# INCENTIVISING USAGE-BASED MOTOR INSURANCE: Costings for two potential policy options

A WPI Economics briefing note for Vodafone

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## About this briefing note

This briefing note was commissioned by Vodafone. It is based on the best publicly available data on the uptake of telematics-based motor insurance products.

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# EXECUTIVE SUMMARY

The way we drive may be changing but British motorists still want the same things that they have wanted for years; for roads to be safer and for the cost of motoring to be cheaper.

New technologies are constantly improving the way we drive and while technologies like GPS have become commonplace, we're now starting to see the rise of ultra-low emission vehicles, driver-assistance systems and connected cars and the likely rise of automated vehicles that are expected to be on our roads within a few years. The connection of cars has the potential to transform the way we drive, particularly when combined with superior 5G network connectivity.

This embracing of new technology reflects the Government's priorities as set out in the Future of Mobility Grand Challenge. While the Government recognises that new technology can help in its ambitions to improve road safety, reduce carbon emissions and reduce the cost of motoring, there is more that can be done.

This led to us to explore the potential for how usage-based telematics products can incentivise motorists to drive slower and more carefully through savings from lower premiums that can be passed on to the consumer by insurance companies.

Usage-Based Insurance devices (UBI) sit discreetly and conveniently in a vehicle to monitor the driver's speed and style before feeding this information to insurance companies who can offer more accurate insurance premiums based on this individual data. There are huge benefits to be had from encouraging more drivers to have telematics products fitted into their vehicles:

- The drivers can potentially benefit from cheaper insurance
- Society can benefit from safer roads as the technology rewards safer driving
- The environment benefits from lower emissions as the technology encourages driving in a more careful and fuel-efficient manner.

There is some take-up of these policies driven by the market; using projections from available data we estimate that UBI is around 5% in the UK today. However, other countries including Italy, the United States and South Africa have significantly higher uptake rates. Given the benefits to society from greater take-up of telematics products in vehicles, there may be a strong case that more should be done to incentivise their take-up. Drivers would also save money; potentially hundreds of pounds each year for those who newly take up a UBI policy.

The greater use of telematics products in vehicles could improve our air, make our roads safer and save consumers money. As a society we all stand to benefit, but to have a real impact we need to increase the uptake of this technology and we think that there is a role for the Government to investigate providing an added incentive so that more drivers embrace telematics in their vehicles.

# INTRODUCTION

This paper presents the case for policy action to incentivise the take-up of telematics products in vehicles and, in particular, insurance policies that are based on data on how vehicles are driven (Usage-Based Insurance, UBI). It argues that as well as bringing cost of living and wellbeing benefits to drivers with these policies, there are wider environmental and safety benefits to society as a whole. These wider benefits provide a clear rationale for the Government to take action to incentivise the take-up of UBI. This paper presents two options for how this might be delivered:

- An exemption of these UBI policies from Insurance Premium Tax (IPT); and
- The Smarter Driving Fund which is a grant-based incentive for UBI policies.

It provides indicative costings for how much the two policy options might cost over the forecast period of five years and the potential scale of the benefits that could be delivered.

We believe that either of these might be used to incentivise greater take-up of telematics in vehicles and deliver the associated benefits. However, we recognise that there are potentially unattractive Exchequer implications of exempting UBI policies from IPT. In particular, if successful, the fiscal costs of the exemption would increase steadily over time. In the extreme, where all vehicle insurance was based on usage-based policies, this would mean that all vehicle insurance policies are exempt from IPT. As such, an approach based on a time-limited grant-based Smarter Driving Fund could be used to provide benefits of increased take-up, whilst ensuring a limit on fiscal exposure of Government.

# TELEMATICS AND USAGE-BASED INSURANCE POLICIES

Before outlining potential costings for both an IPT exemption and the Smarter Driving Fund that could be used to incentivise the take-up of UBI policies, this section briefly outlines the existing knowledge on the take-up of these policies, as well as the potential benefits that they bring to individuals and society.

## *What are telematic insurance products?*

Usage-based (telematics) insurance for motor vehicles works by fitting a telematics box ("black box") to the vehicle, which monitors various aspects of how it is driven. For example, it might monitor:[1]

- The time of day or night the vehicle is driven;
- The type of roads the vehicle is driven on (e.g. motorway) and speeds on those roads;
- Total mileage and number of journeys;
- Severity of braking and acceleration; and
- If breaks are taken on long journeys.

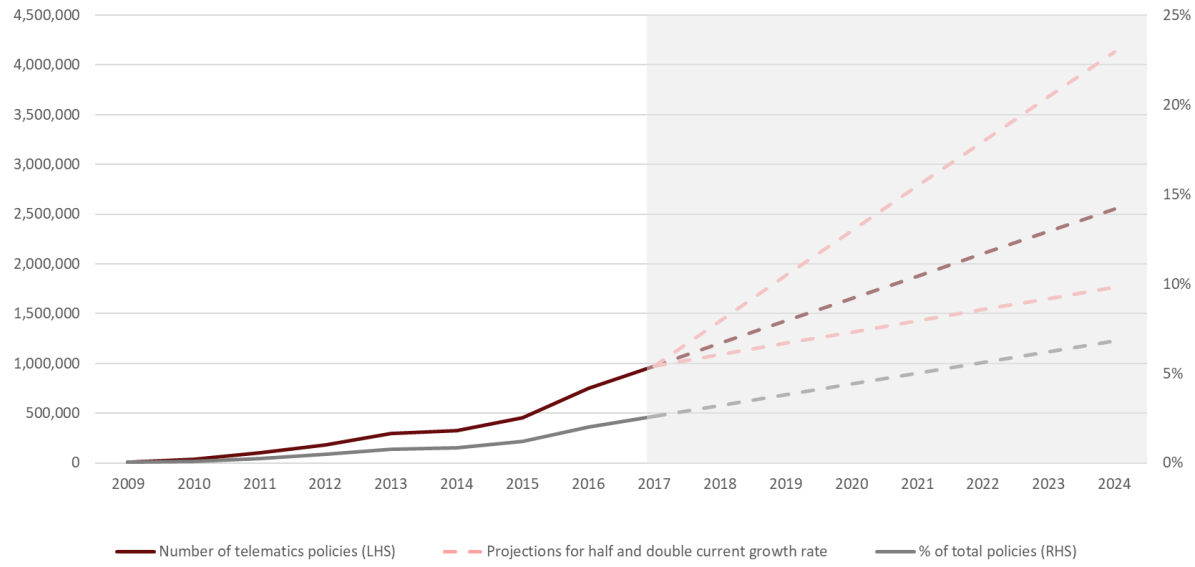
Insurance companies can then use this data to offer premiums based on an individual's own driving behaviour and safety, rather than (for instance) simply relying on data about the typical risks associated with drivers of their age. Estimates of the savings possible from usage-based insurance products vary, but typically report potential savings in the region of 20% of the total premium,[2] with longer-term savings potentially much higher, depending on style of driving.

## What is current take up?

Research from the British Insurance Brokers' Association (BIBA) suggests that there are now close to one million live telematics policies in the UK, and Figure 1 demonstrates that this has grown significantly over recent years. However, it also shows that, as an overall proportion of motor insurance policies, telematics still represents a very low number. Existing evidence also suggests that take-up varies significantly between different groups of drivers. For example, some estimates already put take up of telematics policies of very young drivers (17-19 year olds) at around 80%.[3] However, other research also shows take-up increasing amongst other age groups.[4]

We have projected potential take-up on the basis of a continuing trend for the central projection. Figure 1 also shows how the number of policies would change were the rate of growth to be half or double the current trend.

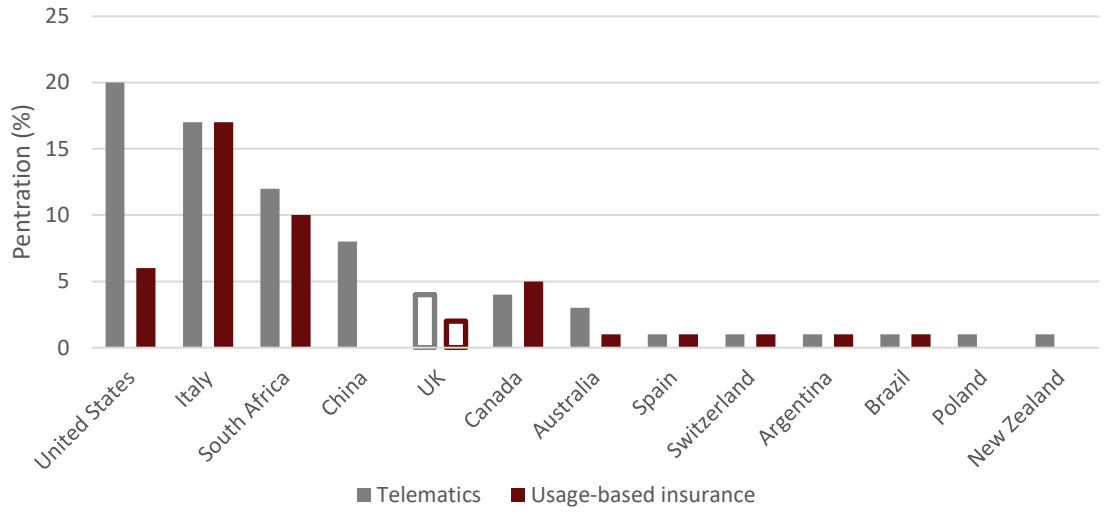
*Figure 1: Number of telematics policies and proportion of total motor insurance policies*




Source: BIBA, HMRC, ABI, WPI Economics analysis

Figure 2 demonstrates how the take-up of telematics and usage-based insurance products varied between countries in 2016. It shows that, while the UK is by no means the least advanced country in terms of take up, there are other countries that have a significant head start on the UK.

*Figure 2: Penetration of telematics and usage-based insurance, selected countries, 2016*




Source: McKinsey Centre for Future Mobility

## *Should usage-based insurance be incentivised?*

If there were only private benefits to usage-based insurance, there would (arguably) be little justification for taking action to incentivise the take-up of these products. However, a number of arguments have been put forward to suggest that there are a range of other wider, non-private, benefits arising from these products. Some of these are summarised below.

| Area of potential benefit | Evidence | Scale of benefits |
|---|---|---|
| ***Safety:*** by monitoring speed and style of driving, usage-based insurance policies can reduce average speeds and acceleration. Can also give "traffic light" feedback to indicate safety of driving with intention of changing driver behaviour. | A recent survey suggested that 58% of businesses using telematics systems had seen a reduction in speeding incidents and fines; 52% also reported a reduction in accidents involving staff.[5] Research with young drivers suggested a reduction in "safety-relevant events" of up to 76% for those with telematics.[6] | Existing research suggests that increased take up of telematics policies would result in over £200 million of net economic benefits over seven years just from reduced costs associated with death and serious injuries from accidents.[7] |
| ***Environment:*** where monitoring leads to lower speeds and more efficient driving styles, the environmental impacts might be significant. | Research from RAC Business suggests that, by encouraging more efficient driving styles, more than half of businesses using telematics have seen fuel usage drop, with total savings of between 10% and 15%.[8] | Not currently estimated – but we know that poor air quality leads to the equivalent of 40,000 premature deaths each year, and costs billions of pounds in lost productivity and healthcare costs. Road traffic is the single biggest contributor to |

| | | |
|---|---|---|
| | | roadside $NO_2$, contributing 80% of these emissions.[9] |
| ***Societal:*** there are also a range of other potential benefits including aiding with vehicle recovery, facilitating traffic monitoring and routing optimisation.[10]<br><br>In the longer term, much wider benefits have been identified around the development of smart transport and smart cities.[11] | Further research needed. | Significant potential – as yet unquantified. |

If even some of these potential benefits could be realised, there may be a strong case for the introduction of incentives to promote take-up. We explore two potential incentives below; an Insurance Premium Tax exemption or a grant-based scheme.

One crucial question to consider in deciding whether to introduce an incentive is if the cost savings of such a measure would be passed onto consumers. Incentives are more likely to be passed onto consumers in markets which are more price competitive, as market forces encourage providers to utilise incentives to lower their prices in order to maintain their market share.

There are several reasons to be confident that the cost benefit attached to an incentive for usage-based insurance policies will be passed onto customers.

- The car insurance market is extremely competitive, with the Prudential Regulation Authority counting that there are 427 insurers authorised to write motor insurance in the UK,[12] with 26 firms and their subsidiaries making up the vast majority of the market.[13]
- Car insurance is typically regarded by consumers as a 'grudge purchase' – people tend to purchase the product which fulfils the legal requirement to have motor insurance in place at the lowest cost possible. Indeed, research suggests that almost 7 million drivers in the UK would not buy car insurance at all if it was not a legal requirement.[14] As a result of this type of demand, the market has become commoditised with many insurers simply focused on providing the cheapest quote possible.
- Price competition is exacerbated by digital intermediaries such as price comparison sites or online brokers, which make it extremely easy for customers to compare the prices of many products at the same time.
- Further evidence of a price competitive car insurance market can be found in looking at the profits made by insurers. Profitability in different insurance markets is measured using a Combined Operating Ratio (COR), a percentage figure that compares income from premiums to costs of operating and paying claims. A COR of over 100% is termed an underwriting loss, whereas under 100% is an underwriting profit. The motor insurance market in the UK has only made an underwriting profit three times since 1994. This contrasts with other product lines, such as property insurance which has made an underwriting profit six times since 2011.[15]

# POLICY PROPOSAL 1: Smarter Driving Fund

## Measure description

The majority of vehicle insurance policies pay little regard to how the vehicle is driven. However, a growing proportion of motor vehicle insurance policies are being based on technology that is used to continually assess driving style and then base insurance premiums on this information. These policies are typically referred to as usage-based policies or telematics policies. As highlighted above, by doing so, as well as typically being cheaper, they can reward and incentivise driving behaviour that is both more environmentally friendly and safer.

This proposed measure would provide a grant to incentivise uptake of these policies. We envisage that this could be administered in a similar way to the Plug-in Car Grant where the grant is claimed by insurers and taken off the sale price of qualifying policies. The level and time period of the grant-based Smarter Driving Fund could be changed year-on-year to reflect the success of the policy and changes to technology.

Grant funding via the Smarter Driving Fund could be provided either at a flat rate per policy, or as a proportion of the cost of the policy. A flat rate would be administratively simpler but would be likely to provide less social benefit as it would provide the smallest proportionate benefit to drivers with the highest premiums that are also likely to be, on average, higher risk and less efficient drivers. We therefore model both options.

## Base-case assumptions

To establish a base case, we use:

- Data on the number and total cost of motor insurance policies obtained from the Association of British Insurers;
- The number of telematics policies currently in place based on data from the British Insurance Brokers' Association. This is grown over time based on recent experience of increased take up;
- Assumed growth over the forecast period (2019/20-2023/24) based on recent past experience of changes in both insurance premiums and the number of policies; and
- An estimate of the average cost of a motor insurance policy.[16]

## Costing

The grants given under the Smarter Driving Fund could be provided at a flat rate per telematics policy sold. This could be set at any given figure, but a salient way to communicate the policy would be to link it to the cost of installing telematics technology in cars. We have estimated this at £80 per installation based on the cost that the broker Ingenie charges for fitting a new telematics box in a policy holder changes car,[17] but this assumption would be improved with cost data from the insurance industry.

The funding required is calculated by applying this cost to the estimated number of telematics policies in the future (e.g. in 2023/24 we estimate there will be around 2.5m policies, and the grant would be £80 per policy). The costing does not include an assessment of behavioural responses.

*Estimated funding required – flat rate grant (£m)*

| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
|---|---|---|---|---|---|
| Exchequer impact | 120 | 140 | 160 | 180 | 200 |

Alternatively, the grant given under the Smarter Driving Fund could be provided as a proportion of the cost of the insurance policy taken out, ensuring that the uptake of telematics was incentivised amongst higher risk groups. The Smarter Driving Fund grant could be set at any given proportion, and potentially varied depending on available budget and the success of the policy. Higher grant rates would create a larger incentive. We have calculated the impact for three illustrative rates – see Annex. A grant rate of 10%, for example, would cost on average £63 per policy, and hence cost around £150m in total for the 2.5 million telematics policies active in that year.

## Areas of uncertainty

The main area of uncertainty in this costing relates to the underlying growth in the take up of usage-based motor insurance products and the demographic characteristics (and therefore typical policy costs) of those choosing these policies. Other uncertainties include the extent to which typical insurance premiums change over time and potential behavioural responses.

To give an indication of the scale of this uncertainty, we have estimated the effect on the costing of a slower and higher growth rate on the flat rate Smarter Driving Fund:

- If growth occurred at half the rate shown in figure 1, by 2023/24 there would be around 1.75m telematics policies, with the total exchequer impact therefore reducing to £140m in that year (as opposed to £200m in the table above)
- If growth occurred at double the rate show in figure 1, by 2023/24 there would be around 3.9m telematics policies, with the total exchequer impact rising to £310m in that year.

The system could be designed to limit the impact of this uncertainty, for example by changing the Smarter Driving Fund rate each year or by setting a limit on the number of policies that could benefit.

## Impact on households

The potential impact on households of this measure are made up of two elements:

1) The savings deriving directly from the grant given under the Smarter Driving Fund; and
2) Savings from reduced insurance premiums for those incentivised to take up these policies.

The evidence we have found suggests that the average annual insurance policy cost is around £630[18] for the typical driver, and around £1,000 for the average new driver.[19]

All drivers who take up a usage-based policy would save the value of the grant itself. For the option of a flat rate this would be £80.

In addition, some of these drivers would not have taken up usage-based insurance without the incentive. For these drivers there will be an additional benefit of savings from cheaper insurance; this has been estimated to be up to 20% in the first year for the typical driver[20] so could save them around £110. Savings to average new drivers could be greater; recently estimated at around £150[21], which when added to the direct savings from the Smarter Driving Fund give total savings of:

- Around £190 for the average driver who is incentivised to take-up usage based insurance
- Around £230 for the average new driver who is incentivised to take-up usage based insurance

See the annex for results for a Smarter Driving Fund based on a proportion of the cost of the policy.

Amongst the youngest drivers, take-up of UBI policies is already high, with some estimates suggesting that over 75% of 17-19 year old drivers already benefit from UBI policies[22]. We expect this would mean that initially the cost of the policy would be driven by this age group as they would receive a further discount on their policies. However, in latter years, we expect that more of the increase in costs would be associated with older drivers choosing to take up UBI policies because of the associated savings and fiscal incentive.

## Challenges

There are a number of areas of detailed design that would need to be considered if this policy were to be taken forward. In particular:

- ***Administrative burden:*** insurers are heavily reliant on IT systems which were designed and built decades ago for significant aspects of their business. Gathering the data and information required to administer the grant based on the number of UBI policies sold is likely to be a significant administrative exercise with a non-trivial cost attached, which may eat into the potential savings from the scheme. The complexity would be greater if the Smarter Driving Fund were a percentage rather than a flat rate amount.

# POLICY PROPOSAL 2: EXEMPTION FROM IPT

## Measure description

Insurance Premium Tax (IPT) is currently levied on the vast majority of insurance policies for motor vehicles. It is typically levied at the standard rate of 12%.

This measure would exempt insurance policies which are based on technology that is used to continually assess driving style and base insurance premiums on this information. These policies are typically referred to as usage-based policies or telematics policies. As highlighted above, by doing so, as well as typically being cheaper, they can reward and incentivise driving behaviour that is both more environmentally friendly and safer.

## History of Insurance Premium Tax

Insurance Premium Tax (IPT) was introduced in 1994 as a tax on general insurance premiums. There are two rates; a standard rate; and a higher rate. The higher rate applies for travel insurance, insurance for mechanical and electrical appliances and some vehicles. Insurance products for the majority of motor vehicles are liable to the standard rate. Figure 1 shows that the rate of IPT has risen significant since its inception.

*Figure 1: Rates of Insurance Premium Tax over time*

| | Rates | |
|---|---|---|
| | **Standard rate** | **Higher rate** |
| *From 1 June 2017* | 12% | 20% |
| *From 1 October 2016 to 31 May 2017* | 10% | 20% |
| *From 1 November 2015 to 30 September 2016* | 9.5% | 20% |
| *From 4 January 2011 to 31 October 2015* | 6% | 20% |
| *Up to 3 January 2011* | 5% | 17.5% |

Source: HMRC[23]

In fact, recent research has shown that rises in IPT outstrip those for tobacco duty, and the tax now generates more income for the Exchequer than beer and cider duties, wine duties and spirits duties.[24] The same report suggests that the IPT costs households over £200 on average.

### *Insurance Premium Tax and motor insurance*

The costs of IPT on motor insurance products form part of this burden. Data from the Association of British Insurers suggests that around £10 billion worth of motor insurance policies are written each year, indicating that:[25]

- The total Exchequer revenue from IPT on motor vehicle insurance policies is in excess of £1.2 billion a year;
- Close to 80% of this comes from non-commercial policies, meaning that domestic vehicle users are collectively liable to around £1 billion of IPT on vehicle insurance policies; and
- In practice, it is likely that the costs to commercial vehicle users will also pass through to households (higher consumer prices and reduced profits for business owners).

## The tax base

The tax base is the value of insurance premiums on motor vehicles that are liable to IPT. This is estimated with data on the number and total cost of motor insurance policies obtained from the Association of British Insurers. The tax base is grown over the forecast period based on recent past experience of changes in both insurance premiums and the number of policies.

The number of telematics policies currently in place is based on data from the British Insurance Brokers' Association. This is grown over time based on recent experience of increased take up.

## Costing

The Exchequer impact is calculated by applying the pre- and post-measure tax regimes to the tax base and taking the difference of the two. It does not include an assessment of behavioural responses.

*Exchequer impact (£m)*

| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
|---|---|---|---|---|---|
| Exchequer impact | - 100 | -120 | -130 | -150 | -160 |

## Areas of uncertainty

The main area of uncertainty in this costing relates to the underlying growth in the take up of usage-based motor insurance products and the demographic characteristics (and therefore typical policy costs) of those choosing these policies. Other uncertainties include the extent to which typical insurance premiums change over time and potential behavioural responses. To give an indication of the scale of this uncertainty, the table below provides two scenarios around the base case.

*Sensitivity – Exchequer impact (£m)*

| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
|---|---|---|---|---|---|
| Half growth rate in take up | -80 | -90 | -100 | -110 | -120 |
| Base case | - 100 | -120 | -130 | -150 | -160 |
| Double growth rate in take up | -140 | -170 | -200 | -230 | -260 |

## Impact on households

The potential impact on households of this measure are made up of two elements:

1) The savings deriving from removal of IPT; and
2) The savings deriving from reduced insurance premiums for those incentivised to take up these policies.

The evidence we have found suggests that the average annual insurance policy cost is around £630[26] for the typical driver, and around £1,000 for the average new driver.[27]

All drivers who take up a usage-based policy would save IPT (12% on the cost of the policy) which would be around:

- £68 for the average driver
- Around £107 for the average new driver

In addition, some of these drivers would not have taken up usage-based insurance without the incentive. For these drivers there will be an additional benefit of savings from cheaper insurance; this has been estimated to be up to 20% in the first year.[28] This could save the typical driver around £110, and the average new driver around £150, which when added to the direct savings from the Smarter Driving Fund give total savings of:

- Around £178 for the average driver who is incentivised to take-up usage based insurance
- Around £257 for the average new driver who is incentivised to take-up usage based insurance

Further detail on these calculations is given in the annex.

Amongst the youngest drivers, take-up of UBI policies is already high, with some estimates suggesting that over 75% of 17-19 year old drivers already benefit from UBI policies[29]. We expect this would mean that initially the cost of the policy would be driven by this age group as they would receive a further discount on their policies. However, in latter years, we expect that more of the increase in costs would be associated with older drivers choosing to take up UBI policies because of the associated savings and fiscal incentive.

## Challenges

There are a number of areas of detailed design that would need to be considered if this policy were to be taken forward. Two key examples are:

- ***Defining the exemption:*** to ensure that the incentive is effective in driving the right behaviours, it must be targeted at usage-based insurance products that actually lead to changes in behaviour. In short, having "black box" functionality present whilst driving is a necessary but not sufficient condition. The functionality must be used to both assess driving style and set insurance premiums. The definition must also be future proof, in that as technology surrounding connected vehicles develop (and indeed, broader mechanisms through which vehicle use might be monitored), the exemption should be flexible enough to continue to meet the policy objective of incentivising driving styles that increase safety and reduce environmental impact.
- ***Erosion of tax base:*** all taxes and tax exemptions that are introduced to drive behaviour have a challenging characteristic for the Exchequer. This is that, where the incentive is effective, the tax base erodes significantly. For example, where taxes are levied to reduce the use of a particular polluting behaviour, if that polluting behaviour stops, no tax is raised. This is equally true here; if more people move to telematics insurance products, the size of the Exchequer costs to exempting such products from IPT will increase. Tackling this should be seen in the context of the need for broader reform of vehicle taxation. For example, there is an acknowledged need to consider the future of Vehicle Excise Duty and Fuel Duty, as existing

evidence suggests that revenue from these taxes could fall by 50% of more over the next 20 years.[30]

## CONCLUSION

This paper sets out the policy argument for the incentivisation of vehicle insurance policies that utilise telematics technology. These could bring cost of living benefits who take them up, as well as societal benefits through improvements in road safety and reduced environmental impacts of driving.

Two realistic options for this incentive are presented: one based on exempting UBI policies from Insurance Premium Tax and another based on a (potentially time-limited) Smarter Driving Fund. We believe that either could be effectively used to increase the take up of UBI policies. However, given the likelihood that the tax incentive would be hard to reverse once take up had increased, we can understand that this might present unfavourable Exchequer risks through the erosion of the tax base. In contrast, a time-limited Smarter Driving Fund could be used to increase take up and then be removed once the policy objective had been achieved, suggesting that (depending on the results of more detailed cost-benefit analysis) this might be viewed more favourably.

In either case, we believe that by incentivising UBI polices, the interventions could be supportive of Governmental priorities, including the ambitions and priorities as set out in the Future of Mobility Grand Challenge and strategies to improve road safety whilst reducing the cost of motoring.

# Annex – Additional Costings

This annex includes more detail behind the costings present in the main report.

## Grant-based Smarter Driving Fund – proportion of cost of policy

The below table presents a range of costings for different grant rates that could be applied.

*Estimated funding required – scheme that pays a proportion of the cost of the policy (£m)*

| | Proportion of cost of policy repaid | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
|---|---|---|---|---|---|---|
| Estimated funding required | 2% | 20 | 20 | 30 | 30 | 30 |
| | 5% | 50 | 60 | 60 | 70 | 80 |
| | 10% | 100 | 110 | 130 | 140 | 150 |

The table below presents sensitivity analysis for the 5% grant rate scenario for different rates of takeup of telematics policies.

*Sensitivity – Funding impact of grant worth 5% of the cost of the insurance policy (£m)*

| | 2019/20 | 2020/21 | 2021/22 | 2022/23 | 2023/24 |
|---|---|---|---|---|---|
| Half growth rate in take up | 40 | 40 | 50 | 50 | 50 |
| Base case | 50 | 60 | 60 | 70 | 80 |
| Double growth rate in take up | 70 | 80 | 90 | 110 | 120 |

## Impact on households – flat rate Smarter Driving Fund

The table below presents analysis of the impacts on households. The potential scale of these impacts is outlined below for the option of providing a flat rate grant of £80 per usage-based policy.

| COMPONENTS OF SAVINGS | Assumptions | £ per year |
|---|---|---|
| *TYPICAL DRIVER* | | |
| Potential direct reduction due to grant | Flat rate grant of £80 | 80 |
| Savings for those newly taking up usage-based insurance | Based on typical 20% saving from taking on usage-based policy in the first year.[31] | 110 |
| *NEW DRIVER* | | |
| Potential direct reduction due to grant | Flat rate grant of £80 | 80 |
| Savings for those newly taking up usage-based insurance | Based on average estimated savings calculated by MoneySuperMarket of £151[32] | 150 |

| TOTAL SAVINGS | | |
|---|---|---|
| *TYPICAL DRIVER* | | |
| Total typical driver, already on a usage-based policy | These people are already benefiting from the savings from lower insurance premiums from usage-based policies – so are only impacted by the incentive | 80 |
| Total for those newly taking on usage-based policies | These people are impacted by the incentive and reduced premiums | 190 |
| *NEW DRIVERS* | | |
| Total for typical 17-24 year old already on a usage-based policy | These people are already benefiting from the savings from lower insurance premiums from usage-based policies– so are only impacted by the additional incentive | 80 |
| Total for typical 17-24 year old newly taking on a usage-based policy | These people are impacted by the incentive and reduced premiums from usage-based policies | 230 |

## Impact on households – Smarter Driving Fund as a proportion of the cost of the policy

The table below presents analysis of the impacts on households. The potential scale of these impacts is outlined below for the option of providing a grant towards the cost of an insurance policy at a rate of 10%.

| COMPONENTS OF SAVINGS | Assumptions | £ per year |
|---|---|---|
| *TYPICAL DRIVER* | | |
| Potential direct reduction due to grant | 10% of the cost of an average policy (£630)[33] | 63 |
| Savings for those newly taking up usage-based insurance | Based on typical 20% saving from taking on usage-based policy in the first year.[34] | 110 |
| *NEW DRIVER* | | |
| Potential direct reduction due to grant | 10% of the cost of an average policy for a new driver (£979)[35] | 100 |
| Savings for those newly taking up usage-based insurance | Based on average estimated savings calculated by MoneySuperMarket of £151[36] | 150 |

| TOTAL SAVINGS | | |
|---|---|---|
| *TYPICAL DRIVER* | | |
| Total typical driver, already on a usage-based policy | These people are already benefiting from the savings from lower insurance premiums from usage-based policies – so are only impacted by the incentive | 63 |
| Total for those newly taking on usage-based policies | These people are impacted by the incentive and reduced premiums | 173 |
| *NEW DRIVERS* | | |
| Total for typical 17-24 year old already on a usage-based policy | These people are already benefiting from the savings from lower insurance premiums from usage-based policies– so are only impacted by the additional incentive | 100 |
| Total for typical 17-24 year old newly taking on a usage-based policy | These people are impacted by the incentive and reduced premiums from usage-based policies | 250 |

## Impact on households – exemption from IPT

The table below presents analysis of the impacts on households. The potential scale of these impacts is outlined below for the option of providing an exemption from Insurance Premium Tax.

| COMPONENTS OF SAVINGS | Assumptions | £ per year |
|---|---|---|
| *TYPICAL DRIVER* | | |
| Potential reduction in IPT | 100% pass through of IPT savings for the average policy costs (£630)[37] | 68 |
| Savings for those newly taking up usage-based insurance | Based on typical 20% saving from taking on usage-based policy in the first year.[38] | 110 |
| *NEW DRIVER* | | |
| Potential reduction in IPT | Based on 100% pass through of IPT savings for average new driver policy (£979)[39] | 107 |
| Savings for those newly taking up usage-based insurance | Based on average estimated savings calculated by MoneySuperMarket (£151)[40] | 150 |

| TOTAL SAVINGS | | |
|---|---|---|
| *TYPICAL DRIVER* | | |
| Total typical driver, already on a usage-based policy | These people are already benefiting from the savings from lower insurance premiums – so are only impacted by reduced IPT | 68 |
| Total for those newly taking on usage-based policies | These people are impacted by reduced IPT and reduced premiums | 178 |
| *NEW DRIVERS* | | |
| Total for typical 17-24 year old already on a usage-based policy | These people are already benefiting from the savings from lower insurance premiums – so are only impacted by reduced IPT | 107 |
| Total for typical 17-24 year old newly taking on a usage-based policy | These people are impacted by reduced IPT and reduced premiums | 257 |

# ENDNOTES

[1] See https://www.insurethebox.com/telematics Accessed 11/10/2018.
[2] See http://www.actuarialpost.co.uk/article/savings-of-gbp-160m-in-premiums-made-by-uk-telematics-users-12989.htm Accessed 15/10/2018.
[3] https://www.thisismoney.co.uk/money/cars/article-6388479/Telematics-insurance-helped-cut-young-driver-casualties-third.html Accessed 23/09/19.
[4] See https://www.consumerintelligence.com/articles/older-drivers-catching-up-with-boy-racers-in-telematics-market and https://www.thisismoney.co.uk/money/cars/article-6929323/Black-boxes-slashing-teens-car-insurance-premiums-save-older-drivers-fortune-too.html Accessed 08/10/19.
[5] RAC, (2016). *RAC Telematics Report 2016: Who's using it and the benefits to their business.* See https://www.rac.co.uk/media/1425/rac-telematics-report.pdf Accessed 11/10/2018. See also https://www.fleetnews.co.uk/news/fleet-industry-news/2016/02/26/nearly-40-of-uk-businesses-using-telematics Accessed 11/10/2018.
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[7] See https://www.biba.org.uk/press-releases/biba-research-reveals-telematics-almost-reach-one-million-mark/, Accessed 11/10/18.
[8] RAC, (2016). *RAC Telematics Report 2016: Who's using it and the benefits to their business.* See https://www.rac.co.uk/media/1425/rac-telematics-report.pdf Accessed 11/10/2018. See also https://www.fleetnews.co.uk/news/fleet-industry-news/2016/02/26/nearly-40-of-uk-businesses-using-telematics Accessed 11/10/2018.
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[10] See https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/telematics-poised-for-strong-global-growth#0 Accessed 11/10/2018.
[11] McKinsey, (2017), *Voices on Infrastructure: Smart cities – turning opportunity into reality.* Available here: https://www.mckinsey.com/~/media/McKinsey/Industries/Capital%20Projects%20and%20Infrastructure/Our%20Insights/Voices%20on%20Infrastructure%20Turning%20the%20smart%20city%20opportunity%20into%20reality/Voices-December-2017-WEB.ashx Accessed 11/10/2018.
[12] https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/authorisations/which-firms-does-the-pra-regulate/2019/list-of-eea-authorised-insurers-july-2019.pdf
[13] https://www.abi.org.uk/globalassets/files/subject/public/personal-injury/ceo-letter-on-civil-liability-bill.pdf
[14] https://www.insurancebusinessmag.com/uk/news/breaking-news/nearly-7-million-uk-drivers-wont-buy-car-insurance-if-36192.aspx
[15] https://www.abi.org.uk/globalassets/files/publications/public/key-facts/key_facts_2018.pdf
[16] Note that estimates of the average cost of motor vehicle insurance vary significantly. For example, the ABI and MoneySuperMarket both estimate average fully-comprehensive policies to be around £500. https://www.moneysupermarket.com/car-insurance/insurance/ & https://www.abi.org.uk/globalassets/files/publications/public/key-facts/abi-key-facts-2017.pdf (accessed 15/10/2018). However other estimates can be much higher – for example an index produced by Confused.com and Willis Towers Watson suggests a figure of £760 - https://azcamsvermedia.azureedge.net/media/All-Q3-2018/car-insurance/price-index/confused-com-car-insurance-price-index-q3-2018.pdf Accessed 15/10/2018. We have used the mid-point of these estimates. We rechecked these figures in September 2019 and there were some minor differences (e.g. Willis Towers Watson now suggest a figure of £789) but they were not substantial so we have kept our original average figure for the cost of insurance.
[17] Ingenie. Fitting the box. Available at: https://www.ingenie.com/fitting-the-box. Accessed 19/09/2019
[18] Note that estimates of the average cost of motor vehicle insurance vary significantly. For example, the ABI and MoneySuperMarket both estimate average fully-comprehensive policies to be around £500.

https://www.moneysupermarket.com/car-insurance/insurance/ & https://www.abi.org.uk/globalassets/files/publications/public/key-facts/abi-key-facts-2017.pdf (accessed 15/10/2018). However other estimates can be much higher – for example an index produced by Confused.com ad Willis Towers Watson suggests a figure of £760 - https://azcamsvermedia.azureedge.net/media/All-Q3-2018/car-insurance/price-index/confused-com-car-insurance-price-index-q3-2018.pdf Accessed 15/10/2018. We have used the mid-point of these estimates.

[19] https://www.moneysupermarket.com/car-insurance/new-drivers/ Accessed 19/09/2018.

[20] See http://www.actuarialpost.co.uk/article/savings-of-gbp-160m-in-premiums-made-by-uk-telematics-users-12989.htm Accessed 15/10/2018.

[21] https://www.moneysupermarket.com/car-insurance/new-drivers/ Accessed 19/09/2018.

[22] https://www.thisismoney.co.uk/money/cars/article-6388479/Telematics-insurance-helped-cut-young-driver-casualties-third.html Accessed 23/09/19

[23] HMRC - https://www.gov.uk/government/publications/rates-and-allowances-insurance-premium-tax/insurance-premium-tax-rates Accessed 10/10/2018.

[24] Corfe, S., (2017). *The impact of Insurance Premium Tax on UK households.* SMF, London.

[25] ABI: General Insurance Overview Statistics.

[26] Note that estimates of the average cost of motor vehicle insurance vary significantly. For example, the ABI and MoneySuperMarket both estimate average fully-comprehensive policies to be around £500. https://www.moneysupermarket.com/car-insurance/insurance/ & https://www.abi.org.uk/globalassets/files/publications/public/key-facts/abi-key-facts-2017.pdf (accessed 15/10/2018). However other estimates can be much higher – for example an index produced by Confused.com ad Willis Towers Watson suggests a figure of £760 - https://azcamsvermedia.azureedge.net/media/All-Q3-2018/car-insurance/price-index/confused-com-car-insurance-price-index-q3-2018.pdf Accessed 15/10/2018. We have used the mid-point of these estimates.

[27] https://www.moneysupermarket.com/car-insurance/new-drivers/ Accessed 19/09/2018.

[28] See http://www.actuarialpost.co.uk/article/savings-of-gbp-160m-in-premiums-made-by-uk-telematics-users-12989.htm Accessed 15/10/2018.

[29] https://www.thisismoney.co.uk/money/cars/article-6388479/Telematics-insurance-helped-cut-young-driver-casualties-third.html Accessed 08/10/19

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[31] See http://www.actuarialpost.co.uk/article/savings-of-gbp-160m-in-premiums-made-by-uk-telematics-users-12989.htm Accessed 15/10/2018.

[32] https://www.moneysupermarket.com/car-insurance/new-drivers/ Accessed 19/09/2018.

[33] Note that estimates of the average cost of motor vehicle insurance vary significantly. For example, the ABI and MoneySuperMarket both estimate average fully-comprehensive policies to be around £500. https://www.moneysupermarket.com/car-insurance/insurance/ & https://www.abi.org.uk/globalassets/files/publications/public/key-facts/abi-key-facts-2017.pdf (accessed 15/10/2018). However other estimates can be much higher – for example an index produced by Confused.com ad Willis Towers Watson suggests a figure of £760 - https://azcamsvermedia.azureedge.net/media/All-Q3-2018/car-insurance/price-index/confused-com-car-insurance-price-index-q3-2018.pdf Accessed 15/10/2018. We have used the mid-point of these estimates.

[34] See http://www.actuarialpost.co.uk/article/savings-of-gbp-160m-in-premiums-made-by-uk-telematics-users-12989.htm Accessed 15/10/2018.

[35] https://www.moneysupermarket.com/car-insurance/new-drivers/ Accessed 13/11/2019.

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[37] Note that estimates of the average cost of motor vehicle insurance vary significantly. For example, the ABI and MoneySuperMarket both estimate average fully-comprehensive policies to be around £500. https://www.moneysupermarket.com/car-insurance/insurance/ & https://www.abi.org.uk/globalassets/files/publications/public/key-facts/abi-key-facts-2017.pdf (accessed 15/10/2018). However other estimates can be much higher – for example an index produced by Confused.com ad Willis Towers Watson suggests a figure of £760 - https://azcamsvermedia.azureedge.net/media/All-Q3-2018/car-insurance/price-index/confused-com-car-insurance-price-index-q3-2018.pdf Accessed 15/10/2018. We have used the mid-point of these estimates.

[38] See http://www.actuarialpost.co.uk/article/savings-of-gbp-160m-in-premiums-made-by-uk-telematics-users-12989.htm Accessed 15/10/2018.
[39] https://www.moneysupermarket.com/car-insurance/new-drivers/ Accessed 13/11/2019.
[40] https://www.moneysupermarket.com/car-insurance/new-drivers/ Accessed 15/10/2018.