0.3073\times HI-0.3259\times QE$$

The results are presented in Table 4.3.18.

Table 4.3.18: Regression Analysis for Motivation Subcomponents and BIETP

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	3.943	0.346	11.41	0.000	-
CI	-0.0100	0.0467	-0.21	0.832	1.04
HI	0.3073	0.0763	4.03	0.000	1.09
QE	-0.3259	0.0615	-5.30	0.000	1.12

Model Summary					
S		**R^2**		**R^2 (adj)**	
0.432779		16.86%		15.46%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	3	6.762	2.254	12.03	0.000
Error	178	33.34	0.187	-	-
Total	181	40.10	-	-	-

The post-hoc model was statistically significant ($F = 12.03$, $p < 0.001$), with an adjusted R^2 value of 15.46%, representing a considerable improvement over the composite model.

The coefficients reveal nuanced effects:

- Cost Impact (CI) was not significant ($p = 0.832$), suggesting that perceived financial burden does not directly influence behavioral intentions.
- Health Awareness (HI) was a significant positive predictor ($\beta = 0.3073$, $p < 0.001$). Counterintuitively, higher health awareness was associated with stronger intentions to use tobacco, suggesting a possible resistance to health messaging among youth.
- Efforts to Quit (QE) was a significant negative predictor ($\beta = -0.3259$, $p < 0.001$), aligning with the hypothesis. Greater efforts to quit were linked to weaker intentions to continue using tobacco.

While the composite measure of motivation failed to predict behavioral intentions, the disaggregated analysis revealed a complex pattern. Active efforts to quit emerged as a protective factor, while health awareness had an unexpected reinforcing effect on usage intentions. These results highlight the need for targeted interventions that address not only awareness but also the underlying cognitive and behavioral barriers to quitting.

4.3.5.8 The Influence of Motivation and Its Subcomponents on Usage of Tobacco Products

This subsection evaluates whether youth Motivation to Quit or Reduce Usage (IETPYA) predicts their actual Usage of Tobacco Products (UYTP). The hypothesis assumed that greater motivation would correspond to lower tobacco consumption.

Initial Analysis: Composite Motivation (IETPYA)

The first regression tested the composite motivation variable. Contrary to expectations, the model was statistically significant but revealed a counterintuitive relationship. The regression equation is as follows:

UYTP=3.306+0.1277×IETPYA

The results are summarized in Table 4.3.19.

Table 4.3.19: Regression Analysis for Composite IETPYA and UYTP

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	3.306	0.232	14.22	0.000	-
IETPYA	0.1277	0.0608	2.10	0.037	1.00
Model Summary					
S		**R²**		**R² (adj)**	
0.316657		2.40%		1.85%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	1	0.443	0.443	4.42	0.037
Error	180	18.05	0.100	-	-
Total	181	18.49	-	-	-

The model reached significance ($F = 4.42$, $p = 0.037$), but the adjusted R^2 value was very low (1.85%). More importantly, the coefficient for IETPYA was positive, suggesting that higher motivation was unexpectedly linked to higher tobacco usage.

To clarify this counterintuitive finding, a post-hoc regression was conducted using the subcomponents of motivation: Cost Impact (CI), Health Awareness (HI), and Efforts to Quit (QE).

The model was statistically significant, though still weak in explanatory power. The regression equation is expressed as follows:

UYTP=3.123+0.0642×CI+0.1522×HI−0.0580×QE

The results are shown in Table 4.3.20.

Table 4.3.20: Regression Analysis for Motivation Subcomponents and UYTP

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	3.123	0.249	12.53	0.000	-
CI	0.0642	0.0337	1.91	0.058	1.04
HI	0.1522	0.0550	2.77	0.006	1.09
QE	-0.0580	0.0443	-1.31	0.193	1.12
Model Summary					
S		**R²**		**R² (adj)**	
0.312069		6.26%		4.68%	
Analysis of Variance (ANOVA)					
Source	**DF**	**SS (adj)**	**MS (adj)**	**F-Value**	**P-Value**
Regression	3	1.157	0.386	3.96	0.009
Error	178	17.33	0.097	-	-
Total	181	18.49	-	-	-

The post-hoc analysis revealed mixed results:

- Cost Impact (CI) was marginally significant (p = 0.058), suggesting a possible but weak positive association with usage.
- Health Awareness (HI) was a significant positive predictor (β = 0.1522, p = 0.006), indicating that greater awareness of health risks corresponded to higher tobacco use.
- Efforts to Quit (QE) was not significant (p = 0.193), suggesting no independent effect once the other subcomponents were considered.

Both the composite and disaggregated models produced counterintuitive results. Rather than reducing consumption, higher motivation—particularly through increased health awareness—was linked to greater usage.

These findings imply that motivation does not straightforwardly translate into behavior change and that unmeasured psychological or social factors may moderate this relationship.

4.3.5.9 The Influence of Motivation and Its Subcomponents on Acceptance of Reasons

This subsection explores whether youth Motivation to Quit or Reduce Usage (IETPYA) predicts their Acceptance of the Reasons for Excise (AYE). The hypothesis anticipated a positive relationship, with higher motivation leading to greater acceptance of policy rationale.

Initial Analysis: Composite Motivation (IETPYA)

The first regression tested the composite motivation variable. The model was not statistically significant, as shown below:

$$AYE=3.020+0.191\times IETPYA$$

Table 4.3.21: Regression Analysis for Composite IETPYA and AYE

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	3.020	0.520	5.80	0.000	-
IETPYA	0.191	0.136	1.41	0.161	1.00
Model Summary					
R^2			**R^2 (adj)**		
1.09%			0.54%		

The model was non-significant ($F = 1.98$, $p = 0.161$).

To gain deeper insight, the subcomponents of IETPYA—Cost Impact (CI), Health Awareness (HI), and Efforts to Quit (QE)—were analyzed separately. The regression model was significant:

$$AYE=2.449+0.2476\times CI+0.440\times HI-0.4265\times QE$$

Table 4.3.22: Regression Analysis for Motivation Subcomponents and AYE

Regression Coefficients					
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**	**VIF**
Constant	2.449	0.520	4.71	0.000	-
CI	0.2476	0.0703	3.52	0.001	1.04

HI	0.440	0.115	3.83	0.000	1.09
QE	-0.4265	0.0924	-4.61	0.000	1.12
Model Summary					

R^2 (adj)
16.13%

The model was significant ($F = 12.60$, $p < 0.001$).
The composite variable masked important dynamics. The post-hoc analysis showed:

- CI and HI positively predicted acceptance, suggesting financial and health considerations encourage justification of excise.
- QE negatively predicted acceptance, indicating that those struggling to quit may resent or reject the rationale.

Thus, motivation's effect on acceptance is complex, with opposing forces at play.

4.3.5.10 The Influence of Behavioral Intentions and Its Subcomponents on Usage of Tobacco Products

This subsection investigates whether youth Behavioral Intentions (BIETP) predict actual Usage of Tobacco Products (UYTP).

Initial Analysis: Composite BIETP
The first regression tested BIETP as a composite variable. The model was significant but weak in explanatory power.

UYTP=3.263+0.1315×BIETP

Table 4.3.23: Regression Analysis for Composite BIETP and UYTP

Regression Coefficients				
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**
Constant	3.263	0.201	16.21	0.000
BIETP	0.1315	0.0497	2.65	0.009
Model Summary				

R^2 (adj)
3.21%

The positive coefficient was counterintuitive, indicating that stronger intentions to change were linked with higher usage.

BIETP was disaggregated into Behavioral Adjustments (BA), Accessibility & Availability (AA), and Alternative Choices (AC).

$UYTP=3.207-0.0384\times BA+0.1414\times AA+0.0432\times AC$

Table 4.3.24: Regression Analysis for BIETP Subcomponents and UYTP

Regression Coefficients				
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**
BA	-0.0384	0.0458	-0.84	0.404
AA	0.1414	0.0449	3.15	0.002
AC	0.0432	0.0278	1.56	0.122
Model Summary				

R^2 (adj)
5.39%

The subcomponent analysis clarified the results:

- AA was the only significant predictor, showing that availability of tobacco strongly drives actual use.
- BA and AC were not significant.

This suggests that environmental access, rather than intentions, shapes behavior.

4.3.5.11 The Influence of Social Influence on Usage of Tobacco Products

This subsection tests whether Social Influence (SI) predicts actual usage.

$UYTP=4.145-0.1058\times SI$

Table 4.3.25: Regression Analysis for SI and UYTP

Regression Coefficients				
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**
Constant	4.145	0.163	25.45	0.000
SI	-0.1058	0.0484	-2.18	0.030
Model Summary				
R^2 (adj)				
2.04%				

The coefficient was significant but negative, indicating that greater social influence was associated with lower usage—contrary to the hypothesis. This may reflect protective norms or social discouragement within peer groups.

4.3.5.12 The Influence of Government Communication and Perceptions of Fairness on Motivation

This model combines RGC and FE as predictors of IETPYA.

IETPYA=2.553+0.2911×RGC+0.0230×FE

Table 4.3.26: Regression Analysis for RGC and FE on IETPYA

Regression Coefficients				
Term	**Coefficient (β)**	**Std. Error**	**T-Value**	**P-Value**
RGC	0.2911	0.0504	5.77	0.000
FE	0.0230	0.0388	0.59	0.554
Model Summary				
R^2 (adj)				
21.56%				

RGC remained significant, while FE was not, confirming that communication drives motivation more strongly than fairness perceptions.

4.3.5.13 The Influence of Motivation, Behavioral Intentions, and Social Influence on Usage

This combined model tested IETPYA, BIETP, and SI as predictors of UYTP.

UYTP=2.997+0.1846×IETPYA+0.1211×BIETP−0.1187×SI

Table 4.3.27: Regression Analysis for IETPYA, BIETP, and SI on UYTP

Regression Coefficients		
Term	**Coefficient (β)**	**P-Value**
IETPYA	0.1846	0.003
BIETP	0.1211	0.016
SI	-0.1187	0.018
Model Summary		
R^2 (adj)		
8.30%		

Motivation and behavioral intentions showed counterintuitive positive effects, while SI had a protective negative effect. The combined explanatory power remained modest.

4.3.5.14 The Influence of Usage of Tobacco Products on Acceptance of Reasons

This model examined whether actual usage predicts AYE.

AYE=1.402+0.619×UYTP

Table 4.3.28: Regression Analysis for UYTP and AYE

Regression Coefficients		
Term	**Coefficient (β)**	**P-Value**
UYTP	0.619	0.000
Model Summary		
R^2 (adj)		
7.23%		

Unexpectedly, higher usage was associated with greater acceptance of reasons, though explanatory power was limited.

4.3.5.15 The Integrated Influence of Key Factors on Acceptance of Reasons

This final regression combined AUAE, FE, IETPYA, and UYTP as predictors of AYE.

$$AYE=1.023+0.2888\times AUAE+0.5988\times FE-0.2732\times IETPYA+0.0871\times UYTP$$

Table 4.3.29: Regression Analysis for Integrated Model

Regression Coefficients		
Term	**Coefficient (β)**	**P-Value**
AUAE	0.2888	0.000
FE	0.5988	0.000
IETPYA	-0.2732	0.000
UYTP	0.0871	0.239
Model Summary		
R^2 (adj)		
81.89%		

This integrated model explained over 80% of the variance in AYE, highlighting AUAE and FE as the most powerful drivers. Motivation had a negative effect, while actual usage was not significant when controlling for other factors.

The regression analyses provided a comprehensive examination of the relationships among government communication, awareness and acceptance, perceptions of fairness, motivation, behavioral intentions, social influence, and actual tobacco usage. Several important patterns emerged, which together help clarify the dynamics influencing youth responses to excise taxation.

4.3.6 Mediation Analysis

This section investigates whether government communication influences youth perceptions of fairness directly, or indirectly through increased awareness and acceptance of excise policies. A mediation analysis was conducted following the Baron and Kenny (1986) framework.

4.3.6.1 A Mediation Analysis of Government Communication and Perceptions of Fairness

This subsection examines whether the effect of Government Communication (RGC) on youth Perceptions of Fairness of Excise (FE) operates directly or indirectly through Awareness, Understanding, and Acceptance of Excise (AUAE). The hypothesis was that RGC does not influence fairness perceptions in isolation but instead fosters awareness and acceptance, which subsequently shape fairness judgments. The analysis follows the three-step regression framework of Baron and Kenny (1986).

Step 1: Effect of RGC on AUAE (Path a)

The first step confirmed that RGC significantly predicts AUAE. The regression model was highly significant, explaining 22.11% of the variance.

AUAE=1.131+0.6488×RGC

Table 4.3.30: Regression of AUAE on RGC (Path a)

Term	β	Std. Error	T-Value	P-Value
Constant	1.131	0.366	3.09	0.002
RGC	0.6488	0.0908	7.15	0.000

This demonstrates that effective government communication is a strong antecedent to awareness and acceptance of excise policies.

Step 2: Effect of AUAE on FE (Path b)

Next, AUAE was tested as a predictor of FE. The model explained 52.72% of the variance, confirming AUAE as a powerful determinant of fairness perceptions.

FE=1.396+0.6843×AUAE

Table 4.3.31: Regression of FE on AUAE (Path b)

Term	β	Std. Error	T-Value	P-Value
Constant	1.396	0.184	7.58	0.000
AUAE	0.6843	0.0483	14.17	0.000

The results confirm that fairness perceptions rise substantially with greater awareness and acceptance.

Step 3: Combined Effects (RGC and AUAE → FE)

Finally, both RGC and AUAE were included in the model predicting FE.

FE=0.544+0.5778×AUAE+0.3126×RGC

Table 4.3.32: Multiple Regression of FE on AUAE and RGC

Term	β	Std. Error	T-Value	P-Value
Constant	0.544	0.263	2.07	0.040
AUAE	0.5778	0.0522	11.07	0.000
RGC	0.3126	0.0720	4.34	0.000

The variance explained rose to 57.22%, and both predictors remained significant. Importantly, the coefficient for RGC decreased substantially compared to a direct-only model, indicating that much of its effect is transmitted through AUAE.

The results confirm that AUAE serves as a significant mediator between RGC and FE. Government communication enhances fairness perceptions primarily by building awareness and acceptance. However, the persistence of a reduced but significant direct path suggests partial mediation rather than full mediation.

This implies that RGC not only strengthens fairness indirectly via AUAE but also retains a direct role, perhaps by shaping perceptions of transparency and trustworthiness in governance.

4.3.6.2 A Mediation Analysis of Awareness and Perceptions of Fairness

This subsection investigates whether Acceptance of Reasons for Excise (AYE) mediates the relationship between Awareness, Understanding, and Acceptance (AUAE) and Perceptions of Fairness (FE). The hypothesis was that AUAE increases acceptance of policy rationale, which in turn enhances fairness perceptions.

Step 1: Effect of AUAE on AYE (Path a)

AUAE was found to be a strong and significant predictor of AYE, explaining 62.31% of the variance.

AYE=1.209+0.6825×AUAE

Table 4.3.33: Regression of AYE on AUAE (Path a)

Term	B	Std. Error	T-Value	P-Value
Constant	1.209	0.151	8.02	0.000
AUAE	0.6825	0.0396	17.25	0.000

This confirms AUAE as a foundational driver of rationale acceptance.

Step 2: Effect of AYE on FE (Path b)

AYE was then tested as a predictor of FE. The model explained 74.64% of the variance, highlighting AYE as the single strongest predictor of fairness identified in this study.

FE=0.412+0.9417×AYE

Table 4.3.34: Regression of FE on AYE (Path b)

Term	B	Std. Error	T-Value	P-Value
Constant	0.412	0.156	2.64	0.009
AYE	0.9417	0.0409	23.02	0.000

Step 3: Combined Effects (AUAE and AYE → FE)

Finally, both AUAE and AYE were entered as predictors of FE.

FE=0.379+0.8411×AYE+0.1103×AUAE

Table 4.3.35: Multiple Regression of FE on AYE and AUAE

Term	B	Std. Error	T-Value	P-Value
Constant	0.379	0.156	2.43	0.016
AYE	0.8411	0.0661	12.72	0.000
AUAE	0.1103	0.0572	1.93	0.055

The model explained 75.16% of the variance, slightly improving upon the AYE-only model. The coefficient for AUAE dropped sharply and became only marginally significant ($p = 0.055$), suggesting that most of its effect is mediated through AYE.

4.3.6.3 Conclusion of Mediation Analysis

The results provide strong evidence of partial mediation, with AYE accounting for most, but not all, of the relationship between AUAE and FE. Awareness and acceptance increase fairness primarily by strengthening acceptance of policy rationale. Nevertheless, a residual direct effect remains, indicating that youth perceptions of fairness also depend partly on their general awareness and understanding, independent of whether they accept the stated reasons.

4.3.6.4 Summary of Path analysis

The combined regression and mediation analyses provide a comprehensive account of the pathways through which government communication, awareness, fairness, motivation, behavioral intentions, social influence, and actual usage interact to shape youth attitudes and behaviors

regarding excise taxation. These relationships are visually summarized in Figure 4.3.7, which illustrates the conceptual model underpinning the observed effects.

1. Government Communication as a Foundational Driver

Government communication (RGC) was confirmed as a primary antecedent in the model. It significantly predicted youth awareness, understanding, and acceptance (AUAE) as well as motivation to quit or reduce tobacco use (IETPYA). Mediation analysis revealed that the influence of RGC on fairness perceptions (FE) was largely indirect: RGC increased AUAE, which in turn elevated fairness perceptions. While a reduced direct effect of RGC on fairness remained, the results support partial mediation, underscoring AUAE's critical role as the main transmission channel for communication effects.

2. Awareness and Acceptance as Central Mechanisms

AUAE consistently emerged as one of the strongest predictors in the model. It explained more than half of the variance in fairness perceptions (FE) and nearly two-thirds of the variance in acceptance of reasons (AYE). Moreover, mediation analysis demonstrated that AUAE's effect on fairness was transmitted primarily through AYE, confirming partial mediation. In other words, awareness enhances fairness mainly because it promotes acceptance of the policy rationale, though some direct effect remains.

3. Acceptance of Reasons as the Strongest Predictor of Fairness

Acceptance of reasons (AYE) was identified as the single most powerful determinant of fairness, explaining almost 75% of the variance in FE.

This underscores that youth are more likely to perceive the tax as equitable when they accept its underlying justifications—whether health-related, economic, or social.

The integrated regression model further confirmed AYE, alongside AUAE and fairness, as central constructs, together accounting for more than 80% of the variance in fairness judgments.

4. Fairness as a Secondary but Relevant Influence

Fairness perceptions had a weaker yet notable role. FE modestly predicted motivation to quit, but its effect size was limited compared to communication and awareness. Thus, fairness acts as a supportive, secondary pathway that reinforces motivational outcomes without being their primary driver.

5. Motivation and Behavioral Intentions: Weak and Counterintuitive Effects

Contrary to expectations, motivation (IETPYA) and behavioral intentions (BIETP) did not consistently translate into reduced usage (UYTP). Composite measures often produced weak or even counterintuitive associations, such as higher motivation correlating with greater usage. Disaggregated analyses revealed greater nuance:

- Efforts to Quit (QE) significantly reduced intentions to use tobacco.
- Health Awareness (HI) unexpectedly increased usage, suggesting psychological resistance or denial.
- Accessibility and Availability (AA) emerged as the main driver of usage within behavioral intentions, confirming the importance of environmental factors over stated intentions.

These findings point to a gap between intention and action, highlighting the need for supportive structures that can convert motivation into behavior change.

6. Social Influence as a Protective Factor

Unexpectedly, social influence (SI) was negatively associated with tobacco usage, indicating that stronger peer influence corresponded with lower consumption. This suggests that within this youth population, peer norms may be protective rather than risk-enhancing. Leveraging positive social dynamics could therefore reinforce policy outcomes.

7. Integrated Model and Final Pathways

The integrated model combining AUAE, FE, IETPYA, and UYTP explained over 80% of the variance in acceptance of reasons (AYE). AUAE and FE were the strongest predictors, while motivation had a negative effect, and actual usage was not significant when considered alongside other factors.

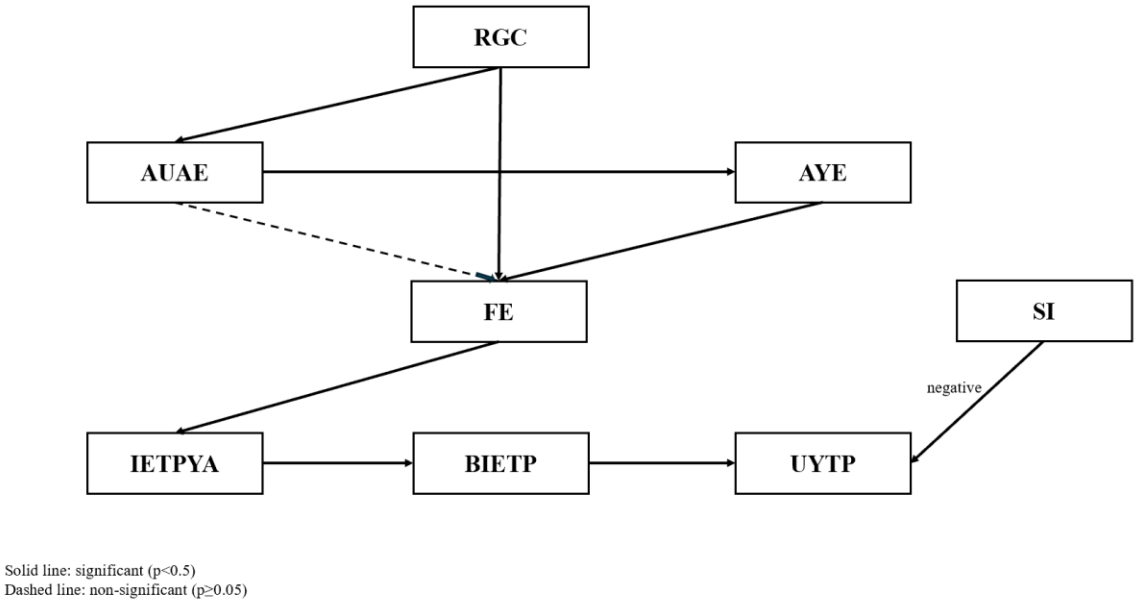
Together with the mediation analyses, these results confirm that:

- RGC → AUAE → FE represents the key mediated pathway from communication to fairness.
- AUAE → AYE → FE represents the strongest mediated pathway to fairness, confirming that acceptance of rationale is the most critical determinant of fairness perceptions.
- Motivation and behavioral intentions, though theoretically important, did not emerge as reliable predictors of actual usage, suggesting structural or psychosocial barriers inhibit the translation of intention into behavior.

The integrated findings highlight a coherent story: government communication fosters awareness; awareness builds acceptance of policy rationale; and rationale acceptance drives fairness perceptions. Fairness, in turn, modestly supports motivation, but motivation and intentions alone are insufficient to reduce usage without external reinforcement. Social influence emerges as an unexpected protective factor, while accessibility remains the strongest behavioral driver.

Collectively, these insights confirm that the effectiveness of excise taxation depends less on punitive motivation and more on building legitimacy through clear communication, awareness, and acceptance of the policy's rationale.

Figure 4.3.7: Conceptual Diagram: Factors Influencing Youth Tobacco Usage in Response to Excise Tax



The diagram illustrates the key pathways through which government communication influences youth attitudes and behaviors towards tobacco excise policies. Government Communication (RGC) acts as the initial driver, enhancing youth Awareness, Understanding, and Acceptance of Excise (AUAE). This increased awareness and acceptance strongly shape perceptions of Fairness of Excise (FE) and lead to greater Acceptance of the Reasons for Excise (AYE). Acceptance of reasons is the strongest factor influencing perceived fairness. Fairness perceptions then support youth Motivation to Quit or Reduce Tobacco Usage (IETPYA),

although motivation only modestly impacts behavioral outcomes. Behavioral Intentions (BIETP), influenced by motivation and social factors, partially predict actual Tobacco Usage (UYTP). Social Influence (SI) exerts a protective effect, reducing tobacco use among youth.

4.4 Chapter summary

The findings of qualitative and quantitative research reveal change in behaviour in youth with regards to excise tax on tobacco products in terms of reduced usage over time. There has been resistance noted with regards to excise tax in youth. But gradual change in behaviour was noted according to the research. However, this was because the government engaged in effective awareness campaigns which educate the youth about the tobacco risks.

CHAPTER 5 - DISCUSSION

5.1 Introduction

This chapter undertakes the discussion by comparing the research findings with previous research to understand support or contradiction between them. The discussion is made under the four themes identified in the previous chapter.

The rest of this chapter is structured as follows: Section 5.2 presents discussion on attitude of youth towards levying excise on tobacco products over time, section 5.3 presents discussion on Influence of excised tobacco products on the attitude of youth towards tobacco products, section 5.4 presents the discussion on Youth's usage pattern of excised tobacco products over time, section 5.5 presents the discussion on Influence of excised tobacco products on the usage pattern of youth towards tobacco products and section 5.6 presents the framework development.

5.2. Attitude of youth towards levying excise on tobacco products over time

The sub-themes identified under this theme are awareness understanding and acceptance of excise, fairness of excise and role of government communication which affect the attitude of youth towards levying excise tax on tobacco products. The key aspect is how the attitudes of youth changed and what factors played role in this change. The research's findings show that although young people in the UAE first resisted the tobacco excise tax, they ultimately accepted it. However, this attitude change was observed over a period of time. WHO (2008) supports this finding as it argued that excise tax is one of the most common methods for reducing tobacco usage all over the

world which usually receives resistance from the consumers? The survey also revealed supporting role of awareness campaigns and educational programmes in enhancing understanding of consumers along with the excise. Alhaj et al. (2021) support this finding who noted that youngsters often begin to understand the harmful effects of tobacco through awareness campaigns. Barakat and Yousufzai (2021) also observed noted that an increasing awareness of negative health impacts of tobacco consumption as well as their acknowledgement that smoking is one of the leading causes of death worldwide. Dabbagh (2017) also support this study findings about the importance of awareness initiatives as he insisted on the positive role of health awareness in reducing teen smoking. The research findings confirmed that being well-informed about the excise duties on tobacco led to an increased understanding of how these taxes function. Youth in UAE also showed strong acceptance of the reasons behind implementing excise taxes on tobacco products. The role of excise tax is thus supported by awareness campaigns which educate youth about the health risks of tobacco use.

The findings of this study are supported by previous studies which show that for every 10% increase in pack price, the average adult population in high-income countries would witness a 4% decline in cigarette usage (Jha & Chaloupka, 2000). Because tobacco taxes reduce tobacco usage overall and encourage other smokers to be more responsible with their smoking, they also indirectly benefit individuals who quit. Since tax hikes reduce exposure to passive smoking, they also benefit non-consumers. "Young Adults" (18–25 years old) continued to smoke at high rates despite the general public's awareness of the health dangers, even if the usage of tobacco products appeared to be high and increasing (Bader et al., 2007). This is why the age group in question was selected for the study. Tercyak et al. (2007) state that there is a chance that smokers in this age range will start using tobacco products during this developmental stage and progress to higher levels of use. Since products that contain tobacco have been shown to make up a larger percentage of the product variety, young adults have been shown to be predictive of smoking in later adulthood.

This study demonstrates mixed responses about the perceived fairness of excise taxes. Many participants believed that the excise taxes on tobacco goods were reasonable and justified in terms of justice. But there was disagreement about whether the government should enforce excise taxes, which indicates some amounts of differences. Because of the higher expenses, many young people

first thought the tax was unjust. This was the sudden reaction to the increased costs of tobacco products. Government agencies at all levels—federal, state, provincial, emirate, and local—impose excise taxes. According to Cnossen (2006), it is imposed either as a fixed sum or as a percentage of the total cost of a good or service. In certain instances, it is applied to the retail marked selling price. The networks and channels that trade in tobacco goods are in charge of gathering taxes and submitting them to the proper authorities. While this frequently doesn't influence the profit margins of those selling the goods, it does raise its price, which may have an effect on demand (Delipalla & Keen, 1992). Excise tax revenues are utilised to finance public and government initiatives aimed at covering past, current, and future expenses and investments (West, 2017). This affect consumers' ability to perceive the tax as fair or unfair. Governments employ excise taxes as a measure to manage the demand for tobacco products. By enacting a higher particular tax, the market share of inexpensive cigarettes will be reduced, which will decrease or eliminate demand from the impoverished and young smokers with limited disposable money. However, in order to increase income, the government may impose an ad valorem excise tax to modify the diversity and features of items to a desirable degree (Smith, 2007). In many nations, political factors and timing are used to maintain tobacco users in the government's good or bad graces. The government must strike a balance between the health effect of higher costs leading to fewer consumption and therefore lower revenues, and greater excise taxes for better revenues but they may discourage consumption, which would negatively influence the revenues. (Chaloupka et al., 2000; Cnossen, 2006; Manning et al., 2009). This reasoning behind excise tax is usually not understood by consumers causing them to be dissatisfied.

The research findings show that when public awareness efforts brought attention to the health risks associated with smoking, acceptability increased over time. Thus, excise tax when implemented needs time along with awareness campaigns to change the youth behaviour. This finding is in line with the findings of Al-Lawati et al. (2017), who stressed on the importance of successfully communicating tax reforms to lessen resistance and increase awareness of their advantages. The idea that price rises brought on by excise taxes might affect tobacco use behaviours is supported by the finding made by Ribisl et al. (2022) that older teenagers are more cost-conscious and might not consider excise tax fair until they are educated about their benefits and risks associated with tobacco use. The resistance is sourced from the increased pricing of tobacco which results from the excise tax since the tax is added in the cost resulting in negative opinions from the consumers

(Chaloupka et al., 2000). This study supports the idea that, even if some young people still regard the tax as a financial burden, good communication from the government raises the general impression of fairness.

Numerous studies have demonstrated that the price of cigarettes and awareness both have an impact on the prevalence and severity of teen smoking. Numerous researches have looked into the possibility that certain young people's subgroups may be more or less sensitive to price variations. According to Ribisl et al. (2022), older adolescents are more cost-conscious when it comes to price than younger adolescents. An individual's salary was a reliable determinant of whether they were a "established" smoker as opposed to whether they were a "try it out" smoker. The impact of increasing cigarette prices is directly correlated with the rise in teen smoking rates. These findings offer empirical evidence in favour of the theory that teenagers who experiment with smoking are typically given cigarettes by third parties by their peers. When young individuals start smoking for the first time, the cost of cigarettes might not be a major concern for them if they are not responsible for buying their own supply (Delipalla et al., 2022).

The excise tax is accepted and understood by youth because of government communication. According to the present research, youth in the UAE are well-informed on excise taxes and tobacco usage. This is because government communication through well-designed awareness campaigns has a significant impact on shaping their opinions regarding tobacco use. The survey also revealed that right media outlets were used to make the public informed about excise tax reaching a wider audience. This study confirmed that public communication and awareness efforts play a key role in changing consumer’s opinions and attitudes towards tobacco use as they learn about the health risks of smoking. Hoek et al. (2021) argue that public awareness campaigns play a key role in enhancing knowledge in consumers about the health risks of tobacco usage encouraging them to reduce and quit smoking. According to WHO (2020), a combination of various initiatives such as excise tax, awareness campaigns and providing access to smoking cessation services, together contribute towards reduction in tobacco consumption. Thus, existing research support the finding of this research which found that government communication and awareness campaigns contribute positively in encouraging youth to reduce and quit smoking. The combination of various initiatives i.e., excise tax and awareness campaigns are thus found to be effective from the literature as well as this research to be effective in reducing tobacco usage in youth.

In conclusion, the research findings are supported by the previous literature emphasising the significance of excise tax, awareness campaigns and effective government communication in influencing young people's views towards tobacco product usage.

5.3 Influence of excised tobacco products on the attitude of youth towards tobacco products

The sub-themes identified under this theme are cost impact, health impact and quitting efforts. The result findings show that increased prices of tobacco products caused by excise tax have a substantial impact on young people's tobacco usage. This is because excise tax cause smokers to reconsider their smoking habits owing to rising costs. The results demonstrate that many youths become more price-sensitive and decide not to buy tobacco products as a result of the higher expenses brought on by excise taxes. Ribisl et al.'s (2022) findings, which indicate that older adolescents are more cost-aware and that higher cigarette costs discourage teen smoking, corroborate this conclusion. Furthermore, Alhaj et al. (2021) found that young individuals are becoming more aware of the financial and health advantages of reducing their tobacco use as a result of levies, which is consistent with this research survey's findings that the majority of the respondents are price sensitive. Chaloupka and Warner (2000) also supported the idea that greater prices discourage usage by arguing that higher tobacco taxes have considerable positive health effects. While price elasticity estimates vary amongst studies, Cunningham (2008) and Bader et al. (2011) support the finding of this study as they examined the effects of increased prices on youth and found that, on average, youth are two to three times more price-responsive than the general population. Nevertheless, there is general agreement that higher prices reduce smoking consumption and participation. Thus, cost impact of excise tax is confirmed to be a key factor which influence youth attitude related to tobacco use. Price sensitivity is a significant factor since rising prices typically cause people to reduce or quit smoking. The financial strain of rising tobacco prices, according to the majority of respondents, significantly encourages people to re-evaluate their tobacco usage. Price increases function as a deterrent to consumption, as explained by the theory of reasoned action and planned behaviour.

Another impact was found to be health impact from the research. In terms of the influence on health, youth are made more aware of the dangers of tobacco smoking by the excise taxes. Their health is becoming more of an issue because of the rising prices, and most of them think excise rules make people more aware of health hazards. However, some people still do not care about

health concerns despite this awareness. Advocacy for health and education is essential in influencing the attitudes of young people towards tobacco use since this helps in informing people about negative health impact. According to the present research, young people are more aware of the health problems associated with smoking when excise taxes are paired with health education efforts. In fact, 91% of survey participants agreed that higher expenses made individuals think about their health. Studies like Al-Lawati et al. (2017), who stressed the significance of good communication in lowering resistance to quitting tobacco, provide evidence for this. Furthermore, Hoek et al.'s (2021) research shown that greater financing for public education initiatives results in lower tobacco use, supporting this research findings that health awareness programmes have a major impact on influencing young perspectives. As the Theory of Reasoned Action and Planned Behaviour explains, more health knowledge also leads to a better comprehension of the detrimental health effects of tobacco use, which in turn leads to the rational decision to cut back on tobacco use. In contrast to the increased reactivity to health initiatives described by AlMulla et al. (2021), there is some apathy among youth regarding health hazards, as evidenced by the present study, where 59% of respondents indicated awareness but did not care.

The present study demonstrated that excise taxes encourage youth to try quitting smoking. The results so demonstrate that young people try to cut back on their tobacco use as a result of excise taxes. They are encouraged by the policies to refrain from tobacco usage and actively look for methods of quitting. On the other hand, perspectives differ over whether smoking delight outweighs the desire to stop. Due to excise laws, most respondents (83%) reported making steps to minimise consumption, and 79% felt motivated to abstain. Hussain et al. (2022), who observed that excise taxes have a substantial influence on juvenile smoking patterns and lower the prevalence of smoking-related mortality, corroborate this conclusion. Levy et al. (2005) also discovered that among heavy smokers, price increases are linked to an increase in attempts to stop smoking. There is disagreement on whether smoking is enjoyable, though, with 48% of this study respondents citing pleasure as a deterrent to quitting—a detail that hasn't been as well covered in earlier research. This is consistent with the findings of Matheson (2010) and Bader et al. (2008), who suggested that higher tax rates cause a greater percentage of the general public to give up or reduce their consumption.

Several studies have shown that the prevalence and severity of teen smoking are influenced by both the price of cigarettes and public knowledge. Several studies have investigated the potential that specific subgroups of young people might be responsive to changes in pricing. In comparison to younger adolescents, older teenagers are more price-conscious, according to Ribisl et al. (2022). A person's income was a good indicator of whether they were a "established" smoker as opposed to a "try it out" smoker. There is a direct correlation between rising teen smoking rates and rising cigarette pricing. These results provide empirical support for the idea that teens who dabble with smoking are usually offered cigarettes by their classmates, usually via third parties. If young people are not responsible for purchasing their own supply of cigarettes, the cost of cigarettes may not be a significant worry for them when they start smoking for the first time (Delipalla et al., 2022).

The study's findings, which emphasise on the important role that excise taxes and health awareness initiatives have in shaping young people's attitudes towards tobacco, are consistent with previous studies on the effects of tobacco use on the economy, health, and efforts to quit tobacco use with the adoption of right initiatives. Both these aspects are noted to affect usage and consumption behaviour of tobacco products according to the theory of reasoned action and planned behaviour. Increased prices affect the buying power of people which leads them to reconsider their spending on tobacco products. More health information also results in a greater understanding of the harmful health impacts of tobacco use, which in turn leads to the rational decision to reduce tobacco use, as explained by the Theory of Reasoned Action and Planned Behaviour.

5.4 Youth's usage pattern of excised tobacco products over time

The findings of present research show that excise policies have significantly influenced youth decrease their tobacco consumption and that they actively engage in efforts to reduce usage. This was because of increase in tobacco prices as well as the awareness campaigns combined with the imposition of the tax. Sheikh et al. (2023) provide support for this finding, arguing that higher cigarette pricing may encourage young people to give up smoking altogether, cut back on how often they smoke, or cut back on their intensity from high to moderate levels. Alhaj et al. (2021) also support these findings by observing that young individuals are shifting their views on tobacco smoking because of growing health hazards knowledge and the effects of rising pricing. In a similar vein, Ribisl et al. (2022) discovered that older teenagers decrease their usage of tobacco

products in response to price increases because they are more conscious of the expenses involved. The study's findings about the reduction in the use of tobacco products are supported by Chaloupka and Wechsler (1997), who found that price increase can effectively reduce youth smoking rates. Jha and Chaloupka's (1999) finding that a 10% price rise causes a 4% decrease in tobacco demand also corroborates this study findings. Furthermore, the results are supported by Hussain et al. (2022) and Elkelish and Hussain (2022), who highlighted the substantial impact excise taxes resulted in UAE in lowering the prevalence of smoking and reducing smoking-related mortality among youth. However, the results are in contradiction with DeCicca et al. (2008), who argued that the impact of conventional variables and indirect effects make pricing an ineffective means of lowering consumption in all cases. This suggests that although price hikes are typically beneficial, other social and cultural variables may mitigate their effects.

The findings show that social pressure also plays a role in shaping youth's tobacco usage patterns. Many respondents feel that excise taxes have helped their social circles understand their reasons for quitting tobacco, and they receive support and encouragement from peers to reduce usage. However, there is a mixed response regarding the influence of social circles where smoking is prevalent. The study found that tobacco use habits by youth are impacted by social pressure. Hagger and Hamilton (2021) support this finding by insisting on the value of social support networks in encouraging youth to quit tobacco product use. Katz et al. (2019) also support this by insisting that the significance of social pressure, attitudes, and perceived control shape an individual's intention and attitude regarding tobacco use. This research finding is also corroborated by Al-Hamdani and Hopkins (2023) who revealed that a substantial population of youth in country feel negative about smoking and think that it not socially acceptable. The research findings of the positive role of social influence on smoking habits are supported by Liu et al. (2020) who insisted family and friends influence youth to discourage and encourage smoking. Dabbagh (2017) also accepts the pressure of family and friends since these can cause people to change their smoking habits. Youth smoking habits get impacted by social pressure as also noted by Smith (2021). This is in line with research showing that social pressure has a significant impact on tobacco use. Additionally, the significance of social impact and perceived control in health-related behaviours is emphasised by Babaei et al. (2020) and Katz et al. (2019). The existing literature thus supports the survey results, which show that awareness and social support play a major role in the choice

to give up smoking. Thus, tobacco usage and habits are significantly influenced by social pressure either in negative way or positive way.

The findings confirmed that excise taxes serve as a strong motivation for quitting tobacco. A significant proportion of respondents revealed that excise policies as a long-term motivator for quitting and continuing to abstain from tobacco. Survey participants disagreed that they lack motivation to quit even in the presence of high excise taxes. The study found that excise tax along with awareness campaigns together play a key role in increasing motivation in youth to reduce and tobacco use and/ or quit tobacco use over time. WHO (2008) supported this finding which argue that high prices of tobacco products resulting from excise tax is an effective strategy for reducing tobacco consumption as high prices encourages them to reduce tobacco consumption? Alhaj et al. (2021) also support this finding by noting that youth is becoming aware of the negative health impacts of tobacco use which encourage them to reduce tobacco consumption over time. Barakat and Yousufzai (2021) also support the finding by insisting that consumers receive awareness through multiple sources including excise tax which is a key reason of reducing smoking related deaths. Dabbagh (2017) also highlighted the value of health literacy in lowering youth smoking, which supports the findings of the current study about the necessity of raising awareness through campaigns. Youth attitudes towards limiting tobacco use through motivation to quit thus are successfully influenced by the combination of excise taxes and health awareness initiatives as explained by theory of reasoned action and planned behaviour. According to WHO (2008), Alhaj et al. (2021), Barakat and Yousufzai (2021), Dabbagh (2017), and Al-Lawati et al. (2017), among others, economic and educational interventions have a significant influence on teenage tobacco use behaviours.

5.5 Influence of excised tobacco products on the usage pattern of youth towards tobacco products

The findings revealed that excise taxes directly affect users' tobacco-related behaviours in youth, with a substantial number adjusting their behaviours due to these policies. The study's findings showed that there has been a decline in youth tobacco usage in the UAE after the excise tax was implemented. The increased cost of tobacco products has caused some young people to reconsider their usage, particularly those who are occasional users. The decline is not as significant as

anticipated, though as revealed by this research. The behavioural influence was because of the increased prices as well as the awareness of the health risks. There is general agreement in previous research that higher prices reduce smoking consumption and participation, although price elasticity estimates vary amongst studies. Cunningham (2008) and Bader et al. (2011) investigated the effects of increased price on youth and found that they are typically two to three times more price-responsive than the general population. This finding is also supported by WHO (2008) which contends that pricing is one of the most effective initiatives undertaken by governments for reducing tobacco use and its detrimental health impacts. The interview findings are supported by Alhaj et al. (2021) who argue that youth are starting to understand the negative health risks of tobacco use and the need to gradually reduce the tobacco consumption. Similarly, Barakat and Yousufzai (2021) also support by arguing that youth are receiving knowledge of the negative effects of smoking which encourage them to reduce tobacco use and consumption. Thus, the increased prices achieved through excise tax and awareness campaigns encourage them to reduce tobacco consumption. The existing research found that increased consumer awareness along with excise tax raising help to change young people's behaviour. Dabbagh (2017) supported this finding by revealing the importance of awareness in reducing smoking habits amongst teenage people. The need to communicate the imposing of tax changes to reduce consumer resistance and increase acceptance was also supported by Al-Lawati et al. (2017). This supports the existing research finding that government communication significantly influences young people's views towards excise taxes.

This study also found that changes in tobacco product prices due to excise taxes affect youth ability to buy tobacco products as well as the availability of tobacco products since all shopkeepers might not stock tobacco products due to increased prices. According to the results, 95% of respondents believed that increases in excise taxes had an impact on tobacco products' accessibility, and 90% agreed that they had an impact on their availability. Eighty percent of the respondents acknowledged the financial impact of excise taxes on availability and accessibility of tobacco products in UAE. The study finding is supported by previous studies that emphasise the impact of increased costs on diminishing the accessibility and availability of tobacco products which ultimately affect the consumer buying patterns. Ribisl et al. (2022) argued that youth become more cost-aware and that increased costs encourage youth to reduce their smoking habits. This supports the finding that rising costs of tobacco products encourage youth to review their buying behaviour

and smoking habits and reduce smoking. The existing research also revealed that most respondents are price-sensitive and that excise taxes affect their ability to buy tobacco products. Alhaj et al. (2021) support this that young people are becoming more aware of the financial and health advantages of reducing their tobacco use due to levies.

The research found that although while excise taxes have led to reduced tobacco use, the availability of alternatives such as sheesha is a problem in addressing the issue. The survey revealed that a majority of respondents (60%) agreed that excise taxes led them to seek alternatives to traditional tobacco. Alhaj et al. (2021) support this finding by arguing that young people awareness is increasing because of excise tax. This encourages them to seek alternatives. Aden et al. (2013) noted the increasing regional demand of waterpipes, or sheesha which is in line with a large percentage of respondents who identified sheesha as a substitute. These results are further supported by Lavidge and Steiner (1961) who argue that young consumers may look for alternatives as a result of expensive traditional tobacco products. Ahmed et al. (2021) noted that price increase had a substantial impact on smoking and e-cigarette usage among university students in the UAE. To support this study finding that higher costs reduced tobacco use, Westgarth (2019) argue that excise taxes can result in underground markets for cheaper alternatives. Bate et al. (2020) on the contrary noted that taxes might not have a substantial impact on youth smoking behaviour. The research thus confirm that youngsters are keen to look for alternative tobacco products by increased prices caused from the excise taxes. This is supported by previous research. This identified the difficulty in controlling tobacco use because increased costs of traditional tobacco products result in encouraging the lookout for alternative products.

5.6 Framework development

Fourth research objective was used the research findings to develop a model for the UAE government representing how attitudes and usage amongst 18 to 25-year-old consumers have changed towards excised tax and non-excised tax tobacco products in the UAE. The framework is developed and presented in Figure 5.1. The framework graphically conveys the change in youth attitudes and usage patterns towards excised and non-excised tobacco products in the UAE through the impact of excise tax levied since 2017. The research findings inferred through survey and interviews were utilised to develop the model to understand the changes in consumer behaviour and perceptions within this demographic.

The framework begins mentioning the introduction of the excise tax on tobacco products in the UAE in 2017. This step was a major policy shift since there was no tax levied on tobacco products before and it aimed to reduce the tobacco consumption as well as increasing government income through tax revenues. The initial reaction received from youth in the age group off 18 to 25 was negative response to the excise tax. This resistance was because of the sudden increase in tobacco prices. The resistance was also justified because of the rate of excise tax i.e., 100% which meant that the cigarette price was to be doubled because of the excise tax. This price increased was considered by the youth consumers as a financial burden due to increase in their expenses when buying tobacco products. This reaction is justified by the general economic principle that higher prices can lead to decreased demand as consumers adjust their buying practices to meet their economic conditions.

As the time passed, the initial resistance received from the young consumers resulted into increased price sensitivity as they started to face the impact of the price increase. Price sensitivity means that they now had increased awareness of the cost of tobacco products and started to consider the increased costs when making tobacco purchasing decisions. It is interesting to note that irrespective of the price increase, some youth kept on buying and consuming tobacco products and the excise tax actually did not impact them. These are the consumer groups with higher disposable incomes or strong purchasing power who had more money to be spent on non-essential items such as tobacco products. It is however noted that their purchasing decisions became more considerate. This means that there was a shift in their behaviour from impulsive buying behaviour to more considerate buying behaviour. Economic factor such as change in prices thus noted to impact the buying decisions of youth in case of tobacco purchase.

The framework also presented the key role of awareness campaigns in transforming youth attitudes towards excised tobacco products. Public health campaigns were helpful reshaping the attitudes and perceptions of the consumers related to the excise tax. Excise tax was considered as a financial burden by youth initially as the tax was levied. This was changed because of the awareness campaigns run by the government which communicated the health risks linked with tobacco use. These campaigns helped to change the consumer thinking from considering the excise tax as a burden to start considering it as a health measure. This change helped in the motivating the

consumers internally to reduce and/ or quit the tobacco use. Thus, their behaviour and attitudes changed in line with wider public health goals.

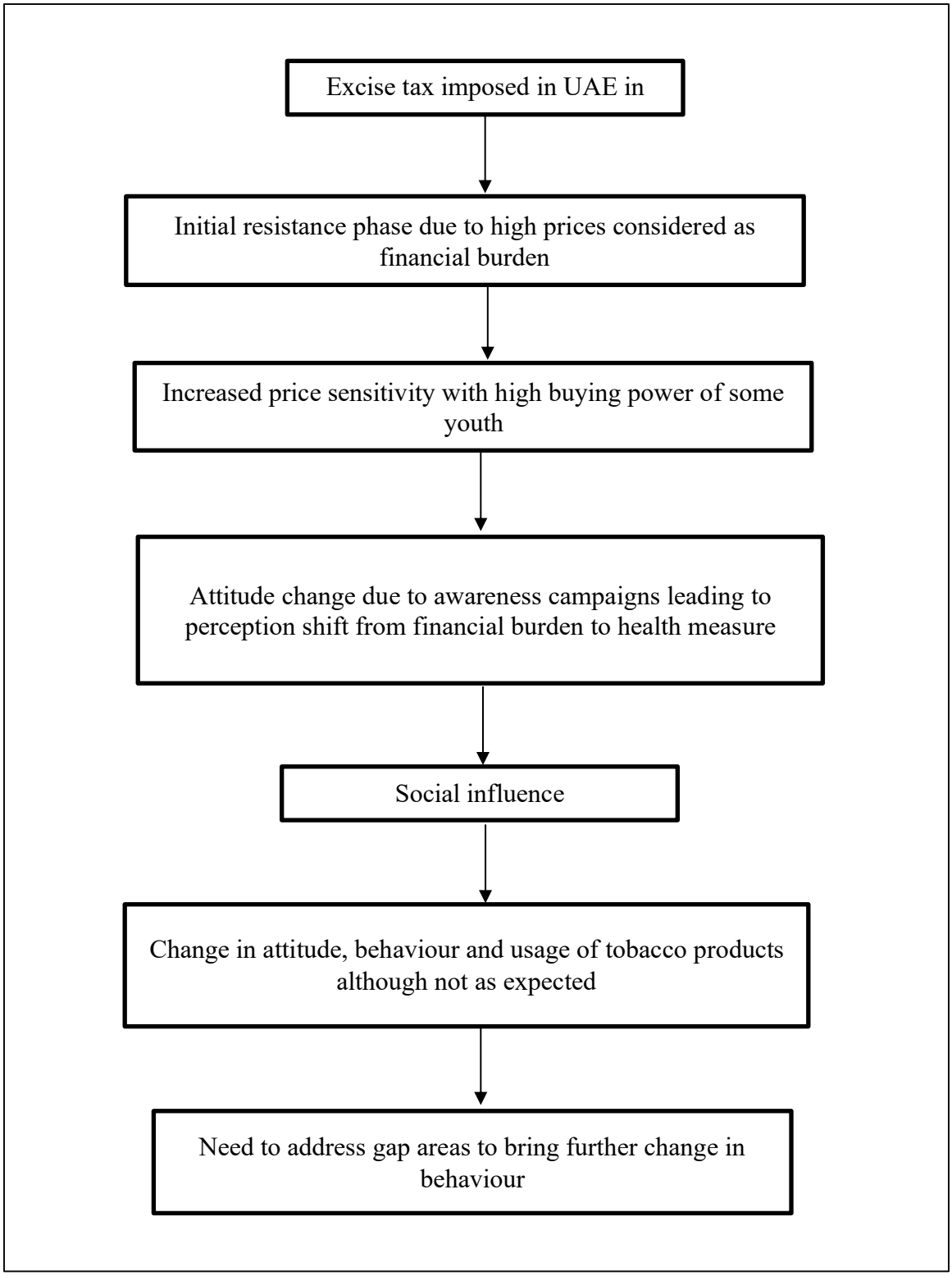


Figure 5.1 Framework developed from the findings

Following this attitudinal shift, the framework revealed the significant impact of social influence on youth behaviour. Social influence refers to the pressures and impact within peer groups, families, and broader social circles that shape people behaviours and decisions. In the context of tobacco use, since youth began to perceive tobacco consumption negatively, these attitudes were supported within their social networks. As awareness campaigns were run country-wide, social influence from non-smoking family and friends also influences youth to reduce or quit tobacco consumption. Social influence thus had multiple effects. This amplified the reach and effectiveness of public health interventions by creating widder behaviour shift against tobacco use.

This combination of increased price sensitivity, attitude changes caused by awareness campaigns, and the support of these changes through social influence led to a visible change in the behaviour and usage patterns of tobacco products among youth. The framework suggests that these factors collectively contributed to a decline in excised tobacco use. This has led young consumers to become more health-conscious and less acceptable of tobacco consumption within their social circles. This behavioural change shows a broader attitudinal change towards healthier lifestyles. This is the result of both economic deterrents and targeted public health campaigns.

Lastly, the framework conveys the need for the regulation of alternative tobacco products. With decrease in consumption of traditional tobacco products, a shift towards alternative products was noted from the research. This is a major concern for the government since the health risks for these alternative products are similar to traditional tobacco products. Alternative products such as e-cigarettes which should be addressed with same regulatory measures to curb their consumption. The framework insists that to continue achieving the positive changes in consumer behaviours, it is important to ensure similar regulatory measures to these alternatives. Lack of similar regulations applicable to alternatives, the progress made in reducing traditional tobacco use can be negatively impacted by shifting towards these alternatives resulting in new public health challenges.

In conclusion, the framework presents the progression of the events from the levy of excise tax in 2017 till date on how the tax measure has been able to bring changes in consumer attitudes in terms of reducing the consumption of tobacco products. It identifies the link between economic factors, public health initiatives, social influence, and the need for continued regulation for achieving better outcomes in terms of reduced tobacco usage. By considering these factors, the UAE government

can continue to develop and implement effective strategies to reduce tobacco consumption and promote public health among its youth population.

5.7 Chapter summary

The combination of excise taxes and health campaigns was found effective in reducing tobacco use as confirmed from this research and supported by previous literature. Increase in prices and increased awareness of health risks associated with tobacco use were found to have an impact on attitudes and behaviour of youth related to tobacco use. The UAE's youth tobacco usage patterns have been significantly changed by excise tariffs. Many young people became more price sensitive as a result of the rising expenses, which decreased tobacco consumption. Initiatives to raise health awareness were combined with this financial disincentive to encourage many people to try quitting. Social pressure was also quite important; situations where smoking was common presented difficulties, while supportive social circles encouraged efforts to quit. According to the theory of reasoned action and planned behaviour, all of these factors are known to influence tobacco product usage and consuming behaviour. People's purchasing power is impacted by price increases, which makes them rethink their tobacco product purchases. According to the Theory of Reasoned Action and Planned Behaviour, more knowledge of the detrimental effects of tobacco use on one's health and increased social pressure also contribute to a more logical decision to cut back on tobacco usage. However, the availability of alternatives like sheesha and e-cigarettes emerged as a new challenge also confirmed by previous research. Overall, these findings, supported by previous research, highlight the importance of comprehensive strategies that include both economic measures and continuous awareness efforts to reduce youth tobacco consumption.

CHAPTER 6 - CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The previous chapter undertook the discussion by comparing the research findings with previous research to understand support or contradiction between them. The findings of this research are supported by previous research. This study revealed that health initiatives and excise levies worked well together to reduce tobacco usage as also confirmed by previous literature. This is due to rising costs and more knowledge of the health hazards of tobacco use, which have been shown to affect young people's attitudes and behaviours about tobacco use. Excise taxes have had a major impact on the tobacco use habits of young people in the UAE. The increased costs caused many young people to become more price-sensitive, which in turn reduced tobacco use. This financial disincentive was used in conjunction with health awareness campaigns to urge many people to consider quitting. Social pressure also had a significant role; although supportive social circles supported efforts to stop, circumstances where smoking was prevalent caused challenges. The theory of reasoned action and planned behaviour states that all of these elements are recognised to affect how people use and consume tobacco products. When prices rise, people's purchasing power is affected, which causes them to reconsider their purchases of tobacco products. A more rational decision to reduce tobacco use is also influenced by more social pressure and a greater understanding of the harmful health implications of tobacco use, according to the Theory of Reasoned Action and Planned Behaviour. However, a new problem that has been supported by earlier studies is the availability of substitutes like sheesha and e-cigarettes. In order to lower juvenile tobacco use, the conversation emphasised the significance of all-encompassing approaches that incorporate both financial incentives and ongoing education campaigns. This chapter concludes the thesis by presenting the summary of the research in section 6.2, summary of the research findings in section 6.3, addressing research objectives in section 6.4, addressing research questions in section 6.5, relationships in section 6.6, implications of the findings in section 6.7, recommendations for practice/ policy in section 6.8, contribution of the research in section 6.9, limitations of the research in section 6.10 and recommendations for further research in section 6.11.

6.2. Summary of research

Tobacco products are categorised as "harmful products" by the UAE and an excise tax was imposed nationwide in 2017 as an indirect tax on certain goods that are generally harmful to the environment or human health. Tobacco products include all items listed in Schedule 24 of the GCC Common Customs Tariff, and as of December 1, 2017, electronic smoking devices and tools are also subject to the excise tax. For both tobacco goods and electronic smoking devices, the excise tax rate is 100%. Excise taxes are levied in an effort to decrease the use of unhealthy and hazardous goods while simultaneously increasing government revenue that may be allocated to the provision of beneficial public services. Since imposing of excise tax led the manufacturers in UAE to pass on the increase cost to the consumers in the form of increase prices, this has resulted in increased pricing of tobacco products across the country since October 2017. Thus, the impact of excise tax on tobacco users in the country has been expected. Researcher holding Director position in Federal Tax Authority in UAE has been aware of reduction in tobacco usage in the country from the data collected and analysed by the authority. However, there has not been detailed study on the attitude and usage pattern changes in youth (18–25-year-old). A challenging issue of attitudes and usage among young 18- to 25-year-old consumers perception towards excised tax tobacco products in the UAE was thus investigated through this study. There was lack of understanding and clarity in these areas which needs to be investigated and a solution found within theoretical and practical application in the UAE. The research thus aimed to investigate how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers.

The research methodology chosen was an exploratory sequential mixed-methods design, commencing with the collection and analysis of qualitative data. Face to face semi-structured interviews were conducted with 10 government officials responsible for the excise duty on tobacco products. The identified themes from this qualitative phase informed the development of a quantitative data collection instrument, specifically questionnaires, to further investigate the research problem. The survey respondents were young adults (18 to 25 years old) residing in the UAE. The survey respondent profile was categorized into three distinct sets: (i) Past users of tobacco who have ceased usage, (ii) Present users of tobacco who continue usage, and (iii) non-users of tobacco products. The questionnaires were structured and administered online

with 182 respondents. Quantitative analysis through frequencies and percentages were attempted. Once both qualitative and quantitative analysis were done, they were triangulated by comparison with each other as well as previous literature.

6.3. Summary of the findings

The first phase of the research was the semi-structured interviews with ten government officials. This revealed valuable insights into the impact of excise duty on tobacco products on youth attitudes and usage in the UAE. It was found that initially youth resisted the excise tax due to increased costs. There have been awareness campaigns run by the government which eventually led to greater acceptance. This shows significant role of government communication in shaping youth attitude, behaviour and usage of tobacco products in UAE. Officials noted that while some youth continued to purchase tobacco due to their financial capability, overall, there was a positive shift in attitudes towards the excise tax. They are found to consider excise tax as a health measure rather than a financial burden. Higher prices of tobacco products due to excise taxes were found to significantly influence youth usage patterns. The higher prices led to motivate many consumers to reduce or quit tobacco. Health awareness campaigns and social pressures further helped this trend of reducing tobacco consumption. Some respondents noted that high buying power in the UAE might mitigate reduce the impact of excise tax as youth with higher buying power might be willing to spend higher on their tobacco use. The combination of excise taxes and educational initiatives effectively decreased the accessibility and availability of tobacco products to youth. However, there was an emphasis on regulating alternative tobacco products like sheesha to achieve more reduction in tobacco use. The interviews revealed the need for continuous efforts in public education and the potential for increased taxation on alternatives to enhance the effectiveness of existing policies. Despite substantial efforts from the government by imposing excise tax and running awareness campaigns, the reduction in tobacco usage was not as significant as expected. This showed the need for additional measures and higher taxes.

The themes identified from the interviews helped in developing the survey questionnaire and the survey conducted with 182 respondents led to useful insights. The survey's findings show that although young people in the UAE first resisted the tobacco excise tax, they ultimately accepted it. However, this attitude change was observed over a period. The study's findings show that increased prices of tobacco products resulting from excise tax have a substantial impact on young

people's tobacco usage since they force smokers to reconsider their habits owing to rising costs. The results demonstrate that many youths become more price-sensitive and decide not to buy tobacco products as a result of the higher expenses brought on by excise taxes. Given that growing costs usually lead to smokers cutting back on or quitting smoking, price sensitivity is an important consideration. According to most respondents, the financial burden of growing tobacco costs greatly motivates people to reconsider their tobacco use. According to the notion of reasoned action and planned behaviour, price rises serve as a disincentive to consumption.

Their understanding of the health advantages and the reasoning behind the tax was greatly aided by awareness campaigns and educational programmes. The research findings show that being well-informed about the excise duties on tobacco demonstrated an increased understanding of how these taxes function. Youth in UAE also showed strong acceptance of the reasons behind implementing excise taxes on tobacco products. The role of excise tax is thus supported by awareness campaigns which educate youth about the health risks of tobacco use. This study demonstrates mixed responses about the perceived fairness of excise taxes. Many participants believed that the excise taxes on tobacco goods were reasonable and justified in terms of justice. But there was disagreement about whether the government should enforce excise taxes, which indicates some number of differences. Because of the higher expenses, many young people first thought the tax was unjust. This was the sudden reaction to the increased costs of tobacco products. But when public awareness efforts brought attention to the health risks associated with smoking, acceptability increased over time. Thus, excise tax when implemented needs time along with awareness campaigns to change the youth behaviour.

This study supports that although some young people still regard the tax as a financial burden, good communication from the government raises the general impression of fairness. The findings of present research show that excise policies have significantly influenced youth decrease their tobacco consumption and that they actively engage in efforts to reduce usage. This was because of increase in tobacco prices as well as the awareness campaigns combined with the imposition of the tax. The findings show that social pressure also plays a role in shaping youth's tobacco usage patterns. Many respondents feel that excise taxes have helped their social circles understand their reasons for quitting tobacco, and they receive support and encouragement from peers to reduce usage. However, there is a mixed response regarding the influence of social circles where smoking

is prevalent. The findings show that excise taxes serve as a strong motivation for quitting tobacco. The majority of respondents see excise policies as a long-term motivator for quitting and maintaining their efforts to abstain from tobacco.

6.4. Addressing research objectives

The research was able to address the first research objective. It critically examined and identified attitudes towards excised and non-excised tobacco products among the youth in the UAE. The semi-structured interviews with government officials resulted in gathering in-depth insights into initial resistance of consumers when the excise tax was imposed. It also revealed that there was an eventual acceptance of excise taxes since there were increased costs and effective awareness campaigns run by the government. These interviews revealed that there is a significant role of government communication in changing consumer attitudes and behaviours. The mere step of imposing excise was highlighted to be insufficient and was revealed to be supported by awareness campaigns. The positive shift was achieved because of the combined strategy which led the consumers to view the excise tax as a health measure rather than a financial burden. The second phase of this research (the survey conducted with 182 respondents) confirmed these findings. The survey found that people initially resisted the excise tax. However, as time passed and with having more health awareness, they accepted it as they became more aware of the health benefits and the reason behind imposing the tax by the government. The increased prices of tobacco products were found to significantly influence consumer usage patterns. This led to encouraging many young people to reduce or quit tobacco. Price sensitivity is a crucial factor to take into account since rising expenses typically cause smokers to reduce their smoking or stop altogether. The financial strain of rising tobacco prices, according to the majority of respondents, significantly encourages people to re-evaluate their tobacco usage. The theory of reasoned action and planned behaviour states that price increases operate as a deterrent to consumption. However, higher buying power was noted to have played a role against the excise tax since some young people are capable of buying tobacco products even at higher prices. Thus, awareness campaigns and educational programs play a crucial role in this shift. This is made possible by educating consumers about the health risks linked with tobacco use and the reasons for imposing the excise tax.

The research was also able to address second research objective. It critically evaluated and determined changes in consumer attitudes among 18 to 25-year-olds regarding the usage of excised

and non-excised tobacco products in the UAE. By conducting semi-structured interviews with government officials in UAE, the research revealed that youth resisted the excise tax due to increased costs when the excise tax was imposed. However, awareness campaigns run by the government eventually resulted in greater acceptance of excise tax in youth. This showed the significant role of government communication and awareness campaigns in changing youth attitudes and behaviours toward tobacco products. The interviews revealed a positive shift in attitudes. With time and with awareness campaigns run by government, youth started to view the excise tax as a health measure rather than a financial burden. The research showed that higher prices resulting from excise taxes caused youth to reduce or quit tobacco usage as they found the prices to be high. However, only price increases could not result in change in attitudes of youth. Health awareness campaigns and social pressures played a significant role in changing youth attitudes over time. Some youths were found to continue to consume tobacco products due to their higher purchasing power. However, there was a positive change in attitudes towards the excise tax in the youth in UAE since they understood the health risks of tobacco products. The combination of excise taxes and awareness campaigns is found to reduce the accessibility and availability of tobacco products to youth. However, the research also noted shift of youth towards alternatives such as sheesha which must be addressed by the government to achieve more significant reductions in tobacco use.

The survey also confirmed these findings addressing the second research objectives. The survey confirmed that youth initially were against the tobacco excise tax. They initially resisted the excise tax. However, they were found to accept the imposing of excise tax it over time. Increased prices were found to change young people's attitude towards tobacco usage.

In summary, research revealed that excise tax along with awareness campaigns and social pressure led to influencing youth attitudes and usage patterns concerning tobacco use in UAE. Thus, there were visible changes in youth towards excised and non-excised tobacco products.

The research was also able to address this research objective. It critically analysed and evaluated the factors affecting behaviour of 18 to 25-year-old consumers on tobacco products after tax in the UAE. The semi-structured interviews found that initially youth resisted the excise tax due to increased prices. The excise tax introduced in the country was taken negatively by youth. However,

government-run awareness campaigns eventually led to greater acceptance. Similarly, social pressure also played a key role in motivating youth to reduce or quit smoking. This confirmed that changes in usage, perception and attitudes of 18–25-year-old consumers resulted not only through excise tax but rather through awareness campaigns and social pressure. Young consumers were made more price-sensitive causing them to reconsider their buying and usage patterns of tobacco products. It was found that awareness campaigns have key role in changing their attitudes through educating them of the health risks of tobacco use and the reasons of imposing excise tax. Youth might not perceive the fairness of excise tax but coupled with awareness campaigns understood the role of excise tax and led to the support of excise tax as a means to enhance their health. This showed the significant role of government communication in shaping youth attitudes and behaviour. The changes in usage, perception and attitudes of 18–25-year-old were noted since youth considered excise tax to be healthcare measure from the government. Overall, the study revealed that excise policies along with awareness campaigns and social support effectively changed youth attitudes by making them more health-conscious and price-sensitive.

The framework is developed from the findings which represent the change in youth attitudes and usage patterns towards excised and non-excised tobacco products in the UAE. The excise tax was imposed in UAE in 2017 which led to initial resistance phase. The youth consumers considered high prices as a financial burden. This phase transitions into increased price sensitivity, particularly among those with high buying power. Awareness campaigns play a critical role in shifting perceptions. This led to the view of excise tax as a health measure rather than a financial burden. Social influence further impacts behaviour. Together, excise tax along with awareness campaigns and social pressure result in significant changes in attitude, behaviour, and usage of tobacco products. Finally, the framework highlights the need for regulation of alternative tobacco products to sustain these positive changes.

6.5. Addressing research questions

The research shows that the attitude of youth on the excise tax on tobacco products changed over time. It was revealed that there was an eventual acceptance of excise taxes since there were increased costs and effective awareness campaigns run by the government. The research revealed that there is a significant role of government communication in changing consumer attitudes and behaviours. The only step of imposing excise was highlighted to be insufficient and was revealed

to be supported by awareness campaigns. The positive shift was achieved because of the combined strategy which led the consumers to view the excise tax as a health measure rather than a financial burden. The increased prices of tobacco products were found to significantly influence consumer usage patterns. This led to encouraging many young people to reduce or quit tobacco over time. In summary, the research revealed that over time, with effective communication and awareness campaigns, the attitude of youth towards levying excise tax on tobacco products became more positive.

The research also found the answer to this research question. It was found that excised tobacco products influenced the attitudes of youth towards tobacco products. The reason is the higher prices caused by excise taxes. Higher prices made youth price sensitive. This led to many young people to consider higher prices as a factor to reduce their tobacco consumption. This resulted in youth to change their buying habits of tobacco products. Their smoking habits were also changed because of increased costs of tobacco products. This financial burden motivated many youths to reduce or quit tobacco use. However, since the buying power is high in UAE, the awareness campaigns supported excise tax in enhancing information of youth about the health risks of tobacco products which led them to reconsider their smoking habits. Excised tobacco products also created social awareness which led to increased social pressure which caused youth to reduce or quit tobacco usage. Overall, the research revealed that excise taxes, along with awareness campaigns and social support helped in shaping youth attitudes by enhancing their information on health risks and making them price sensitive. This led to change in their attitudes.

It was found that initially youth resisted the excise tax due to increased costs. There have been awareness campaigns run by the government which eventually led to greater acceptance. This shows significant role of government communication in shaping youth attitude, behaviour and usage of tobacco products in UAE. Officials noted that while some youth continued to purchase tobacco due to their financial capability, overall, there was a positive shift in attitudes towards the excise tax. They are found to consider excise tax as a health measure rather than a financial burden. Higher prices of tobacco products due to excise taxes along with awareness campaigns and social pressure were found to significantly influence youth usage patterns over time.

The research confirmed that higher prices of tobacco products resulting from excise taxes impacted youth usage patterns. The youth is noted to have reduced usage or quit smoking. The excised tobacco products are higher prices which make the youth to reconsider their tobacco buying and usage habits motivating many youths to reduce or quit tobacco. However, this positive change in their usage pattern could not be possible only because of excise tax because of higher purchasing power in the country. The youth are known to have resources to buy higher priced tobacco products. The awareness campaigns and social pressure gradually played key role in changing the usage patterns of youth towards reduced usage or quitting.

6.6. Relationships results

The research developed and tested two relationships:

Is there a significant difference in youth's attitudes between excised (higher priced) and non-excised (lower priced) tobacco products?

Is there a significant difference in youth's usage pattern between excised (higher priced) and non-excised (lower priced) tobacco products?

From the regression analysis, there was a weak but positive and significant correlation (R = .276**) found for UAE citizens between awareness, understanding, and acceptance of excise and fairness of excise. For expatriate residents residing in UAE, moderate to strong positive correlations were observed for all sub-factors under the attitude variable. The results reveal a significant difference in how UAE citizens and expatriates view excised and non-excised tobacco products. UAE citizens showed lower awareness compared to expatriates. There is a significant difference in youth's attitudes between excised and non-excised tobacco products. Nationality was found to be playing a significant role in bringing significant difference in youth's attitudes between excised and non-excised tobacco products.

For relationship 2, correlations between attitude factors (awareness and fairness of excise) and usage factors (motivation of quitting and social pressure) were assessed using regression analysis. For past users of tobacco, there were significant positive correlations between attitude factors (awareness and fairness of excise) and usage factors (motivation of quitting and social pressure). For present users of tobacco, the only significant relationship found was a negative correlation

between the attitude factor 'fairness of excise' and the usage factor 'reduction in tobacco product usage' (R = -0.261). There is a significant difference in youth's usage patterns between excised and non-excised tobacco products. Notable differences were found between past and present users of tobacco. Significant positive correlations between attitude factors (awareness and fairness of excise) and usage factors (motivation of quitting and social pressure) were found only for past users of tobacco. Present users showed a negative correlation. This suggests that current strategies might not be effective for present tobacco users.

6.7. Implications of the findings

This study findings have many implications for various stakeholders in UAE such as policymakers and public health representatives. Firstly, the research confirms the positive role of excise tax in changing attitudes and behaviour of people in general and youth in particular. This shows positive outcomes of excise tax in UAE as confirmed from empirical evidence. The research also confirmed the critical role of government communication in terms of awareness campaigns in changing youth attitudes towards levying excise taxes. There was initial resistance noted which caused negative attitudes in youth regarding excise tax who considered it as a financial burden. However, these attitudes were changed with awareness campaigns. Thus, continuous and effective awareness campaigns are essential in changing attitudes of excise taxes from considering it as financial burden to considering as health measure by government. The positive role of government communication is confirmed by Alhaj et al. (2021), Barakat and Yousufzai (2021) and Dabbagh (2017). This implies that merely imposing excise tax is not sufficient to change consumer attitudes. Levying excise tax should be supported by effective government communication such as awareness campaigns.

Although youth exhibited price sensitivity because of levying excise tax on tobacco products, some youth seemed unaffected by the price increase. The findings imply that the increase in tobacco prices due to excise taxes made youth more price sensitive. This is supported by Ribisl et al. (2022) and (Chaloupka et al., 2000). The research confirmed that price increase resulted in causing many youths to reduce or quit tobacco use. One key implication was that some youths were not affected by excise tax and the price increase did not impact them. This might be prevalent in a country with high purchasing power as UAE. Policymakers should consider price sensitivity when

developing future taxation strategies to maximize public health benefits. The high buying power of some youth in the UAE should thus be considered by policymakers.

Furthermore, awareness campaigns and educational programs run from the government have been effective in changing attitudes and behaviours as confirmed by this research. These campaigns have been able to change people attitude from considering excise tax as financial burden to considering it as health measure from the government. It is thus implied that continued investment in awareness initiatives is important to bring positive change in youth using tobacco products and maintaining people who already quit to continue to abstain. Effective communication from the government had their impact on youth tobacco consumption through making them aware of health risks of tobacco. Another factor affecting youth attitudes and usage pattern was social pressure and support from peers. This was also because of effective awareness campaigns. As the overall awareness of health risk of tobacco increased in UAE, the social pressure also plays a significant role in reducing tobacco usage as family and friends influence others to reduce or quit smoking. Public health strategies should thus acknowledge the role of non-smoking social networks and peer influence to change attitudes and tobacco usage among youth.

Another implication of the findings is the possibility of youth to opt for alternatives such as sheesha. The research led the policy makers to know that youth are inclined to opt for alternative options because of excise tax on tobacco products. This is also confirmed by previous research Aden et al. (2013), Lavidge and Steiner (1961) and Ahmed et al. (2021). This need to be considered when developing future strategies in the country. Thus, all forms of tobacco products should be regulated along with awareness campaigns to include the health risks of alternative products to bring positive change in youth attitudes, behaviour and usage patterns.

6.8. Recommendations for practice/ policy

The findings of this research along with Ribisl et al.'s (2022), Alhaj et al. (2021), Chaloupka and Warner (2000), Cunningham (2008) and Bader et al. (2011) confirmed price-sensitivity in affecting consumer behaviour. The reduction observed in tobacco usage in youth in UAE is because of the price sensitivity along with increased awareness of health risks. Although there have been significant efforts by the policy makers and enforcement agencies in UAE, the reduction in tobacco usage has not been up to expectations as revealed from the research. There is thus a

need for policy adjustments to bring more change in youth attitude, behaviour and usage related to tobacco products. The excise tax not meeting the higher expectation of tobacco use reduction is found to be owing to higher purchasing power in the country. Currently, the excise tax is 100% on tobacco products in UAE which although could bring some change in youth attitude, behaviour and usage patterns, it could not bring change as expected. It is thus recommended to impose higher taxes and additional measures may be necessary to achieve desired public health outcomes. The excise tax on tobacco products can gradually be increased from 100% to 150% and then 200%. This strategy will be beneficial in many ways. There are people in various income brackets in UAE. People in lowest and middle-income brackets might have been more impacted by 100% excise tax on tobacco products in UAE. However, people in higher income brackets might not be impacted and thus their attitude, behaviour and usage patterns have remained unaffected. Higher excise tax will affect people with higher income changing their attitude, behaviour and usage patterns. Higher excise tax will also increase government income which is thus a win-win situation for the government.

Excise taxes alone was not found to be impactful in bringing change in attitude, behaviour and usage patterns in youth. Excise tax along with awareness campaigns and educational programs have proved to be long-term motivators for reducing and quitting tobacco from the research. It is recommended that policy makers put extra efforts in these areas for reductions in tobacco usage in youth. The significant role of government communication is confirmed by Alhaj et al. (2021), Barakat and Yousufzai (2021) and Dabbagh (2017). This shows that merely imposing excise tax is not sufficient to change consumer attitudes. The research specifically suggests that current strategies might not be effective for present tobacco users although they had been effective for past users. Levying excise tax should be supported by effective government communication such as awareness campaigns. Although there has been some change noted in attitudes, behaviour and usage patterns of youth in UAE, less than expected reduction in tobacco usage shows that more effective awareness campaigns are needed to bring more positive change in attitudes, behaviour and usage patterns of youth in UAE. Detailed research on their preferred choice of communication medium (social media, television, radio, newspaper etc.) should be conducted. Moreover, celebrities such as football players can be used to convey the message to achieve better response. From the research, UAE citizens showed lower awareness compared to expatriates. This means that the awareness campaigns have not been effective in enhancing awareness in UAE citizens.

The awareness campaigns are thus recommended to be designed more effectively for UAE citizens. The use of correct language, message, medium and frequency should be decided to make UAE citizens more aware of the health risks of tobacco use.

Another recommendation made to policymakers is to regulate alternative options such as sheesha and electronic vapes since these poses' serious health impact (Aden et al., 2013; Lavidge and Steiner, 1961 and Ahmed et al., 2021). It is recommended that all forms and alternatives of tobacco products should be regulated by imposing higher excise tax along with running effective awareness campaigns to make people aware of the health risks of alternative products. This will bring positive change in youth attitudes, behaviour and usage patterns of alternative tobacco products. There is also a need for continuous research and monitoring by the government to understand changing attitudes and behaviours of consumers and youth in UAE. This can be done by conducting regular consumer research and collect and analyse consumer data to support evidence-based decision making. This will help in making data-driven decisions and changes to policies to control tobacco use. These recommendations will further enhance the outcomes of policies excise taxes and related measures to influence youth attitudes and behaviours towards tobacco and result in reducing tobacco consumption among youth in the UAE.

6.9. Contributions of the research

An excise tax was imposed in UAE in 2017 as an indirect tax on certain goods that are generally harmful to the environment or human health. Excise taxes are levied to decrease the use of unhealthy and hazardous goods while simultaneously increasing government revenue that may be allocated to the provision of beneficial public services. There has not been detailed study on the attitude and usage pattern changes in youth (18–25-year-old). A challenging issue of attitudes and usage among young 18- to 25-year-old consumers perception towards excised tax tobacco products in the UAE was thus investigated through this study. There was lack of understanding and clarity in these areas which needs to be investigated and a solution found within theoretical and practical application in the UAE. The research thus aimed to investigate how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers. Investigating the issue empirically using qualitative as well as quantitative research helped in better understanding of the tobacco products' consumer's attitudes and usage especially for taxed goods. The consumer behaviour generally and youth behaviour specifically related to a

product which is harmful to health was understood. It revealed the outcomes of imposing excise tax in UAE and how this helped in changing youth behaviour and usage of tobacco products. The findings will help in developing and cultivating the right attitudes towards tobacco products through appropriate strategies and initiatives and prevent or dissuade its consumption thereby ensuring better health and environment conditions for everyone in the country. The research also provided input to the policy makers and the regulators in managing tobacco products and in excise revenue generation and deployment of resources. Evidence-based recommendations are made in the research which will guide the policy makers to revise the policies/ strategies and initiatives to being further change in attitudes, behaviour and usage patterns in youth. Theoretical contributions are also made by the research since it added new knowledge in the existing body of knowledge since there was not much previously research in the context of UAE. The change in consumer behaviour brought by excise tax on tobacco products in UAE is now documented through this research.

6.10. Limitations

The present research scope is limited to 18–25-year-old youth in UAE which restricts the applicability of the research findings. Furthermore, the scope is also limited to UAE which means that the findings are not applicable to other countries. Moreover, the data collection was not categorised based on seven Emirates in UAE which do not identify the consumer behaviour of youth on the basis of these even Emirates. There might be differences in behaviour and usage pattern on some Emirates as compared to the others. Furthermore, interviews with only 10 tax experts were undertaken due to inability to get hold of the potential respondents and due to lack of time. More interviews might have led to find newer themes and aspects related to the consumer behaviour of youth concerning excised tobacco products.

6.11. Further research

Various recommendations can be made to address the limitations of this research. Firstly, further research should be conducted on consumers of all ages to include both younger and older demographics. This will allow to provide comprehensive understanding of the impact of excise tax of various age groups. Comparative studies should also be conducted to compare various age groups to understand which age group is more impacted by the excise tax. The age group which is

less impacted by excise tax should then be targeted through more thorough and well-designed strategies. Moreover, conducting research in other countries would help determine if the findings are consistent across different regions and how various cultural and economic contexts impact the consumer behaviour related to excised tobacco usage. This would help to enhance the generalizability of the findings. Comparative studies should also be conducted to compare the impact of excise tax on consumer behaviour in neighbouring countries such as Saudi Arabia, Qatar, Bahrain and Oman. This will help policy makers in UAE to benchmark its policies by empirically comparing data from similar context countries. It is also recommended that comparative studies should be conducted in all seven Emirates in UAE. This will help to understand how consumers in each Emirate behave in terms of excised tobacco products. Moreover, increasing the number of interviews with tax experts and other stakeholders would likely uncover new themes and aspects of youth behaviour related to excised tobacco products.

In the future, it is required to research about addressing various disparities in utilisation of tobacco and its related harms. These disparities within tobacco use prevalence and its related harms have dramatically increased in the last 50 years with the utilisation of tobacco and its effects are now concentrated within some specific sub groups of the young adults and other tobacco users (Hamadeh et al., 2020). Proper research is required in future which will focus on direct targets and various ways of improving treatment reach and its efficiency among young adults with high intensity in prevalence of usage or who is suffering from serious outcomes from tobacco consumption.

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APPENDICES

1. Interview Questions

Consent Form

Dear Participant,

Thank you for your participation in this interview. Your inputs will facilitate the development of my DBA research thesis titled 'An attitudinal and usage (A&U) study into The **Impact of Excise Tax on Consumers and Government Revenues: A review of the Tax Authority in UAE** (UAE)'. The study aims to investigate how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers. The target audience for this interview is government officials responsible for excise duty on tobacco products. You are selected to participate in this study since you are responsible for excise duty on tobacco products in your current position.

In this interview, your inputs will be requested on the following sections:

Demographic data (no personal information such as name and contact # will be collected)

Questions will be asked to assess the following:

- The Attitude of Youth towards Levying Excise on Tobacco Products Over Time in the country
- The influence of excised tobacco products on the attitude of youth towards tobacco products in the country
- The youth's usage pattern of excised tobacco products over time will be measured.
- The influence of excised tobacco products on the usage pattern of youth towards tobacco products will be measured.

Kindly note that during this interview, you have the right to withdraw at any time. Your participation is voluntary.

If you have any questions, do let me know.

Thank you.

Consent Provided:

Yes ☐ No ☐

Gender	□ Male			□ Female	
Age	□ Less than 25 years			□ 45 to 54 years	
	□ 25 to 34 years			□ 55 to 64 years	
	□ 35 to 44 years			□ Age 65 or older	
Education level	□ High School	□ Diploma	□ Bachelor	□ Master	□ Doctorate
Total years of experience in excise tax field of tobacco products	□ Less than 1 year			□ 5 years	
	□ 2 years			□ 6 years	
	□ 3 years			□ 7 years	
	□ 4 years				

1. Can you provide insights into the historical context and reasons behind the implementation of excise duties on tobacco products in the UAE?

2. How have government officials perceived the attitude of youth towards levying excise on tobacco products over time?

3. In your view, what factors contribute to the changing attitudes of youth towards tobacco products in the context of excise taxes? Are increased prices resulting from excise taxes affect the attitudes of youth towards tobacco products?

4. Could you discuss any observed trends or patterns in the usage of excised tobacco products among young adults in the UAE over time? Did the consumption decrease since excise tax was introduced in the country?

5. How do government officials assess the effectiveness of excise taxes in influencing the overall usage patterns of tobacco products among the youth population?

6. In your interactions with the public, have you noticed any shifts in perceptions or attitudes of young individuals towards excise taxes on tobacco products?

7. What recommendations or lessons learned would you offer based on your experience in overseeing excise duties on tobacco products, particularly concerning youth engagement and behaviour?

2. Survey Questionnaire

Consent Form

Dear Participant,

Thank you for your participation in this survey. Your inputs will facilitate the development of my research thesis titled 'An attitudinal and usage (A&U) study into the Impact of Excise Tax on Consumers and Government Revenues: A review of the Tax Authority in UAE. The study aims to investigate how attitudinal and usage (A & U) trends in the UAE have influenced the usage of excised tobacco products amongst 18 to 25-year-old consumers. The target audience for this interview is young adults aged 18 to 25 years residing in the UAE. The respondents were categorized into three distinct sets: (i) Past users of tobacco who have stopped using the product, (ii) Present users of tobacco who continue to use the product (iii) non-users of tobacco products.

In this survey, your inputs will be requested on the following sections:

Section 1: Demographic data (no personal information such as name and contact # will be collected)

Section 2: This will measure the Attitude of Youth towards Levying Excise on Tobacco Products Over Time in the country

Section 3: This section will measure the influence of excised tobacco products on the attitude of youth towards tobacco products in the country

Section 4: In this section, the youth's usage pattern of excised tobacco products over time will be measured.

Section 5: In this final section, the influence of excised tobacco products on the usage pattern of youth towards tobacco products will be measured.

Kindly note that during this survey, you have the right to withdraw your survey at any time. Your participation in this survey is voluntary.

If you have any questions, do let me know.

Thank you.

Consent Provided:

Yes ☐ No ☐

Section #1: Demographical Information

Position					
Gender	□ Male			□ Female	
Age	□ 18 years			□ 21 years	
	□ 19 years			□ 22 years	
	□ 20 years			□ 23 years	
	□ 24 years			□ 25 years	
Nationality	□ UAE citizen			□ Expatriate resident	
Education level	□ High School	□ Diploma	□ Bachelor	□ Master	□ Doctorate
Which best describes you? (select one option)	□ Past users of tobacco who have stopped using the product □ Present users of tobacco who continue to use the product □ Non-users of tobacco products				

Section # 2: Attitude of Youth towards Levying Excise on Tobacco Products Over Time

Please circle your desired response:		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Awareness, understanding and acceptance of excise						
2.1	I have kept myself aware of the excise duties imposed on tobacco products over time	1	2	3	4	5
2.2	I have enhanced my understanding about how excise works on tobacco items.	1	2	3	4	5
2.3	I have accepted the reasons behind implementing excise on tobacco products	1	2	3	4	5
Fairness of excise						
2.4	I find excise to be fair on tobacco products over time	1	2	3	4	5
2.5	My acceptance of excise was improved due to its fairness	1	2	3	4	5
2.6	Excise is not fair at all and should not be forced by the government	1	2	3	4	5
Role of government communication						

2.7	Government communication effectively kept me informed about excise on tobacco.	1	2	3	4	5
2.8	I have developed trust on the information provided by the government regarding excise over time.	1	2	3	4	5
2.9	Government communication has played a significant role in shaping my views on excise.	1	2	3	4	5
2.10	Government uses right media (TV, social media, direct messaging) to communicate with the public on the issue.	1	2	3	4	5

Section # 3: Influence of excised tobacco products on the attitude of youth towards tobacco products

Please circle your desired response:		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Cost impact						
3.1	Increased costs due to excise influence my decision to buy tobacco products.	1	2	3	4	5
3.2	The higher prices caused by excise make me reconsider purchasing tobacco.	1	2	3	4	5
3.3	I am sensitive to changes in the cost of tobacco due to excise.	1	2	3	4	5
3.4	Excise tobacco at this level is acceptable.	1	2	3	4	5
3.5	I will decrease my tobacco consumption if excise is increased in the future	1	2	3	4	5
Health impact						
3.6	Excise taxes make me more aware of the health risks associated with tobacco.	1	2	3	4	5
3.7	The increased cost due to excise makes me think more about my health.	1	2	3	4	5
3.8	I believe excise policies contribute to better health awareness.	1	2	3	4	5
3.9	I am aware about the risk of tobacco on my health but I do not care	1	2	3	4	5
Quitting efforts						
3.10	I have made efforts to reduce my tobacco consumption due to excise.	1	2	3	4	5

3.11	Excise policies motivate me to try abstaining from using tobacco.	1	2	3	4	5
3.12	I actively seek ways to abstain from tobacco consumption influenced by excise.	1	2	3	4	5
3.13	I did not try to quit because I enjoy smoking	1	2	3	4	5

Section # 4: Youth's usage pattern of excised tobacco products over time

Please circle your desired response:		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Reduction in tobacco product usage						
4.1	I have noticed a reduction in my tobacco product usage over time.	1	2	3	4	5
4.2	Excise policies have influenced me to decrease my tobacco consumption.	1	2	3	4	5
4.3	I actively engage in efforts to reduce my usage of tobacco products.	1	2	3	4	5
4.4	I never tried to reduce my consumption.	1	2	3	4	5
Social pressure						
4.5	Excise has made my social circle understand my reason to quit tobacco products	1	2	3	4	5
4.6	My social circle supports by reduction in usage of tobacco products due to excise	1	2	3	4	5
4.7	I gain encouragement from my social and peer dynamics to quit tobacco	1	2	3	4	5
4.8	My social circle are mainly smokers and they did not try to encourage me to give up.	1	2	3	4	5
Motivation of quitting						
4.9	Excise policies serve as motivation for me to quit tobacco in the long run.	1	2	3	4	5
4.10	I have long-term goals of quitting tobacco influenced by excise.	1	2	3	4	5
4.11	Excise contributes to my motivation to sustain efforts for quitting tobacco.	1	2	3	4	5
4.12	I do not have a motivation to quit even if the excise was high.	1	2	3	4	5

Section # 5: Influence of excised tobacco products on the usage pattern of youth towards tobacco products

Please circle your desired response:		**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Behavioural influence						
5.1	Excise policies has directly influenced my behaviours related to tobacco use.	1	2	3	4	5
5.2	I consciously adjust my behaviours concerning tobacco due to excise.	1	2	3	4	5
5.3	Excise has a noticeable impact on my behavioural choices related to tobacco.	1	2	3	4	5
Accessibility and availability						
5.4	Changes in excise has affected the accessibility of tobacco products for me.	1	2	3	4	5
5.5	Excise has influenced the availability of tobacco products in my surroundings.	1	2	3	4	5
5.6	I consider the impact of excise on the accessibility and availability of tobacco due to cost.	1	2	3	4	5
Alternative choices						
5.7	Due to excise, I have actively sought alternative choices to traditional tobacco.	1	2	3	4	5
5.8	Excise policies have led me to explore various alternatives in place of tobacco.	1	2	3	4	5
5.9	The availability of alternatives has been a key factor in my choices influenced by excise.	1	2	3	4	5
5.10	I will consider electric vape as an alternative.	1	2	3	4	5
5.11	I will consider sheesha as an alternative.	1	2	3	4	5

Thank you for your time.