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Scottish Government's current approach to changing climate behaviour

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Scottish Government's current approach to changing climate behaviour

Climate change is an accelerating global predicament that has caused repercussions in the rural and urban areas of Scotland. Forestry areas are experiencing an increased spread of pests such as ticks and urban areas are prone to serious flooding and storms (Adaption Sub-committee, 2011). The Scottish government (2020, p. 7) has established several objectives to address this dilemma, and one of Scotland's commitments is to "Reduce emissions by 75% by 2030 (compared with 1990) and to net-zero by 2045." While it appears promising for Scotland to attain this target having hosted Cop26 in Glasgow, the Committee on Climate Change has estimated that more than 60% of emissions reductions to meet net-zero will need to come from a societal change in terms of behavioural patterns (Scottish Government, 2020, p. 22). Subsequently, there is a necessity for policymakers in Scotland to exploit behavioural economics to firstly comprehend individuals' and businesses behaviour in relation to the crisis, and successively drive the change required to meet climate targets. This essay will argue the government's current approach to changing behaviour which is the belief-attitude intention pathway model, while using a simple economic model to strengthen Scotland's policies and approach in response to the crisis.

Global warming is recognised by Daneshkhu and Harvey (2006) as a global public bad as it carries the characteristics of non-excludability and non-rivalry. This means Scotland cannot be omitted from the aftermaths of global warming such as wetter environments and the increase in rainfall (Environment, 2021). Additionally, with rural areas of Scotland experiencing water and energy disturbances (Adaption Sub-committee, 2011), this will not eliminate other expenses of global warming in urban areas of Scotland and in countries worldwide. This further emphasises the need for global collaboration to ensure that every country, including Scotland, do their own bit to drive effective behavioural change. According to (Black *et al*., 2019), a belief-attitude intention (BAI) pathway, is an approach currently used by the Scottish Government that proposes that citizens' beliefs and attitudes will determine their intentions to carry out daily activities and act a certain way. With this pathway, the government is anticipating that expanding climate knowledge within society and across businesses will be sufficient to change beliefs and attitudes towards the environment. Thus, consecutively influencing intentions to carry out pro-environmental behaviours (PEB). Black (2021) found that nearly 50% of Scottish businesses are educating senior management in sustainability. In addition, the Learning for Sustainability action plan is a cross-curricular approach implemented by the Scottish Government (2019) to ensure sustainability is taught by education leaders across learning institutes, in the hope of advancing climate literacy. According to a definition provided by Miléř and Sládek (2011, p.152), climate literacy is defined as, "an understanding the climate's influence on you and society and your influence on climate". That said, the Scottish Government is currently, with the BAI pathway, trying to ensure citizens have crucial knowledge on the vast, quickening risks global warming has on human livelihood. In addition, through improving climate literacy, the government is trying to increase Individual's knowledge of how ones' small actions can contribute negatively to this global public bad, and it is through individuals' collective actions that can offset the consequences (Black *et al*., 2019). That said, it is

debated whether this rise in climate literacy is enough to stimulate the required climate action to meet Scotland's Net-zero goal (Black *et al*., 2019).

One major drawback of this approach is that it assumes that individuals when exposed to increased climate education, can and will make rational decisions to implement PEB. This is linked to the rational actor model widely used in behavioural economics by policymakers, which assume humans will always make choices/actions in their best self-interests. In this case, Scotland's policymakers can presume that citizens and businesses will want what is best for their wellbeing and livelihood in which they'll perform PEB to enhance the environment around them. Such exposition is unsatisfactory, as humans are said to not always act in their best interests (Gowdy, 2008), due to factors, such as social influences, and costs, for which the rational model-actor and the BAI pathway, fail to account. As a result, Black, P.I. *et al.* (2019) found that there is an attitude-behaviour gap in which there is a void in the individuals' willingness to transition this global warming awareness or positive attitude/intentions into sufficient climate action. This study found that there are factors, some of which are out of the individual's control, that can stop citizens' intention to take climate action, such as available transport infrastructure. In addition, Black (2021) found that businesses see the costs of implementing decarbonising practices as the main barrier to carrying out PEB and a third of businesses felt that there is a lack of government funding to aid with this. These findings have important implications in the long run for the Scottish economy to ensure that they deviate from the current BAI pathway and to use a more relevant approach. If policymakers are wanting to drive adequate behavioural change, a study more into barriers to change and improving infrastructure support for citizens and funding for businesses can prove impactful.

Transport Scotland (2022b) enabling free bus travel for under 22s across Scottish geographics, is a good illustration of Scotland taking into consideration the infrastructure factor that limits individuals, particularly younger ones to engage in climate action. Through this free bus travel policy, the Scottish Government is straying away from its BAI pathway model by providing a convenient infrastructural way to drive behavioural change for young people. In turn, under 22s will not rely much on cars for personal activities and will take fitting climate action to use public transportations, therefore reducing emissions by cars and making Transport Scotland (2022a) on track to meet its commitment of reducing car kilometres by 20% by 2030. Through this impactful behavioural change policy, The Scottish Government is also tackling its other grand challenges such as income inequality within the youth. The Scottish Government (2021) conveyed that with bus travel being free, young people can relieve stress on finances while taking steps to carry out PEB to assist positively to the global public bad. Scotland's Vision for Active Travel (Scotland, 2019) has the aim of making cycling and walking the most popular choice for citizens. Scotland has already allowed a bike-share operator called Nextbike to offer rental bikes across Glasgow and Stirling (VisitScotland, No date). Citizens can rent Nextbikes via the company's app to unlock the Nextbike for use as transportation across the city. This is another good example of Scotland supporting infrastructure and driving climate action to enable easier access to cycling. Thus, achieving Scotland's Vision for Active Travel as well as their target to reduce car kilometres. Continued efforts are needed to make cycling more accessible to citizens

across Scotland, in which it is recommended that the Scottish government should operate Nextbikes in other cities in Scotland to further drive PEB.

As gathered by Black (2021), the Scottish government has a key role in providing funding in the form of subsidies to help corporations take climate actions in their practices. In reference to figure 1 provided by Pettinger (2019), point (Q1, P1) is the free-market equilibrium, and it is the quantity businesses are producing with their current practices. The businesses at this point are only considering their marginal private cost and benefits, which in this case, could be businesses producing goods with carbon-emitting production, as it is cheaper to use rather than eco-friendly machinery. If the Scottish government provide a per-unit subsidy equal to P0-P2, this reduces marginal costs of production for businesses. In turn, this will aid Scottish businesses to change their behaviour and invest in cleaner production. The supply curve shifts to the right from S to S2, which cleaner production of goods will increase, and as a result businesses will start producing at Q2 which is the socially optimum outcome. Therefore, the government is helping overcome the barrier of costs of decarbonising practices, which in turn will contribute to the goal of net-zero by 2045.

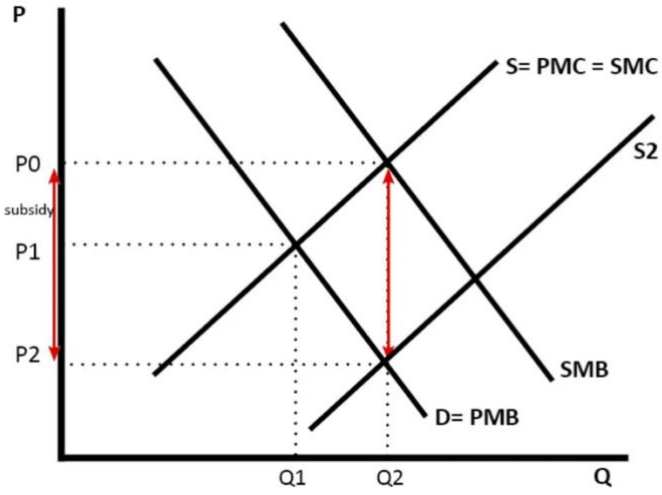

Figure 1: Diagram of subsidy on positive externality (Pettinger, 2019).

The Scottish government has set many climate targets some of which are to reduce transport emissions, to reduce car travel and to encourage cycling. All these actions can only contribute to the overall target of net-zero by 2045 through effective behavioural change. It is concluded that Scottish policymakers will need to refrain from their current BAI pathway as it assumes individuals and businesses are always rational and will carry out PEB if there is an increase in climate literacy. Therefore, I would recommend the Scottish government to provide more subsidies to reduce costs of production to firms, which will enable them to invest in cleaner practices, thus reducing the harms of the global public bad. In addition, I suggest the government increase infrastructural support across all areas of Scotland such as operating Nextbikes in different cities to help achieve interim targets which will lead to a socially optimum country.

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