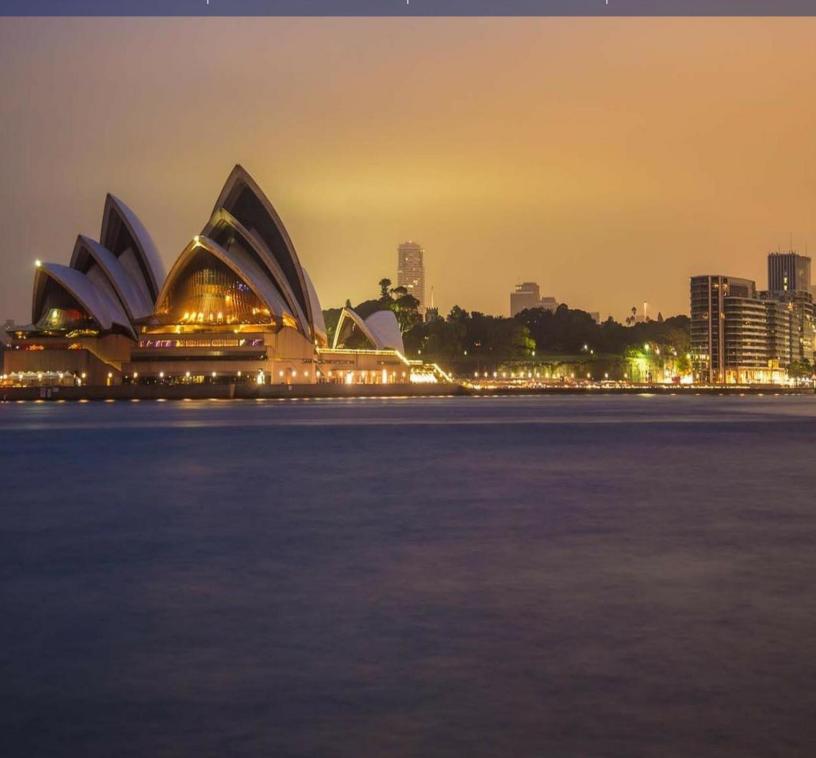# A MULTI-DISCIPLINARY STUDY INTO THE DRIVERS OF SMOKING CESSATION IN AUSTRALIA

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A multi-disciplinary study into the drivers of smoking cessation in Australia

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Preface

Smoking is one of the main risk factors for health. Tobacco consumption contributes to a variety of non-communicable diseases, including cancer, heart disease, stroke, chronic respiratory diseases, and diabetes. The WHO (2019) estimates that tobacco consumption is the leading cause of death for smokers; about one in every two smokers dies from smoking-related causes every year. Approximately eight million people a year die from diseases associated with smoking. In response to this, over the past four decades, numerous countries have introduced successful tobacco control policies, which have resulted in longer and healthier lives for their population. Since 2000, Australia, United Kingdom, Sweden and Canada have reduced their smoking prevalence by more than 40%, while Colombia, Norway, and Iceland have done so by more than 50%. Despite this, smoking persists, even in those countries where policies have been implemented, and especially among more disadvantaged social groups. Moreover, smoking reduction policies in other countries have hitherto not been as successful. Indeed, smoking rates in Egypt, Oman, Morocco, and Croatia have steadily increased from 2000 onwards.

The relatively long history of smoking cessation policies allows for a better understanding of what works, what does not, why, and how. Today, policy-makers seeking to further reduce the morbidity and mortality associated with tobacco smoking can learn from the experiences of countries that have succeeded in reducing smoking. However, the social, cultural, and regulatory complexity of smoking habits prevents any straightforward replication of successful policies within a different context, a different country, and a different period. Simply put, no law exists in a vacuum; rather, manifold factors simultaneously determine the success or otherwise of any policy. Yet, sound scientific research and reasoning do allow for the construction and verification of hypotheses and theories about how to replicate cessation elsewhere. Above all, the development of this knowledge will be of particular value for those nations that do not have successful histories of tobacco control; these are very often developing nations in which the vast majority of the world's smokers currently reside (World Health Organization, 2019).

Australia constitutes an ideal case-study through which to achieve this aim. This is because Australia is recognized as a leading country in tobacco control worldwide, due to its long history of tobacco control policies having lowered smoking prevalence over the years. This success was achieved via the combination of strict anti-tobacco regulations and strong social sensitization through enduring anti-smoking campaigns. At the same time, Australia represents a paradoxical situation, insofar as people have easier access to nicotine through traditional tobacco products than they do via the use of Electronic Nicotine Delivery Systems (ENDS), despite the latter being significantly less harmful to health than the former. These features, combined with the abundance of empirical studies on the country, allow for a sound and comprehensive policy analysis.

Adopting a rational approach to the analysis of policy experiences is critical for providing concrete guidance on how to reduce smoking. In this respect, policy-makers have to walk a delicate line that involves carrying out careful study prior to the enactment of new laws, alongside displaying evidence-based regulatory flexibility in implementing and enforcing these laws. The potential consequences from cutting funding to anti-smoking media campaigns, banning certain products, or increasing taxes, should be weighed

carefully to best serve the public interest for both current citizens and future generations. In the field of smoking policy, too often positions become polarized along ideological lines instead of being based on empirical evidence. Ordinarily, there is the argument between, on the one hand, the abstinence approach—from those who want nicotine to be completely banned because of the damage smoking poses to health—and, on the other, the harm reduction approach—from those who recognize the fact that some people still smoke despite all the adopted measures. The need to move beyond ideological positions and adopt a more pragmatic approach is particularly pertinent with respect to ENDS, which lie at the core of the present study.

Executive Summary

Alberto Aziani

This report presents the Australian case study, which has been developed within the framework project *A multi-disciplinary investigation into the drivers for smoking cessation in five nations with ANDS markets*. The aim of the project is to identify the historic drivers of smoking cessation in Australia, Canada, Japan, South Korea, and the United Kingdom, with an especial focus on the role of public policies and Alternative Nicotine Delivery Systems (ANDS). The following sections provide an overview of the background and aim of the case-study, as well as the methodology that was used, key messages and policy implications.

Background

In recent decades, the Australian government has adopted increasingly more stringent anti-smoking policies. These strict laws also apply to ANDS. Overall, the Australian approach to tobacco control has led to a significant reduction in smoking. However, the effectiveness of some of these policies appears to have diminished recently, and there are now requests being raised for amendments.[1]

Australia stands out for its strict smoking policies

- Originating in the 1970s, in response to the increasing smoking rates among Australians, the government has adopted a multifaceted anti-smoking strategy. In 2011, Australia was the first country in the world to adopt plain packaging. Since 2012, health warnings occupy 75% of the front and 90% of the back of cigarette packs. Tobacco excise taxes increased by 25% in 2010 and from 2013 they have surged by an additional 12.5% per year. By the end of 2020, the price of a 25-cigarette premium pack is estimated to reach almost 50 AUD. Australia bans smoking in most of its enclosed public places.

Australian smoking prevalence is low in comparison to most other countries

- 20% of adults in the world smoke tobacco. In Australia, between 1995 and 2017-18, the prevalence of daily smokers (18+) decreased by 42.0% (from 23.8% to 13.8%), the prevalence of ex-smokers (18+) increased by 6.6% (from 27.4% to 29.2%), while the percentage of the population (18+) who never smoked increased by 13.9% (from 48.9% to 55.7%). Between 2001 and 2016, the average number of cigarettes smoked per week reduced, from 109.5 to 93.6. The overall volume of consumed tobacco products also contracted.

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[1] All data presented in the Executive Summary refer to individuals aged 14 years old and over, unless otherwise specified.

The use of ANDS—including e-cigarettes—is severely limited in Australia

- E-cigarettes and other electronic devices are not officially approved as smoking cessation aids. Australia has banned both the sale and use of e-cigarettes containing nicotine, heat-not-burn products, and other smokeless products. Although illegal, Australian vapers appear to have easy access to e-liquids containing nicotine. Australians can legally import liquid containing nicotine for therapeutic reasons only if it is prescribed by a qualified medical practitioner. E-cigarettes that do not contain nicotine can be freely possessed and sold.

Nonetheless, the use of e-cigarettes is growing in Australia

- The retail value of the market in vapor products increased by 85% from 2014 to 2016 (last available estimates). In 2016, the daily prevalence of e-cigarette-use was 0.5% among the whole Australian population, 1.5% among smokers, and 0.8% among ex-smokers. The primary reason for using e-cigarettes is to quit smoking. 98% of smokers (12+) had already smoked combustible cigarettes before trying e-cigarettes.

Recently, Australian anti-smoking policies have lost momentum

- Smoking reduction has slowed down in recent years, while smoking prevalence has actually increased across certain age groups. After decades of progress, since 2013 further decline in deaths from smoking has stalled. Since 2012-13, federal expenditure on anti-smoking campaigns has been contracting. From 2015, mass media attention on tobacco-related issues has decreased and remains low. Consumption of illicit tobacco products has increased over the last decade.

Important discrepancies persist in the smoking habits of different social groups

- Less affluent Australians smoke more than their richer counterparts, people at the margins of the labor market smoke more than those in better employment, while Indigenous people smoke more than non-Indigenous ones. In 2017-2018, smoking rates in Northern Territory, Tasmania and Queensland—the Australian states and territories characterized by the highest percentage of Indigenous people on the total population—remained higher than the national average.

Current study

Starting from these premises, the current study aims to identify the historical drivers of smoking cessation in Australia, specifically by understanding the effectiveness of their smoking cessation policies and investigating the potential role of ANDS in smoking reduction and cessation.

The study adopts a multidisciplinary approach to the analysis of smoking cessation

- This study combines insights, theories and empirical evidence from social sciences, economics, and health sciences. This permits the analysis of smoking cessation through a range of lenses, which, in turn, enables us to provide more comprehensive results and policy recommendations.

The study proposes a multilevel analysis of the drivers and barriers of smoking cessation

- The study investigates the role of both drivers and barriers at different levels: macro (e.g., policies, anti-smoking campaigns), meso (e.g., neighborhood, school), micro drivers (e.g., family, friends), and individual (e.g., beliefs, personal preferences).

The study adopts a multi-methodological approach

- The trend analysis of selected drivers allows for the exploration of their impact on smoking cessation over time. The extensive media coverage analysis of thousands of newspapers' articles pertaining to tobacco products, ANDS, and smoking cessation policies provides insights into the role of the media in shaping and reporting smoking-related issues over the years. The structured literature review, based on the extensive availability of sound empirical studies, summarizes extant empirical evidence on the most effective historical drivers of smoking cessation in Australia.

Key messages

The results of this study enable the identification of what has worked and what proved to be less effective in driving smoking cessation in Australia. These findings are expedient for designing new effective tobacco control policies to further reduce smoking prevalence.

Effectiveness of Australia's smoking-related policies

Overall, the main macro-level tobacco control policies have been jointly successful in reducing tobacco consumption among the general population

- Albeit with specific distinctions and caveats, smoke-free environments, taxation, and advertisement bans collectively contributed to the de-normalization of smoking, and, in turn, sustained both smoking prevention and cessation. In particular, increased taxation had a strong impact on smoking rates among the general population. However, the adopted taxation policy was not effective in reducing the discrepancy in the smoking prevalence of high- and low- income populations. In fact, it likely caused an increase in illicit consumption.

Smoking cessation services and aids are not very effective in helping smokers to quit

- The results from empirical studies question the effectiveness of smoking cessation services and aids in inducing actual smoking cessation. However, pharmacotherapies have been found to be more successful when combined with counselling (e.g., quitlines).

Negative emotions associated with health warnings are often not enough to stimulate behavior change

- Studies examining the specific impact of health warnings have yielded mixed results. That said, most of them show that health warnings are not effective in prompting cessation. Similarly, available studies suggest that plain packaging does not induce smokers to quit. Notwithstanding these findings, plain packaging has contributed to de-normalizing smoking, thus discouraging uptake and reducing smoking prevalence in Australia, especially in the years immediately following its introduction.

Policies at different levels have proven to be only partially successful in targeting the most vulnerable groups, for whom smoking persists the most

- The smoking prevalence among Indigenous people and low-income populations remains more than twice that of the non-Indigenous people and high-income populations. Studies show that radio anti-smoking campaigns are less effective in getting the message to the Indigenous population. This is due, at least in part, to the prolonged social marginalization and disadvantage experienced by this population. Smoking remains much more socially acceptable within the most vulnerable groups, which testifies to the fact that it is not yet de-normalized.

Available statistics suggest that e-cigarettes have potential as a smoking cessation tool

- From 2007 to 2016, both the percentage of smokers who attempted to quit and those who reduced their daily intake of tobacco increased by 13.1% (from 25.2% to 28.5%) and 17.4% (from 31.6% to 37.1%), respectively. The simultaneous increase in the use of e-cigarettes may have contributed to this change in smoking behavior.

Available data appear to refute gateway theory

- E-cigarettes may provide a mechanism for cessation for a category of smokers for whom motivation alone is insufficient, without acting as a potential gateway into tobacco consumption for non-smokers. Indeed, 98% of smokers aged 12 years or older reported having smoked combustible cigarettes prior to e-cigarettes.

Severe restrictions on e-liquids containing nicotine does not prevent vapers from obtaining them illegally

- Vapers can easily obtain nicotine e-liquids via illicit channels, particularly over the internet or under-the-counter from tobacconists. In 2013, 43% of current Australian e-cigarette users reported vaping with nicotine, while a further 21% did not know if the e-liquid they were using contained nicotine or not. Moreover, in 2013, 70% of the e-liquids sampled by the NSW Health Ministry contained high-levels of nicotine even though the label did not list nicotine as an ingredient.

General lessons learned from the Australian case study

Manifold multilevel and interconnected factors impact the effectiveness of smoking cessation policies in Australia

- Smoking cessation is simultaneously affected by multiple factors (barriers and drivers) at the macro, meso, micro and individual level. The complexity of the interconnections between these various factors suggests that it may be difficult to identify single drivers as being responsible for both smoking cessation—at the individual level—and the reduction in smoking prevalence—at the societal level. Rather, smoking is influenced by a combination of different factors interacting together.

The effectiveness of tobacco control policies is time-sensitive

- Many tobacco control policies have different short-term and long-term effects. Tobacco control policies that reduce the opportunities to smoke (e.g., smoke-free environments) tend to have effects that last longer than those aiming at arousing immediate negative emotions around smoking (e.g., health warnings). The former makes it difficult to preserve smoking habits, while the latter are more likely to induce temporal emotional changes and only eventually behavioral changes. Policies that induce more long-term effects contribute more to the de-normalization of smoking habits.

Tobacco control policies can have direct and indirect effects

- Free-smoking environments tend to have a direct effect on the volume of cigarettes consumed, but only an indirect effect on smoking cessation. However, the indirect effect can show evidence of smoking cessation over the years. Consequently, a public consumption ban might make it less likely for future generations of pub-goers to start smoking. On the contrary, liberalizing the use of e-cigarettes might directly affect smoking reduction and cessation, but it can also indirectly generate health issues in the event that non-smokers begin to use them. Indeed, while ANDS almost certainly have a less detrimental impact on health than traditional tobacco products, complete abstinence is a safer option.

Factors facilitating the intention to quit, in and of themselves, may not lead to successful cessation

- Factors associated with the intention to quit (e.g., being confident in one's capabilities, being aware of the effects of smoking on one's health) do not necessarily facilitate smoking cessation. Other factors may reinforce anti-smoking beliefs and the intention to quit, thus inducing successful quit attempts. For example, an increase in the price of tobacco may provide an additional motivation to quit. Over the last decade, affordability has played a major role in encouraging people to quit.

Anti-smoking campaigns are most cost-effective if they are regular and well-funded

- More intense and expensive anti-smoking campaigns are more cost-effective than less intense and cheaper campaigns. Low-intensive or fragmented campaigns have little to no significant effect, and, in fact, can even be counterproductive. This is especially true for low-income and Indigenous populations. A cost-effectiveness analysis carried out in 2008 showed that, out of a total cost of about 10 million USD for an anti-smoking campaign funded in 1997 by the Australian government, the predicted health care cost savings exceeded 730 million USD.

Emerging Policy Implications

The findings emerging from the performed analysis can be useful for designing new effective tobacco control policies to further reduce Australian tobacco consumption.

Adopt integrated approaches

- Given that smoking cessation is simultaneously affected by multiple factors, policies should also adopt an integrated approach. Tax increases should always be combined with sensitization campaigns, smoking cessation services, and enforcement efforts against illegal markets. Policies capable of inducing the intention to quit (e.g., health warnings) should be combined with the provision of

instruments that actually help people to quit (e.g., smoking cessation aids, ANDS). Moreover, to reduce smoking among disadvantaged sectors of the population, it would be beneficial to frame tobacco control within broader programs aimed at improve living conditions, social integration, and population health.

Conduct regular and frequent anti-smoking campaigns

- It is preferable to concentrate one's efforts into well-funded ambitious campaigns and to strengthen the level of coordination between different institutions and stakeholders so as to maximize their impact.

Evaluate policies by paying specific attention to their timing and lifespan

- Given that the effectiveness of tobacco control policies changes over time, it is important to evaluate policies in terms of their short- and long-term effects. The effectiveness of policies should be assessed over time because evaluations made immediately after the adoption of a specific regulation may measure effects that do not persist. Similarly, leaving too much time to pass can impede the identification of the potentially significant effects engendered by a policy after its introduction.

Renew policies that are losing their effectiveness

- Policies that produce short-term effects should be reconfigured when their effects begin to wane. Specifically, health warnings, media anti-smoking campaigns, and smoking cessation services' modalities must be regularly updated to maximize their impact.

Design better customized anti-smoking campaigns that directly target the most vulnerable populations

- Anti-smoking campaigns aimed towards the maximum smoking reduction in the general population might not be effective in reaching marginalized communities and vulnerable subjects. In Australia, anti-smoking campaigns and effective communication strategies should be implemented to directly approach Indigenous people and low-income populations. Above all, it is critical to raise awareness of the existence of quit-smoking services and to improve access to them for the most disadvantaged sections of the population.

Relax regulation of ANDS

- Despite the legal restrictions, Australians nevertheless continue to use nicotine e-liquids and, indeed, many liquids on the Australian market contain high-levels of nicotine. People who change their smoking behavior, but still are unable to quit, might therefore benefit from having access to certified devices and nicotine e-liquids to assist them to stop smoking. Hence, by penalizing most ANDS over combustible tobacco products, the government and health institutions may in fact unintentionally be promoting a falsehood that combustible tobacco is less harmful than smokeless alternatives. An extended set of recognized ANDS would better meet the preferences of those who want to quit smoking but are unable to do so. Indeed, quitting smoking is the primary reason cited by Australians for beginning to use e-cigarettes in the first place. In this respect, then, the gateway theory does not appear to ring true, insofar as 98% of smokers aged 12 years or older reported having smoked combustible

cigarettes prior to using e-cigarettes. However, to protect young individuals from using ANDS before beginning to smoke, the government should seek to regulate e-cigarettes in the same way that they do tobacco products. Finally, if legalized, ANDS should be adequately taxed to both remove the barriers to cessation for those who want to quit and to discourage smokers from switching to illicit tobacco products.