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Tax-Efficient Employer-Provided Commuter Benefits in Germany

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Saksa pyrkii vähentämään kasvihuonekaasupäästöjään. Arkisin kaksi kolmasosaa työväestön tekemistä matkoista liittyy työhön. Ilmasto-ohjelmallaan Saksa edistää ilmastoystävällistä liikkuvuutta ja energiankulutukseen liittyvät teemat ovat sisällytetty verolakiin. Verotuksella tiedetään olevan vaikutus yksilöiden ja yritysten taloudellisen käyttäytymisen muutoksiin. Saksaa on pitkään vaivannut työvoimapula. Siksi työnantajien tulisi rakentaa huolellisesti rekrytointistrategia, jonka avulla osaamista voidaan palkata onnistuneesti. Työsuhde-edut auttavat hankkimaan ja säilyttämään osaavia ammattilaisia. Kuitenkin työsuhde-edut tarkoittavat yritykselle kustannuksia ja työntekijälle verotettavaa tuloa. Keskeisimmät saksalaisten työnantajien tarjoamat ja työmatkaliikenteeseen liittyvät työsuhde-edut on analysoitu tuloverotuksen näkökulmasta.

Tutkimusongelmana oli, mitkä näistä työsuhde-eduista ovat työntekijälle tuloverotuksen kannalta verotehokkaimpia. Vaihtoehto on verotehokas, kun samaan tavoitteeseen päästään muita vaihtoehtoja pienemmällä verokuormalla. Tutkimus toteutettiin vertailevana tutkimuksena. Lainsäädäntöä sekä viranomaisdokumentteja käytettiin sisältöanalyysissä. Tulokset saatiin taulukkolaskentaohjelmaa käyttäen, kuvaavien taulukoiden muodossa.

Useita julkiseen liikenteeseen kohdistuvia työsuhde-etuja voidaan tarjota työntekijöille verotehokkaasti. Verotehokkaita vaihtoehtoja ovat myös sähköauto, polttokennoauto, ulkoisesti ladattava hybridisähköauto sekä pyörä. Yhtä kaikille sopivaa työmatkaliikenteeseen suunnattua etua ei ole. Verotehokkuus saavutetaan rakentamalla malli huolella valituista verotehokkaista työmatkaliikenteeseen suunnatuista työsuhde-eduista, joiden joukossa on useampia ilmastoystävällisiä vaihtoehtoja.

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Abstract

Germany aims to reduce greenhouse gas emissions. On business days, about two-thirds of the total transport volume of employed people is due to job-related mobility. The 2030 Climate Program promotes climate-friendly mobility. Energy consumption topics are included in the German Income Tax Act. Taxation is known to have an impact on changes in the economic behaviour of individuals and companies. Germany has been coping with labour shortages. Employers must carefully prepare their employee attraction strategies to successfully recruit talents. Benefits will help to win and retain professionals. Employer-provided benefits are costs to the company and taxable income for the employee. The major employer-provided commuter benefits in Germany have been described.

The aim was to analyse these from the income tax perspective. The research problem was which of these commuter benefits are most advantageous to an employee on the income tax-efficiency point of view. A decision is tax-efficient when the tax liability is lower compared to an alternative structure but achieves the same goal. The research was carried out using a comparative method. Official documentation, such as legislation and government documentation, was used in the content analysis. Spreadsheet software was used to produce the results in the form of descriptive tables.

Several commuter benefits, for public transport, can be offered income tax-efficient to employees. Furthermore, the sole electric motor vehicle, the fuel cell vehicle, and the externally rechargeable hybrid electric vehicle are a tax-efficient alternative. The same applies to subsidies for bikes. The one-size-fits-all commuter benefit does not exist. Tax-efficiency can be reached by building a model of some well-selected tax-efficient commuter benefits with climate-friendly alternatives.

Keywords/tags (subjects)

employer-provided benefits, income tax, wage tax, commuting, Germany

Miscellaneous (Confidential information)

Contents

1 Introduction 4

2 Research design 5

2.1 Research objectives 5

2.2 Research problem and questions 6

2.3 Research approach and method 7

2.4 Data collection and analysis methods 8

2.5 Reliability 10

3 German Income Tax Act 11

3.1 Tax liability 11

3.2 Other mandatory revenue-linked taxes and contributions 12

3.3 Tax terminology 13

4 Employer-provided commuter benefits 17

4.1 Travel subsidies for using public transport 18

4.2 Commuter subsidies for using private or company car 22

4.3 Commuter subsidies for using bikes 32

4.4 Commuters are many 36

5 Research results 37

5.1 Research results regarding commuter benefits for public transport 37

5.2 Research results regarding company cars 48

5.3 Research results regarding company bikes 55

6 Discussion 58

References 61

Figures

Figure 1. Hydrogen Fuel Cell eDrive Technology 26
Figure 2. Tax treatment of employer-paid subsidies for public transport 38
Figure 3. The Employer's right to choose the flat-rate tax when the commuter allowance for public transport is not considered tax-free 40
Figure 4. Tax treatment of long-distance travel authorisation based on amortisation 42
Figure 5. Tax treatment of discount authorisation for long-distance passenger transport based on amortisation 45
Figure 6. Assessment basis for tax treatment of employer-provided company cars when the initial registration is in year 2020 52
Figure 7. Sunset and a company bike 55
Figure 8. Tax treatment and assesment basis of employer-provided company bikes, pedelecs, e-bikes and e-scooters 56
Figure 9. Model of some well-selected commuter benefits 59

Tables

Table 1. Description of the research data 9
Table 2. Deduction of the validity discount when determining the monetary value of benefit in kind 14
Table 3. Deduction of the validity discount when the amount of volume discount is not known 14
Table 4. Example of the regular payroll 16
Table 5. Example of the salary conversion 16
Table 6. A flat-rate reduction of the list price when determining the value of the benefit in kind 30
Table 7. Changes in the monthly monetary value of the benefit in kind for Job-Tickets with employees self-participation depending on employers contribution amount 39

Table 8. Comparison of employer-paid subsidies to long-distance tickets depending on payment type and permitted use 41
Table 9. Changes in annual monetary value of benefit in kind for long-distance travel authorisation, especially BahnCard 100, depending on amortisation 44
Table 10. Changes in annual monetary value of benefit in kind for long-distance discount authorisation, for example BahnCard 50, depending on amortisation 46
Table 11. Recalculated annual monetary value of benefit in kind with the correction booking at the end of the validity period of travel authorisation..... 47
Table 12. Changes in monthly monetary value of benefit in kind for conventional diesel vehicle as a company car depending on the gross list price..... 48
Table 13.Changes in monthly monetary value of benefit in kind for conventional diesel vehicle as a company car depending on the commuting distance 49
Table 14. Changes in monthly monetary value of benefit in kind for a company car depending on the vehicle type and based on 1 % rule..... 50
Table 15. Changes in monthly monetary value of benefit in kind for a company car depending on the vehicle type and based on logbook method..... 51
Table 16. Changes in monthly monetary value of benefit in kind for non-conventional vehicle as a company car depending whether the legistaltive requirements are fulfilled 53
Table 17. Tax treatment of a company car based on the volume of business and private related usage..... 54
Table 18.Changes in monthly value of benefit in kind for company bikes depending on bike type and employees contribution 57

1 Introduction

In 2018, the European Commission sued its six member states because of air pollution. These countries, Germany being one of them, have failed to meet the agreed air quality limits and have not taken appropriate action towards improvement. Although the air quality in the European Union has improved much in recent decades, many serious and chronic diseases such as asthma, lung cancer, and cardiovascular problems are often consequences of air pollution. The agreed limits of nitrogen dioxide were exceeded in 26 areas in Germany. The major problem areas were in Berlin, Munich, Hamburg, Cologne, Stuttgart and Düsseldorf. (EU-Kommission verklagt Deutschland und fünf weitere Mitgliedsstaaten wegen Luftverschmutzung 2018.)

With the 2030 Climate Program and the new Climate Protection Act, the Federal Government of Germany aims to substantially reduce greenhouse gas emissions by 55% by 2030. A part of the Program promotes climate-friendly mobility. (Was tut die Bundesregierung für den Klimaschutz? 2020.) On business days, about two-thirds of the total transport volume of employed people is due to job-related mobility. Half of that comes from commuting and the other half is job-related traffic. (Nobis & Kuhnimhof 2018, 103.) Commuting has enabled human beings to search for and find work from a wider area. It makes it possible for employees to find a job that best suits their skills and needs, plus choose a residential area according to their preferences. Same time, a high volume of traffic on the streets, full trains, and time-throwing leads many to feel stress and lost life. (Haller & Dauth 2018, 608.)

To encourage workers to use public transport, and thus decrease the environmental pollution caused by motorised individual traffic, the legislators have included energy consumption topics into the German Income Tax Act (Imping, Mader, Perach & Voss 2020, Number 2515). Additionally, on the 29th of November 2019, the Federal Council approved the law on further tax incentives for electromobility and amending other tax regulations. The tax benefits for electric and hybrid vehicles as well as fuel cell vehicles are both extended and redesigned. The tax legislation applied from 1 January 2020. (Mader, 2020, 38.) On the 9th of January 2020, the Federal Ministry of

Finance announced further tax incentives for conventional bikes, pedelecs, and e-bikes (Steuerliche Behandlungen der Überlassung von (Elektro-)Fahrrädern 2020, 1). The idea behind this is to significantly reduce the pollution and CO_2 emissions caused by road traffic (Was tut die Bundesregierung für den Klimaschutz? 2020).

Taxation has a significant impact on changes in the economic behaviour of individuals and companies, as well as generally on employment, savings, and investments (Myrsky 2006, 91). Most of the tax law research conducted is legal dogmatic in its nature. Legal dogma has an interpretative function to determine the situation under the law in force. In addition, it has a systematisation role, continuing the work of the legislator by helping to outline the tax system as a whole. Tax law research fulfils an important social function, as there is a constant need in society to find out what the rules for taxing are. In countries with high tax rates, the value of this task is emphasised. (Myrsky 2006, 92.)

2 Research design

2.1 Research objectives

Germany has been coping with substantial labour shortages because of its shrinking working-age population (Germany Policy Brief: Migration 2018). The shortage of high- and medium-skilled professionals in Germany can be seen as a social motive for this research. Employers must prepare more carefully their employee attraction strategies so they can successfully recruit and hire talents (State of American Workplace 2017, 6). Many leaders believe that the extra benefits and perquisite they offer to employees will help them to win and retain sought-after professionals. Likewise, some leaders believe that employee benefits can even improve the business performance. (State of American Workplace 2017, 41.)

Benefits and perks are costs to the company as they are organised and paid by employer (Luontaisedut verotuksessa 2020). At the same time, benefits in kind are a taxable income for the employee in Germany. (Einkommen- und Lohnsteuer 2019, 13).

Therefore, optimisation can be profitable for both parties. Although a long list of perks cannot cure everything if the leadership does not function, the most efficient talent retention strategies include every aspect of what matters noteworthy to the company's employees. These involve a combination of good leadership, a clear idea what is expected of each other, and a feeling to be in a matching role; together with the top employer-provided benefits. (State of American Workplace 2017, 56.)

2.2 Research problem and questions

This study will describe the major employer-provided commuter benefits in Germany. The idea will be to analyse these benefits from the income tax perspective. The research problem is which of these commuter benefits are most advantageous to an employee on the income tax-efficiency point of view. The research questions are:

- Which of the employer-provided commuter benefits are income tax-efficient?
- What kind of commuter benefits an employer should offer from the income tax perspective?

The research will focus on income tax-efficiency and will not consider other presumptive consequences like impact in employer's annual results or other obligations burden. However, levied income-related obligations like social security contributions, church tax and solidarity surcharge, will be considered as these will have a direct impact on presented results. It is natural and explicit to note, that during the year the law, and other legislative guidance, could be changed. This study will refer to the legislation valid on the 1st of January 2020. Nevertheless, the circular letter from the Federal Ministry of Finance published on the 9th of January 2020 and the second Corona Tax Aid Act (Zweites Corona-Steuerhilfegesetz 2020) dated on the 29th of June 2020 will be included, as both apply retroactively as of the 1st of January 2020 and have a significant impact on research results. The changes in the Value Added Tax Act (UStG) will not be taken into consideration. Although the research question aims to find out commuter benefits with a minimal tax liability, the final income tax burden in euro to an individual taxpayer will not be calculated. Excluded will be other

thinkable aspects like environmental sustainability, time savings from driving speed, the stress incurred in traffic jams, travel comfort and safety.

As there are countless ways to commute, the coverage of this research will rely on evidence from trends of commuting presented in three other studies made by Haller & Dauth (2018, 608), Ullah, Walter & Hinc (2019, 19) and Nobis & Kuhnimhof (2018, 127). Therefore, commuting will refer in this study to journeys made by public transport, by feed, with a cycle, or with a motor vehicle. Excluded will be all other ways to commute and explicitly taxis, private boats, campers, caravans, and planes as well as inline skates. Furthermore, excluded will be occasionally offered benefits like multiple company cars to one employee, one company car offered to several employees, driver services and special employment contracts with a possibility to work fully or partially remotely and so-called net wage agreements. Excluded will be also specialties relating to retirement, parental leave, and part-time work as well as managing directors and employees with disabled ID. This study will be limited to commuting between home and the primary place-of-work and, therefore, does not include situations relating to multiple households or places of work. Neither it encompasses transport company's employee benefits to its staff members.

2.3 Research approach and method

This study will be carried out as qualitative research by using pre-existing data. Qualitative research describes the phenomenon and provides interpretation so that the phenomenon can be understood in depth. In this way, it clarifies and explains the investigated phenomenon. (Kananen 2014, 16–19.) The research will be carried out with a comparative method. Comparative research refers to an approach strategy that outlines the similarities and differences between selected cases (Lähdesmäki, Hurme, Koskimaa, Mikkola & Himberg (2012). A comparison is a play with these similarities and differences. In this play, the concept needs to be wide enough to find out the best alternatives, and narrow enough to clearly see the outcome of the research. (Berndtson 2002, 44.)

In this study, the comparison concerns employer-provided commuter benefits and their taxation in Germany. Comparative law is often seen as an extension to national law study practices (Wilson 2007, 8). The importance of a comparative perspective on tax law is growing (Myrsky 2006, 93). Understandably, this is often driven by significant financial interests. The predetermined interface with economic developments and economic phenomena creates situations in which legislation must be adapted rapidly and more frequently. As a result, there is a need to clarify the current legal status. (Myrsky 2006, 96.) New perspectives on the legal research, particularly in commercial and tax law, can be opened by analytical tools and economic questions (Myrsky 2006, 104).

The economic approach often emerges precisely in the form of economic questioning. Through business economics, the perspectives of companies and employers can be better exposed. Although the creation of various mathematical calculations and scenarios is more the task of economists and statisticians, the legal perspective provides interpretative options and arguments. In this way, economics gives content while the law gives form. (Myrsky 2006, 105.) In this study, the comparative method aims to reveal the challenges about required framework employers and employees are facing in real life. In Germany, one major challenge for an employer and an employee is that the tax system is complicated and time consuming (Knop 2015; Paying taxes 2015, 145).

2.4 Data collection and analysis methods

Traditional data collection methods for qualitative research are interview and observation. Less common is to collect the data out of various ready-made materials like essays, reports, or answers. (Saaranen-Kauppinen & Puusniekka 2006, chapter 6.) The used data collection method for this study will be collecting and reprocessing of secondary data for content analysis. Fieldwork is not required. Generally, the secondary data refers to some pre-existing documents or documents that may be produced during the research (Lähdesmäki et al. 2012). It is to emphasise that the data needs to be already gathered and compiled, in one way or another, by someone (Heaton 2004, 13). The two key issues throughout the data collection and analysis process will

be access and ethics. (Blaxter, Hugnes & Tight 2006, 154). As the German Tax Legislation changes annually, and this research is limited to present legislation. However, formal material from Federal Ministry of Finance and the Federal Office of Justice is available to investigate the phenomena. In addition, guidance from tax authorities and private tax experts have been published. The available data for this research is categorised by type of source (see Table 1). Still, the limitation of data will be considered as the biggest risk in this research.

Table 1. Description of the research data

Category of research data	Number of sources
Acts	11
Circular information from Federal Ministry of Finance	8
Code	1
Constitutional and basic laws	2
General information from authorities and institutions	5
General information from private sources	5
Judgement	1
Legislative Guidelines	4
Ordinances	4
Regulation of the European Union	1
Statistics	9
Technical studies	7
Total	58

In this study, the documents will be produced with a secondary analysis method during the research with spreadsheet software in the form of descriptive tables. A secondary analysis is a conceptualised research method for carrying out an empirical exercise on pre-existing data (Heaton 2004, 18–19). The secondary analyses can be categorised to five different types of analyses based on how the qualitative data is diverges from the primary research or form. These are supra analysis, supplementary analysis, re-analysis, amplified analysis, and assorted analysis. (Heaton 2004, 40.) In this study, amplified analysis is selected as an analysis method to combine the knowledge from various legislative themes and primary analyses, but not primary

studies. The purpose of the combination of the several secondary data in the amplified analysis is to re-use this information for comparison or to enlarge the point of view (Heaton 2004, 41). For this study, both purposes apply.

With amplified analysis both common and divergent tax treatment throughout the data set can be examined. With the sorting technique, the data set can be shaped so that it fits with the purpose of the research (Heaton 2004, 89). This will allow the comparative calculations to be made and provides a basis for further investigation. Comparisons will be made to see what kind of factors play a part when an employer considers offering commuter benefits. The review will be made in an explicit, logical, and reproducible method (Blaxter et al. 2006, 122). It is essential to understand the economic opportunities and practical obstacles that lie behind the current legislation to see their impact in practice (Wilson 2007, 87). But here, the comparison will also give a possibility to notice whether, and if yes, how effective the new regulations in the German Income Tax Act supports the climate-friendly mobility. Although, the final monetary value of the benefit is determined based on employee's tax characteristics like tax bracket and annual taxable income. (EStG § 38a paragraph 1 sentence 1 in conjunction with § 39 paragraph 1 sentence 1).

2.5 Reliability

When amplifying pre-existing data, the material needs to be accessible, qualitative, and suitable for re-usage (Heaton 2004, 85). As the pre-existing data is predominantly found in the Income Tax Act, the technical access to German legislation over the internet will be almost self-evident. The quality refers to a data set which is complete and can this way serve for secondary and comparative study (Heaton 2004, 85–87). The utilisation of the other tax literature and publications will be valuable to ensure completeness of the primary data. The other major quality aspect in this work, the accuracy, will be gained through precise text citations of legal sources. The sustainability determinates how well the primary data will fit to the secondary analysis and comparison, especially when size and composition are considered (Heaton 2004, 85).

Honesty, diligence, and accuracy are mentioned as basic requirements for good scientific practice. These requirements should apply to the entire research process and as such also to this study. This necessitates the researcher to have both good disciplinary expertise and ethically sustainable working practices. (Miettinen 2006, 50.) The re-usage of pre-existing data and the secondary analysis may raise concerns over the legal and ethical aspects, especially in respect of copyrights (Heaton 2004, 79). It is of note, therefore, that Acts, official notices, court decisions and official headnotes of decisions do not enjoy copyright protection (UrhG § 5 paragraph 1). Although ethical guidelines focus on honesty, research must also have evidence of educational competence (Miettinen 2006, 51).

3 German Income Tax Act

The German income tax, called “Einkommensteuer” in the German language, is an annual contribution to the state, and each calendar year, the basis for its assessment is defined (EStG § 2 paragraph 7 sentence 1 to 2). Income tax arises generally at the end of the assessment period (EStG § 36 paragraph 1). The taxable person must submit a personally signed income tax declaration for the assessment period (EStG § 25 paragraph 3 sentence 1). The income tax prepayments made for the assessment period and the income tax levied through a wage tax deduction, insofar as it applies to the assessment period, will be offset against income tax (EStG § 36 paragraph 2).

3.1 Tax liability

Natural persons who have a place of residence or their usual place of abode in the Federal Republic of Germany are subject to unlimited income tax liability (EStG § 1 paragraph 1). If one neither has a place of residence nor is his or her usual place of abode in Germany, this person is predominantly subject to limited income tax liability for his or her revenues in German sources (EStG § 1 paragraph 4). Revenues earned as employee or from self-employed work are subject to income tax. Furthermore, earnings from forestry, agriculture, business, trade, leasing, letting, investments, savings, and some other revenues are also subject to income tax. (EStG § 2

paragraph 1.) Other revenues mainly refer to statutory and private pension as well as private sales of land and rights (EStG § 22 paragraph 1 to 5 and § 23 paragraph 1 to 3). It is prerequired that the revenue is generated by a person during their unlimited income tax liability or as a German sourced income during their limited income tax liability (EStG § 2 paragraph 1).

There is a special procedure to charge the income tax from employees' wage insofar as the wage is paid by an in Germany domiciled employer or a foreign provider of employees, who hires out to a third party for work performances in Germany. The income tax is levied throughout the calendar year by virtue of deductions from employees` wage. Thus, the wage tax exists as a special type of income tax. The employer assesses the amount of wage tax, retains it from each wage payment, and transfers the amount to the tax office monthly. (Tax liability 2013.) The execution of the wage tax withholding happens with tax brackets. Each employee is classified into one of the six prevailing brackets according to the family situation. (EStG § 38b paragraph 1.) Depending on the tax bracket in which the employee is classified, different annual allowances apply. These define the amount up to which no tax must be paid. Hence, taxes are higher in some tax brackets than in others. (EStG § 39a; EStG § 39b.)

3.2 Other mandatory revenue-linked taxes and contributions

Additionally, to the income tax, church tax and solidarity surcharge are levied on all types of income too (GG Art 140 in conjunction with WRV paragraph 6; SolZG § 1 paragraph 1). For the time being, the solidarity surcharge is 5.5 percent of the income tax (SolZG § 4 paragraph 1 sentence 1). A church tax is levied if the taxpayer is a member of the religious community recognised as entitled to church tax. Each individual federal state has its own church tax laws. (Imping et al. 2020, Number 2606.) The church tax is between 8 and 9 percent of the income tax and depends on the federal state (Imping et al. 2020, Number 2611).

Generally, anyone who is employed in Germany is insured in all branches of social security insurance (SGB Volume IV § 2 paragraph 2). However, there are plenty of ex-

ceptions. German social security encompasses health, long term nursing care, pension, and unemployed insurances (SGB Volume I § 4 paragraph 2). The employer and employee each pay half of the contributions for these four insurances (BVV § 2 paragraph 1). All contributions to these statutory insurances are levied together as a total social security contribution to health insurance company (SGB Volume IV § 28d and § 28h paragraph 1). One-off income, ongoing allowances, surcharges, grants or similar income that is granted, in addition to wages or salaries, are not earnings that are subject to social security contributions, provided they are exempt from income tax (SvEV § 1 paragraph 1 Number 1 to 3).

3.3 Tax terminology

Benefit in kind

Benefit in kind is non-monetary income like earmarked cash benefits, some retrospective reimbursements and monetary surrogates (EStG § 8 paragraph 1 sentence 2; Wenning 2020). Generally, when the employee receives a non-monetary income, the monetary value of the benefit is to be allocated to the current wages (LStR R 39b.2 paragraph 1 to 2). This value is called benefit in kind. The monetary value of the benefit in kind refers to the final price after customary price reductions (EStG § 8 paragraph 2 sentence 1). For simplification purposes, it is allowed to reduce the monetary value of the benefit in kind can be by four percent (LStR R 8.1 paragraph 1 sentence 9).

If the employee does not receive the benefit totally free of charge, the difference between the monetary value of the benefit and the employee's contribution is considered as a benefit in kind. (Wenning 2020). If the total value of an employee's benefits in kind remains under forty-four euro within the calendar month, the amount can be considered tax-exempt for this employee. However, if the amount exceeds forty-four euro in a particular month, then the total amount in that month will be considered as taxable income for this employee. (EStG § 8 paragraph 2 sentence 11.) The determination process of the monetary value is demonstrated in the table (see Table 2). As the reduced amount is under forty-four euro, it can be considered

tax-exempt, given that there are no other benefits granted. (Schönfeld, Plenker & Schaffhausen 2020c, 383.)

Table 2. Deduction of the validity discount when determining the monetary value of benefit in kind (Schönfeld et al. 2020c, 383, amended)

	in euro
Fuel voucher for 30 litres of petrol	45.00
Deduction, valuation discount of 4%	1.80
Benefit in kind	43.20

The validity discount procedure can also be applied for travel authorisations for public transport if the transport company and the employer do not publish the volume discount the transport company has granted to the employer as seen in the Table (see Table 3). The tax obligation exists, as the benefit in kind is over forty-four euro.

Table 3. Deduction of the validity discount when the amount of volume discount is not known (Imping et al. 2020, Number 2536, amended)

	in euro
Monthly season ticket	80.00
Valuation discount of 4%	3.20
Employee's own contribution	30.00
Benefit in kind	46.80

Flat-rate taxation

Usually, the wage tax is individually calculated corresponding to many personal tax characteristics. In certain cases, a flat-rate tax applies. There are a few common possibilities for an employer to use flat-rate wage tax. A distinction is made between a flat-rate tax for the entire wage for some groups of employees with a low income and a flat-rate tax for certain salary components like meal allowances. (Dorn 2020.) The employer is the debtor of the flat-rate wage tax and needs to pay it (EStG § 40 paragraph 3 sentence 1 to 2). The flat-rate wage tax must not offset against income tax or annual wage tax (EStG § 40 paragraph 3 sentence 4).

According to the German Income Tax Act (EstG § 37b paragraph 2), the employer can apply 30% income tax flat-rates for business-related benefits and gifts granted to their employees up to a maximum amount of 10,000 euro per employee and per fiscal year when the benefit in kind is performed in addition to due remuneration. Additionally, there are two other flat-rates options, 15 and 25%, which the employee can apply for some commuter benefits (EStG § 40 paragraph 2). It should be noted that a solidarity surcharge and a possible church tax comes on the top of the flat-rate tax and are also to be carried by the employer. However, many commuter benefits which are taxed with a flat-rate remains free of the social security contributions (Wenning 2020).

It is often criticized that many commuter benefits, which are either tax-exempt or taxed with the 15% flat-rate tax, are in the end not beneficial for an employee. The criticism refers to travel authorisations and other tickets for public transport. Generally, an employee is allowed to deduct a commuting allowance for the amount of 30 cents per distance kilometre as revenue-related expenses from the earned income when filing a tax return. However, the monetary value of benefit-in-kind received as tax-exempt or taxed with the 15% flat-rate tax needs to be deducted from the revenue-related expenditures when the tax return is filed. Therefore, the legislator introduced a further flat-rate option with 25%. An employer can use it regardless whether the commuter benefit comes in addition to due remuneration or not. If the employer chooses to use the 25% flat-rate tax for the commuter benefits, the monetary value of benefit-in-kind does not need to be deducted from the revenue-related expenditures. (Imping et al. 2020, Number 2540.)

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Salary conversion from cash to benefit in kind

The German Income Tax Act allows a tax exemption and a flat-rate taxation for certain salary components. A question arises whether the employee's taxable base salary could be converted into a benefit in kind, which is tax reduced or exempt. According to Imping et al. (2020, Number 1184), from the employees' point of view the ideal way would be to convert the base salary to various tax-free salary components. The procedure to convert salary is demonstrated with two examples. Examples are

calculated for a 21-year old person, who belongs to the Roman Catholic church, lives in Cologne, and has a tax bracket I. The first example describes the regular payroll (see Table 4). The second example describes the salary conversion (see Table 5). The examples show how a salary conversion can reduce income tax and social security obligations 96.43 euro.

Table 4. Example of the regular payroll (Imping et al. 2020, Number 1184, amended)

Payroll before a salary conversion	in euro
Gross base salary	3,000.00
Deduction, individual tax obligations	467.05
Deduction, social security contribution	594.75
Payout	1,938.20

Table 5. Example of the salary conversion (Imping et al. 2020, Number 1184, amended)

Payroll after a salary conversion	in euro
Gross base salary	2,800.00
Deduction, individual tax obligations	410.27
Deduction, social security contribution	555.10
Subtotal	1,834.63
Tax exempt benefit-in-kind	200.00
Payout	2,034.63

In many cases, the legislature has expressly made the tax exemptions and the flat-rate taxation dependent on the fact that the benefits in kind like commuter benefits are provided in addition to the wages payable anyway. Here, the due remuneration refers directly to German labour law. Then, the base salary conversion to another salary component, which would tax-relief, is not allowed. (Gewährung von Zusatzleistungen und Zulässigkeit von Gehaltsumwandlungen 2020.) Still, in some cases the salary conversion is allowed. Common ways to convert the salary is a deferred compensation for a company pension scheme or for a company car (EStG § 8 paragraph 2 sentence 2 to 5; EStG § 3 Number 63). It is to note, that the salary conversion does not necessarily mean a release from the obligation to the social security contributions (Imping et al. 2020, Number 1116).

4 Employer-provided commuter benefits

Politicians have recognized the economic benefits of commuting. German commuters are supported by various forms of tax relief through the Income Tax Act (Haller & Dauth 2018, 608.) Almost one-third of the German employers already grant their employees so called Job-Ticket or a travel allowance (Ullah et al. 2019, 19). Beyond that, employees seek to be better compensated for a long commuting distance. Still, only a few employees are directly compensated by their employer for further commuting costs. (Haller & Dauth 2018, 608.) The average distance of the direct route from home to work is eleven kilometres (Haller & Dauth 2018, 608). However, when looking only at income taxpayers, that is persons who can take advantage of the tax reliefs, the average distance between home and work is sixteen kilometres (Nobis & Kuhnimhof 2018, 6). Almost seven million German income taxpayers commute a distance over 20 kilometres to work (Tax breaks for commuters: 6.7 million taxpayers travelled more than 20 kilometres to work in 2015, 2019). The commuting distance varies significantly between different socio-demographic groups (Haller & Dauth 2018, 609).

The commutes to work are shortest in metropolises and large cities, and longest in small towns and villages (Haller & Dauth 2018, 610; Nobis & Kuhnimhof 2018, 6). An exception here is the Rhine-Ruhr region, which is one of the largest metropolitan regions in Europe. There the labour markets of several large cities are closely linked. Long commuting distances are relatively rare because several cities exist in this tightly populated area (Haller & Dauth 2018, 609–610). Also, the income plays a role in commuting. The higher the income and the educational qualification, the longer commutes to work. Around two percent of employees frequently stay at their second household for work-related reasons and are thus long-distance commuters. Here too, the proportion of long-distance commuters among people from households with high income and educational qualification is three times higher than in other population groups. (Nobis & Kuhnimhof 2018, 6.) All of this has an impact on what kind of employer-provided commuter benefits employees wish to have and, in general, are able to take an advantage of.

Employer-provided commuter benefits refer to a journey between home and a primary place of work. If an employee does not have a primary place of employment, but is permanently and typically working on each working day at the same place or the same large area of activity, depending on conditions and arrangements, this place or large area applies analogously to journeys between home and this place (EStG § 9 paragraph 1 Number 4a sentence 3). Many commuter benefits are applicable for the tax exemptions or the flat-rate wages tax. If so, then the benefits are also exempt for the social security obligation (SvEV § 1 paragraph 1 Number 1). Generally, in order to avoid a cumulative effect, the monetary sum of received commuter benefits that are tax-exempt needs to be deducted from the sum deductible according to distance allowance from earned income when filing a tax return (EStG § 9 paragraph 1 sentence 3 Number 4 sentence 2 in conjunction with EStG § 3 paragraph 1 Number 15 sentence 3).

4.1 Travel subsidies for using public transport

Common employer-provided commuter benefits in Germany relate to the travel subsidies in order to cover, partially or fully, employees' costs of public transport (Imping et al. 2020, Number 2517). Roughly 15% of people aged 14 or above have a season ticket for public transportation. (Nobis & Kuhnimhof 2018, 3.) Only one third of Germans admit that they like to use public transport in everyday life (Nobis & Kuhnimhof 2018, 127). Many commuters say that local public transport does run too seldom, and with a poor route network. Furthermore, transfer times significantly increase travel. Some do not have a connection to public transport. Long-distance commuters rarely receive granted or reimbursed tickets like Bahncard 25, 50 or 100 from their employers for pure commuting reasons. (Ullah et al. 2019, 19.)

Employer-paid subsidies on the employee's expenses for journeys with public transport on scheduled services between home and primary place of employment as well as for journeys in local public transport are tax-free (EStG § 3 paragraph 1 Number 15 sentence 1 to 2). The first mentioned refers to long-distance passenger transport and the second one to short-distance passenger transport. However, excluded are the air traffic, taxis that do not run on licensed routes as well as buses or

trains when chartered or rented for special occasions. Even if the ticket allows the ticket holder to take other people with him on the tour, or if the ticket is transferable to other people outside the employers' organisation, the tax exemption remains. (Imping et al. 2020, Number 2518.)

The difference between local public and long-distance transport is determined in the German Passenger Transport Act (PBefG § 8 paragraph 1 to 2) and the Value Added Tax Act (UStG § 12 paragraph 2 Number 10). Local public transport refers to trams, trolleybuses, and motor vehicles which are generally accessible for people and providing regular transport services. Their primary intention is to meet the demand for urban, suburban, or regional transport. Typically, the total travel distance does not exceed 50 kilometres, or the total travel time does not exceed one hour. But, also the traffic with taxis or rental cars, can be seen as local public transport if they replace, supplement or condense local public transport. (PBefG § 8 paragraph 1 to 2.) In respect of trains, the definitions regional and local could lead to a fine line and discussions about fairness, as Germany's 16 Federal states are very different in the size of geographic area. Therefore, Deutsche Bahn has determined through their corporate structure, that Intercity-Express, Intercity and Eurocity trains are running long-distance routes, when S-Bahn, Regionalbahn, Regional-Express and Interregio-Express trains offers local public transportation (Imping et al. 2020, Number 2519–2520).

This tax-efficient benefit needs to be provided in addition to due remuneration (EStG § 3 paragraph 1 Number 15 sentence 1 to 2). "In addition to" also covers the situation where the employee can select the benefit out of the available alternatives, for example company car or season tickets, given by the employer (Imping et al. 2020, Number 2528.) The exemption applies regardless of whether the ticket is given free of charge to an employee, or an employee has acquired the granted ticket by himself (EStG § 3 paragraph 1 Number 15 sentence 1 to 2). It is worth noting that regulations for long-distance passenger transport are limited to employees with an active employment relationship and to temporary leased employees from the employee leasing companies. Regulations for short-distance passenger transport with local public

transport companies, however, applies to all employees and temporary leased employees. (EStG § 3 paragraph 1 Number 15 sentence 1 to 2; Imping et al. 2020, Number 2518). With the active employment, it is referring to the employment relationship where both parties enjoy rights and obligations, for example, an employee's right to salary and continued remuneration in the event of sickness (BAG 10 AZR 419/17). Additionally, local public transport regulations are unattached to the type of trips, and even employees' private journeys do not risk the opportunity of tax exemption (Imping et al. 2020, Number 2520).

Job-Tickets

Job-Ticket is a product name and refers to monthly or annual season tickets for a daily journey to work and back with a public transport. Job-Tickets are mostly offered by the transport provider to employers with an attractive price so their employees can acquire a ticket from the employer for a reduced price. (Jobticket, das n.d.) The taxation of Job-Tickets can be complicated due to the various ticket forms. Job-Ticked can be issued for the next month or even for a whole year. Therefore, it is questionable whether a benefit in kind from the income tax point of view exists. If so, further consideration is, whether flat-rate taxes or tax exemptions, can be applied. (Imping et al. 2020, Number 2516.) In 2015, the Federal Ministry of Finance issued circular information about price advantages granted to employees by third parties (Rabatte an Arbeitnehmern von dritter Seite – Steuerliche Behandlung der Rabatte, die Arbeitnehmern von dritter Seite eingeräumt werden 2015). Acquiring a Job-Ticket does not analogously constitute a wage from a third party if the employer has concluded a framework agreement with the transport company (Imping et al. 2020, Number 2535). Job-Tickets are tax-free when principles of this circular letter and German Income Tax Act § 3 paragraph 1 Number 15, are fulfilled (Imping et al. 2020, Number 2528).

If the criteria for the tax exemption is not fulfilled and the Job-Ticket is considered as a benefit in kind, but the total amount of advantage, together with employee's all other benefits in kind, like vouchers or magazines, is not more than forty-four euro in one calendar month, then the Job-Ticket remains tax-free (EStG § 8 paragraph 2 sen-

tence 11). If the monthly value is over forty-four euro, the whole amount is considered as benefit in kind, and the monetary equivalent received by the employee is subject to taxation (EStG § 8 paragraph 1).

If the Job-Ticket is considered as a taxable benefit in kind, for one reason or another, the wage tax can be levied by the employer with a flat-rate tax (EStG § 40 paragraph 2 sentence 2 Number 1 to 2). The flat-rate taxation exempts the employer-provided benefits from the social security obligation, but not for solidarity surcharge or possible church tax (SvEV § 1 paragraph 1 sentence 1 Number 3; Imping et al. 2020, Number 2541). There are two possibilities. With the first alternative, the flat-rate of 15% can be used for instance, when the employer-paid subsidy comes in addition to wages payable anyhow, but the employee receives the Job-Ticket directly from the employer (EStG § 40 paragraph 2 sentence 2 Number 1). Here, the reference is made to the employees of the transport company (Imping et al. 2020, Number 2536). With the second possibility, the flat-rate tax of 25% can be used, when the subsidy does not come in addition to due remuneration (EStG § 40 paragraph 2 sentence 2 Number 2). The 25% rule is also, therefore, beneficiary because the monetary value of Job-Ticket does not need to be deducted from the revenue-related expenditures when an employee files the tax return (Imping et al. 2020, Number 2541).

Amortisation

BahnCard is a travel authorisation for public long-distance trains in Germany. The tax treatment of an employer-provided BahnCard depends on how it is used. If a BahnCard is provided to the employee only for business trips, it is exempt for the income tax and social security contributions (EStG § 3 Number 16 in conjunction with SvEV § 1 paragraph 1 Number 1 to 3). This refers to a full amortisation forecast. The same applies when the employer's self-interest is seen to be overwhelming. At the time, when a BahnCard is handed to an employee, the employer can estimate the total monetary value of all single tickets which would be incurred during the BahnCard's period of validity if the BahnCard were not used during the business trips. When the employer predicts the saved costs for single tickets will reach or exceed the costs of a BahnCard, the travel authorisation is tax-exempt.

If the full amortisation prognosis does not come true for unforeseeable reasons, for example due to illness of the employee, no subsequent taxation for benefit in kind is to be made because the employer's interest in the handover existed. If, according to the forecast, the costs saved by using a BahnCard for business trips during the period of validity are not expected to fully equal the costs of the BahnCard, the full value of the BahnCard is to be recognised as a benefit in kind. However, the saved travel costs can be booked as a correction to reduce the value of the benefit in kind. The corrections can be done monthly or at the end of the validity period. This process refers to a partial amortisation forecast. Simultaneously an employer's tax-free subsidies, when granted in addition to the due remuneration, on the employee's expenses for commuting with public transport, which would be incurred without using a BahnCard, shall be considered in amortisation forecast.

On the contrary to the forecast of business-related expenditures, the forecasted commuting costs need to be deducted from the revenue-related expenditures when an employee files the tax return. Therefore, it is regulated that in the amortisation prognosis the tax exemption for business-related expenditures takes precedence over the tax exemption for commuting. (Steuerbefreiung nach § 3 Nummer 15 EStG in der Fassung des Gesetzes zur Vermeidung von Umsatzsteuerausfällen beim Handel mit Waren im Internet und zur Änderung weiterer steuerlicher Vorschriften 2019, 4–11; Schönfeld et al. 2020c, 169–172.)

4.2 Commuter subsidies for using private or company car

Two-thirds of commuting is done by car (Berufspendler 2017). On average, there are 1,1 cars available per household (Nobis & Kuhnimhof 2018, 3). Almost half of the car mileage is achieved by commuting or as part of business activities (Nobis & Kuhnimhof 2018, 4). Male commuters drive in average 42% longer way to work than female commuters. Females are more likely to work part-time and, therefore, longer commuting distances are less meaningful for them. (Haller & Dauth 2018, 609.) Six percent of cars in private households are company cars. However, every second electric vehicle is a company car. (Nobis & Kuhnimhof 2018, 5.) More than 85% of those, who commute over 20 kilometres, use a car at least part of the trip (Tax breaks for

commuters: 6.7 million taxpayers travelled more than 20 kilometres to work in 2015, 2019). Only one percent of employees are driving with the motor bike to work (Berufspendler 2017).

Car allowance

The tax treatment of a vehicle depends on for what reason the vehicle is predominantly used (§ 6 paragraph 1 Number 4 sentence 2). If a vehicle is used less than 10% for business-related journeys, it can be only privately registered (EStR R 4.2 paragraph 1 sentence 5). An employer-paid car allowance for using a private car is taxable income (EStG § 2 paragraph 1 Number 4). An employer can select whether the taxes are carried by an employee using the employee's individual tax rate. Alternatively, the employer can use a flat-rate of 15% to tax the car allowance if the amount is not higher than thirty cents per distance kilometre (EStG § 9 paragraph 1 Number 4 and § 40 paragraph 2 sentence 2 Number 1). As a flat-rate tax is paid by the employer, the amount received by the employee need to be deducted from the revenue-related commuting expenses when filing tax return (EStG § 40 paragraph 2 sentence 2 Number 1).

Conventional Internal Combustion engine car as a company car

The tax treatment of a company car depends not only on price but also the engine type and for what purposes it is used (EStG § 6 paragraph 1 Number 4 sentence 2). A conventional car with an internal combustion engine has a clutch and gearing. It burns fuel and can reach longer driving range and higher speed. Easy refuelling makes driving comfortable for many. (Hayes & Goodarzi 2018, 30.) Therefore, the classic company car is still one with a diesel engine (DAT Diesel-Barometer: Weiter hoher Dieselanteil in Fuhrparks 2019, 1). From the employee's point of view, there are two methods to determine the benefit in kind for private use of conventional internal combustion engine vehicle. There are a method with the 1% rule and the logbook method. Regardless of the method, the monetary value of the benefit in kind for private use is taxable income. (Käding 2020.) The tax treatment is based on the employee's individual wage tax characteristics, like tax bracket (Schönfeld et al. 2020c, 408).

When the vehicle is used more than 50% for business purposes, the monthly value for a taxable benefit in kind for a conventional car is one percent of the list price of the new car (EStG § 6 paragraph 1 Number 4 sentence 2). When considering the operational use for business purposes, the journeys between the home and the business premises are counted towards those business purposes (Ertragsteuerliche Erfassung der Nutzung eines betrieblichen Kraftfahrzeugs zu Privatfahrten, zu Fahrten zwischen Wohnung und Betriebsstätte sowie zu Familienheimfahrten 2009). When determining the list price, any cost of the built-in special equipment and the value added tax must be included into the list price (EStG § 8 paragraph 2 sentence 2 in conjunction with § 6 paragraph 1 Number 4 sentence 2). The list price is to be rounded down to a full hundred euro (LStR R 8.1 paragraph 9 Number 1 sentence 6).

It is allowed to limit the taxable benefit in kind to the actual cost of private use when using the so-called logbook method (EStG § 8 Number 2 sentence 4 and § 6 paragraph 1 Number 4 sentence 3; LStR R 8.1 paragraph 9 Number 2 sentence 1; Lohnsteuerliche Behandlung der Überlassung eines betrieblichen Kraftfahrzeugs an Arbeitnehmer 2018, 9). It is highlighted that detailed and accurate records must be kept about the actual costs of the company car as well as of the distance driven (EStG § 8 paragraph 2 sentence 4). If the logbook is not used or kept properly, the one percent rule applies. With the driver's logbook method, the costs incurred to the vehicle within a year, are divided between private and business purposes according to the kilometres driven. The value of the vehicle's depreciation will be considered as a part of the costs. The share of the costs that are attributable to the private use of the company vehicle is to be recorded as withdrawal. Thus, the costs, initially posted as operating expenses, are neutralised. It is to note that with the logbook method and indeed, the costs of acquisition and not the gross list price, is used for determining the benefit in kind. Furthermore, the depreciation range must be set to eight years. (Käding 2020.)

An additional 0.03% of the list price per month is determined for distance travelled in kilometres between home and the primary place of employment (EStG § 8 paragraph 2 sentence 3). This is an assumption that the employee regularly drives to work by company car. However, if the employee drives to work with the company car less

than 180 days per year and never more than 15 days per month, an alternative calculation with 0,002% of gross list price per kilometre for each day the employee actually travels to work is allowed. Should the employee use the company car only part of the way to work, the benefit may be based on the distance indeed driven, provided this can be proved. (Lohnsteuerliche Behandlung der Überlassung eines betrieblichen Kraftfahrzeugs an Arbeitnehmer 2018, 2–8.) In return for 0,03 % rule, it is allowed to deduct a commuting allowance for the amount of 30 cents per distance kilometre as revenue-related expenses from the earned income when filing a tax return. The annual limitation is 4,500 euro. (EStG § 9 paragraph 1 sentence 2 and sentence 3 Number 4 sentence 2.)

It is to note, that there is tax and social security obligations relating to the benefit in kind for the private use of a company car. These are calculated with one percent rule and need to be taxed individually. (EStG § 6 paragraph 1 Number 4.) However, regardless of whether 0,03% or 0,002% rule applies, the employer can select whether the benefit in kind for commuting is also taxed with the individual tax bracket or 15% flat-rate tax. The last one is beneficial for the employee, as the employer carries the taxes. (EStG § 8 paragraph 2 sentence 3 in conjunction with § 40 paragraph 2 sentence 2 Number 1.) On the other hand, as the flat-rate tax is exempt from social security contributions, the final amount to be carried is somewhat compensated. (Wenning 2020).

Emission-free electric vehicle as a company car

In the sense of the German Income Tax Act (§ 6 Number 4 sentence 2 second half sentence), an electric vehicle is a motor vehicle, that uses electric motors solely for propulsion. These are entirely or predominantly powered through mechanical storages, electrochemical energy storages or emission-free energy converters. With mechanical storage is meant, for example, a flywheel with a generator. Electrochemical energy storage refers generally to a battery. One example of an emission-free energy converter is a hydrogen fuel cell. For example, refuelling an electric motor vehicle with a hydrogen fuel cell converter can be done under five minutes (see Figure 1). The same time is mostly needed to fill up a petrol or diesel tank. The driving is locally emission-free. (BMW Group Innovation Days 2015: Drive technologies of the future,

13.) The Federal Motor Transport Authority uses in the registration certificate coding 0004 and 0015 in the field ten for electric vehicles and their trailers. (Mader, 2020, 38).

Figure 1. Hydrogen Fuel Cell eDrive Technology (BMW Group 2015)

The list price of electric or plug-in hybrid electric vehicles is generally higher than the list price of motor vehicles with a conventional internal combustion engine. To avoid an anti-selection as a result of higher list prices of electric vehicles there are special regulations to determinate the list price or the total costs for the logbook method for these vehicle types. (Mader, 2020, 38.) The new regulation applies to the company cars which are either electric motor vehicles or externally rechargeable hybrid electric motor vehicles, and first time assigned to the employee also for private use after 31 December 2018 and before 1 January 2031. Regardless when the vehicle is manufactured, purchased, or leased, the reference is to be set to the date, when the beneficial owner of the usage authorisation changes. (Mader, 2020, 39.)

If the electric motor vehicle is first time granted to an employee for use, and initial registration is between January 1st 2019 and December 31st 2030, the list price of this vehicle is to be assessed only to a quarter when determining the taxable benefit in kind based on one percent rule. The vehicle must meet the requirements of zero

carbon dioxide emission and the gross list price must not exceed 60,000 euro. (EStG § 6 paragraph 1 Number 4 sentence 2 Number 3.) The list price is rounded down to a full hundred euro only after quartering it (LStR R 8.1 paragraph 9 Number 1 sentence 6; Mader, 2020, 39). If the employer prefers to limit the taxable benefit in kind to the actual cost of private use by using the logbook method, the same emission and gross list price requirements need to be fulfilled in order to be allowed to quarter the list price when determining the acquisition cost (EStG § 6 paragraph 1 Number 4 sentence 3 Number 3). The other income tax reliefs for employer-provided commuter benefits for an electric motor vehicle as a company car will also apply to externally rechargeable hybrid electric motor vehicles, which have a simultaneous character for emissions and driving ranges (EStG § 6 paragraph 1 Number 4 sentence 2 to 3).

Externally rechargeable hybrid electric motor vehicles and other electric motor vehicles as a company car

The definition of the hybrid electric motor vehicle is outlined in the European Union Regulation (EU Regulation 2018/858). A hybrid electric motor vehicle combines a conventional engine with fuel and a storage device for electrical power (for example battery, flywheel with a generator, capacitor). However, plug-in hybrid electric motor vehicles are also externally chargeable, and therefore for tax reasons differently treated (Mader, 2020, 38). In this study, the named plug-in hybrid electric motor vehicle corresponds to an externally rechargeable hybrid electric motor vehicle. The Federal Motor Transport Authority uses in the registration certificate coding between 0016 and 0019 as well as between 0025 and 0031 in field ten for hybrid electric vehicles and their trailers. (Mader, 2020, 38).

If the electric motor vehicle, or externally rechargeable hybrid electric motor vehicle, is first time granted to the employee also for private use and initial registration is between the 1st of January 2019 and the 31st of December 2021, but this vehicle does not meet the requirements of zero carbon dioxide emission and the gross list price exceeds 60,000 euro, the list price of this vehicle is allowed to be assessed to half when determining the taxable benefit in kind based on one percent rule. During that time frame an externally rechargeable hybrid electric motor vehicle must meet the requirements of § 3 paragraph 2 Number 1 or 2 of the Electric Mobility Act. (EStG

§ 6 paragraph 1 Number 4 sentence 2 Number 2 to 3.) This means that either the maximum for CO_2 emission must not exceed 50 gram per driven kilometre or the purely electric driving range needs to be at least 40 kilometres (EMoG § 3 paragraph 2 Number 1 or 2).

If the initial registration and first-time assignment for employee's beneficial use of electric motor vehicle or plug-in hybrid electric motor vehicle will be between the 1st of January 2022 and the 31st of December 2024, the maximum for CO_2 emission limitation remains, but the purely electric driving range needs to be at least 60 kilometres to allow the list price to be halved (EStG § 6 paragraph 1 Number 4 sentence 2 Number 4). Simultaneously, if the initial registration and first-time assignment for employee's beneficial use of electric motor vehicle or externally rechargeable hybrid electric motor vehicle will be between the 1st of January 2025 and the 31st of December 2030, the minimum requirement of the purely electric driving range increases to 80 kilometres to allow the list price to be halved (EStG § 6 paragraph 1 Number 4 sentence 2 Number 5).The list price is rounded down to a full hundred euro only after halving it (LStR R 8.1 paragraph 9 Number 1 sentence 6; Mader, 2020, 39–40).

If the employer prefers to limit the taxable benefit in kind to the actual cost of private use by using the logbook method, the same requirements for emission, purely electric driving range and gross list price need to be fulfilled in order to be allowed to halve the list price when determining the acquisition cost (EStG § 6 paragraph 1 Number 4 sentence 3 Number 2 to 5 in conjunction with EMoG § 3 paragraph 2 Number 1 or 2). If motor vehicle is leased or rented, the same applies for the leasing or rental costs (EStG § 6 paragraph 1 Number 4 sentence 3). Costs for the employer-paid electric charging remain completely excluded when determining the total expenses incurred by the vehicle (EStG § 3 Number 46 in conjunction with § 8 paragraph 2 sentence 4).

If the electric motor vehicle, or externally rechargeable hybrid electric motor vehicle, has been granted to an employee for private use before 2019, the elder regulation remains valid (Anwendung der Neuregelung bei der Dienstwagenbesteuerung im

Arbeitnehmerbereich; Änderung des § 6 Absatz 1 Nummer 4 Satz 2 und 3 EStG für Elektro- und extern aufladbare Hybridelektrofahrzeuge 2018). Generally, the one percent rule applies also to electric motor vehicles and externally rechargeable hybrid electric motor vehicles, if the vehicle has been first time granted to an employee for use, and the initial registration was in 2018 or earlier. Also, the one percent rule applies to newer electric motor vehicles and plug-in hybrid electric motor vehicles which do not meet the requirements of the maximum carbon dioxide emission or the minimum requirement of the purely electric driving range as stipulated in EStG § 6 paragraph 1 Number 4 sentence 2 Number 2 and 4 (EStG § 6 paragraph 1 Number 4 sentence 2).

Flat-rate reduction table

There is a possibility to apply a flat-rate reduction of list price when determining the value of the benefit in kind for an electric motor vehicle or a plug-in hybrid electric motor vehicle which is acquired before January 1st 2023 but is not applicable for list price halving or quartering. For a motor vehicle acquired before January 1st, 2014 the list price can be reduced by 500 euro per each kilowatt-hour of the battery capacity. But for a vehicle acquired in following calendar years, the possibility to apply a flat-rate reduction reduces annually 50 euro per kilowatt-hour of the battery capacity. The legislation refers here to the costs of the battery system. The maximum amount of reduction per vehicle acquired in 2013 or earlier is 10,000 euro and this amount reduces annually by 500 euro until 2022. (EStG § 6 paragraph 1 Number 4 sentence 2 Number 1.) If the vehicle is acquired second-hand, the reduction amount is based on the year of initial registration of the vehicle (Mader, 2020, 40).

The flat-rate reduction amount and the maximum reduction amount per vehicle, for determining the benefit in kind, is linked to the year the electro motor or hybrid electro motor vehicle was acquired, and can be found in the Table (see Table 6). The battery capacity in kilowatt-hours can be found in the field 22 of the Federal Motor Transport Authority's registration certificate. (Mader, 2020, 40.) The list price is rounded down to a full hundred euro only after the flat-rate reduction (LStR R 8.1 paragraph 9 Number 1 sentence 6; Mader, 2020, 40).

Table 6. A flat-rate reduction of the list price when determining the value of the benefit in kind. (Mader 2020, 40, adapted)

Year of purchase (new vehicle) or initial registration (second-hand vehicle)	A flat-rate reduction per each kWh of the battery capacity, in euro	Maximum deduction allowed per vehicle, in euro
2013 and earlier	500	10,000
2014	450	9,500
2015	400	9,000
2016	350	8,500
2017	300	8,000
2018	250	7,500
2019	200	7,000
2020	150	6,500
2021	100	6,000
2022	50	5,500
2023 and later	n/a	n/a

Non-plug-in hybrid electric motor vehicle as a company car

A hybrid car without a power socket is considered as conventional Internal Combustion engine car (Elektroauto und Steuer: Das müssen Sie beachten 2020). Since, the vehicle's tax relief requirements like battery capacity, minimum sole electric driving range and maximum CO_2 levels are not yet reached without external charging (Holzer 2019). The monthly value for a taxable benefit in kind for a non-plug-in hybrid electric motor vehicle is one percent of the gross list price of the new car, taken that the car is used more than half for business purposes. (EStG § 6 paragraph 1 Number 4 sentence 2).

Fuel cell vehicle as a company car

An electrochemical device which transforms the chemical energy of a fuel, for example, an oxidant and hydrogen to electrical heat and energy, is called a fuel cell (Hayes & Goodarzi 2018, 111). Fuel cell vehicles combine the energy density of a fossil fuel with the powertrain efficiency of an electric vehicle (Hayes & Goodarzi 2018, 112). It is to note, that the fuel cell vehicle differs from an electric motor vehicle with a drogen fuel cell converter. Generally, hydrogen is a chemical element, which is usu-

ally found in bound form in the nature. (Ehret 2018, 9). The fuel cell on the other hand is an electromechanical power generator. The most essential types of fuel cells are the solid oxide ceramic fuel cell and the polymer electrolyte fuel cell. (Ehret 2018, 10.) While an electric motor vehicle with a battery has efficiency advantages on short routes, the fuel cell vehicle allows a greater driving range (Ehret 2018, 19). Geographically seen, Japan and South Korea are the main providers of fuel cell vehicles, and the needed infrastructure is found predominantly in the USA and Asia. (Ehret 2018, 56.) In contrast, Germany is one of the leading countries of infrastructure for electric driving with a hydrogen fuel cell converter.

The special taxation regulations of the electric vehicle as a company car also applies for fuel cell vehicles, as the battery capacity of electric, as well as a hybrid electric motor vehicle, is comparable to the stored energy in fuel cell vehicles. The value of the battery capacity is stated in section one, paragraph 22 of the vehicle's registration certificate and is used for the determination of the reduction amounts. (Nutzung eines betrieblichen Kraftfahrzeugs für private Fahrten, Fahrten zwischen Wohnung und Betriebsstätte/erster Tätigkeitsstätte und Familienheimfahrten; Nutzung von Brennstoffzellenfahrzeugen. 2018).

Electric vehicle charging

According to the German Income Tax Act (EStG § 3 Number 46), benefits granted by the employer for electric recharging of an electric vehicle or hybrid electric motor vehicle at a stationary operational installation of the employer or its affiliated enterprises as well as with the employer-provided recharging devices granted for private usage are tax-free, when these are given as an addition to the due remuneration. This regulation has been extended and is now valid for a limited period from 1 January 2017 to 31 December 2030 (EStG, § 52 paragraph 4 sentence 14). An electric motor vehicle or a hybrid electric motor vehicle means in this content externally rechargeable within the meaning of EStG, § 6 paragraph 1 Number 4 sentence 2, second half sentence as described above (EStG, § 3 Number 46). Furthermore, the tax exemption corresponding to EStG, § 3 Number 46 has only meaning for company cars, when the monetary benefit for the private usage is determined by the logbook

method, because the employer's expenses for the electric recharging of an electric vehicle or hybrid electric motor vehicle are not considered in the total cost of the vehicle. If the benefit in kind for the private usage of the company car is determined according to the one percent rule, the question of tax exemption does not arise, as the recharging costs paid by the employer are hereby compensated with the one percent rule. (Mader, 2020, 38.)

Carsharing

Carsharing refers to a booking portal where people can book a car. This requires self-organised reservation, pickup and return. The vehicles are available at short notice and can be rented for an hourly or daily basis (Schönfeld & Plenker 2020a.) The benefit in kind exists if the employer carries the costs when the employee chooses the available vehicle for private use (EStG §22 Number 3 sentence 1). The value of the benefit in kind is to be determined with same principles as a conventional company car for private use. Both logbook method and monthly one percent rule together with 0,03% rule can be applied. However, if a vehicle is only given to an employee occasionally and unregularly for no more than five calendar days in a calendar month for a special occasion or for a special purpose, an individual assessment with 0,001 percent of the gross list price per driven kilometre can be applied to determine the benefit in kind. (Schönfeld & Plenker 2020a.) If the value of this emolument does not reach 256 euro in the calendar year, it is not subject to income tax (EStG §22 Number 3 sentence 2).

4.3 Commuter subsidies for using bikes

There are approximately 0,9 bikes per habitat in Germany (Nobis & Kuhnimhof 2018, 3). Nine percent of employees are cycling to work (Berufspendler 2017). Around 40% employees who do not to use a bicycle for commuting have an opinion that the distance, weather, and time consumption are the main reasons for this (Cycling Monitor Germany 2019, 46). There are signs of change. Especially younger age groups cycle frequently and intend to cycle even more often (Cycling Monitor Germany 2019, 2). This requires more and better-developed cycle paths as well as parking and changing

facilities. A quarter of employees who do not commute with a bicycle wishes employer-provided commuter benefits for bike riders (Cycling Monitor Germany 2019, 48.) But employer-provided commuter benefits for bicycles or e-bikes are rarely offered to employees. (Ullah et al. 2019, 19).

The withholding tax obligations for a company that leases in bikes and e-bikes, that they, in turn, provide to their employees for private usage, is regulated by the German Income Tax Act. Such bike leasing is considered to be a benefit in kind (EStG § 3 Number 37). A tax exemption for the employer-provided non-cash commuter benefit of a pedelec or a bicycle has now been extended to the end of 2030. However, it requires that this benefit be provided while receiving due remuneration. A salary deduction is allowed but leads to losing the tax exemption. (Steuerliche Behandlungen der Überlassung von (Elektro-)Fahrrädern 2020, 1.) Furthermore, the tax exemptions for the value of the charging equipment and the electricity, used to charge pedelecs and e-bikes, has also been extended to the end of 2030 (EStG § 52 paragraph 4). This is given with the same conditions regarding the due remuneration and that the charging happens at the permanent establishment of the employer including sites of its affiliated companies or with the employer-provided charging devices for temporary private usage (EStG § 3 Number 46).

Conventional bicycle as a company bike

According to the German Income Tax Act (EStG § 3 Number 37), an employer-granted operational bicycle is tax-free, when it is given as an addition to the due remuneration. This tax-exempt benefit does not eliminate the possibility to deduct a commuting allowance as revenue-related expenses from the earned income when filing a tax return (EStG § 9 paragraph 1 sentence 2 and sentence 3 Number 4 sentence 2). This allowance refers to employees' expenditures for ways between home and the primary place of work. The distance lump sum is a uniform 30 cents per distance kilometre for each working day but limited to 4,500 euro per annum. (EStG § 9 paragraph 1 sentence 3 Number 4 sentence 1 to 2.) If the bicycle does not come in addition to due remuneration, it is considered as a benefit in kind (Imping et al. 2020, Number 2009).

Pedelec as a company bike

A pedal electric cycle more commonly called pedelec is considered equal to a conventional bicycle also for income tax purposes (EstG § 3 paragraph 37 in conjunction with StVG § 1 paragraph 3 and Steuerliche Behandlungen der Überlassung von (Elektro-)Fahrrädern 2020, 1). The pedelec's maximum speed is 25 km/h (StVG § 1 paragraph 3; Schleinitz, Petzoldt, Franke-Bartholdt, Krems & Gehlert 2017, 263). There is neither obligation to wear a helmet nor hold a driving license (StVG § 2 paragraph 1 in conjunction with StVO § 21a paragraph 2).

An employer-granted operational pedelec that does not qualify as a motor vehicle is tax-exempt when it is given as an addition to the due remuneration (EStG § 3 Number 37). This tax-exempt benefit does not eliminate the possibility to deduct a commuting allowance as a revenue-related expense from the earned income when filing a tax return (EStG § 9 paragraph 1 sentence 2 and sentence 3 Number 4 sentence 2). If the benefit does not come on the top of salary, but rather the same amount will be deducted from the regular salary, then the benefit in kind exists. (EStG § 3 Number 37.) If so, the monetary value of the benefit in kind is to be determined based on the statutory regulations which refer to one percent rule for electric vehicles. Here, the assessment basis is one quarter of the gross list price for pedelecs acquired between 2019 and 2030, when costing less than 60,000 euro and producing zero local CO2 emissions. (EStG § 6 paragraph 1 Number 4 sentence 2 Number 3.)

E-bike as a company bike

The term e-bike has a very broad meaning in the science world. In Germany, the so called "S-pedelecs", which have a maximum speed over 25 km/h are considered to be e-bikes. Many models can reach the speed of 45km/h. Therefore, in this report, e-bikes will refer to electric bicycles having a speed over 25 km/h. (Schleinitz et al. 2017, 263.) Simultaneously, an electric bicycle with an electric motor, supporting speeds of over 25 km/h, is classified as a motor vehicle under German Road traffic Act (StVG § 1 paragraph 2 to 3; Steuerliche Behandlungen der Überlassung von (Elektro-)Fahrrädern 2020, 1). This means obligation to wear a helmet, hold a driving license AM or B, stay below the alcohol limit and organise a license plate as well as

motor vehicle liability insurance (StVG § 2 paragraph 1 and § 24a paragraph 1 in conjunction with StVO § 21a paragraph 2; PflVG § 1 and FZV § 8 paragraph 1).

The monetary value of the benefit in kind is to be determined based on the statutory regulations which refer to one percent rule for electric vehicles. Here, the assessment basis is one quarter of the gross list price for e-bikes granted to the employee for private use between 2020 and 2030, when costing less than 60,000 euro and producing zero local CO_2 emissions. (EStG § 6 paragraph 1 Number 4 sentence 2 Number 3.) The list price is rounded down to a full hundred euro only after quartering it (LStR R 8.1 paragraph 9 Number 1 sentence 6; Schönfeld & Plenker 2020b). In addition to one percent rule, an additional 0.03% of the list price per month is determined for distance travelled in kilometres between home and the primary place of employment (EStG § 8 paragraph 2 sentence 3). Although the value calculated with the one percent rule would remain under forty-four euro within the calendar month, the amount cannot be considered tax-exempt for the employee (EStG § 8 paragraph 2 sentence 11).

E-scooters

An e-scooter is a small seatless electric vehicle with a maximum speed of no less than 6 km / h and no more than 20 km / h (eKFV § 1 paragraph 1 Number 1). An employer-provided e-scooter for sole work-related activities, for example visiting a client, is considered a travel expense reimbursement and, therefore, tax-free (EStG § 3 Number 16.) However, an e-scooter granted also for private use and trips between home and primary place of work is considered as a benefit in kind and taxable income (eKFV § 1 paragraph 1 Number1 in conjunction with EStG § 6 paragraph 1 Number 4 sentence 2 Number 3 and § 8 paragraph 2 sentence 3).

For e-scooters apply the same rules as for e-bikes. It means one percent rule combined with either 0,03% or 0,002% rule (EStG § 6 paragraph 1 Number 4 sentence 2 Number 3 in conjunction with § 8 paragraph 2 sentence 3 to 5). The list price can be quartered and after that rounded down to a full hundred euro (EStG § 6 paragraph 1 Number 4 sentence 2 Number 3 in conjunction with LStR R 8.1 paragraph 9 Number 1 sentence 6). Although the value calculated with the one percent rule would remain

under forty-four euro within the calendar month, the amount cannot be considered tax-exempt for the employee (EStG § 8 paragraph 2 sentence 11). However, a flat-rate of 15% can be applied for the benefit in kind for journeys between home and the primary place of work (EStG § 40 paragraph 2 sentence 2 Number 1). This employer-paid flat-rate tax is exempt of social security contributions (EStG § 40 paragraph 3 sentence 1 in conjunction with SvEV § 1 paragraph 1 sentence 1 Number 3).

Pedelec and e-bike charging

The benefit in kind does not exist when charging a pedelec at the stationary operational installation of the employer or its affiliated company (Schönfeld & Plenker 2020b). Simultaneously, an e-bike can be recharged at the stationary operational installation of the employer or its affiliated enterprise tax-free when this is granted by the employer in addition to due remuneration (EStG § 3 Number 46).

4.4 Commuters are many

Over seven percent of employees walk to the workplace (Berufspendler 2017). Tax exemption or reliefs for possible employer-provided commuter benefits, particularly for walking, is not mentioned in the German Income Tax Act. Nevertheless, there is a possibility to deduct a commuting allowance as a revenue-related expense from the earned income when filing a tax return (EStG § 9 paragraph 1 sentence 2 and sentence 3 Number 4 sentence 2). This allowance refers to employees' expenditures for ways between home and the primary place of work. The distance lump sum is a uniform thirty cents per distance kilometre for each working day. As it is not specified, how the journey should be made, also walking entitles to the commuter allowance. The allowance amount is limited to 4,500 euro per annum. (EStG § 9 paragraph 1 sentence 3 Number 4 sentence 1 to 2.)

Other means of transport play a yet insignificant part of commuting (Berufspendler 2017). But tomorrow's mobility will not be only green or blue. The beginning of the new millennium is characterised by both an increasing demand for mobility and an

expanding variety of mobility forms. There is a clear trend direction to individualisation, urbanisation, and connectivity. Technical development and changes in human needs, require transport to be more networked, digital, post-fossil and shared. (Mobilität Glossar 2020.)

5 Research results

The research material has been analysed by comparing different situations and alternatives. The analysis of the data highlights the complexity and breadth of the research topic, which could not be assumed on this scale at the time of preparing the research design. The research design has been delimited and crystallised accordingly. The analysis is carried out so that the tax-efficiency can be observed, and conclusions can be drawn. When interpreting, the obtained research information is mirrored against the research questions.

5.1 Research results regarding commuter benefits for public transport

Particularly beneficial are one-way, return und multi-trip tickets as well as various forms of season tickets (Imping et al. 2020, Number 2518). For example, IsarCard is a monthly pass for local transport in Munich area and BahnCard 100 is an annual pass for long-distance transport within Germany (The IsarCard pass for frequent travellers n.d.; Alle BahnCards für Privatreisende n.d.). In contrast, BahnCard 25 is a discount card which grants 25% discount at Deutsche Bahn on the specified ticket fares (Alle BahnCards für Privatreisende n.d.). Here, the tax exemption applies to both, purchase of the discount card and purchase of the discounted travel tickets (Imping et al. 2020, Number 2518). However, there are a few legislative requirements for employer-paid commuter benefits for public transport. These and their hierarchy are illustrated in Figure (see Figure 2).

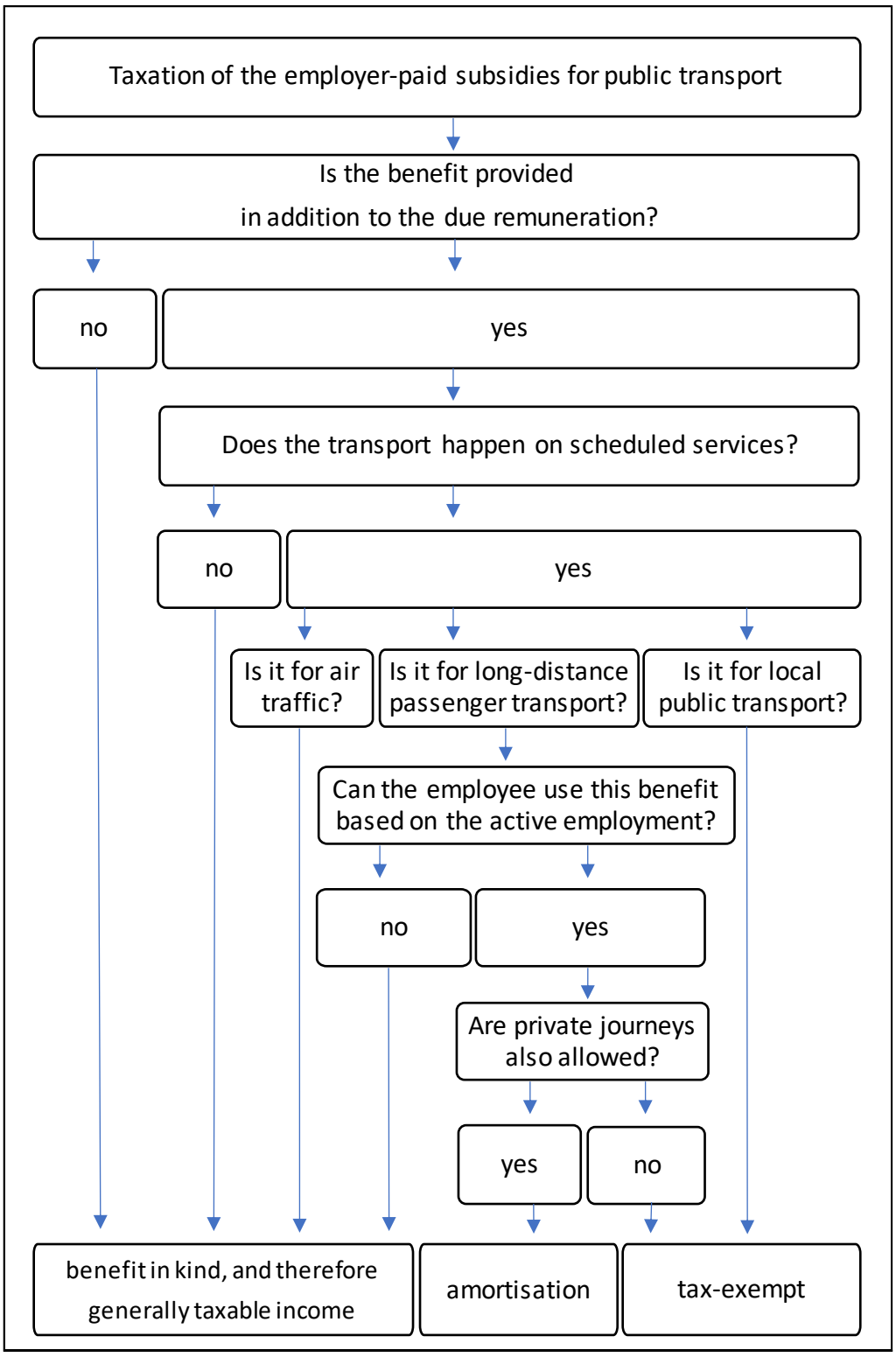

Figure 2. Tax treatment of employer-paid subsidies for public transport

It turns out that commuter benefits for local public transport are both tax-efficient and on requirements point of view, less complicated to offer. The tax-efficiency is also possible if the employer prefers to grant the same kind of ticket type for local public transport to all employees, regardless of where they live. This might not serve

everyone, as employees can live far away from the workplace. The same tax-efficiency can be reached with commuter benefits for long-distance public transport. Nevertheless, the long-distance commuter benefit can be only offered tax-exempt for a route between home and the primary place of work.

Benefit in kind exist, for example, on situations when an employer does not give the commuter benefit to public transport in addition to due remuneration but concludes a framework agreement with a local public transport company, and grants an additional discount to its employees on the top of the usual volume discount received from the transport company. The employer can also sell these tickets to its staff members at higher price than its volume discounted purchase price was. These alternatives and their affect to tax treatment are visualised in a table (see Table 7).

Table 7. Changes in the monthly monetary value of the benefit in kind for Job-Tickets with employees self-participation depending on employers contribution amount

	Provided with the lower price than originally acquired	Provided with the same price than originally acquired	Provided with the higher price than originally acquired
Regular price in euro	55.00	55.00	55.00
Volume discounted price in euro, granted to an employer	45.00	45.00	45.00
Employee price in euro, granted by the employer	40.00	45.00	50.00
Monetary value of the benefit in kind in euro	5.00	0.00	0.00

Figure 3 visualises the employer's possibility to choose flat-rate taxation when the commuter benefit for public transport is considered as a benefit in kind (see Figure 3). If the monetary value of the benefit in kind is under forty-four euro and therefore minor, it is an attractive alternative to handle it tax-exempt. However, this is seldom the employer's first choice. It would lead to the situation, that in each month, the employer has to calculate all the employee's minor benefits together to verify whether the limit of forty-four is exceeded or not.

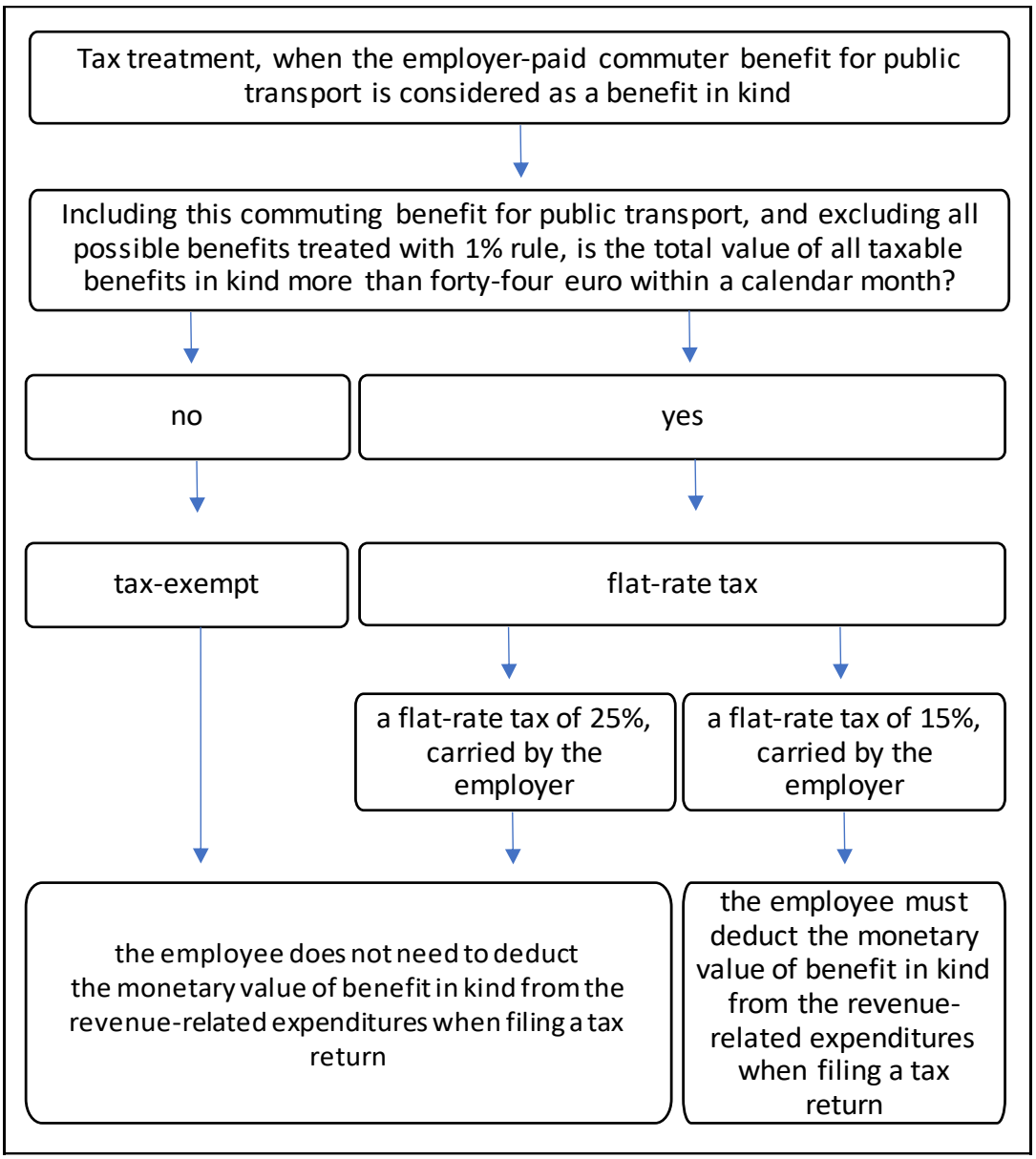

Figure 3. The Employer's right to choose the flat-rate tax when the commuter allowance for public transport is not considered tax-free

The tax treatment of long-distance travel tickets depends on whether these are offered in addition to the due remuneration and whether the private journeys are allowed. Table 3 presents how a salary conversion reduces the payout amount and how the employer can voluntarily carry the tax burden to expand the benefit to also cover private journeys (see Table 8).

Table 8. Comparison of employer-paid subsidies to long-distance tickets depending on payment type and permitted use

	Salary conversion	Employer offers to carry the taxes	Employer selects a tax-free ticket form
Granted in addition to the remuneration	no	yes	yes
Permitted for private use	yes	yes	no
Tax treatment	individual	flat-rate of 15%	tax exempt
Regular price in euro	200.00	200.00	200.00
Benefit in kind in euro	200.00	200.00	0.00
Base salary in euro	2,600.00	2,800.00	2,800.00
Tax burden in euro, carried by employer	0.00	34.35	0.00
Tax burden in euro, carried by employee	410.27	410.27	410.27
Social security contributions in euro, carried by the employer	555.10	555.10	555.10
Social security contributions in euro, carried by the employee	555.10	555.10	555.10
Pay out	1,834.63	2034.63	2034.63
Tax-efficiency	for none of the parties	for employee	for employer and employee

Public transport for long-distance commuting refers predominantly to trains for Deutsche Bahn. When the commuting distance is long enough, or the employee also makes business trips with the train, an annual travel authorisation like BahnCard 100 might come less expensive than various single tickets. An amortisation prognosis clarifies whether the annual authorisation can grant tax-exempt. Generally, amortisation refers to the process of writing down a loan or an asset. It is also used to spread out expenses over a specific period for tax purposes. (Tuovila 2020.) A forecasted

amortisation is used to determine whether an annual travel authorisation would be worthwhile because of the employer's interest (see Figure 4).

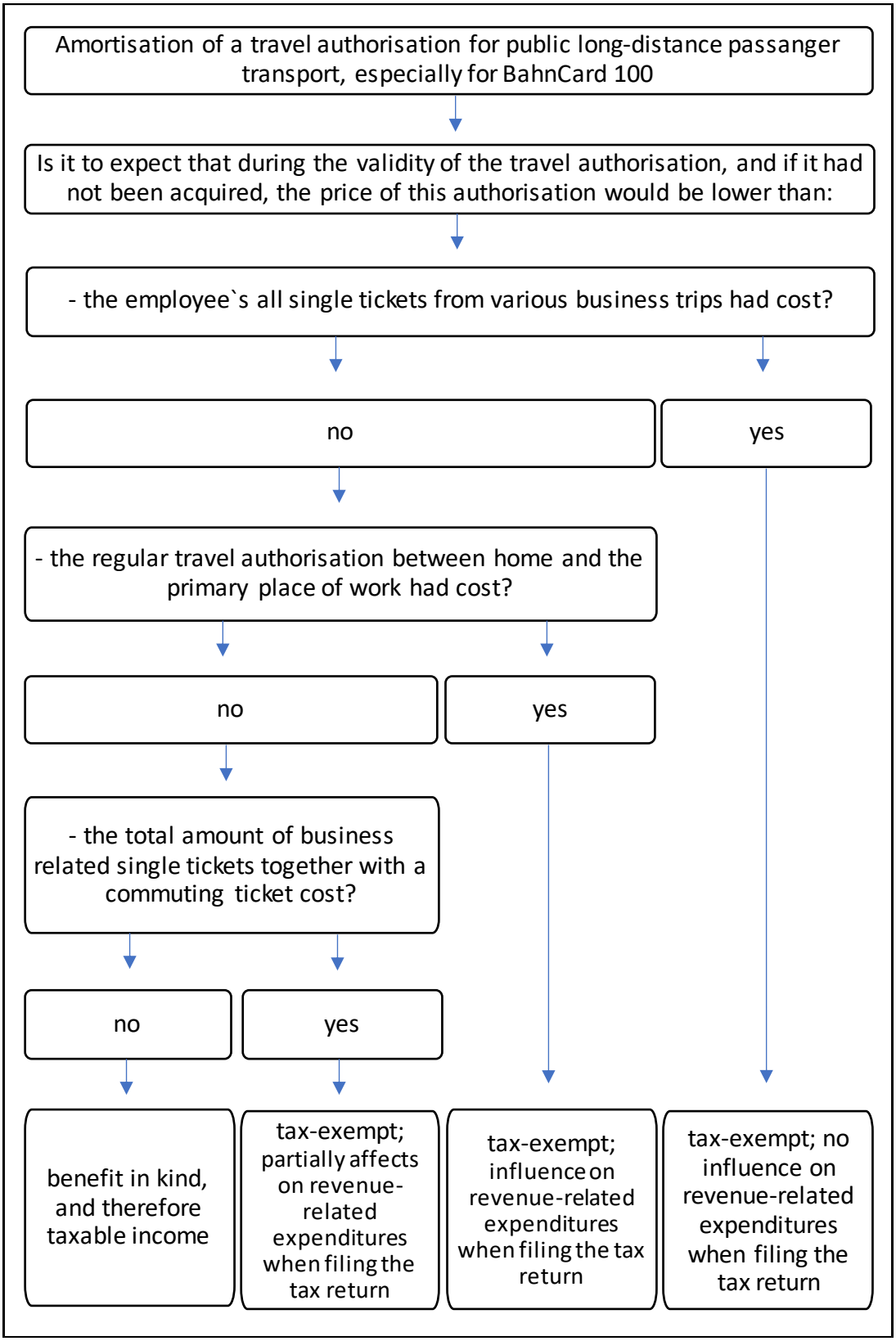

Figure 4. Tax treatment of long-distance travel authorisation based on amortisation

Four examples describe the amortisation of a long-distance travel authorisation and show how the amortisation affects to tax treatment (see Table 9). In the first alternative, it is to remark that if the savings from single tickets from foreseen business trips would be higher than the price of the travel authorisation, then this employee can use the authorisation for commuting and private journeys without having any impact on taxation (EStG § 3 Number 16 in conjunction with SvEV § 1 paragraph 1 Number 1 to 3). For a person, who travels a lot with a train, a fully amortised BahnCard is tax-efficient and attractive benefit. It is also to note, that the higher the forecasted value of all single tickets from foreseen business trips would be, the better tax-efficiency is reached.

In the second alternative, it is to remark that the savings from single tickets from foreseen business trips are not higher than the price of the travel authorisation (see Table 9). When combining the expected value of the business trip tickets together with the expected commuting costs, then the full amortisation can be reached. However, in this case, the employee needs to deduct a small amount from the revenue-related expenditures when filing a tax return. That would be the difference, between the BahnCard price and the savings for the single tickets for the planned business trips. (Steuerbefreiung nach § 3 Nummer 15 EStG in der Fassung des Gesetzes zur Vermeidung von Umsatzsteuerausfällen beim Handel mit Waren im Internet und zur Änderung weiterer steuerlicher Vorschriften 2019, 4–11; Schönfeld et al. 2020c, 169–172.)

In the third alternative, a person is not a business traveller (see Table 9). The commuting costs are expected to be higher than the price of the BahnCard. If an employer decides to offer BahnCard as a commuter benefit in addition to due remuneration, the employee needs to deduct the BahnCard price from the revenue-related expenditures when filing a tax return.

In the last alternative, full amortisation is not possible, and the employee needs to pay tax for the authorisation (see Table 9). Finally, it is irrelevant how the travel authorisation is indeed used. Therefore, also private trips to other areas in Germany and during the free time are allowed without risking the tax exemption.

Table 9. Changes in annual monetary value of benefit in kind for long-distance travel authorisation, especially BahnCard 100, depending on amortisation

	Forecasted full amortisation when employer's self-interest dominates	Forecasted full amortisation when used for business trips and commuting	Forecasted full amortisation when solely used for commuting	Forecasted partial amortisation when private journeys included
Annual fee for travel authorisation, in euro	3,878.00	3,878.00	3,878.00	3,878.00
Forecasted value of all business-related single tickets if travel authorisation had not used, in euro	4,000.00	3,000.00	0.00	2,000.00
Forecasted value of commuting cost if travel authorisation had not used, in euro	1,000.00	1,000.00	4,000.00	1,000.00
Amount, the employee needs to deduct from the revenue-related expenditures, in euro	0.00	878.00	3,878.00	0.00
Benefit in kind, annual monetary value in euro	0.00	0.00	0.00	3,878.00

Forecasted amortisation is also used to determine whether an annual discount authorisation for public trains would be worthwhile because of employer's interest. Amortisation procedure is illustrated in Figure (see Figure 5).

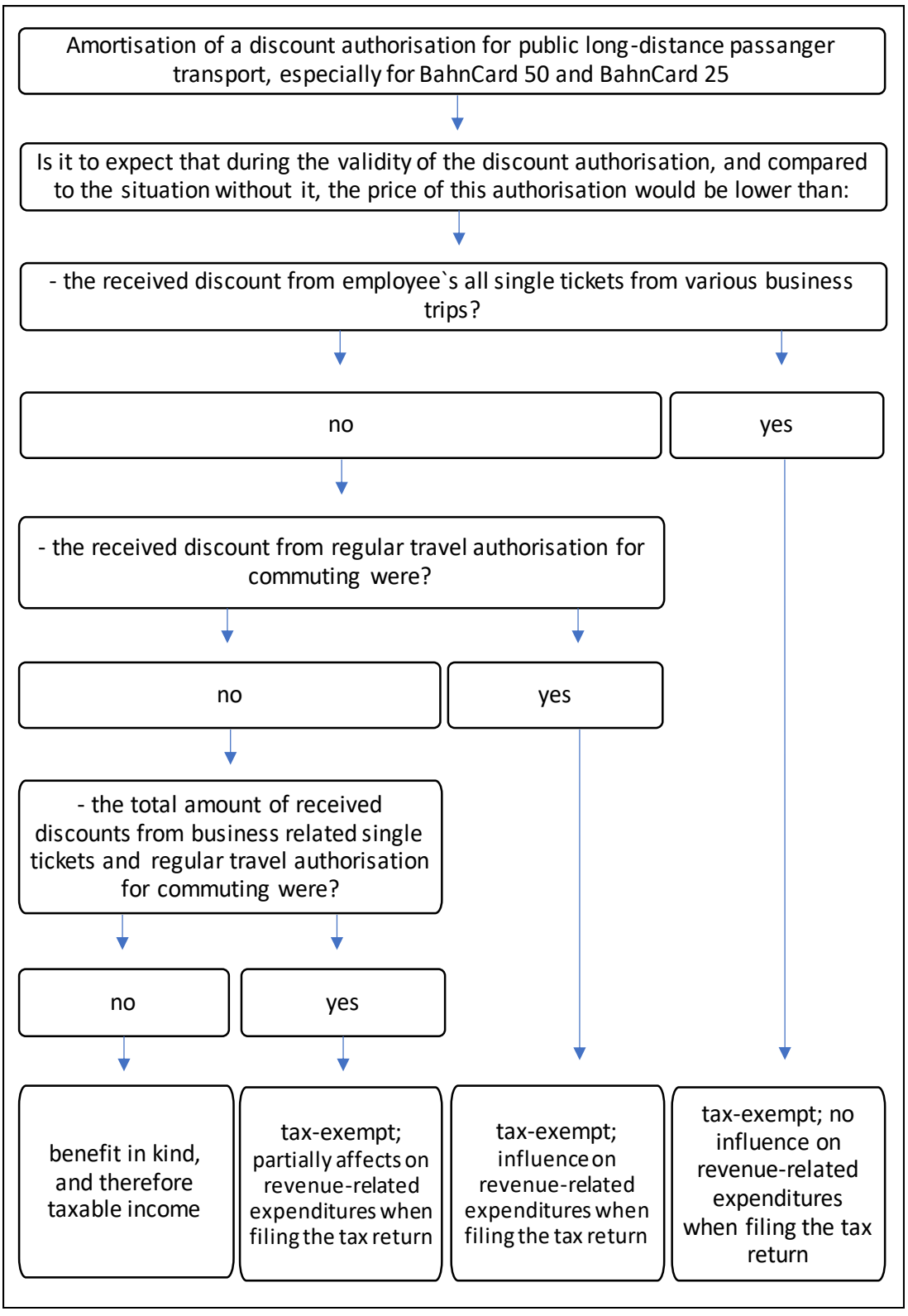

Figure 5. Tax treatment of discount authorisation for long-distance passenger transport based on amortisation

Four amortisation cases regarding discount cards and amortisation's effect to tax treatment are visualised in a table (see Table 10). It is to note, that the higher the foreseen discount from planned business journeys would be, the better tax-

efficiency is reached. After the forecast, it is irrelevant whether the discount authorisation is used for business, commuting or private journeys.

Table 10. Changes in annual monetary value of benefit in kind for long-distance discount authorisation, for example BahnCard 50, depending on amortisation

	Forecasted full amortisation when employer's self-interest dominates	Forecasted full amortisation when used for business trips and commuting	Forecasted full amortisation when solely used for commuting	Forecasted partial amortisation when private journeys are included
Annual fee for discount authorisation, in euro	224.70	224.70	224.70	224.70
Forecasted value of all business-related single tickets if discount authorisation would not be used, in euro	500.00	300.00	0.00	200.00
Forecasted value of received discount regarding business trips	250.00	150.00	0.00	100.00
Forecasted value of commuting cost if discount authorisation would not be used, in euro	100.00	200.00	1,000.00	100.00
Forecasted value of received discount regarding commuting	50.00	100.00	500.00	50.00
Amount, the employee needs to deduct from the revenue-related expenditures, in euro	0.00	74.70	224.70	0.00
Benefit in kind, annual monetary value in euro	0.00	0.00	0.00	224.70

When the travel or discount authorisation pays it only partially off, the benefit in kind exists for an employee. Still, there is a possibility to book corrections either on monthly basis or in the end of the validity period. All savings from business trips and commuting can be deducted from the primary benefit in kind until the purchase price of the authorisation (see Table 11).

Table 11. Recalculated annual monetary value of benefit in kind with the correction booking at the end of the validity period of travel authorisation

	Corrections for forecasted partial amortisation reduces the monetary value of benefit in kind	Corrections for forecasted partial amortisation leads to a full amortisation
Annual fee for travel authorisation, in euro	3,878.00	3,878.00
Forecasted value of all business-related single tickets if travel authorisation would not be used, in euro	2,000.00	2,000.00
Forecasted value of commuting cost if travel authorisation would not be used, in euro	1,000.00	1,000.00
Annual monetary value of benefit in kind, in euro	3,878.00	3,878.00
Calculated value of all single tickets from incurred business trips if travel authorisation would not be used, in euro	2,100.00	3,500.00
Amount to be booked as a correction in the end of validity period, in euro	2,100.00	3,500.00
Calculated value of incurred commuting costs if the travel authorisation would not be used, in euro	1,000.00	1,000.00
Amount to be booked as a correction in the of validity period, in euro	1,000.00	378.00
Amount, the employee needs to deduct from the revenue-related expenditures, in euro	1,000.00	378.00
Recalculated benefit in kind, annual monetary value in euro	778.00	0.00

5.2 Research results regarding company cars

Generally, the more expensive the company car and the daily commute, the greater the monetary value of benefit in kind and the higher the tax burden (EStG § 6 paragraph 1 Number 4 sentence 2 in conjunction with § 8 paragraph 2 sentence 3). The comparison of the effect of the gross list price height is visualized in a table (see Table 12). This monetary value does not decrease by the time even the vehicle gets older. A second-hand company car with a purchase price of 20,000 euro, whose gross list price was 40,000 euro, needs to be taxed with a monetary value of benefit in kind in the amount of 400 euro instead of 200 euro. However, after six years, when the vehicle is depreciated, it is allowed to limit the monetary value of the benefit in kind to actual costs if logbook method is used (Schönfeld et al. 2020c, 411). As the assessment basis of the one percent rule is always the gross list price of the vehicle, a second-hand company car is not tax-efficient commuter benefit.

Table 12. Changes in monthly monetary value of benefit in kind for conventional diesel vehicle as a company car depending on the gross list price

	Cheaper price range	Average price range	More expensive price range
Gross list price in euro	20,150.00	40,300.00	60,450.00
Divisor	1	1	1
Divided gross list price in euro	20,150.00	40,300.00	60,450.00
Applied gross list price after rounding it down to full one hundred euro	20,100.00	40,300.00	60,400.00
Private use, in euro, calculated with 1 % rule	201.00	403.00	604.00
Distance between home and work in kilometres	16	16	16
Commuting, in euro, calculated with 0,03 % rule	96.48	193.44	289.92
Benefits in kind, monthly monetary value in euro	297.48	596.44	893.92

The comparison of the effect of the commuting distance is visualised in a table (see Table 13). When evaluating the tables 12 and 13, the height of the gross list price in-

fluences to the monetary value of the benefit in kind more than the commuting distance kilometres does (see Tables 12 and 13). This is because a change in the gross list price has an impact on the benefit of private use and the benefit of commuting. But the change in distance kilometres influences only to one benefit in kind when only one variable of the 0,03% rule for commuting changes. If the employer chose to pay the 15% flat-rate tax for the commuting part, then the individual taxation with the tax bracket not be needed and the employee could ignore the monetary value of benefit in kind.

Table 13.Changes in monthly monetary value of benefit in kind for conventional diesel vehicle as a company car depending on the commuting distance

	Shorter Commuting distance	Average Commuting distance	Longer Commuting distance
Gross list price in euro	40,300.00	40,300.00	40,300.00
Divisor	1	1	1
Divided gross list price in euro	40,300.00	40,300.00	40,300.00
Applied gross list price after rounding it down to full one hundred euro	20,100.00	40,300.00	60,400.00
Private use, in euro, calculated with 1 % rule	403.00	403.00	403.00
Distance between home and work in kilometres	8	16	24
Commuting, in euro, calculated with 0,03 % rule	96.72	193.44	290.16
Benefits in kind, monthly monetary value in euro	499.72	596.44	693.16

The comparison of the effect of the vehicle type is visualised in a table (see Table 14). The monetary value of the benefit in kind decreases significantly when the gross list price can be divided.

Table 14. Changes in monthly monetary value of benefit in kind for a company car depending on the vehicle type and based on 1 % rule

	Sole electric motor and fuel cell vehicle, max. 60,000.00 euro	Sole electric motor vehicle over 60,000.00 euro or plug-in hybrid electric motor vehicle	Other kinds of motor vehicles
Gross list price in euro	40,300.00	40,300.00	40,300.00
Divisor	4	2	1
Divided gross list price in euro	10,075.00	20,150.00	40,300.00
Applied gross list price after rounding it down to full one hundred euro	10,000.00	20,100.00	40,300.00
Private use, in euro, calculated with 1 % rule	100.00	201.00	403.00
Distance between home and work in kilometres	16	16	16
Commuting, in euro, calculated with 0,03 % rule	48.00	96.48	193.44
Benefits in kind, monthly monetary value in euro	148.00	297.48	596.44

The simultaneous result is also visible when using the logbook method. The monetary value of the benefit in kind decreases significantly when the acquisition costs can be divided. The comparison of the effect of the vehicle type is visualised in a table (see Table 15).

The monetary value of the depreciation, operating costs and insurance premiums constitute general costs. The general costs are mostly carried by an employer, like in this example. If an employee needs to carry part of the costs, for example, an electric charging fee, maintenance costs or garage rental costs, then this amount must be deducted from the annual value of the benefit in kind. This happens after the costs are divided with a private and business share. (Schönfeld et al. 2020c, 831.)

Table 15. Changes in monthly monetary value of benefit in kind for a company car depending on the vehicle type and based on logbook method

	Sole electric motor and fuel cell vehicle	Plug-in hybrid electric motor vehicle	Other kinds of motor vehicles
Acquisition costs in euro	39,000.00	39,000.00	39,000.00
Divisor	4	2	1
Applied acquisition costs in euro	9,750.00	19,500.00	39,000.00
Depreciation of wear and tear (8 years)	1,218.75	2,437.50	4,875.00
Operating costs and insurance premium in euro	1,300.00	1,300.00	1,300.00
The share of private use in %	50	50	50
Benefits in kind, annual monetary value in euro	1,259.38	1,868.75	3,087.50
Benefits in kind, monthly monetary value in euro	104.95	155.73	257,29

There are a few legislative requirements when the gross list price can be divided. These and their hierarchy are illustrated in Figure (see Figure 6). This figure refers to the year 2020. The legislative minimum requirements for technical features will be different in later years (EStG § 6 paragraph 1 Number 4 sentence 2 Number 4 to 5). During the year 2020 the maximum gross list price requirement of CO_2 emission free vehicles for the tax-exemption was raised retroactively with the second Corona Tax Aid Act (Zweites Corona-Steuerhilfegesetz 2020) dated on the 29th of June 2020).

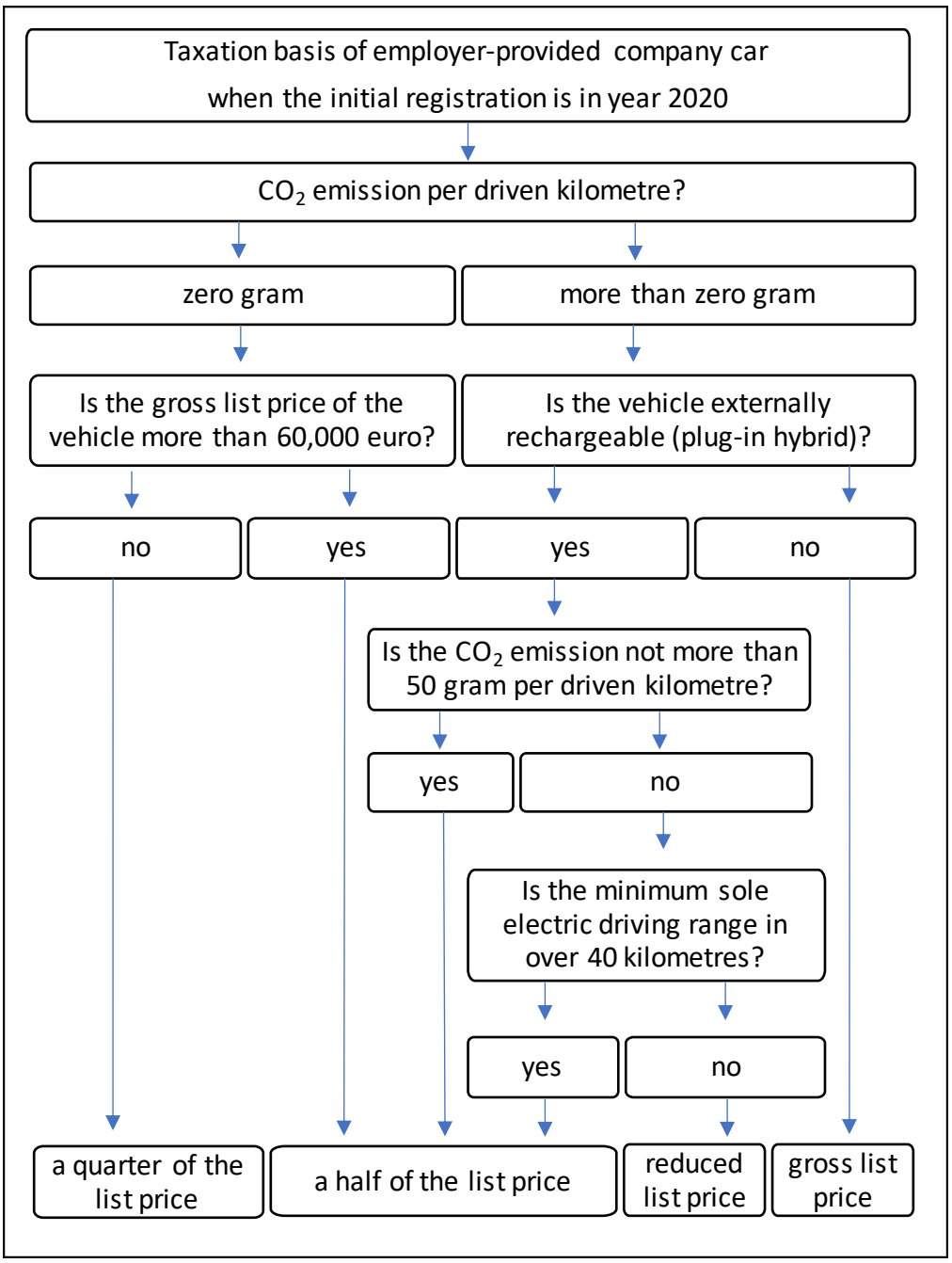

Figure 6. Assessment basis for tax treatment of employer-provided company cars when the initial registration is in year 2020

If the sole electric motor vehicle, fuel cell vehicle or the externally rechargeable hybrid electric motor vehicle does not fulfil all the technical requirements in order to get tax reliefs, the flat-rate reduction table can be used. The monetary value of the benefit in kind decreases only slightly when the flat-rate reduction is used. The comparison between halving or quartering the list price versus reducing it with the flat-rate is visualised in a table (see Table 16). As the flat-rate reduction has only a slight influence on the monetary value of the benefit in kind, a company car which fulfils

the technical requirements for tax reliefs is from the income tax point of view more tax-efficient commuter benefit than the vehicle which does not fulfil the requirements. Regardless, whether the monetary value of the benefit in kind for private use of company car would be less than forty-four euro, the amount is considered as a taxable income (Schönfeld et al. 2020c, 831).

Table 16. Changes in monthly monetary value of benefit in kind for non-conventional vehicle as a company car depending whether the legistaltive requirements are fulfilled

	Sole electric motor and fuel cell vehicle, max. 60,000.00 euro	Sole electric motor vehicle over 60,000.00 euro or plug-in hybrid electric motor vehicle	Electric, fuel cell or plug-in hybrid vehicle with flat-rate reduction
Gross list price in euro	40,300.00	40,300.00	40,300.00
Divisor	4	2	1
Divided gross list price in euro	10,075.00	20,150.00	40,300.00
Gross list price after rounding it down to full one hundred euro	10,000.00	20,100.00	40,300.00
Battery capacity in kWh	n/a	n/a	15
Flat-rate reduction (250 euro per kWh when the vehicle is acquired in 2020)	n/a	n/a	3750
Applied gross list price in euro	10,000.00	20,100.00	36,550.00
Private use, in euro, calculated with 1 % rule	100.00	201.00	365.50
Distance between home and work in kilometres	16	16	16
Commuting, in euro, calculated with 0,03 % rule	48.00	96.48	175.44
Benefits in kind, monthly monetary value in euro	148.00	297.48	540.94

When the benefit in kind is determined the tax can be levied with an employee's individual tax rate. The employer may choose to carry the taxes incurred from the commuting, but not from the private use (EStG 40 § 2).

Table 17. Tax treatment of a company car based on the volume of business and private related usage

Business related usage	> 50 %		10–50 %
Benefit in kind, vehicle for private usage	exists	exists	exists
the monetary value of private usage	1% rule	logbook	logbook
Basis for determination	Gross List Price	acquisition costs	acquisition costs
Wage Tax	with the employee's individual tax rate (carried by employee)		
Benefit in kind, commuter-benefit	exists, if the vehicle is used for commuting		
the monetary value of the commuting	0,03% rule (or 0,002% rule when less than 180 commuting days)		
Basis for determination	distance kilometres		
Wage Tax, Solidarity Surcharge, Church Tax	-employee's individual tax rate (carried by employee) or if the employer prefers: -15% flat-rate tax (carried by employer)		
Social Security contributions	-applicable only for the monetary value of private usage, -carried by employee and employer, each half -the monetary value of commuting is exempt for contributions		
Possibility to deduct a commuting allowance of 30 cent per distance km when filing the tax return	only, if the employer-paid 15% flat-rate tax is not applied		

There is also a tax-efficient commuter benefit when using a private car. Fuel vouchers or cards with a maximum amount of forty-four euro per month are tax-efficient way to reimbursement of commuting expenses, as they are tax-exempt within this limitation.

5.3 Research results regarding company bikes

The procedure to find out the appliable tax treatment for a company bike is a bit easier than the procedures for company cars or subsidies for commuting with public transport. Bike leasing companies have noticed this, and are able to offer tax-efficient alternatives.

Figure 7. Sunset and a company bike (Jobrad n.d.)

Still, there are a few legislative requirements when a company bike can be granted tax-exempt or the gross list price should be divided. These and their hierarchy are illustrated in Figure (see Figure 8).

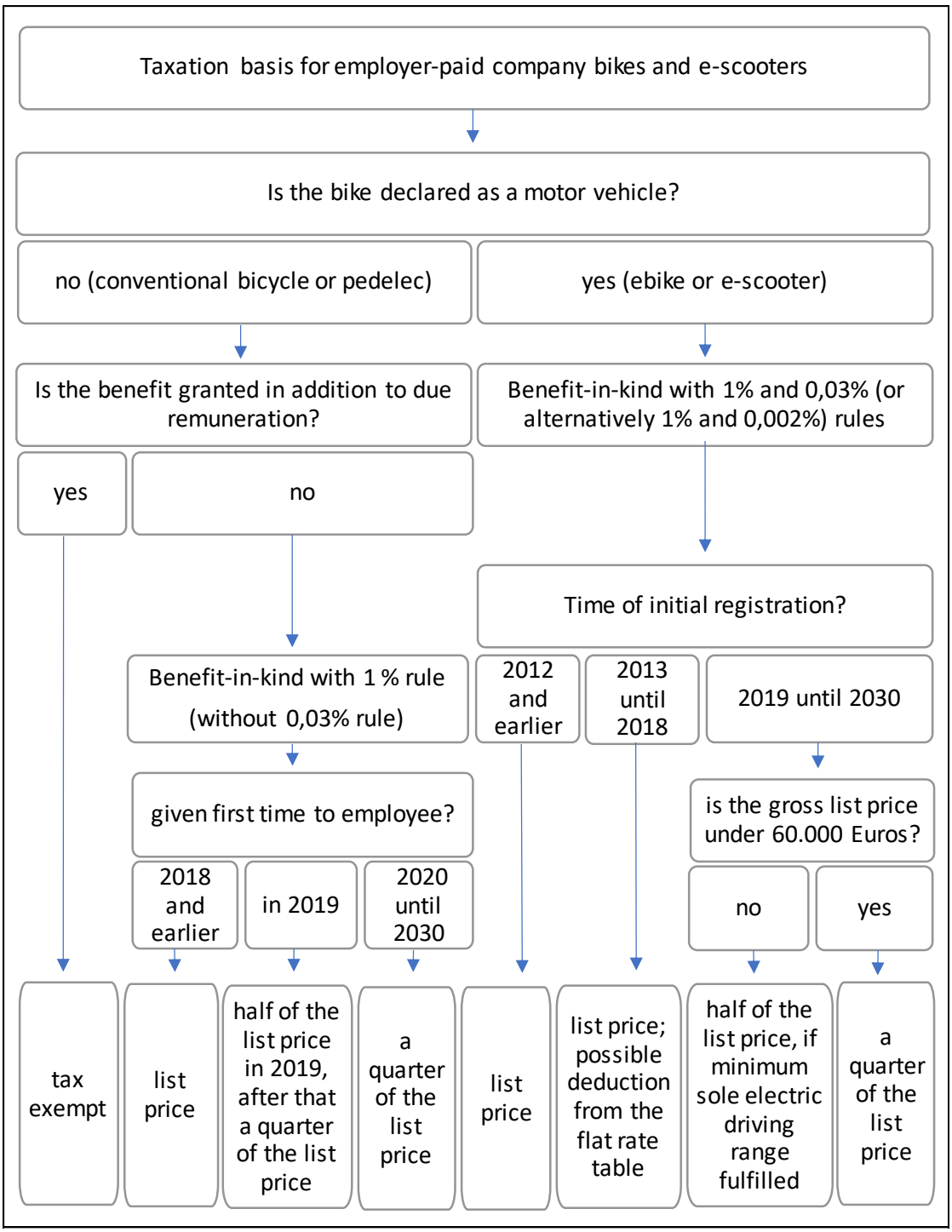

Figure 8. Tax treatment and assesment basis of employer-provided company bikes, pedelecs, e-bikes and e-scooters

Table 17 describes the comparison of various bike types when the initial registration happened in 2020 and the bike was first time given to the employee in the same year (see Table 18). If the bike is given to an employee in addition to due remuneration and it is not declared as a motor vehicle, then it is tax-exempt and therefore, on the income tax point of view, tax efficient. For practical reasons, it is worth investing in

electric charging equipment in order to take advantage of this tax-efficient commuter benefit.

Table 18.Changes in monthly value of benefit in kind for company bikes depending on bike type and employees contribution

	Conventional bicycle in addition to a due remuneration	Pedelec in addition to a due remuneration	Conventional bicycle or pedelec as a salary conversion	E-bike or e-scooter
Gross list price in euro	5,000.00	5,000.00	5,000.00	5,000.00
Divisor	not applicable	not applicable	4	4
Divided gross list price in euro	0.00	0.00	1,250.00	1,250.00
Gross list price after rounding it down to full one hundred euro	0.00	0.00	1,200.00	1,200.00
Private use, in euro, calculated with 1 % rule	0.00	0.00	12.00	12.00
Distance between home and work in kilometres	16	16	16	16
Commuting, in euro, calculated with 0,03% rule	0.00	0.00	0.00	5.76
Benefits-in-kind, monthly monetary value in euro	0.00	0.00	12.00	17.76

When the benefit in kind exists, and the one percent rule applies, the monthly monetary value needs to be taxed with an employee's individual tax rate. As bikes seldom generate benefits in kind with a monthly monetary value over forty-four euro, the question rises whether this could be handled tax-exempt. Still, it is not possible as the one percent rule cannot be treated with a flat rate tax or tax-exempt. Nevertheless, bicycles, pedelecs and e-bikes can be seen tax-efficient.

6 Discussion

According to Kagan (2020), tax-efficiency refers to financial decisions to minimise tax liability. The outcome of the decisions is tax-efficient when the tax liability is lower compared to an alternative structure but achieves the same goal. (Kagan 2020.) This study describes in which employer-paid commuter benefits the least possible income taxation occurs in 2020. Furthermore, it discloses that German employers have a variety of ways to obtain the tax-efficiency when offering commuter benefits to its employees. Most likely, the tax-efficiency is of benefit to the employer also, given that the low taxation of the commuter benefit results in higher net benefit and thereby a more satisfied employee.

There are no typical commuters (Ullah et al. 2019, 6). Employees have different personal and family circumstances (Commuter Survey Report 2013, 3). Therefore, their needs and preferences are not similar (Nobis & Kuhnimhof 2018, 127; Ullah et al. 2019, 19). Although, one-size-fits-all commuter benefit does not exist, there is a possibility to offer various tax-efficient commuter benefits to employees. When offering benefits, the employer needs to evaluate besides tax-efficiency also many other aspects like financial impact, organizational time consumption and business connectivity.

This research highlights that tax-efficiency can be reached by building a model of some well-selected tax-efficient commuter benefits (see Figure 9). When an employer prepares its employee attraction strategy, it is worthwhile to consider a model with climate-friendly alternatives for different business needs and various commuting situations. With a proper employee attraction strategy, recruiting and hiring talents will be easier. (State of American Workplace 2017, 6). On a large scale, the advantages like reduced carbon footprint, employer's attractiveness to recruit talents, and employees tax savings will hopefully accumulate and shape the commuting in a new era. This could be researched in future.

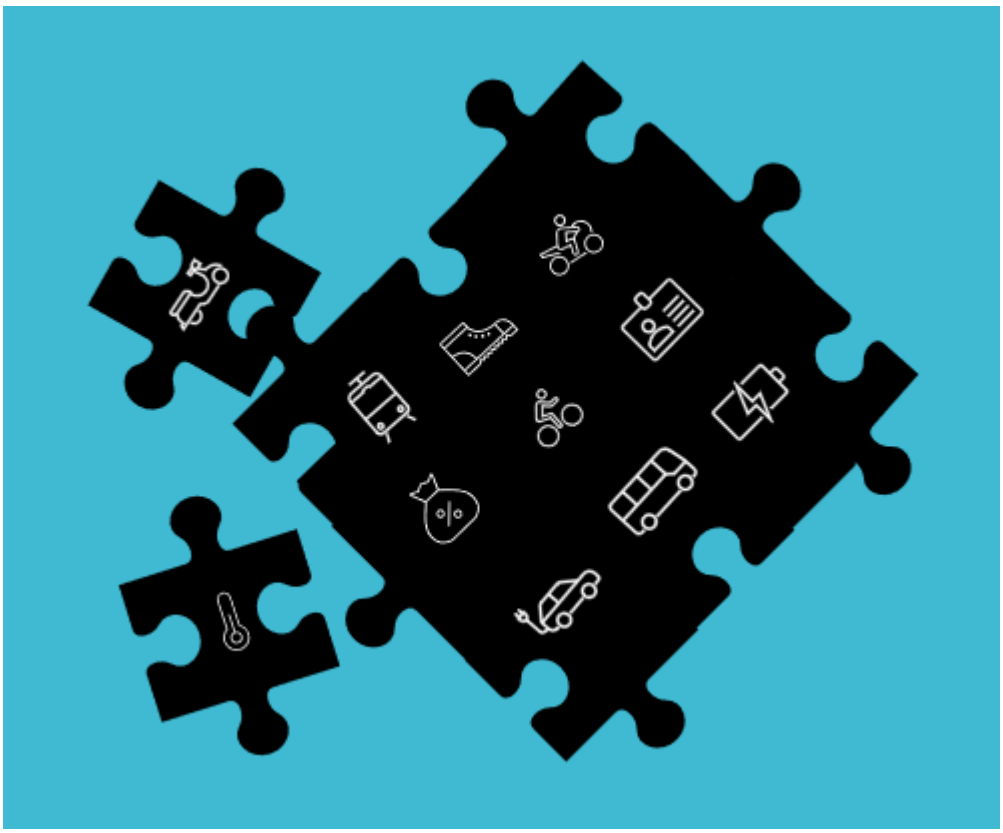

Figure 9. Model of some well-selected commuter benefits

Tax-exempt subsidies and tickets, like Job-Tickets and full amortised BahnCards, for public transport are financially attractive for an employee, as an employee can save the amount used for commuting. Still, the precondition for the benefit is a well-developed public transport network between home and the primary place of work. Although, substantial additional expenses incur to the employer, as these commuter benefits need to be granted in addition to the due remuneration. From the income tax point of view these benefits require careful planning to ensure that the requirements for tax exemption are fulfilled. When this is once done, the commuter benefits for public transport can be offered tax-efficient to employees.

Converting a company car from a diesel to an electric model was earlier associated, besides infrastructural challenges and technical limitations, with high investment costs. Profitability was rather seldom achieved regardless of various smaller tax reliefs and other subventions. Nevertheless, the tax treatment of the company car has undergone numerous evolutions in the last years (Seifert & Hammerl 2020). With the 2030 Climate Program and the new Climate Protection Act, the Federal Government

of Germany has successfully removed the barriers to invest in electric driving (Was tut die Bundesregierung für den Klimaschutz? 2020).

The acquisition of an electric vehicle has become attractive as a company car since the list price can be quartered for tax purposes, and the electric charging is in many forms tax-exempt for an employee (EStG § 3 Number 46 and § 6 paragraph 1 Number 4 sentence 2 Number 3). This together with the falling electric motor vehicle prices and increasingly appearing charging stations improves employer's and employee's possibilities to invest in climate-friendly mobility (Nürnberg 2020; Kostenvergleich e-Fahrzeuge + Plug-In Hybride gegen Benziner und Diesel 2020). From the income tax point of view, the sole electric motor vehicle, the fuel cell vehicle, and the externally rechargeable hybrid electric vehicle are since begin of the year 2020 tax-efficient alternatives as a company car for both, an employer, and an employee. Luckily, many of these tax reliefs are tied until year 2030 (EStG § 52 paragraph 4). If the employer prefers to offer vouchers or gift cards as a commuter benefit, it is worth staying well below forty-four euro per person and annum to ensure that the granted amount is predominantly for an employee and not for the tax authorities.

Caution is essential when using secondary data. The data needs to be suitable, adequate in the context of the research problem. (Kothari 2004, 111.) This study includes several tables, calculations, and comparisons made with spreadsheet software. Their meaning and limitation are critically reflected together with other available data. The impact of statistics on the study results is almost negligible, as statistical information from various sources, such as The Federal Statistical Office and the Federal Ministry for Transport and Digital Infrastructure, is used to find out how the Germans commute to work. Nevertheless, these statistics have helped to frame the concept. Special caution is emphasised for reliability, suitability, and adequacy of the legislative data (Kothari 2004, 111). This means that the legislation interpreted is in force, applies to the case, and is described in sufficient detail and accuracy. Only on this basis the economical calculations and comparisons are trustworthy.

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