Abstract
The provision of the extraordinarily deadly product of cigarettes is dominated by a small number of large and incredibly profitable shareholder owned companies that are focussed on cigarettes. The legal duty of their managers to maximise shareholder wealth means that such companies vigorously fight any new public health measures that have the potential to disrupt their massive profit making, and have the resources to do so. Protecting the public health is therefore made a lot more difficult and expensive. We suggest that one way to counter this would be to actively design future tobacco control policies so that tobacco companies face mechanisms and incentives to develop in such a way that they no longer achieve the greatest shareholder value by focusing on cigarettes. A proper tobacco diversification and exit strategy for the shareholders of the profit-seeking tobacco industry would protect the public health by addressing the current addiction to the continuation of the cigarette market. The increasing popularity of e-cigarettes presents a particular opportunity in this regard, and we therefore suggest a possible policy response in order to start discussion in this area.

1. Introduction
In light of the fact that smoked tobacco (hence forth cigarettes for simplicity) is an extraordinarily deadly product, recent decades have witnessed a gradual increase in global tobacco control measures in order to reduce the multiple negative impacts upon society. Such measures have been fought by cigarette companies, thereby erecting significant obstacles to efforts to protect the public health. The basic problem is that selling cigarettes is incredibly profitable, especially in Western markets [1, 2]. For instance, in 2013 the profit of the world’s top six tobacco companies was $44.1bn [3], the vast majority of which was earned from combustion products, whilst Imperial Tobacco the long-time market leader in the UK has been estimated to have earned profit margins of up 68% in that market in recent years, which compares to a typical 12-20% margin for European non-tobacco consumer staple firms [2]. A sequence of corporate mergers and takeovers mean that we now have a
small number of large and extremely profitable transnational tobacco companies (TTC) dominating the global market for cigarettes outside China. These firms are strongly focussed on smoked tobacco, and overwhelmingly on cigarettes, and so have a very strong incentive to maintain their position and the current status quo in tobacco markets. Any attempt to introduce new public health measures which have the potential to disrupt the extremely lucrative cigarette business are fought ‘tooth and nail’, with states often facing massive legal bills if they are to successfully implement tobacco-control measures. Witness the reaction to the introduction of plain packaging in Australia [4], the future implantation of this in the UK and Ireland [5-11], and in the USA the successful legal challenge against the FDA’s attempt to put graphic health warnings on cigarettes [12]. The basic issue is that the TTC have every incentive to act in ways which prevent their extremely profitable market positions from being removed or eroded. It is logical for them to vigorously object to public health measures because these might restrict their business activities and thus the ability to maximise shareholder returns (i.e. profits), which is after all, the purpose of the modern shareholder owned corporation [13]. Furthermore, the current extreme profitability of the TTC also gives them significant resources with which to go into ‘battle’ to protect their position and also to mitigate, bypass, and undermine any measures that are ultimately introduced. In short, the current structure of the tobacco industry is one which requires on-going and repeated battles with the industry for each and every public health measure in the area of tobacco control in each country. Like a cornered animal, or any army facing an enemy committed to their total annihilation, a corporation in such a situation will fight long, hard, and viciously.

If something could be done about the industry’s incentives to act in this way, there would be significant gains to be had in terms of addressing the global cigarette smoking epidemic, most especially in developing markets where public health regulation is less developed. Tobacco related health measures might be more quickly, easily, and cheaply introduced, and would most likely be more effective too, leading to better health outcomes for the public. As a result, smoking rates might be more easily reduced. To do this, the nature of the incentives facing tobacco companies need to change. The companies need to be given a business environment that makes the marketing of cigarettes less appealing than other
commercial opportunities on offer. Such policies have been effective in the past in helping to transition other industries toward products more beneficial to health. Consider, for example, the combination of regulation and carrot and stick policies used to engender the transition from leaded petrol to unleaded petrol. Regulations that reduced and ultimately eliminated the use of lead in fuels in many countries combined with such things as the incompatibility of leaded fuel with the catalytic converters (mandated in the 1970s in the US under the Clean Air Act) to create change. Importantly, fiscal measures in jurisdictions such as Germany gave tax incentives to unleaded petrol that changed the economics, and thereby facilitated a transition to a less hazardous product that had been stymied for decades [14].

In this regard existing tobacco control work looking at the tobacco industry has begun to develop a set of policies which might start to address the negative effects of the profit incentives currently faced by the TTC. These include policies that reduce the long-term profit potential of marketing cigarettes, such as: plain packaging; price cap regulation; limits on the composition of tobacco products; and even changing the structure of the commercial tobacco industry itself [15-21]. Each of these policies has its own merits but also reasons why they might be unappealing or difficult for politicians to implement [22]. For instance, the suggestion that the tobacco industry be taken out of the private sector would require several hundred billion US dollars (just the value of the TTC on the FT500 currently exceeds US$550 billion, so adding in a premium to nationalise these companies, plus the many smaller companies, becomes an astronomical sum) so to buy out the existing companies would be hard to justify politically during a time of global austerity, especially with there being no guarantee that such an action would actually protect the public health. It is therefore likely that the commercial tobacco industry will be around for some time yet (most probably with increasing tobacco control regulation). It just need not be so single-mindedly focused on the marketing and sale of cigarettes (or other combustion-focused tobacco products), and thus the resulting epidemic of smoking-caused death and disease.

Immediate steps are therefore needed if the harm caused by the fiduciary obligation of the TTC’s to maximise shareholder value is to start to be addressed in a meaningful way. Ideally such measures would complement and facilitate the introduction of further tobacco control
measures in the future, such as the aforementioned suggestions. One such policy is to regulate tobacco companies/tobacco markets and design future tobacco control measures in ways which avoid backing the companies into a combustion-focused corner. Public health goals can be hard enough to reach without unnecessarily turning the TTCs into cornered animals. An extremely profitable tobacco company that only operates in the cigarette dominated tobacco market has the ultimate incentive to fight tobacco control measures because the company might cease to exist without cigarettes. However, if the tobacco companies were provided an escape route outside the realm of cigarettes where they might go in their commercial activities, they might be less inclined to fight so hard for the continuation of tobacco markets as we know them. That is to say, to implement tobacco industry policies in such a way that gives shareholders of TTC a mechanism and incentive to develop their businesses in ways that they no longer achieve the greatest shareholder value by focusing on cigarettes. By making status quo products only a part of their commercial activities, and ideally a rapidly declining part over time, the incentives to maintain the status quo in the tobacco market would be considerably reduced. Cigarettes would no longer be the imperative to corporate survival they are now.

Quite how TTC could be offered such an escape route is one where there will no doubt be considerable debate as to what is appropriate. Some will no doubt argue that such policy foresight is not (yet) required as the industry still has considerable freedom within existing tobacco control regulations and is, as yet, fighting nothing like a desperate cornered animal. Others will object to the very idea since all firms are currently free to use existing tobacco profits to diversify their businesses into other non-tobacco markets to ensure corporate survival (as for example, BAT did in the 1970s when it moved into retailing with the acquisition of the Argos chain in the UK and Saks Fifth Avenue in the USA, and in the 1980s when it moved into financial services with the acquisition of Eagle Star, Allied Dunbar, and Farmers Group which made it the largest UK-based insurance group [23]). Whilst both views have merit, they also fail to recognise that the key point is to change the relative incentives faced by the companies in terms of their tobacco operations. The companies need to be given incentives to move away from their current focus on extraordinarily deadly cigarettes so that they accept the winding down of combustion-based tobacco products
much like petrol companies moved to unleaded fuel. Governments could facilitate or even force this change, through measures such as tax differentials [24], tax credits, profit levies, banning of cartel enhancing tobacco company mergers, or more direct measures such as differential price controls, product licensing, or even striking a long-term legal bargain with the industry regarding its future strategic direction, investment and conduct. There are no doubt other possibilities that have yet to be thought of that could also serve to reduce the TTC focus on the maintenance of the cigarette business. Such polices should be aimed at removing the huge profit incentive companies achieve supplying, sustaining, and creating demand for cigarettes. Policy choices in this area would need to be mindful of the constraints operating in any particular market, such as the threat posed by illicit tobacco sales, and hence be selected accordingly. If there were to be a strong threat of increasing illicit sales, the fact is that measures to address corporate profitability of cigarettes need not significantly change retail prices, thereby not impacting the likelihood of consumers switching to illicit products. One such measure could be the imposition of a levy on cigarette profits which could not be passed on to consumers in the form of retail higher prices.

National tobacco policy changes of the type needed to address cigarette profitability would no doubt be the subject of fierce TTC objections since they impact upon their profitability and potentially even their very essence, but victory in this particular battle could potentially fundamentally change the outlook for public health in the future.

2. E-Cigarettes

One immediate area for active consideration of such a wider tobacco policy is the growing popularity of E-cigarettes. The introduction of such alternative products (and similar ones such as cigarette-like nicotine inhalers) presents a dilemma. These new products (henceforth all collectively referred to as e-cigarettes) have real potential to disrupt the tobacco market given their growing popularity [25, 26], significantly lower health risk than smoked tobacco products [27, 28], and more lenient government product regulations to date. The level of appropriate regulation for such products is a matter of current debate but
it is clear they could be a real force for change that can significantly enhance public health [28-34]. However, for this to come to fruition the TTC, and regulators themselves, need to be prevented from handling the threat of vaping in the same way they have handled past threats to the combustibles market. Such threats that may have caused disruption to cigarette dominated tobacco markets have generally been handled by regulation that stifles such products, or by simply buying out the companies making such products in order to monopolise the market and subsuming these products to an overall cigarette focused agenda.

E-cigarettes can only change the tobacco market if they are sold in a way that actively competes against smoked tobacco. For this to happen they need to be an alternative product that displaces lethal cigarettes rather than being sold in a way designed to protect existing products (e.g. as part of dual-use marketing strategy which promotes their use only when smoking tobacco isn’t possible). How this revolutionary change can be facilitated will no doubt vary from country to country, reflecting individual market conditions and legal systems. One possibility is to make sure the e-cigarette market is structured in a way that combines an open and competitive market dynamic with a regulatory system for the broad nicotine market (as mentioned in section 1) that encourages rapid product transformation away from cigarettes. Especially important is to have the profitability of cigarette sales at a level less than that of alternative products. In such an environment normal market forces could be expected to deliver the appropriate changes as companies naturally compete against each other within the regulatory framework that favours e-cigarettes over smoked tobacco. However, for this to work there would need to be few restrictions on entry into, and the free operation of, the e-cigarette market. In reality many countries have already introduced market and product regulations which mean that markets can’t be free and hence can’t be fully competitive, with the unintended consequence of protecting the combustibles market. For example, product advertising and point of sale for e-cigarettes might be restricted. Furthermore, free market forces are also likely to be distorted because TTC are large powerful organisations with significant financial resources, large distributions facilities, strong customer awareness, and strong brand names, all of which give them a significant advantage relative to independent participants in the e-cigarette market. Such
advantages have already been seen in the e-cigarette market with tobacco companies lobbying for tough product regulation and standards, which ultimately favours their products and their organisations given their deep pockets. Consider, for example, Altria’s support for legislation that gave the US Food and Drug Administration (FDA) the authority to evaluate products that could be lower risk [35].

In light of these likely difficulties with a laissez-faire competition based solution, a second policy response to consider would be to complement a broad nicotine regulatory system with an active competition policy. Global competition regulators (such as the Competition and Markets Authority in the UK, European Union competition authorities, or the Federal Trade Commission (FTC) in the USA) could more actively oversee the TTC takeovers of e-cigarette companies and purchases of related technology to ensure this is consistent with a transition out of cigarettes rather than an effort to stymie competition for combustibles. Such agencies could complement this by requiring the TTC to divest their corporate interests in this area, as/when needed to spur industry transformation. Current competition rules allow for such action in many countries if a wide definition of a nicotine market is adopted, as this would still be dominated by the TTC given the current value of tobacco sales and hence they could be argued to already have monopoly power which operates against the public interest. Such a forced change in corporate incentives, if sufficiently robustly implanted, would mean that e-cigarettes could really compete with smoked tobacco since a myriad of companies would have strong market incentives to aggressively compete against cigarettes.

However, the dilemma faced is that this sort of very active and vigorous implementation of competition policy is that, if not carefully implemented, it would essentially trap TTC in the business of making smoked tobacco products. Their only option to break free from tobacco would be to diversify into unrelated industries and this would do nothing to diminish their incentive to maximise the profits they receive from smoked tobacco products. Without any commercial interest in non-smoked nicotine products, TTC have the maximum possible incentive to continue cigarette sales and thus to use fierce competition to neuter the infant e-cigarette industry with its significant potential for improving the public health. Indeed TTC would likely use their smoked tobacco products to compete even more fiercely and that
might result in lower prices for cigarettes with detrimental health consequences. Indeed, any required separation of reduced risk products from the cigarette business would also prevent the TTC from investing in wider product development and innovation, since they could be limited to producing combustion products.

We would therefore argue that in most markets a hybrid solution is required in order to capture the best of both worlds. A broad regulatory framework that favours e-cigarettes (over combustion products) needs to be combined with a more limited activist competition policy that prevents TTC monopolising the e-cigarette market. The aim would be to strike a balance that gives the TTC the incentive and means of escaping the smoked tobacco market by transitioning into e-cigarettes, but which also results in other participants in a dynamic and diverse e-cigarette market which actively competes against combustion products. To achieve this we suggest that the TTC should be given incentives to invest and innovate in their own alternative nicotine product companies as they have already started to do. The key to making this policy compatible with wider public health goals is these alternative nicotine investments should be required to be consistent with enhancing, rather than limiting, the market for alternative products. In theory this might be something that could be achieved through differentiated profit potential based on relative risks alone.

However, reality is likely to necessitate more direct action from competition authorities such as requiring that such TTC alternative businesses be mainly organically grown (not simply created by buying-up all potential competitors) and that they be operated completely independently of their parent tobacco companies, with this strict separation being stringently enforced by competition regulators. In essence the cigarette and ‘alternatives’ business could then be thought of as two totally separate companies operating in related markets which compete against one another, but that happen to be owned by the same shareholders. Whilst such separation would be unusual, it would not be without precedent within the business world. In the UK for instance, BT is the dominant force in fixed-line telephony and associated services including broadband, but the infrastructure that BT (and other competing companies) use to provide these services is actually owned and maintained a sister company to BT, called Openreach. Openreach has a legal duty to treat BT and competing telecom providers on an equal basis, giving all access
to its infrastructure at the same cost and with the same level of service. This is done by having two completely separate organisations which are owned by the same parent company. Such similar separation could be mandated for tobacco companies developing nicotine product based businesses, and might also include particular provisions such as overseeing or even preventing the use of the same brands between combustion and non-combustion products.

Each business division in isolation would have an incentive to maximise its profits, but the profitability of the cigarette and alternatives businesses would move in opposite directions over time given the competing nature of the products being produced and the legislatively imposed broad constraints on the profitability of the cigarette trade. Since competition for both divisions of the TTC would also be provided by third party e-cigarette companies, the parent TTC groups should find it in their interests to develop their alternatives division, especially in light of wider market policies that depress the profitability of combustion products relative to alternative products. The overarching goal would be to create an environment such that the e-cigarette division would develop over time to become more profitable overall than their legacy combustion tobacco businesses, thus giving the TTC a strong incentive to expand the former at the expense of the latter as overall TTC parent group policy. Such a change would not happen overnight and would rely on an appropriate market environment being created alongside appropriate competition policy. Policies such as those outlined at the end of section 1 are likely to be required in order to depress the profitability of combustion products in order to ensure parent companies start to favour the alternative division. Ultimately this favouritism should lead to the running down of the combustion business in the same way that companies allow past brands to slowly fade once they cease on-going marketing support.

In summary such an environment would allow TTC to create new areas of business that are related to their current areas of expertise, but which are likely to have a more sustainable future. The companies would therefore be nudged away from their current addiction to deadly combustion products as they seek to reposition themselves into a more profitable long-term market position. The public benefits by having more competition and innovation in less-harmful nicotine products which are actively sold to entirely displace cigarettes.
Such arguments might also be extended to encompass more than just e-cigarettes, and could well be applicable to a broad range of ‘next-generation’ reduced-risk products, possibly even including heat-not-burn type products.

3. Conclusion

No matter what future tobacco control measures are identified as being desirable for public health, in the absence of measures that change market incentives, severe resistance will always be encountered from cigarette companies. As profit-making firms they are legally obligated to protect their shareholder-owners and therefore vigorously fight any measure that could cause their profits to disappear. Such resistance makes protecting the public health significantly more difficult, slower, and more expensive. However, such resistance might be mitigated over time if the TTC’s were to find that as the profitability of cigarettes diminished, the profit potential of alternative products was enhanced so they were not reliant upon cigarettes for their corporate survival. By using a variety of carrot and stick policies to influence corporate strategy, such as differential tax rates and profit levies on particular products, the tobacco industry might be shepherded away from its current addiction to the continuation of the cigarette epidemic. In other words, protect the public health by incentivising a tobacco diversification and exit strategy for the shareholders of the profit-seeking tobacco industry. One obvious starting point would be to compliment such broad policies by considering the impact of the ownership of E-cigarette firms given the growing popularity of such products.
References

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