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Tax Incentives for Bicycle Commuting in the Capital Region of Copenhagen

Consulting for Sustainability - Harnessing Business Models and Innovation

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Denmark is considered a role model for cycling However, tax incentives for bicycle commuting do not exist yet. In its development plan, the Capital Region of Copenhagen aims for 50% of all commuting trips to be by bicycle. Favorable infrastructural conditions are already in place, but the individual needs more incentives to choose the bicycle over the car. Supercykelstier, a cooperation between the Capital Region and 30 municipalities creating a network of cycle superhighways that provide better conditions for bicycle commuters, commissioned this study to find one or more viable tax solution(s) for incentivizing bicycle commuting in Denmark.

Applying a best-in-class scan, five pioneer countries were selected that have been referred to as being successful in incentivizing bicycle commuting: United Kingdom, Belgium, France, the Netherlands, and Germany. For each country, the exact tax incentive schemes have been described and analysed, discussing the advantages and shortcomings, as well as some financial and non-financial costs and benefits. Qualitative research was conducted through semi-structured and open-ended interviews with country-specific experts about the schemes in place. In addition, online reports and websites about the background and performance of the different measures have been consulted.

The main finding is that there are five different categories of tax incentive schemes that Denmark could implement or improve: a tax-free mileage allowance, a distance-flat mileage rate, a bicycle leasing scheme, company pool bikes, and a bicycle financing model.

First, the tax-free mileage allowance that is already in place in Denmark could be improved by making it available from two or three kilometers distance, instead of the current minimum of 12 km. The government could even consider offering higher tax-free travel compensation on shorter distances, incentivizing people to live within a bicycle-friendly distance from work.

Second, the employee's taxable income could be reduced by a certain amount per kilometer commuted by bicycle. This way, every employee that pays income taxes is included in the scheme. A disadvantage for the tax-free mileage allowance as well as the flat mileage rate is that car and bicycle commuters receive the same compensation. Bicycle commuting could be incentivised more through these schemes by making them dependent on the CO2-emissions per mode of transport, although this would make the schemes a lot more complex.

Third, a bicycle leasing scheme could be implemented. Leasing a bike as an employee directly through the employer or indirectly through a third-party company is cheaper than purchasing it. This scheme is more beneficial if it is the policy target to stimulate the usage of more

sustainable (but more expensive) e-bikes. Leasing can be incentivized by salary sacrifice (paying the expenses with the gross wage), resulting in a benefit from reduced taxable income for employees. Another option is to lease the bicycle to employees free of charge, in addition to the salary. This would be even more beneficial for the employee, but imposes high costs on the employer, if not compensated or subsidised by the government.

Fourth, employers could provide a pool of company bikes. This is financially beneficial for the employer, as it is cheaper than a car pool and because of the effects of scale. However, a pool of (e-)bikes can still be quite expensive and some employers do not have the money for such an investment. Both in the case of company pool bikes and a leasing scheme, it should be easy and tax-free to use the bicycles privately. Alternatively, a low but fixed percentage could be added to the income taxes for personal use of company bicycles.

Fifth, an employee can purchase a new bicycle through a bicycle financing model, using salary sacrifice similarly as in the leasing scheme. Also here, the benefit is the difference between the net and gross wage; in some cases (for employees with a high income), the fiscal benefit can be more than 50% of the purchasing price of the bicycle. The most important disadvantage of salary sacrifice in both schemes is that it favors higher incomes.

Other recommendations from this report include the following: no tracking mechanisms should be necessary for the distinction between private and business use of company bicycles; the distance traveled to the workplace should be taken into account, incentivising the usage of cheaper and regular bicycles on shorter distances and more expensive e-bikes and speed pedelecs on longer distances; guidelines should be clear and the policy should be easy to implement and apply; the scheme needs to be adaptable and flexible, and it should be possible to combine it with other schemes.

The report concludes that a tax-free mileage allowance that is higher for bicycle commuting compared to carbon intensive modes and which also accounts for distances travelled is highly incentivising. In the case of the provision of bicycles, it should be easy to use and preferably tax-free, no matter the mechanism used (leasing or pool bikes). The government shall support the implementation of any scheme with easily understandable and implementable guidelines.

Nevertheless, this work shows that every scheme has its advantages and shortcomings that need to be considered. The right scheme for each region depends on what is already in place, how fast new incentives should be implemented and, especially, what exactly must be incentivised.

1. Introduction

The bicycle plays a key role in a sustainable mobility transition. In Copenhagen, road traffic makes out most of the emissions from transport. This makes a sustainable mobility system a necessary component of efforts to reach the climate targets. One of the main goals in the development plan for Copenhagen is that no more than one third of the trips with a start and/or stop in the city should be by car, with bikes and public transport accounting for the rest. The target is for 50% of all commuting trips to be by bike.[1] If the city is to meet this target, any growth in traffic must consist of pedestrians, public transport users and cyclists.

Apart from environmental benefits, cycling offers advantages for individuals, companies and society as a whole. Denmark is in many aspects a front-runner in terms of cycling. Unfortunately, besides the favorable infrastructural conditions in Copenhagen, tax incentives for bicycle commuting have been neglected in the past. However, in order to make the individual choose the bike over a car, it needs more than just a good bicycle infrastructure.

This report aims to find one or more viable tax solution(s) for incentivizing bicycle commuting in Denmark. In order to do this, we performed a best-in-class scan in two steps. First, we looked into a wider range of countries to see if they have any tax incentive schemes for bicycle commuting in place. We decided to select five pioneer countries as a case study, that have been referred to as being successful in incentivizing bicycle commuting, or are commonly known as 'bicycle-friendly' countries. These pioneer countries are the United Kingdom, Belgium, France, the Netherlands, and Germany.

In the second step, we described which exact schemes have been recently in place in the pioneer countries. Then, we analysed how successful these measures have been, discussing the advantages and disadvantages, as well as some financial and non-financial costs and benefits of the different schemes. More specifically, we conducted qualitative research through interviews with several country-specific experts about the schemes in place.

Altogether, the data consulted for this paper is a combination of primary and secondary data.[2] The primary sources were semi-structured interviews with open-ended questions. This allows the interviewee to respond freely and in detail, without any biases induced by the interviewer,[3] while using a mix of previously defined and emerging questions that arise during the interview.[4] The interviews were conducted both in English, as well as in other languages, if the interviewer

[1] The Technical and Environmental Administration (2012)
[2] Easterby-Smith (2015)
[3] Yilmaz (2013)
[4] Whiting (2007)

spoke the same language as the interviewee (which was the case for most of the Dutch, German, and French experts consulted). Some of the interviews were recorded, but most were shorter telephone interviews for which notes were more appropriate. Both the transcripts and the interview notes (which have been approved for publication) can be found in Appendix 8.1. The secondary data consisted mainly of online reports and websites, as most information on the schemes has become available quite recently. These sources are listed in the References.

This project is part of the Consulting for Sustainability course at the Copenhagen Business School. It was commissioned by Supercykelstier, an organization born from the union of 30 municipalities and The Capital Region of Denmark. Supercykelstier's objective is to create a network of cycle superhighways, offering better conditions for cyclists who commute between municipalities and giving their needs the highest priority. The project aims to create direct routes as well as offering a comfortable and safe service. Supercykelstier decided to focus on tax-incentives, as a way to give companies and employees bigger incentives for an eco-friendlier transport behaviour.

The paper is structured as follows. In chapter two, the business case of tax incentives for bicycle commuting and its external context are discussed. This includes the benefits of bicycle commuting, the current Danish tax system, and the current commuting situation in Denmark. In the third chapter, we present the results of our case study analysis, discussing the different schemes in place in the pioneer countries. In chapter four, we discuss the different possible schemes for Denmark in general, after which we give more specific recommendations. Last, we conclude with a summary of the main findings of the report and suggestions for future research.

2. Business case and external context

2.1 The benefits of bicycle commuting

There are multiple reasons for incentivising bicycle commuting, both for individuals and companies, as well as for society as a whole. They can be categorised into financial, environmental, health, and social benefits.

Financially, cycling is (after walking) the cheapest way of commuting. This is the most important financial benefit for the individual. According to research in the Netherlands, an average person saves 270 EUR (2010 DKK) every year by taking the bicycle to work instead of the car.[5] Also, leasing a bicycle is about ten times cheaper than leasing a car.[6] For society as a whole, bicycles have less infrastructure costs than cars and public transport, putting less pressure on state

[5] Decisio (2017)
[6] Lease-a-Bike (2020)

funds. In Denmark, a 10% increase in bicycle trips would result in a reduction of congestion costs worth 184 million DKK.[7] For companies, the reduction in sick days and increase in productivity translates into less costs and more profits. Companies also have to pay more for facilities such as parking lots, if employees commute by car.[6] Together, this translates into costs for car leasing that are 32 times higher than bicycle leasing.[8] In Denmark, a 10% increase in cycling would result in yearly total benefits of 1.1 billion DKK for all companies.[7]

Environmentally, bicycle commuting puts less pressure on the planet than other modes of transport. On average, bicycles are more than 30 times cleaner in terms of CO2-emissions than cars.[6] The emissions of one passenger kilometer on an electric bike are also 26 times smaller than in a car. This becomes even a factor of 40 for commuting alone.[8] If you take the bicycle to work every day, this could save 358 kilograms of CO2-emissions per person on average each year.[5] According to the European Cycling Federation, the estimated total value of CO2 emissions savings and the reduction of air and noise pollution by cycling in Europe is 1.3 to 6.3 billion EUR (9.7 to 46.9 billion DKK). Other, smaller or unquantified environmental benefits are less soil and water pollution and less heavy metals for vehicle production.[9]

Regarding health, employees who cycle have less sick days and are more healthy in general. Cycling essentially is not only a mode of transport, but also an exercise; as an average person, if you cycle to work every day, you burn about 26,100 kilocalories extra every year.[5] According to research in the Netherlands, people who regularly cycle to work have 7.4 sick days per year, compared to 8.7 sick days for people who don't or rarely cycle to work; a reduction of 1.3 sick days per year.[10] If cycling would increase by 10% in Denmark, this would result in a decrease in sick days of 267,000 in total, of which 112,000 would be working days.[11] The collective health benefit per cycled kilometer in Denmark is 3.55 DKK.[7] In Europe, longer and healthier lives because of cycling are currently valued at 73 billion EUR (544 billion DKK) per year. Not included in that figure are mental health benefits;[9] when you cycle, you naturally produce the hormones endorphins and serotonin, which you also produce when taking antidepressants.[12]

Last, socially, cycling is often faster, and people tend to perceive it as a relaxing and comfortable way of commuting.[13] Within cities, cyclists arrive 10% faster at their destination on average than car drivers.[12] In addition, employees who regularly exercise are up to 18% more

[7] DI Transport (2018)
[8] Fietsersbond (2020)
[9] European Cycling Federation (2018)
[10] TNO (2009)
[11] DI Business (2018)
[12] FiscFree (2019)
[13] Rijksoverheid (2020)

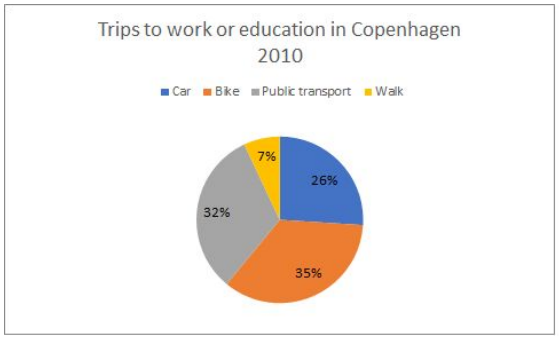
productive than colleagues who do not exercise.[14] People who cycle regularly, or exercise in general, can deal better with stress at work and have better motivation. It also promotes mood and the atmosphere in the workplace. For society, more cycling would lead to less road congestion. In Denmark, 10% more bicycle trips would reduce congestion costs by 184 million DKK.[15] For companies, facilitating bicycle commuting is an attractive service to your employees, which enhances social reputation.[16] Support for employee cycling makes a workplace more attractive, and good cycling conditions can be used to recruit employees.[17]

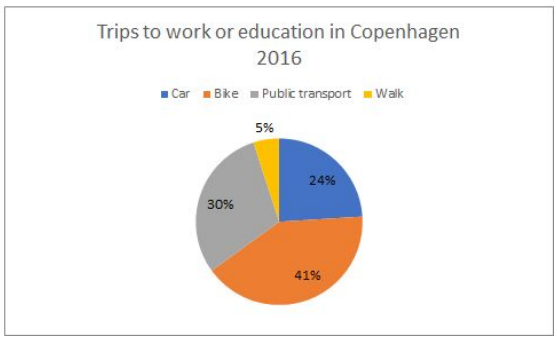
2.2 The current Danish tax system

Denmark is a welfare state, therefore taxes paid are used for public services including hospitals, medical care, public transport and maintenance of infrastructure. Some taxes may vary among the municipalities, like the municipality tax. Additionally, there exist tax deductions and allowances. At the moment, there is a tax deduction for transport expenses between home and work that exceed the distance of 24 km in total.[18] This applies equally for any kind of transport and results in complaints from bike promoters as distances over 24 km are mainly covered by any other transport than walking or biking.

2.3 The current commuting situation in Denmark

Cyclistforbundet has analysed that around 33% of the journeys taken by car in Denmark are for distances no more than 5 km. More than 50% is for distances of less than 10 km. The consulted stakeholders as well as the Cyclistforbundet are convinced that there is hidden potential for shifting the car commuters to cycling commuters for distances up to 12 km.[17]





[14] Decisio (2017)
[15] DI Transport (2018)
[16] Lease-a-Bike (2020)
[17] Cyklistforbundet (2020)
[18] Skatte Styrelsen (2018)

Figure 1: Overview of transportation means for trips to work/education in Copenhagen in 2010 and 2016.[19]

Figure 1 shows that 41% of the commuting trips in Copenhagen in 2016 were by bike, 30% by public transport and 24% by car. Only 5% walked to work or their education facility.[20] In 2010, the percentage of people that commuted by bike to work or study place was only 35%, whereas in 1996 it was even lower, with 30%. This shows that the percentage of bike commuters has already increased over the past 20 years. 26% took the car to commute to work or their education in 2010, which shows a decrease of 2% compared to 2016.[21]

Overall, the bike share has significantly increased since separate bike lanes have been implemented. Since 1980, the amount of bikes in the city center of Copenhagen have increased from 60,000 up to 270,000 in 2016. This means that the amount of bikes in downtown Copenhagen have increased by more than a factor of 4 in less than 30 years. At the same time, there has been a slight decrease in car use. The increase in bike use is much stronger than the decrease in car use.[20] This is also according to figure 1, which shows only a slight decrease in car use and a 6% increase in bikes as a commuting medium.

In 2016, 1.4 million kilometers have been biked in Copenhagen,[20] which is an increase of almost 200,000 km since 2010 and more than doubles as much as in 1996.[21] Furthermore, 66% of Denmark's population commutes up to 20 km one way, while in the region Hovedstaden (where the capital Copenhagen is located) 76% commute up to 20 km. 15% even cycles between 20 and 50 km in the region Hovedstaden. More details can be found in Appendix 8.3.

3. What we can learn from other countries

This chapter represents the different tax incentives from the five pioneer countries: The United Kingdom, the Netherlands, Belgium, Germany and France. They all start with an introduction in the current biking situation, followed by the presentation of the tax incentive schemes.

3.1 United Kingdom

The population size in the United Kingdom (UK) has been increasing over the past 35 years,[22] while the amount of commuting trips decreased. The car is the medium used the most to commute. Although there has been a decrease in the number of trips taken by car, the

[19] City of Copenhagen (2011); City of Copenhagen (2018)
[20] City of Copenhagen (2018)
[21] City of Copenhagen (2011)
[22] Coates et al. (2019)

percentage of using the car as a driver to commute increased since 1988/92 from 36% to 41% in 2013/14. The number of trips as a car passenger increased until 2000 and then slightly decreased, but the percentage of this medium increased from 21% to 23%. The bike as a commuter medium remained constant at 2%, although the actual number of trips experienced a slight decrease. Walking experienced a decrease from 29% to 22% and in the actual number of trips over the same period. Public transport remained constant or increased by 1% depending on the medium (bus, train or underground) but remained under 7% per medium in 2013/14.

Walking and cycling are used for rather short distances in England with 1.6 km (1 mile) and 4.8 km (3 miles) respectively. The car is used for distances of roughly 16 km (10 miles), while buses are used for trips of 8.5 km (5.3 miles). Distances of 32 km are usually undergone by the National Rail.[23]

The 1999 Finance Act introduced a leasing scheme called Cycle to Work, allowing for employers to buy or lease bikes and equipment for their employees.[24] There are three ways to provide the scheme to employees: salary sacrifice, loan or pool cycle model.[25]

The salary sacrifice scheme reduces the taxable income and the savings for the employee depend on the income tax the employee pays. When providing a loan scheme, the employer hands out an interest-free loan for purchasing a bike and safety equipment. The implementation of a pool cycle model is based on the provision of a bike fleet to employees. This can take place by offering a pool of bikes, where employees can use the bike when needed[26] or with one bike for each employee.[27] Nowadays, the salary sacrifice scheme is the measure used by far the most.[28]

The employee can receive the bike either directly through the employer or indirectly through a scheme provider. A scheme provider leases (hires) the bike to the employee and gets paid by the employer with the employee's salary sacrifice. The employee can prolong the leasing agreement, return the bike or buy the bike at the end of each contract. A minimum of 50% of the bike's use has to be for qualifying journeys, which refers to commuting to the office or using the bike for meetings.[28] No tracking of how much and where they cycled is needed.[29]

Some numbers on users, savings and costs can be found in Appendix 8.4.

[23] Department for Transport (2017)
[24] Swift et al. (2016)
[25] Department for Transport (2019)
[26] Interview A (see Appendix 8.1)
[27] Department for Transport (2019)
[28] Interview B (see Appendix 8.1)
[29] HM Revenue & Customs (2014)

The scheme of the UK differs slightly from the one in Ireland. While in the UK the scheme providers ensure that the bike is kept at the end; Ireland's scheme is sanctioned by the government, where the bike becomes the employees' property over time. In Ireland, employees can only get a new bike every 4 years and sales prices are limited to 9,300 DKK (1,250 EUR) for regular bikes and equipment and to 11,150 DKK (1,500 EUR) for e-bikes. In the UK, employees can get a new bike every year and there is no limit on the purchasing price.[30] Like in the UK, it is purchased with salary sacrifice.[31] The Irish scheme is "more straightforward and easier to understand for consumers" (Interview B). Nevertheless, for both schemes good guidelines from the government on the implementation of the scheme are needed and then third party companies, those scheme providers, will enter the market.[29]

3.2 The Netherlands

Most adults in the Netherlands have access to a car (85%) or a bike (73%), more than one quarter (27%) has access to an e-bike and 60% has a public transport chipcard. However, in practice, about half of all commuting trips are by car, whereas bikes and e-bikes only account for 20% of the rides. On short distances (until 7.5 km) the share of (e-)bikes is higher (about 30%), but it is still clear that the Netherlands can still improve the share of bike rides among commuters.[32] In 2017, research has shown that 41% of Dutch people are encouraged to cycle to work if they would receive more tax benefits.[33] Over the last years, some policies did actually change in the Netherlands. Now, bicycle commuting is incentivized by fiscal regulations in three ways: a tax-free mileage allowance, the work-related costs scheme, and the company bicycle scheme.

First, Dutch employers can give their employees a tax-free mileage allowance with a maximum of 0.19 EUR (1.42 DKK) per kilometer, regardless of the distance. There is no difference between the ways of transportation, so employers can give the same compensation for commuting by bicycle, car, and public transport.[34]

Second, as an employer, you can compensate (part of) the employees' expenses for purchasing a bicycle. That part should fall within the work-related costs scheme, or the so-called *werkkostenregeling* (WKR): the percentage of the total gross wage bill of the entire organisation that an employer can turn out in the form of untaxed allowances and benefits to its employees.

[30] Interview A; Interview B (see Appendix 8.1)
[31] Citizens Information (2020)
[32] Ministerie van Algemene Zaken (2020)
[33] Gazelle (2017)
[34] Fietsersbond (2020)

From 1 January 2020, the WKR-percentage is 1.7% for a gross wage until 400.000 EUR (3 million DKK). Above that amount, 1.2% can be turned out in the form of untaxed allowances and benefits.[35] This includes company outings/parties, christmas gifts, and fitness schemes, but also company bikes (or a part of the expenses). An example can be found in Appendix 8.2. In theory, this policy can be combined with the tax-free mileage allowance, but in practice not a lot of employers do this. The bicycle is owned by the employee, but he or she would also have to pay for any insurance or maintenance costs.

An often-heard problem is that the percentage of 1.7% is too low.[36] The allowed amount is sometimes already 'gone' after deducting the usual gifts and benefits. Even if an employer would not give out anything else, the amount is often not enough for most high-quality bicycles, and certainly not for any e-bikes.[37] It could also be considered to have a separate percentage for bicycle costs, taking into account that other company costs (such as parking lots for car users) are also not included in the WKR-policy.[38]

Until 2014, there was also a National Bicycle Plan (*Nationale Fietsplan* in Dutch), which entails that the employer can pay a bicycle for its employee from the gross wage of that employee. This could be done for bicycles until a maximum value of 749 EUR (5580 DKK) per employee. Now, this plan should fit within the WKR-percentage of the entire organisation.[39]
To pay for a bicycle that is provided within the WKR-percentage, employers can also deduct the amount paid for the bicycle from the gross wage (salary sacrifice), if they do not wish to make this investment themselves. Alternatively, part of the expenses can be paid for by the employer (as an investment) and part can be paid from the gross salary of the employee.

Third, employers in the Netherlands can also provide a bicycle to their employees through the company bicycle scheme, a policy called *'Fiets van de Zaak'* in Dutch. This can be either done by purchasing a bicycle themselves and giving it to their employees, or by leasing it to their employees through a leasing company. In both cases, the bicycle is not owned by the employee, but all maintenance and insurance costs are mostly covered. After three years of use, the employee can buy the bicycle for personal ownership at a lower price.[40]

Until recently, this scheme was quite problematic, as such a bicycle could only be used for business and not personally. Anything that is provided by an employer but is used personally,

[35] Belastingdienst (2020)
[36] Interview C; Interview D; Interview E (see Appendix 8.1)
[37] Interview C (see Appendix 8.1)
[38] Interview E (see Appendix 8.1)
[39] Interview D (see Appendix 8.1)
[40] Rijksoverheid (2020)

should be taxed in the Netherlands. Setting up an administration to keep these distinguished was almost impossible.[41]

Taking into account these administrative problems, from 1 January 2020, the Fiets van de Zaak-policy was renewed: employees would pay their usual percentage over their income taxes on 7% 'addition' of the recommended retail price of the bike every year.[41] An example can be found in Appendix 8.4.

Setting up the Company Bicycle Scheme took about two years, from the political decision until the final draft was ready.[42] The expected implementation costs of the scheme are 720.000 EUR in 2020, 470.000 EUR in both 2021 and 2022, and 320.000 EUR in 2023, so a total of almost 2 million EUR (almost 15 million DKK). There are no further annual budgetary costs.[43]

3.3 Belgium

More than one out of ten workers in Belgium (13%) regularly cycled to and from work last year, which is twice as many as five years ago. According to Acerta, the average Belgian cyclist is 41 years and 4 months old and rides 9.4 km to work. This is an increase of more than 2 km compared to 2013, thanks in part to the electric bicycle.[44] In 2019, the Observatory of Cycling in the Brussels-Capital Region, has observed an increase in bicycle traffic in the Brussels-Capital Region of 8.9% compared to the year 2018: this is a resumption of growth after a stagnation recorded between 2016 and 2017. Nevertheless, the upward trend observed since 2010 continues, with an average annual growth rate of 13%.[45]

Regarding tax incentives, Belgium has a kilometric reimbursement scheme, tax-free bikes provided by employers, and a tax-exemption system on all biking investment.

First, the kilometric reimbursement scheme is exempted from tax up to 0.24 EUR (1.79 DKK) per km cycled to and from work. As long as the amount of the mileage allowance does not exceed 1.79 DKK per km travelled, there is no tax to be paid. If the employer grants a higher kilometric allowance, this surplus is then taxable for the employee as professional income. An employee who cycles to work for 3 km one-way will get, based on the tax-free 1.79 DKK and on the basis of 220 worked days, 317 EUR per year (2,360 DKK). This sum increases to 1056 EUR (7,867 DKK) for 10 km one-way, and 2,112 EUR (15,734 DKK) for 20 km one-way. [46]

[41] Lenoir (2018)
[42] Interview F (see Appendix 8.1)
[43] Tweede Kamer (2019)
[44] Acerta (2019)
[45] Pro Velo (2019)
[46] Vélo-actifs (n.d.)

The scheme is not mandatory and is a favour: the employer can decide whether or not to grant it and is free to set the amount. The cyclist can claim the allowance all year round or only for part of the year.

The kilometric reimbursement scheme can also be accumulated with the one granted for public transport journeys: in this case, it will only be paid for the kilometers cycled and not for the entire journey. Similarly, if an employee has a company car, the bicycle allowance may be paid on days when he or she prefers to come to work by bicycle rather than by car.

The bicycle allowance can also be granted for official journeys (i.e. for journeys made during working hours for the purpose of missions) provided that these journeys are made with the employee's personal bicycle. The amount of this allowance is in line with the amount of the home-work allowance.

It is important to note that if the employer does not grant the bicycle allowance, the employee may deduct the kilometers travelled by bicycle to work from his tax return as business expenses at a rate of 1.79 DKK per km.

Second, companies in Belgium are allowed to give their employees a tax-free bike. This bike can be used for trips between home and work: this benefit is then tax-exempt and the bike can also be used for other trips. If the bike is not used for trips between home and work, this benefit is taxable (it will be taken into account in the calculation of your tax).[47]

Third, Belgium also implemented a tax-exemption system on all biking investment, which consists of a 100% tax exemption on corporation tax for any expenditure made to stimulate the use of bicycles. This includes expenditures related to the acquisition (purchase or leasing) of company bicycles, their maintenance and repair, the development of bicycle parking facilities, and the purchase of repair stations. The exemption of the benefit resulting from the provision of a company bicycle can be accumulated with the exemption of the mileage allowance of 1.79 DKK for the use of a bicycle. In this case, accumulation is authorized for the same trip or part of it.[48]

The number of cyclists benefiting from a bicycle allowance increased by 4% in the first 10 months of 2020 compared to the same period last year, despite the low point in April due to the health crisis. Furthermore, in January, the number of employees who cycled to work (with a specific bicycle allowance) was nearly 20% higher than in January 2019.[49]

[47] SPF Finances (n.d.)
[48] Vélo-actifs (n.d.)
[49] SD Worx (2020)

3.4 Germany

In general, bicycles in Germany are widely spread and there is a bicycle for almost every resident. In 2017, for around 80 million residents there were 77 million bicycles (including 4 million pedelecs).[50] 44% of the population regularly use bicycles or e-bikes as a means of transport. The e-bike (or pedelec) is on the rise in particular and is available in 14% of the households. In addition, the e-bike is the bicycle type that potential bicycle buyers in Germany would most like to buy as the next model. 42% of potential buyers intend to buy an e-bike in the next twelve months (13% of the population). 32% consider a conventional bicycle (10% of the population), while 41% of all questioned want to use the bicycle more often in the future.[51]

The car is used less often and is also losing popularity. Nevertheless, 61% of the Germans regularly use a car (daily or weekly repeated use of the car in 2017: 64%; 2015: 76%).[52]

Slightly less than a third of those who are employed or are in education, state to commute by bike at least a couple of times a week. The construction of cycle superhighways is generally rated very positively. 37% of those who have not yet commuted would use the bike if there were cycle superhighways on their way to work/education. 74% of those already commuting would use the bike more often than before. In general, Germany is currently focusing on the infrastructure, which is considered a bottleneck. Rather than implementing new fiscal incentives for bikes, the aim is to dismantle current benefits for cars.[53] But in the past 10 years, Germany has had significant changes in the tax situation for biking which has sustainably improved bicycle commuting.[54]

With a flat mileage rate (*Entfernungspauschale*), the expenses for journeys between home and first place of work are lumped in the German income tax law. The distance lump sum reduces the taxable income according to § 9 EStG. The law bases the calculation on the distance kilometers of the shortest road connection between home and workplace. In contrast to the mileage allowance that used to apply, the distance allowance can be claimed regardless of the type of transport used. This means that since 2004, it does not only apply to motorists and motorcyclists, but also to users of trains, trams, buses, boats, bicycles and pedestrians. There is an exception for the use of an airplane or a taxi. Since 2004, a flat mileage rate of € 0.30 has been granted for each full kilometer of the distance. As part of the climate package, the lump

[50] Nobis and Kuhnimhof (2018)
[51] Sinus Markt- und Sozialforschung GmbH (2019)
[52] Sinus Markt- und Sozialforschung GmbH (2019); Sinus Markt- und Sozialforschung GmbH. (2017); Sinus Markt- und Sozialforschung GmbH (2015)
[53] Interview G (see Appendix 8.1)
[54] Sinus Markt- und Sozialforschung GmbH (2019)

sum for distances from the 21st kilometer onwards was increased to € 0.35 for the years 2021–2023 and to € 0.38 for the years 2024–2026. In addition, a mobility bonus will be granted for low-income earners in the period 2021–2026.[55]

A public, nationwide funding for the purchase of e-bikes is currently off the table in Germany. However, there are funding programs that support the purchase of electric bikes. Since March 2018, there has been nationwide funding for e-cargo bikes - albeit for commercially used models. The Federal Ministry for the Environment, Nature Conservation and Nuclear Safety supports the purchase with a purchase bonus of up to € 2.500.[56] There are also several other programs at the country level.

In 2012, company bicycles were included into the 'company car privilege' (*Dienstwagenprivileg*). Since then, the company car and company bicycle have been treated equally for tax purposes and the transfer of a company bike to employees equals the transfer of motor vehicles. This increased the share of company bikes significantly. Before including bicycles into this 'privilege', there were almost no company-bicycles that employees could use privately. In 2020, 350.000 new bicycles are expected and the market has grown by 50% to 100% annually for the past 7 years.[57]

There are multiple ways to provide the Cycle to Work scheme as an employer to employees in Germany, namely using salary sacrifice, providing a loan or implementing a pool cycle model. All cases can be combined with the flat mileage rate.

First, the purchase is paid by the employer and is then part of a pool which an employee can use only for business purposes but not for commuting or private purposes.

Second, as an addition to the salary, the JobRad is paid by the employer. From 2019, the government "promotes" this form through not raising income taxes[58] and social security expenses[59] on the converted part of the salary. Therefore, this version is completely tax free.

Third, the employer leases the bike at a third company (e.g. Jobrad) and the employee pays the leasing rates through salary conversion. This model can be used for business and private purposes. Since employees are allowed to use the bicycle for private purposes, the non-monetary benefit must be taxed. Until the end of 2018, the assessment basis for this was 1% of the recommended purchase price, which included company bicycles, company cars and

[55] § 2 - Gesetz zur Umsetzung des Klimaschutzprogramms 2030 im Steuerrecht (KlSchStG k.a.Abk.)
[56] § (EU) Nr. 1407/2013
[57] E-Mails (see Appendix 8.2)
[58] § 3 Ziff. 63 EStG - Income Tax Act
[59] § 1 Section. 1 Ziff. 4 + 9 SvEV - Social Security Compensation Directive

pedelecs. From 2019, the monthly average value for the private use was set to 1% of half of the gross list price, which was rounded down to 100 EUR (7,450 DKK). From 2020 on, the assessment basis for electric bikes and company bikes has been halved again to a quarter of the list price, the so-called '0.25 percent rule'.[60]

Examples of calculations can be found under Appendix 8.2.

3.5 France

In France, the overall share of bicycles in travel remains low, around 3%, because car use continues to increase on the outskirts of towns and cities, which are becoming increasingly spread out.[61] Cycling is mainly used for very short home-to-work trips: for example, the use of bicycles increases up to a distance of four kilometers and then decreases beyond that: for journeys of 4 km, 5% of workers commute to work by bike.[62]

1 January 2020, a tax-free allowance, the Forfait de Mobilité Durable (Sustainable Mobility Package) was introduced. In the private sector, it consists of a lump-sum allowance, except from taxes and social security contributions, up to 400 EUR (2,980 DKK) per year and per employee. In the public sector, this lump-sum can reach up to 200 EUR (1,490 DKK) per year.

This allowance can be accumulated with other systems. It can for instance be cumulated with the allowance of 50% of the price of public transports subscription cards all employees get. Nevertheless, this cumulation is only possible within the overall limit of 2,980 DKK per year and per employee.

This tax and social security exemption is subject to proof that the sums allocated have been used in accordance with their purpose: the employee must be able to provide a sworn statement or proof of the use of the modes of transport.

The amount, terms and conditions as well as the criteria for the allocation of the Forfait de mobilité durable must be laid down in a company or branch agreement. If no agreement can be reached, the employer can decide unilaterally, after consultation with the social and economic committee, the coverage of these costs. This tax free allowance is not mandatory: companies can decide whether they want to implement it or not.

Since 2016, companies that make a fleet of bicycles or electrically assisted bicycles available to their employees can now tax-exempt 25% of their related expenditures. This includes purchases

[60] Interview H (see Appendix 8.1)
[61] FUB (n.d.)
[62] Tallet & Vallés (2017)

of bicycles (including electrically assisted bicycles), the purchase or rental of equipment necessary for the safety of employees, the cost of insurance against theft and to cover employees' bicycle trips between home and work, bicycle maintenance costs, costs related to the construction or development of a parking lot or bicycle storage area, and the cost of renting a parking lot or bicycle storage space.

This scheme is only for companies that have subscribed to a bicycle rental commitment for a period of 5 years or more or 3 years for companies with less than 10 employees.

According to the study Economic Impact and Development Potential of Bicycle Use in France, regular cycling could generate a benefit of 97.4 EUR (725.63 DKK) per 100 passenger-km in 2018. 77% of the benefit value would be explained by a reduction in the number of deaths, and the rest by the decrease in morbidity. On this basis, the 12 billion km travelled annually by bicycle would generate an impact of 10.9 billion EUR (81,205 billion DKK) each year.[63]

The Forfait de Mobilité Durable is too recent to evaluate its impact. Nevertheless, statistics exist on the measure that the Forfait de Mobilité Durable replaced: the Indemnité Kilométrique Vélo (IKV). The IKV was a kilometric reimbursement scheme for employees who commute to work by bicycle, set at 0.25 EUR per km (1.87 DKK), exempt from tax and social security contributions, capped at a maximum at 200 EUR per year (1,490 DKK). The Ademe study, one year after the implementation of this measure, showed that the immediate effect of the IKV was a 25% increase in the modal share of cycling after a few months. The longer-term effect, measured in June 2015, is more significant, with an increase of around 125% in modal share after one year. The study also revealed that bikers have complementary expectations, such as a more important financial help (19%).[64] The Forfait de Mobilité Durable answers to those expectations: thus, it can be expected that its impact is even greater than the IKV.

These results are surprising, given the fact that the French measures are capped, and quite restricted. Nevertheless, this shows that small extra financial incentives can already lead to a great increase in bicycle commuters. Nevertheless, the impact in Denmark might not be as impressive, as already a high number of Danish cycles, contrary to France.

[63] Federation Française de Cyclisme (2020)
[64] Gioria (2016)

4. Discussion of the different schemes

First of all, an important lesson that can be learned from the Dutch national commuter research is that bicycle commuters especially find relaxation important, as well as travel compensation and bicycle services and facilities.[65] This does not have to be the case for Denmark, but it is still a good takeaway for any new policy.

4.1 Tax-free Mileage Allowance

For a tax-free mileage allowance, if employees already own a bicycle themselves, the marginal costs of commuting are the lowest for biking (because there are no fuel costs or ticket fares), so tax-free travel compensation could become a net benefit. Another advantage is that it can be used to pay back an interest-free employee loan. In this case, the employer loans out the amount that the employee needs to purchase a bike, against 0% interest.[66]

The government could also consider only allowing tax-free travel compensation if the CO2-emissions of the trip are low enough, especially on short distances[67]. In this case, bicycle commuters would get the highest compensation and car commuters would get the lowest compensation, with public transport in between. Alternatively, it could be considered to only offer employees a tax-free mileage allowance if you live within a certain distance from your work, when taking the bicycle and not when taking the car. This could also be a policy proposal that businesses can come up with themselves, without interference or cooperation from the government.[68]

If the employer needs to pay the mileage allowance, a disadvantage is that employees whose employer is not participating are excluded from the benefit. This could be overcome with a direct payment through the government, but would introduce new bureaucratic costs and barriers. An option to overcome this problem would be a flat mileage rate or to allow employees whose employers are not participating to deduct the kilometers cycled as a business expense.

4.2 Flat mileage rate

Through a flat mileage rate rate an employee's taxable income is reduced by a certain amount per kilometer commuted. This way, every employee that pays income taxes is included in the scheme.

[65] Rijksoverheid (2020)
[66] Fietsersbond (2020)
[67] Interview E (see Appendix 8.1)
[68] Interview I (see Appendix 8.1)

A disadvantage for the mileage allowance as well as the flat mileage rate is, that as long as CO2-neutral means of transport are not better off than cars, there is no greater incentive to use CO2-neutral means of transport. In addition, the amount or the tax exemption must be high enough to create a significant incentive for the user at all. If there is generally a minimum number of kilometers or the rate is increased for a certain amount of kilometers on, the incentives are again distorted. This would set an incentive to move from the big cities to the surrounding area and therefore increases the incentive to use the car, which negatively impacts the environment.[69]

4.3 Bicycle leasing scheme

Leasing a bike as an employee directly through the employer or indirectly through a third-party company is cheaper than purchasing the bikes and more beneficial for all involved parties, especially if the usage of more sustainable (but more expensive) e-bikes shall be stimulated.[70] The journeys shall not have to be tracked.

A disadvantage would be a potential limit on the purchase price as it would result in the exclusion of e.g. disability bikes or e-bikes.[71] Furthermore, businesses should not need to have a consumer credit license as this is costly if the business does not already have one[72].

Leasing can be applied in different ways and has therefore additional pros and cons. Leasing through salary sacrifice benefits from reduced taxable income for employees and the easy applicability.[73] Additionally, the employer pays less contribution payments.[74] Furthermore, the leasing company is in charge of the management of the bikes and the administrative part.[75]

Having said this, salary sacrifice precludes the minimum wage earners as it is forbidden to go below the minimum wage.[76] To overcome this the inclusion of an additional alternative scheme that supports this part of society that is 'circumstantially unable to participate' could be a possibility.[77] This offers employees the chance to "access a better than market-value discount and an ability to spread the cost of the bike" (Cyclescheme, n.d.). Also, the self-employed population is excluded.[68] Further, it promotes employees with the highest income compared to the ones with lower income as the more an employee earns, the higher tax rates are paid and

[69] Prange und Ahlswede (2005)
[70] interview J (see Appendix 8.1)
[71] Interview A; Interview B (see Appendix 8.1)
[72] Interview B (see Appendix 8.1)
[73] Department for Transport (2019)
[74] Interview A (see Appendix 8.1)
[75] Interview K (see Appendix 8.1)
[76] Interview A; Interview B (see Appendix 8.1)
[77] Cyclescheme (n.d.)

therefore the higher the benefit from the tax exemption is. Additionally, the employee pays less social security contributions. Thus, the individuals' pension, unemployment and sickness benefits are decreased as well as the contribution to the public budget.

As a voluntary service by the employer, another option is to lease the company bicycle in addition to the salary. This overcomes the disadvantages associated with salary sacrifice. This option is free of charge for the employee and the costs are incurred solely by the employer. However, these can also be deducted from the profit taxes.

4.4 Company pool bikes

The provision of a bike pool owned by the employer where employees can take a bike for business purposes is financially beneficial for the employer as it is e.g. cheaper than a car pool. The maintenance and fuel costs are lower and less parking space is needed. Additionally, the investments are much faster balanced. The successful implementation of a bike pool depends on the interest of the employees and the support of the management. Building a bike pool is a rather longer process as it involves building a business case, internal planning, obtaining bikes, equipment and storage as well as launching the scheme[78].

A disadvantage is that these (e-)bikes are often quite expensive, which leads to high investments - money that could have been spent elsewhere and that some employers do not even have to spend. To mitigate this problem, employers should lease the bicycles from a leasing company. That way, they do not have to carry the full investment costs, but only the monthly leasing costs (which they could deduct from the profit taxes, if the policy follows that of the Netherlands). Employees might have to pay an additional tax payment for personal usage of the company bike, but have no other costs.[79]

In the Netherlands, more than 50% of employees are interested in a bicycle or e-bike from the company.[80] This is a positive sign as the cycling culture in Denmark is comparable.

4.5 Bike financing model

The benefit of paying off an own bike through salary sacrifice is the difference between the net and gross wage; in some cases, the fiscal benefit can be more than 50% (the tax percentage for the highest income). The benefits and disadvantages are the same as for a leasing scheme that

[78] Transport for London (n.d.)
[79] Rijksoverheid (2020)
[80] Interview J (see Appendix 8.1)

is paid for through salary sacrifice, but the difference is that the bicycle is owned by the employee at once and it is thus a personal belonging.[75]

5. Recommendations

5.1 No tracking

Generally, it is not practical nor effective if employees have to keep track of how much they use a company pool bike for personal use and for business-related use. An option is to base the system on trust with a declaration of trust (about the share of personal and business usage), which could increase the likelihood of implementation by employers as it would become easier. Personal usage of a company bicycle should then preferably be tax-free, or there should be a fixed tax rate for personal use (independent of the amount of usage).[81]

5.2 Distance to workplace

The distance to work plays an important role in the transport decision making process of commuters. Policies should react to that and set the right incentives so that depending on the distance, cycles or e-bikes are chosen instead of cars. The distance to work also influences the choice of a cheaper regular cycle or a more expensive e-bike or speed pedelec.

For shorter distances a regular bicycle would be good enough for commuting. As these bikes are cheaper than e-bikes, a good way to incentivize the purchase, leasing, and usage of these bikes is to make Tax-Free Travel Compensation available on shorter distances to cover the purchasing or leasing price.

On the other hand, if the employee lives far away from work, an e-bike or speed pedelec would be the only serious alternatives to the car or public transport. Making personal usage of the company bike easier would work very well for Denmark: even if employees have to pay a small fixed tax fee for the personal usage, it can be much cheaper than having to buy or lease such an expensive bicycle, and all maintenance and insurance would be included as well.[82]

In the Netherlands, some find that the 7% addition of the retail price of the bicycle to the income taxes is too high and hence not a good incentive at all. Because this is the same percentage as

[81] Interview L; Interview M; Interview N (see Appendix 8.1)
[82] Lenoir (2020)

for a lease car, in most cases, the administrative costs outweigh the benefits. The scheme only works as a beneficial incentive for expensive e-bikes or speed pedelecs.[83]

If it is the aim of policy to incentivise the use of expensive bikes for longer distances specifically, having a leasing scheme or company bike pool in place could be beneficial. In the Netherlands, the company bike scheme with tax addition for personal usage was not meant as an incentive, but as a simplification of the policy in place, which would eventually lead to an incentive to lease a company bike. However, it is questionable whether this also leads to an increased usage. That poses an important question for Denmark when imposing new tax incentives: does it incentivize bicycle usage, or only bike ownership?[84]

5.3 Clear guidelines

No matter the scheme, the clearer the guidelines from the government and the easier the implementation the better because "[...] simplicity means that it will be well used, complexity means it will be little used."[85]

5.4 Adaptability

The scheme needs to be adaptable and flexible, and be able to combine it with financial schemes of other transportation modes. Indeed, a study about the French Indemnité Kilométrique Vélo (IKV), the former kilometric reimbursement system, revealed that 14% of the bikers had complementary expectations, such as the possibility of combining the IKV with other transportation modes.[86] The combination of different measures allows covering the whole range of expenses cycling to work implies, both for the employer and for the employee, and would thus be very beneficial.

5.5 Tax-free Mileage Allowance and CO2

After the intensive exchange with different interview partners, it became obvious that a change in the current tax-free mileage allowance is wished for. The suggestions for the change vary in the exact numbers but the goal remains the same: tax-free mileage allowance for shorter distances.

[83] Interview E (see Appendix 8.1)
[84] Interview F (see Appendix 8.1)
[85] Interview B (see Appendix 8.1)
[86] Gioria (2016)

Gate21 wishes for a tax-free mileage allowance for all modes of transport from 2 km one-way. Cyklistforbundet appeals for it from 3 km one-way.[87]

We support this decision and believe that it would be a good fit for Denmark. Further, we recommend that the payment is higher than the one for e.g. cars to incentivize the preference of choosing the bike over a car. Additionally, the tax-free mileage allowance should be applicable to every scheme. It should not matter if the bike is already owned, leased or currently being paid off. This scheme would incentivise that more people choose the bike over more carbon-intensive modes like a car.

In general, it should be accessible to as many individuals as possible in order to create real incentives for employees to create new habits.

5.6 Tax-free bike leasing or purchase

No matter the scheme, a bike should be made available tax-free to employees. This means that no taxes should be paid when a bike is leased or paid off, even if it is for private purposes. Same should account for safety equipment, accessories and maintenance. Alternatively, a low but fixed percentage could be added to the income taxes for personal use of company bicycles.

For the effect on the number of new cyclists, one of our interviewees suggests that it will not make a significant difference to use zero or seven or another percentage of additional taxes when using a company bicycle. However, having zero percent addition entails less of an administrative burden. The advantage of an addition is that it yields tax money for the government. “But the difference won't affect whether people like it or not. The current mileage allowance in Denmark is of no use, so the benefit of the difference between net and gross salary would already convince more people to purchase a bicycle through the company. Of course, even more people would be convinced if you stimulate it extra with a higher tax-free mileage allowance. This optimal combination of policies is what they have in Belgium.”[88]

5.7 Purchasing own bike through salary sacrifice

Danish companies already do a lot for their employees, so it would be reasonable if the investment for a new bike is carried especially by the employee. It should thus be possible to deduct the purchasing price of a new bicycle from the gross salary. For such a policy, the Ministry of Finance only must allow companies to do this. It does not entail any difficult arrangements, according to one of the interviewees from the Netherlands.[84]

[87] Cyklistforbundet (2020)
[88] Interview J (see Appendix 8.1)

5.8 Other recommendations

Regardless of the tax incentive scheme, companies could take their own measures to further promote bicycle over car commuting. For example, providing better bicycle facilities, such as sheds, showers, and pumps while deciding to not provide free or cheap parking spots for cars anymore.[89]

Lastly, bicycle commuting can be incentivised through company-intern measurements. Those measurements could be financial rewards for a certain total distance or a certain amount of times cycled to work as it has recently been implemented by the Danish company VM Tarm a/s. This approach can be easily implemented if a common exercise app is used to keep track of distances and amount of times cycled. This bonus scheme showcases that employers already can support their employee's health and the environment through their own measures, even if there are not too many tax incentives yet.[90] Bicycle commuting is also further promoted through appropriate infrastructure and safety requirements.[91]

6. Conclusion

The research and analysis undergone in this paper is valuable for not only the region of Copenhagen but for Denmark as a whole. It is further interesting for different stakeholders including companies, individuals and the government. The research is based on international schemes and therefore gives valuable information for states outside Denmark, too. It informs the stakeholders about internationally implemented schemes to incentivize bicycle commuting through either travel compensation or the provision of bikes.

It is valuable for companies as bicycle commuting results in healthier and more productive employees, but it also states that the company supports achieving the Sustainable Development Goals and an overall greener environment. For states it results in lower health and infrastructure spending compared to other commuting modes, which equals out the potential reduced tax income. Additionally, CO2 emissions are reduced. Bicycle commuting is besides walking the cheapest and healthiest commuting option for individuals.

The results show that a tax-free mileage allowance that is higher for bicycle commuting compared to carbon intensive modes and which also accounts for distances travelled is highly

[89] Interview I (see Appendix 8.1)
[90] Interview O (see Appendix 8.1)
[91] Interview A (see Appendix 8.1)

incentivising. In the case of the provision of bicycles, it should be easy to use and preferably tax-free, no matter the mechanism used (leasing or pool bikes). The government shall support the implementation of any scheme with easily understandable and implementable guidelines.

Nevertheless, this work shows that every scheme has its advantages and shortcomings, which need to be considered. The right scheme for each region depends on what is already in place, how fast new incentives should be implemented and, especially, what exactly must be incentivised.

However, for the exact knowledge of savings and costs of each scheme, a quantitative analysis needs to be conducted, based on the outcomes of this qualitative work.

This work can also serve as the basis for future studies that focus on increasing the usage of bicycles in other parts of society, or society as a whole. The presented schemes in this study exclude, among others, students, pensioners and self-employed people.[92]

[92] Interview A (see Appendix 8.1)

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8. Appendices

8.1 Interviews

Referred to as	Name(s)	Company	Country	Language	Date	Transcript or notes
Interview A	*Anonymous*	UK Dep. of Transport	UK	English	1/12/20	Transcript
Interview B	*Anonymous*	Cycle Scheme	UK	English	27/11/20	Transcript
Interview C	Roel Lenoir	3PM	NL	Dutch	5/10/20	Notes
Interview D	*Anonymous*	FiscFree	NL	Dutch	29/10/20	Notes
Interview E	Lennart Nout	Mobycon	NL	Dutch	6/11/20	Notes
Interview F	Olivier Flinterman	Dutch Tax Agency	NL	Dutch	20/11/20	Notes
Interview G	Prof. Dr. Eckart	TH-Wildau	DE	German	13/11/20	Notes
Interview H	Colin Pöstgens	JobRad	GE	German	12/11/20	Notes
Interview I	Nout Ramaekers	Dutch Cycling Embassy	NL	Dutch	12/11/20	Notes
Interview J	Klaas Hartmans	Lease-a-Bike	NL	Dutch	11/11/20	Notes
Interview K	Claire Shreiber, Marie Joly	Ademe	FR	French	20/11/20	Notes
Interview L	Charlotte Hauerslev	Moving People	DK	English	14/11/20	Notes
Interview M	Anders Westgård	JOOLL	DK	English	21/10/20	Notes
Interview N	Ditte Haugaard Clausen	KMD	DK	English	3/11/20	Notes
Interview O	Holger Ross Lauritsen	VM Tarm a/s	DK	English	21/10/20	Notes

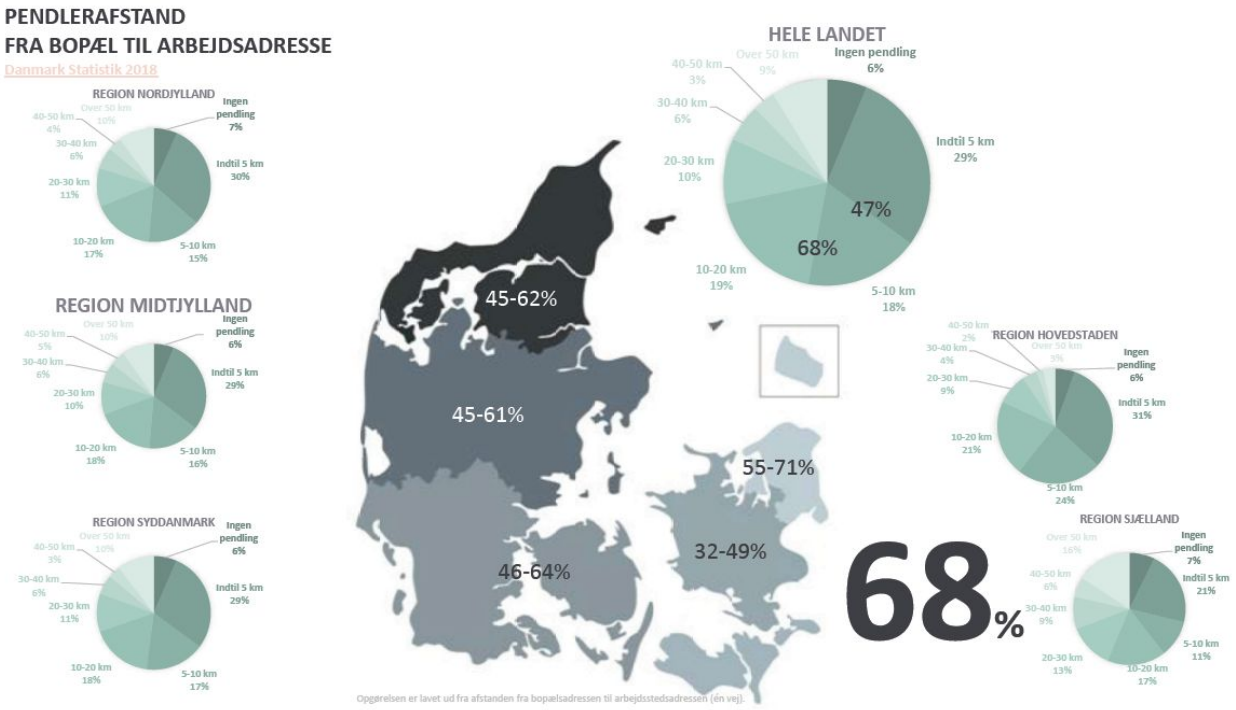
The interview notes and transcripts have been removed for this public version of the report. For more information, please contact the authors.

8.2 Emails

The email transcripts have been removed for this public version of the report. For more information, please contact the authors.

8.3 Figures

Commute distances in Denmark per region



8.4 Calculations and examples

Users, Savings and Costs of the Cycle to Work Scheme in the UK

Users (employees)	> 1.6 million (Department for Transport, 2019) 180,000 participants yearly, tendency: rising (Swift et al., 2016)

Users (employers)	40,000 (Department for Transport, 2019)
Benefit-to-cost ratio	Between 5:1 and 10:1 (Swift et al., 2016)
Yearly social benefit	£72 million (DKK 603 million) → assumption: yearly only 9,200 people, which equals 5% of all yearly participants, cycled for at least 30 minutes more per day → through reduced sickness days at work and increased physical fitness (Swift et al., 2016)
Cost to government	- Assumption 1: bikes are purchased through salary sacrifice → reduction in tax income - Assumption 2: average UK Treasury is £190 (DKK 1,592) - Assumption 3: yearly participants are 184,000 → yearly costs sum up to approximately £35,000,000 (293,350,000 DKK) (Swift et al., 2016)

Example Work-Related Costs Scheme (the Netherlands)

For someone with a yearly income of 35.000 EUR (260.000 DKK), the employer can provide tax-free allowances and benefits with a maximum worth of 595 EUR (4430 DKK). The employer could thus

purchase a bicycle worth a maximum of 595 EUR (4430 DKK) for the employee, if no other benefits (such as christmas gifts) are given that year.

Example Company Bicycle Scheme (the Netherlands)

For someone with a yearly income of 35.000 EUR (260.000 DKK) per year who uses a bike worth 2000 EUR (15.000 DKK), leasing this bike through the Fiets van de Zaak-policy results in monthly costs of approximately 5 EUR (37 DKK).

Examples of salary conversion (Germany)

- The employer provided a company bike for the first time by the end of 2018. The gross list price is 3.000 euros. As a non-monetary benefit for private use, you have to pay tax on 30 euros per month (one percent rule).
- If the bike was provided in January 2019, only income tax and social security contributions (0.5 percent) on € 15 for 2019 must be paid. And from 2020 the tax base drops to € 7 (0.25 percent). Because a quarter of € 3.000 is € 750 - but this amount can be rounded down to € 700.
- From 2020 on, the tax payment for the non-monetary benefit would be € 7 (0.25 percent).

8.5 Exchange rates used

1£ = 8.38 DKK

1€ = 7.45 DKK

8.6 Final presentation

Setup of the project report

1. Introduction and methodology
2. Business case and external context
   a. The benefits of bicycle commuting
   b. The current Danish tax system
   c. The current commuting situation in Denmark
3. What can be learnt from other countries?
   a. United Kingdom
   b. The Netherlands
   c. Belgium
   d. Germany
   e. France
4. Discussion of the different schemes
   a. Tax-Free Mileage Allowance
   b. Distance Flat-Rate
   c. Bicycle Leasing Scheme
   d. Pool bicycles provided by employer
   e. Full bicycle financing for employee
5. Recommendations and conclusion

General Takeaways

- Bicycle commuting has financial, environmental, health and social benefits, and all for individuals, companies, and society as a whole
- The reasons for individuals to choose a bicycle for commuting are: relaxation, the offered bicycle services, and the travel compensation they receive for it
- In Denmark, around 33% of journeys taken by car is for distances below 5 km and more than 50% is for distances below 10 km → potential for shifting to bicycle commuting
- Regardless of the tax incentive scheme Denmark would potentially implement, companies should consider:
    - Not to provide cheap/free parking spots or other car facilities anymore
    - Instead, provide better bicycle facilities, such as sheds, showers, and pumps

Tax-Free Mileage Allowance

Big advantage: An already known scheme for Denmark

+ Marginal costs for commuting are lowest for biking (no fuel or ticket costs), so this could become a net benefit with tax-free mileage allowance
+ If the employer needs to pay this, it does not cost any public funds
+ Easy to implement

- Some employees could be excluded if it is optional and the employers pay for it themselves (and it could lead to high costs for the employer)
- Less effective if it is the same compensation for all modes of transport, so also CO2-intensive cars → could be mitigated by making it the allowance CO2-dependent (but that would entail a more complex and bureaucratic system)

Distance Flat-Rate

A commuter can reduce his or her taxable income by a certain value per kilometer between home and workplace

+ Easy to implement
+ For every full kilometer → also for shot distances
+ Not dependent on an employer participating in the scheme

- As long as car = CO2-neutral means of transport, there is no greater incentive to choose the latter
- Tax exemption must be significantly high to create an incentive
- A higher flat-rate distance allowance above certain kilometers offers incentive to commute more by car and to move into surrounding area → additional traffic, desolation of inner cities, land consumption, urban sprawl
- Exclusion of earners below DKK 46,500

Bicycle Leasing Scheme

Option 1	Option 2	Option 3
Salary Sacrifice + Reduced taxable income - Can't be applied for minimum wage earners (in DK) - Higher tax payers profit more than lower tax payers - Lower pension, social security, contribution to public budget	Salary + Extra tax-free bicycle + No reduced taxable income, pension, social security or contribution to the public budget + Expenses employer could be deducted from profit taxes - High investment costs for employer	Division between employer & employee (combination 1/2) + Burden for both, so no high costs for anyone + Reduced taxable income (but less than in 1) - Investment costs for employer (but less than in 2) - Same disadvantages as option 1 (but less)

→ Bike can be returned, prolonged or bought at the end

Pool bicycles provided by employer

The bike is **purchased and owned by the company** (or leased from a leasing company) and employees are allowed to use them for business purposes

+ Effects of scale for running costs
+ Use is tax free
+ lower costs than a car pool
+ employer can lease the bikes for the pool instead of buying them to save money
+ employees only lease them when needed and therefore save money compared to a monthly lease

- Employees are normally not allowed to use them privately (or otherwise: tracking problem)
- High investment costs for employers
- usually there is not one bike per employee
- long implementation process

Full bicycle financing for employee

Option 1: Salary Sacrifice

→ Essentially, the same pro's and con's as the bicycle leasing scheme with salary sacrifice

→ Difference: bicycle is paid for at once and is immediately owned by the employee

Option 2: Loan paid back with tax-free mileage allowance

+ Loan is interest- and tax-free
+ Employee has no costs
+ Employer 'earns investment back' through the tax-free mileage allowance for the employee and indirectly through its fitter and more productive employees
- Full burden on the employer at first, big investment to make (although it does not have to be the full price of the bicycle, if the employee also pays part of it)

Final Recommendations

- No tracking of personal usage → based on trust
- Employee target group (distance and kind/price of bicycle) is important:
  - Who lives close to work can use a regular, cheaper bicycle → Tax-Free Travel Allowance
  - Who lives far away from work needs an expensive e-bike → Leasing and/or Company Bike
- Tax-Free Travel Allowance: take distance and CO2-emissions into account
- Leasing or Company Bike: private use should be easy and tax-free (or at low flat fee)
- Clear guidelines no matter the scheme
- Adaptability and ability to combine the schemes

Thank you

... for the challenging and interesting opportunity!

... for the great support!

... for trusting us with this topic!