

## ON THE PUNISHMENT OF WHITE-COLLAR AND TAX CRIME: AN ECONOMIC ANALYSIS

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### ABSTRACT

*Economic and tax crimes account for a significant proportion of criminal activity and result in considerable economic damage. In Germany, two of the most prominent offenders in this area in recent years were Thomas Middelhoff and Uli Hoeneß, both of whom served jail sentences. Taking advantage of the widespread media coverage of both cases, the following paper draws on economic theory to compare prison terms with fines. It argues that fines are preferred from an economic perspective and can therefore be considered a useful first-choice punishment in cases involving white-collar and tax crimes. The paper sees itself in this regard as a plea.*

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## I. IMPORTANCE ATTACHED TO WHITE-COLLAR AND TAX CRIMES

The Sarbanes-Oxley Act of 2002, which was adopted following numerous corporate scandals,<sup>1</sup> marked a turning point in international commercial criminal law. On the basis of the adopted regulations, a "new hardship" was established against white-collar criminals. This is illustrated, for example, by the sentencing of the US financial fraudster Bernard Madoff to 150 years imprisonment. The multitude of criminal law norms is astonishing in this context, as it leads to increased complexity and ignores the recognition that criminal law as a control instrument has not been a resounding success.<sup>2</sup>

The tendency of many courts is to sentence white-collar and tax criminals to imprisonment. Typically, the convicts are middle-aged<sup>3</sup> and their social standing cannot be compared with that of other criminals. The question therefore arises whether the judicial system is sufficiently prepared for this "new hardship", or whether it contains weaknesses that make other levels of punishment appear preferable. In particular, the interpretation of economic criminal law by the courts must be critically examined to the effect that it is developing into a brake on the economy as a result of anti-market economic tendencies.<sup>4</sup>

The former CEO of Arcandor AG Thomas Middelhoff recently published a book about his experiences with the German prison system. In his book, Middelhoff, who served a three-year sentence for infidelity at the Essen Penitentiary, describes particularly negative conditions during his imprisonment:<sup>5</sup> In particular, he discusses an autoimmune disease that he had developed during his prison stay and criticizes the conditions at the Essen Penitentiary as unacceptable, especially the constant suicide monitoring during the first six weeks. This monitoring entailed Middelhoff being woken up every fifteen minutes during the night, forcing him to experience sleep deprivation. This in turn led to the former top manager developing an incurable autoimmune disease that involved weight loss and swollen feet; the treatment, Middelhoff writes in his book, also left much to be desired. Middelhoff even compares the prison conditions he experienced with those found at Guantanamo, the US-run prison for terrorists. His book represents a judgment with the German judiciary. Middelhoff writes about his very small single cell, about questionable sanitary facilities, and about cold, frosty nights in his cell. Since the book, *A115 – Der Sturz*, now ranks at the top of the German book trade's sales lists, it cannot be ruled out—irrespective of the justified criticism of Middelhoff's behavior and the judicially clarified

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<sup>1</sup> See e.g. John C. Coates, *The Goals and Promise of the Sarbanes-Oxley Act*, 21(1), JOURNAL OF ECONOMIC PERSPECTIVES, 91-116 (2007).

<sup>2</sup> See HAUKE BRETTEL & HENDRIK SCHNEIDER, WIRTSCHAFTSSTRAFRECHT, § 1 no. 65 (2nd ed.2018).

<sup>3</sup> See Hendrik Schneider & Dieter John, *Der Wirtschaftsstraftäter in seinen sozialen Bezügen. Empirische Befunde und Konsequenzen für die Unternehmenspraxis*, in *Wirtschaftskriminalität*, 161-162 (Britta Bannenberg & Jörg-Martin Jehle, 2010).

<sup>4</sup> See Hendrik Schneider, *Wachstumsbremse Wirtschaftsstrafrecht*, NEUE KRIMINALPOLITIK 24, 30–37.

<sup>5</sup> See also in the following: THOMAS MIDDELHOFF, *A115 – DER STURZ* (2017).

question of guilt—that the German prison system has not suffered a loss of reputation. In addition to the health consequences, Middelhoff has also had to file for private insolvency.

The chairman of the Supervisory Board of FC Bayern Munich AG, Uli Hoeneß, also has had to serve a prison sentence; in his case, at Landsberg Prison for tax evasion. German society attaches great importance to economic and tax crimes as illustrated by the following three figures. Fig. 1 shows the development of cases of white-collar crime in Germany between 2006 and 2016:

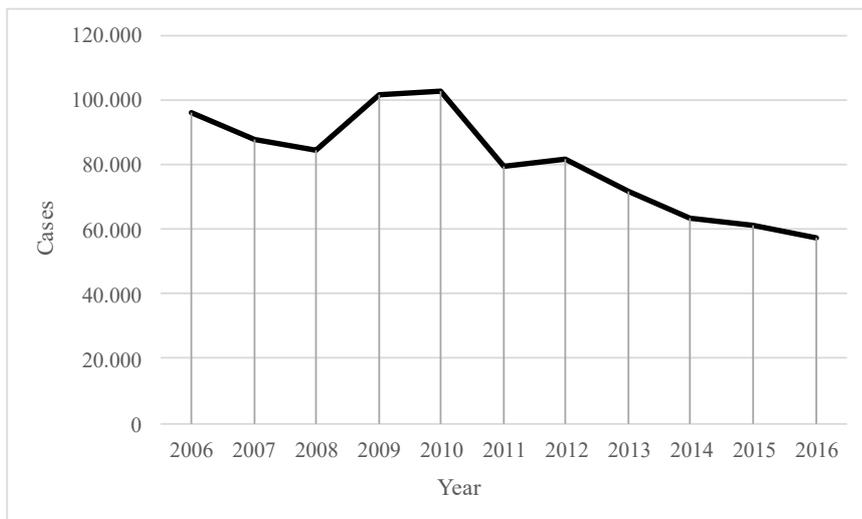


Fig. 1: Cases of white-collar crime in Germany (source: Federal Criminal Police Office of Germany, 2017)

In the area of tax criminal law, cases are also on a comparable scale (fig. 2). This underlines their importance in the context of criminal prosecution:

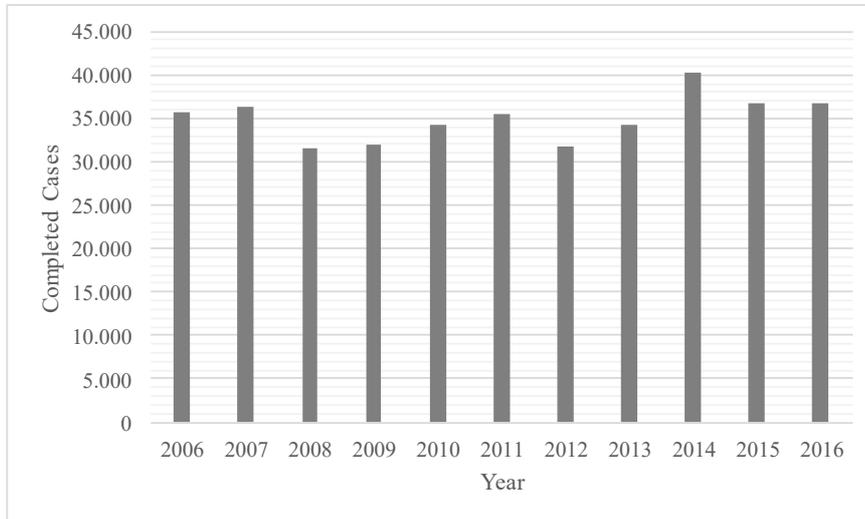


Fig. 2: Number of completed tax investigations in Germany (source: Federal Ministry of Finance of Germany, 2017)<sup>6</sup>

This results in economic losses running into billions (fig. 3), so that an economic analysis of the associated penalties appears justified:

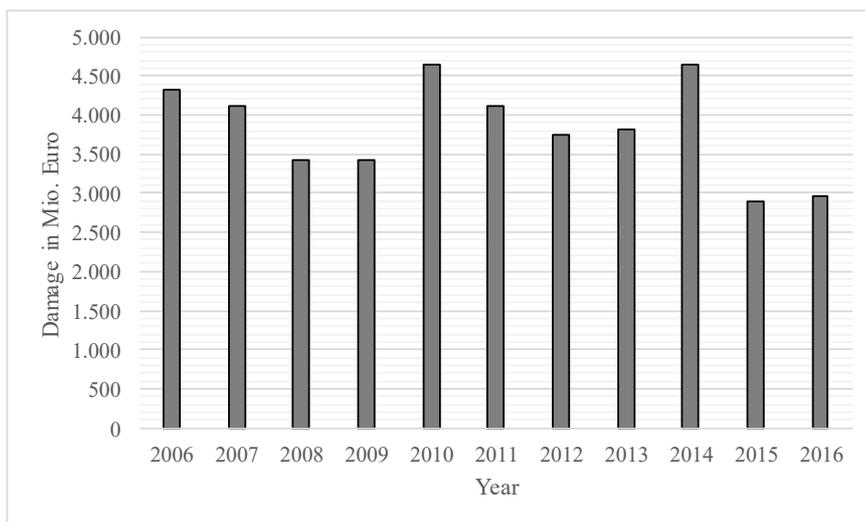


Fig. 3: Damage from white-collar crime in Germany (source: Federal Criminal Police Office 2017)

<sup>6</sup> Of course, the number of undetected tax offenses should not be underestimated.

In this context, the question of the costs and benefits of imprisonment for tax and economic offenses arises. An analysis of punitive measures from an economic perspective is an obvious option, as it focuses in particular on costs and benefits.<sup>7</sup> On the basis of such an economic analysis of economic and tax crimes and the criminal law associated with them, it is questionable whether prison sentences for economic and tax offenses can meet the efficiency standard at the center of the economic analysis of law in general and criminal law in particular. From an economic point of view,<sup>8</sup> an optimal penalty (P) is found if the marginal costs of the penalty (MC(P)) equals the marginal utility (MU(P)):

$$MC(P)=MU(P)$$

Therefore, penalty shall be imposed as long as:

$$MU(P)>MC(P)$$

Admittedly, an economic analysis of the law must not be interpreted as representing the ideal path. Under certain circumstances, economic considerations may have to be put aside in favor of legal and political evaluations; however, economic considerations can provide an initial indication of efficiency aspects in order to discuss the impact of legal norms and judicial decisions.<sup>9</sup>

The following paper would therefore like to take the Middelhoff and Hoeneß cases as an opportunity to carry out an analysis of prison sentences for such offenses on the basis of the economic theory of crime and criminal law that can be traced back in particular to Gary S. Becker<sup>10</sup> and to critically assess the economic efficiency of prison sentences for economic and tax offenses. In performing a cost-benefit analysis, the paper focuses on the economics of happiness, which can also be applied to the punishment of criminal individuals.<sup>11</sup>

<sup>7</sup> For a cost-benefit analysis: Jacques Stohler, *Zur Methode und Technik der Cost-Benefit-Analyse*, 20(2), KYKLOS, 218–245(1967).

<sup>8</sup> See Bruno S. Frey & Angel Serna, *Recht und Wirtschaft: Bemerkungen zu einem interdisziplinären Forschungsprogramm*, 2(4), STAATSWISSENSCHAFT UND STAATSPRAXIS, 534–547, 537 f. (1991); Roland Kirstein & Dieter Schmidtchen, *Ökonomische Analyse des Rechts*, 4, CSLE DISCUSSION PAPER SERIES (2003).

<sup>9</sup> See Florian Follert, *Kriminalität und Strafrecht aus ökonomischer Sicht*, 130(2), ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFT, 420–437, 423 (2018).

<sup>10</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217 (1968).

<sup>11</sup> It should be noted that only offenses committed by natural persons are considered.

An exact definition of white-collar crime does not exist in the literature.<sup>12</sup> Fraud, breach of trust, accounting crimes, corruption, and bribery are often subsumed under the label of white-collar crime. In this contribution, economic and tax crimes are to be understood simply as illegal behavior that serves the goal of improving one's own financial position. This enrichment takes place at the expense of private entities (mostly enterprises) as well as at the expense of the state and thus indirectly also at the expense of the general public.<sup>13</sup>

## II. THE ECONOMICS OF WHITE-COLLAR AND TAX CRIME

Why do individuals evade taxes or commit white-collar crimes? The economic theory of crime provides an analytical framework for explaining illegal actions and is by no means limited to white-collar crime.<sup>14</sup> The economics of crime, which Becker (1968) decisively determined, interprets a criminal act as the result of a rational weighing process. Criminal action is therefore not the result of a particular personality, but rather should be interpreted as rational behavior.<sup>15</sup> Becker assumes that after weighing the (expected) costs and benefits, people rationally decide for or against taking criminal action:

“Some persons become ‘criminals’ . . . not because their basic motivation differs from that of other persons, but because their benefits and costs differ.”<sup>16</sup>

This idea is based on the homo oeconomicus model<sup>17</sup> according to which an individual commits an action when the expected benefit exceeds the predicted costs, including opportunity costs.<sup>18</sup> The economic theory of crime assumes a negative price elasticity of the demand for crime, which means demand decreases when crimes become more expensive.<sup>19</sup> If the economic theory of crime can be applied to every category of crime, it is not far off to apply it to economic and tax crimes as well. The utility of such a crime can be defined

<sup>12</sup> See also in the following, Karl-Dieter Bussmann, *Kriminalitätsprävention durch Business Ethics*, ZEITSCHRIFT FÜR WIRTSCHAFTS- UND UNTERNEHMENSETHIK, 35–50 (2004).

<sup>13</sup> However, there are also approaches that consider a minimum level of corruption through the “lubricant money in the sense of bureaucratic landscape management” (Eike Emrich & Christian Pierdzioch, *Theoretische Rabmung. in: Falsches Spiel Im Sport*, 15–44, 41 (Eike Emrich, Christian Pierdzioch & Werner Pitsch, 2015) as a decision accelerator. See for example: Nathaniel H. Leff, *Economic Developments Through Bureaucratic Corruption*, 8(3), AMERICAN BEHAVIORAL SCIENTIST, 8–14, 11 (1964), who speaks of “hedge against bad policy.”

<sup>14</sup> See Bruno S. Frey & Karl-Dieter Opp, *Anomie, Nutzen und Kosten: Eine Konfrontation der Anomietheorie mit ökonomischen Hypothesen*, 30, SOZIALE WELT, 275–294, 281 (1979).

<sup>15</sup> See Bruno S. Frey & Karl-Dieter Opp, *Nutzen und Kosten: Eine Konfrontation der Anomietheorie mit ökonomischen Hypothesen*, 30, SOZIALE WELT, 275–294, 282 (1979).

<sup>16</sup> Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2), JOURNAL OF POLITICAL ECONOMY, 176 (1968).

<sup>17</sup> See GEBHARD KIRCHGÄSSNER, HOMO OECONOMICUS (4th ed., 2013).

<sup>18</sup> Of course, pure acts of affect are not considered within the framework of the model.

<sup>19</sup> See Bruno S. Frey & Karl-Dieter Opp, *Nutzen und Kosten: Eine Konfrontation der Anomietheorie mit ökonomischen Hypothesen*, 30, SOZIALE WELT, 275–294, 282 f. (1979).

as the value gained from the crime, less the product of the expected penalty and the likelihood of being sentenced:

$$U(x) = E - p * P$$

With:

E = enrichment

p = probability of discovery

P = penalty

The higher the expected costs ( $p * P$ ) of an economic crime, the more likely a potential offender will decide against the act.<sup>20</sup> Legislation, prosecution, and justice thus provide various parameters to influence the decision calculation of a potential economic offender.<sup>21</sup> In particular, the nature of the penalty ( $P$ ), the probability of detection, the probability of conviction ( $p$ ), and the ethical-moral values within a society influence the calculation of the potential economic criminal in such a way that the (expected) costs of the action exceed the (expected) benefit, and the individual decides on legal activity because criminal action is too expensive. Special importance is attached to the probability of detection, which Pitsch, Frenger, and Emrich show using the example of doping.<sup>22</sup> Accordingly, the probability of detection is the decisive component and has a greater influence on the decision of the potential offender than the level of penalty. Moral or moral ideas can also be easily integrated into the basic model of homo oeconomicus.<sup>23</sup>

Becker's findings were transferred to the area of tax evasion by Allingham and Sandmo.<sup>24</sup> According to this model, the value of tax evasion results from the higher disposable income, since in this case the tax liability is not paid. Disposable income is reduced by penalties combined with the likelihood of being discovered and convicted.

<sup>20</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 176 (1968); Bruno S. Frey, *Plädoyer für eine positive Ökonomik*, in *Perspektiven der Wirtschaftspolitik: Festschrift zum 65. Geburtstag von Prof. Dr. René L. Frey*, 759–766, 761 (Christoph A. Schaltegger and Stefan C. Schaltegger, 2004).

<sup>21</sup> See Florian Follert, *Kriminalität und Strafrecht aus ökonomischer Sicht*, 130(2), ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFT, 420–437, 433–436 (2018).

<sup>22</sup> See Werner Pitsch, Monika Frenger, & Eike Emrich, *The impact of anti-doping legislation in Europe—outlines for the development of model-based hypotheses*, in *Sport and Doping. The Analysis of an Antagonistic Symbiosis*, 71–100 (Eike Emrich and Werner Pitsch, 2011).

<sup>23</sup> See Dieter Schmidtchen, *Homo oeconomicus und das Recht*, CSLE DISCUSSION PAPER 2000–03, 6 (2000).

<sup>24</sup> See Michael G. Allingham & Agnar Sandmo, *Income Tax Evasion: A Theoretical Analysis*, 1 (3–4) JOURNAL OF PUBLIC ECONOMICS, 232–238 (1972).

This model, based on deterrence and negative incentives, has been criticized by some authors.<sup>25</sup> Critics consider it problematic that the economic theory of crime in general and tax evasion in particular puts the focus on the cost side of the decision calculation and therefore increasingly sees itself as a *negative* economy. As an alternative,<sup>26</sup> the concept of tax morality was developed. It assumes the deterrent effect of the expected penalty has only a minor influence on the willingness to pay taxes<sup>27</sup> and that the decision to pay or avoid taxes is determined by the relationship between citizens and the state<sup>28</sup> as represented by politicians.<sup>29</sup> It can be seen that the willingness to pay taxes is influenced to a considerable extent by the tax compliance of society as a whole.<sup>30</sup> This is why Frey's analysis,<sup>31</sup> which is often carried out from the point of view of deterrence, should give way to a *positive* economy. According to this view, potential criminals should be given positive incentives that motivate them to become legally active. In criminological literature, the deterrent effect is also by no means undisputed. Entorf,<sup>32</sup> Levitt,<sup>33</sup> and Entorf and Spengler<sup>34</sup> confirm the deterrence hypothesis, while Myers,<sup>35</sup> Blumstein and Wallman,<sup>36</sup> and

<sup>25</sup> See, e.g., Michael J. Graetz & Louis L., The Economic of Tax Compliance: Fact and Fantasy, 38(3), NATIONAL TAX JOURNAL, 355–363 (1985); James Alm, Gary H. McClelland & William D. Schulze, Why do people pay taxes?, 48(1), JOURNAL OF PUBLIC ECONOMICS 48, 21–38 (1992).

<sup>26</sup> See Bruno S. Frey, *Plädoyer für eine positive Ökonomik*, in *Perspektiven der Wirtschaftspolitik: Festschrift zum 65. Geburtstag von Prof. Dr. René L. Frey*, 759–766, 761 f. (Christoph A. Schaltegger and Stefan C. Schaltegger, 2004).

<sup>27</sup> See the studies by Lars P. Feld & Bruno S. Frey, Trust breeds trust: How taxpayers are treated, 3, ECONOMICS OF GOVERNANCE, 87–99(2002); Bruno S. Frey & Benno Torgler, *Tax morale and conditional cooperation*, 35(1), JOURNAL OF COMPARATIVE ECONOMICS, 136–159 (2007).

<sup>28</sup> See Florian Follert's contribution to this, Florian Follert, *Die Bürger-Politiker-Beziehung im Lichte der Neuen Politischen Ökonomie: Ein Diskussionsbeitrag*, 11, DER MODERNE STAAT – ZEITSCHRIFT FÜR PUBLIC POLICY, RECHT UND MANAGEMENT, 233–255 (2018).

<sup>29</sup> See Bruno S. Frey, *Plädoyer für eine positive Ökonomik*, in *Perspektiven der Wirtschaftspolitik: Festschrift zum 65. Geburtstag von Prof. Dr. René L. Frey*, 759–766, 762 f. (Christoph A. Schaltegger and Stefan C. Schaltegger, 2004).

<sup>30</sup> See Bruno S. Frey & Benno Torgler, *Tax morale and conditional cooperation*, 35(1), JOURNAL OF COMPARATIVE ECONOMICS, 136–159 (2007).

<sup>31</sup> See Bruno S. Frey, *Plädoyer für eine positive Ökonomik*, in *Perspektiven der Wirtschaftspolitik: Festschrift zum 65. Geburtstag von Prof. Dr. René L. Frey*, 759–766 (Christoph A. Schaltegger and Stefan C. Schaltegger, 2004).

<sup>32</sup> See Horst Entorf, *Kriminalität und Ökonomie: Übersicht und neue Evidenz*, 116(3), ZEITSCHRIFT FÜR WIRTSCHAFTS- UND SOZIALWISSENSCHAFTEN, 417–450 (1996).

<sup>33</sup> See Steven D. Levitt, *Why do increased arrest rates appear to reduce crime: Deterrence, incapacitation, or measurement error?*, 36(3), ECONOMIC INQUIRY, 353–372 (1998).

<sup>34</sup> See Horst Entorf & Hannes Spengler, *Socioeconomic and demographic factors of crime in Germany*, 20(1), INTERNATIONAL REVIEW OF LAW AND ECONOMICS, 75–106 (2000).

<sup>35</sup> See Samuel L. Myers, *Estimating the economic model of crime: Employment versus punishment effects*, 98(1), QUARTERLY JOURNAL OF ECONOMICS, 157–166 (1983).

<sup>36</sup> See ALFRED BLUMSTEIN & JOEL WALLMAN, THE CRIME DROP IN AMERICA (2000).

Cherry and List,<sup>37</sup> for example, have no deterrent effects.<sup>38</sup>

In the following, we assume a deterrent effect in the context of modeling. However, the focus of this analysis is not on an a priori assessment of the decision calculation of a potential offender. Rather, it asks the question: What are the implications of economics when the state and the offender meet in court? If an individual violates the legal norms of a society, it endangers the stability of the system<sup>39</sup> from which punishment should follow in order to stabilize the norm and in the sense of the atoning function of punishment. However, it is questionable which type of penalty should be applied in the specific case. The form of preferred sanction must be determined by carefully weighing the benefits and costs of enforcement.

### III. COSTS AND BENEFITS OF PRISON SENTENCES

In general, there are various ways to punish an economic criminal for his or her actions. Money, probation, and prison sentences or combinations thereof are possible.<sup>40</sup> As of March 31, 2017, more than 7,000 people were imprisoned for economic crimes in Germany.<sup>41</sup> The penalty preferred from an economic perspective can be assessed by weighing costs and benefits.<sup>42</sup> The analysis of costs and benefits can be carried out both at the individual level of the offender and at the macroeconomic level. It is obvious that a prison sentence causes costs in the offender's calculation. Frey and Ulbrich<sup>43</sup> transfer the results of empirical happiness research for the first time to the field of jurisprudence, but focus on civil law—here, in particular, compensation for damages—as well as state organizational law. The aim of this paper is to attempt to extend the findings of the economics of happiness to criminal law and to discuss how this can influence the view of the costs and benefits of a particular type of penalty.

<sup>37</sup> See Todd Cherry & John List, *Aggregation bias in the economic model of crime*, 75(1), ECONOMICS LETTERS, 81–86 (2002).

<sup>38</sup> On the validity of the deterrence hypothesis, see also Jürgen Antony and Horst Entorf's Meta-Study, *On the validity of deterrence in the sense of the economic theory of crime*, 116, DARMSTADT DISCUSSION PAPERS IN ECONOMICS, 2002.

<sup>39</sup> See Toby Jackson, *Is Punishment Necessary?*, 55(3), THE JOURNAL OF CRIMINAL LAW, CRIMINOLOGY AND POLICE SCIENCE, 332–337 (1964).

<sup>40</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 193 (1968); Florian Follert, *Kriminalität und Strafrecht aus ökonomischer Sicht*, 130(2), ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFT, 420–437, 434 (2018).

<sup>41</sup> Of which 5,972 prisoners for fraud and breach of trust, 1,001 prisoners for forgery of documents, and 279 individual for other offenses against property (source: Federal Statistical Office 2017).

<sup>42</sup> See Horst Entorf & Susanne Meyer, *Costs and Benefits of the Prison System: Fundamentals in the Framework of a Rational Criminal Policy*, 129, DARMSTADT DISCUSSION PAPERS IN ECONOMICS (2004).

<sup>43</sup> See Bruno S. Frey & Christian Ulbrich, *Zur Bedeutung der empirischen Lebenszufriedenheitsforschung für die Rechtswissenschaft*, 218(1), ARCHIV FÜR DIE CIVILISTISCHE PRAXIS, 32–66 (2018).

Modern economic happiness research has shown that the freedom of an individual as well as the possibility of flexible action and autonomous development determine the personal level of satisfaction to a high degree.<sup>44</sup> If an individual is detained for a longer period of time, he or she must renounce this freedom, which naturally reduces the individual's level of satisfaction. Furthermore, it is obvious that a prison sentence would break up social relationships, which would also have a high influence on subjective life satisfaction. This effect can be described as the cost of imprisonment to the offender. These costs are variable as they increase with the duration of detention. In addition, the offender must give up part of his or her income while serving the prison sentence because the offender is restricted in his or her choice of profession, which in turn limits the individual's earning potential. These opportunity costs must also be taken into account in the offender's cost function and can be described as lost wages. Furthermore, a criminal who serves a prison sentence incurs reputation costs, for example in the context of future business initiations (known as a "stigma effect").<sup>45</sup>

It becomes clear that the cost function to a large extent consists of variable costs, since they do not arise once, but rather depend on the duration of the prison stay. It can be argued, however, that the predominance of costs at the level of the offender also corresponds to the sense and purpose of a prison sentence. That is not to be contradicted. The problem with prison sentences, however, is that they also entail costs at the level of society.<sup>46</sup> However, a prison sentence can only be regarded as meaningful from a macroeconomic point of view as long as the social benefit exceeds the costs incurred by society.

The following table shows the economic burden in terms of current prison expenditure for a prisoner in 2011:

Federal state	Prison charges per prisoner (in EUR)
Hamburg	59,800
Brandenburg	52,500
Rhineland-Palatinate	48,100
Berlin	47,000
Schleswig-Holstein	45,700
Mecklenburg-Western Pomerania	45,000

<sup>44</sup> See Bruno S. Frey & Claudia Frey Marti, *Glück – Die Sicht der Ökonomie*, 90(7), WIRTSCHAFTSDIENST, 461 (2010).

<sup>45</sup> RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* (2014), 269. This effect can even affect the offender's family, especially the children, cf. Joseph Murray & David P. Farrington, *The Effects of Parental Imprisonment on Children*, 37(1), CRIME AND JUSTICE, 133–206 (2008). This effect can be described in terms of reputation costs. The loss of reputation is assumed here to be a fixed cost, since it can be argued that the social stigma of imprisonment is attached to the prisoner regardless of the length of the detention. On the other hand, it could also be argued that a short prison sentence is more likely to be concealed from the public than several years' imprisonment.

<sup>46</sup> See Susanne Meyer, *Die Tageshaftkosten der deutschen Strafvollzugsanstalten: Ein Überblick*, 121, DARMSTADT DISCUSSION PAPERS IN ECONOMICS (2003).

Saxony-Anhalt	44,200
Lower Saxony	43,400
Saarland	41,800
Hesse	41,400
North Rhine–Westphalia	40,700
Thuringia	38,500
Bremen	36,000
Baden-Württemberg	33,900
Saxony	31,300
Bavaria	29,600
Average for Germany	39,500

Tab. 1: Prison charges per prisoner, 2011 (source: Federal Statistical Office of Germany, 2015)

The imprisonment of a tax evader costs taxpayers considerable resources over many years, from daily meals to the costs for guards to the costs of resocialization<sup>47</sup> after the prison sentence ends.<sup>48</sup> The accommodation costs are variable costs, since they increase with the output quantity, i.e., the period of liability.<sup>49</sup> Fixed costs are represented by the maintenance of the penitentiary, which are incurred regardless of the period of imprisonment of the individual offender. It is assumed that the costs of resocialization increase with the length of the prison sentence. This is obvious, since an individual who cannot participate in everyday social life for a long period of time will be more difficult to resocialize than an inmate who is only imprisoned for a few weeks. These costs are also largely variable and therefore increase with the duration of detention. In addition, society does not allow the offender to contribute to economic value creation through work. The lost value added contribution is also to be allocated to variable costs, as it is incurred for each day of detention. Although the prisoner will also regularly pursue an activity in the correctional facility, this is often not likely to correspond to the potential of the prisoner. In addition, the state loses tax revenues that would have to be paid with a higher income earned from a professional activity performed outside of prison. This component of the cost function also increases with the length of detention. Due to the structure of the cost function, short durations, if any, would be preferable, as the variable costs lead to an increase in total costs over time.

As already mentioned, from an economic perspective a prison sentence only makes sense if the costs are offset by a benefit that more than compensates for them. The benefits of

<sup>47</sup> Although these are probably smaller with a tax or economic criminal than, for example, with a violent criminal.

<sup>48</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 193 ff.

<sup>49</sup> See Horst Entorf & Susanne Meyer, *Kosten und Nutzen des Strafvollzuges: Grundlagen im Rahmen einer rationalen Kriminalpolitik*, 129, DARMSTADT DISCUSSION PAPERS IN ECONOMICS (2004). Here it must be taken into account that this is a delta view. If fewer criminals were sentenced to prison, c.p. fewer prisons would be needed.

imprisonment for economic and tax offenses can be seen in particular in imprisonment's deterrent effect. Costs at the level of the offender, according to the deterrent hypothesis, increase the price of a crime and thus create an incentive to turn to a legal act. It is conceivable, for example, that the perception of prison sentences and the associated costs of deprivation of liberty in the case of such offenses may have a behavioral effect on potential offenders.<sup>50</sup> This view is aimed at *general prevention* within the framework of the legal-theoretical justification of criminal law.<sup>51</sup> At the level of society as a whole, the benefit of the prison sentence is the gain in confidence (*positive general prevention*) in the legal system and the deterrent effect.

#### IV. A PLEA FOR FINES

After comparing the costs and benefits of a custodial sentence, this paper will present fines as a more efficient alternative from an economic perspective. Becker (1968) already decidedly worked out why fines should be preferred if possible. However, Becker generally pleads for fines, which could possibly be viewed critically. While the application of fines, for example in the case of murderers, is not intuitively obvious, an economic or tax offense appears to be predestined to punish the offender in monetary terms because there is no immediate physical or psychological danger for an individual.

If the fine is analyzed from an economic point of view, the costs of an economic or tax offense for the offender result from the loss of a share of his or her assets. With regard to the analysis of these costs, empirical happiness research can make a contribution to the (criminal) legal discourse.<sup>52</sup> Psychological research has shown that the individual life satisfaction of a subject can be used as an approximation to the benefit concept.<sup>53</sup> Conversely, if the benefit can be measured by subjective satisfaction, this means that costs can be interpreted as decreasing satisfaction. The economic analysis of happiness has shown that financial resources have an influence on subjective well-being.<sup>54</sup> Poor people are therefore more unhappy than people without money worries, although the increase in wealth above a certain level has less influence on life satisfaction. This finding can theoretically be justified by the fact that individuals with greater financial resources are more likely to

<sup>50</sup> See Horst Entorf & Susanne Meyer, *Kosten und Nutzen des Strafvollzuges: Grundlagen im Rahmen einer rationalen Kriminalpolitik*, 129, DARMSTADT DISCUSSION PAPERS IN ECONOMICS, 4 (2004).

<sup>51</sup> See DIETHELM KLESCZEWSKI, STRAFRECHT: ALLGEMEINER TEIL, DAS EXAMENSRELEVANTE GRUNDWISSEN, § 1 no. 20 f. (2017).

<sup>52</sup> See the contribution by Bruno S. Frey & Christian Ulbrich, *Zur Bedeutung der empirischen Lebenszufriedenheitsforschung für die Rechtswissenschaft*, 218(1), ARCHIV FUER DIE CIVILISTISCHE PRAXIS, 32–66 (2018).

<sup>53</sup> See in particular the overview article by Daniel Kahneman & Alan B. Krueger, *Developments in the measurement of subjective well-being*, 20(1), JOURNAL OF ECONOMIC PERSPECTIVES, 3–24 (2006).

<sup>54</sup> See Bruno S. Frey & Alois Stutzer, *Measuring Preferences by Subjective Well-Being*, 155(4), JOURNAL OF INSTITUTIONAL AND THEORETICAL ECONOMICS, 755–778, 765 ff. (1999); Bruno S. Frey & Alois Stutzer, *Ökonomische Analyse des Glücks: Inspirationen und Herausforderungen*, 63(3), DIE UNTERNEHMUNG, 263–282, 269 f (2009).

be able to purchase goods and services that meet their needs than poorer people. If, on the<sup>55</sup> other hand, an individual loses large parts of his or her wealth, it is not unlikely that this will reduce this person's subjective life satisfaction.

In particular, if (significant) parts of the property have to be paid as a penalty, welfare losses will be experienced by the offender that could result in costs similar to the temporary renunciation of freedom, especially for persons who are accustomed to a high standard of living. Modern happiness research has also shown that the subjective level of satisfaction is always subject to a comparison with the social environment.<sup>56</sup> In the field of economic and tax crimes, it is not unlikely that criminals sentenced to heavy fines will lose their connections to their social peer groups after losing (large) portions of their assets. Accordingly, the penalty to be paid initially represents fixed costs for the offender. Similar to the prison sentence, a loss of reputation can occur that influences the social life of the convicted offender. However, it can be assumed that this is lower than in the case of imprisonment, since it is easier to conceal a fine, and the person concerned is not torn out of his or her social environment. If opportunity costs are also considered, the cost function can be extended to include lost interest income or other consumption satisfactions.

The amount of the penalty must be set in relation to the total assets of the offender, which can be regarded as meaningful against the background of the results of empirical happiness research. A nonlinear correlation is therefore assumed, so that the costs increase proportionally more strongly the larger the share of the penalty in the total assets of the offender becomes. It should be borne in mind that in the best case the fine should be calculated in relation to the total assets. A fixed fine that, first, is not based on the chances and the amount of the profit of the criminal act and, second, is not based on the financial circumstances of the offender, is perceived as unfair and inappropriate.<sup>57</sup> The question arises as to the benefits of these costs.

From a macroeconomic perspective, it is easy to see that the welfare of the population increases as a result of fines, as they do not incur any initial costs. Fines are rather transfer payments from the offender to society.<sup>58</sup> To substantiate the significant financial benefits of monetary sanctions, it can be determined that 2012 revenues of €564 million were generated by this type of penalty (Federal Statistical Office of Germany, 2015). If one compares these revenues with the detention costs presented in the previous chapter, it becomes clear once again why a fine appears to be preferable from an economic perspective.

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<sup>55</sup> See Bruno S. Frey & Alois Stutzer, *Ökonomische Analyse des Glücks: Inspirationen und Herausforderungen*, 63(3), DIE UNTERNEHMUNG, 263–282, 270 (2009).

<sup>56</sup> See Bruno S. Frey & Claudia Frey Marti, *Glück – Die Sicht der Ökonomie*, 90(7), WIRTSCHAFTSDIENST, 458 (2010).

<sup>57</sup> See already JEREMY BENTHAM, *THEORY OF LEGISLATION*, chapter ix. (1931).

<sup>58</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 193–195 (1968).

Also from an economic perspective, it is incomprehensible why, for example, a tax evader who withholds tax revenues from the state should incur additional costs for the state as a result of a prison sentence.

In addition, this type of punishment can be seen as compensation for the victims, as both the amount of the damage and any additional fines are returned to the injured parties.<sup>59</sup> Becker and Becker<sup>60</sup> plead for the amount of the penalty to be calculated on the basis of the total damage incurred. With regard to the benefit of the fine, it can be stated for both sides that no additional cost-intensive rehabilitation measures are necessary, since the payment of the fine can be assumed to have a deterrent effect on the offender and society cannot expect any further wishes for retaliation from the compensation payment.<sup>61</sup> Another practical advantage of the fine is that it can be increased almost free of charge, while an increase in the prison sentence entails significant economic costs.<sup>62</sup>

In the sense of *general prevention*, it could now be argued that the costs presented for potential offenders were too low due to the envisaged fine compared with a prison sentence. However, the deterrent effect of the penalty could be considered as effective for a fine as for a prison sentence in the case of economic or fiscal crime. Especially for individuals who seem to attach a high value to financial prosperity, a fine that deprives them of much of their financial resources could be an effective deterrent if the fine leads to a drop in the level of satisfaction. For the courts that determine the level of penalties, this leads to the conclusion that a fine is most effective when it is sufficiently high in relation to the offender's financial situation.

Critics of a fine could also argue that a criminal could buy his or her way out of debt against payment of a certain price (the fine). However, this argument applies in the same way to all other types of penalties, since the guilt is deemed to have been paid after the respective penalty has been served. The only difference is the unit of measurement of the price, which differs between the types of penalties.<sup>63</sup> Another argument in favor of fines, particularly for tax offenses, is that they are proportionate to other offenses. The use of multiple years' imprisonment for tax evasion could lead to a reduction in the sense of

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<sup>59</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 194 (1968).

<sup>60</sup> See GARY S. BECKER & GUILTY NASHAT BECKER, THE ECONOMICS OF LIFE. FROM BASEBALL TO AFFIRMATIVE ACTION TO IMMIGRATION, HOW REAL-WORLD ISSUES AFFECT OUR EVERYDAY LIFE, 139 – 141 (1997).

<sup>61</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 194 (1968).

<sup>62</sup> See Richard A. Posner, *An Economic Theory of the Criminal Law*, 85, COLUMBIA LAW REVIEW, 1193–1231, 1206–1207 (1985).

<sup>63</sup> See Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 195 (1968).

justice within the population. Especially in comparison with violent crimes, the impression could arise that the courts weight monetary aspects similarly or even more strongly than physical offenses. Against this background, it is quite conceivable that a long prison sentence for a tax offense in relation to a suspended sentence for a violent crime is perceived as a draconian sentence. From the point of view of citizens, it could therefore be perceived as fairer if an offense aimed at money were also punishable by a fine, freely in accordance with the biblical legal principle of “an eye for an eye, a tooth for a tooth,” which aims to exclude disproportionate penalties.<sup>64</sup>

Those in favor of imprisonment will argue that imprisoning one offender will protect society from further crimes. In principle, the first question that arises here is whether detentions result in a decrease in the number of criminal offenses. Kury and Scherr believe that the majority of prisoners could be released without compromising the safety of the population.<sup>65</sup> The example of Finland clearly shows that “less imprisonment does not necessarily lead to more crime.”<sup>66</sup> This certainly does not apply to dangerous, violent, and sex offenders<sup>67</sup> or terrorists,<sup>68</sup> but they do not make up the majority of prison inmates.

If, however, one wishes to stick to this argument, it can be argued in the light of chapter two that, assuming that a crime is a rational act, no automatism can be assumed with regard to further crimes. A potential offender always newly assesses the costs and benefits of a future decision, so that it is hardly possible to draw conclusions about the future from the past. The state has enough adjustment tools that can influence the calculation of a potential economic or tax criminal for the future.<sup>69</sup> If, for example, the investigative behavior of the tax investigator changes, this has a direct effect on the probability of detection, so that further tax offenses can possibly be prevented. While violent offenders and sex offenders in particular often have personality disorders<sup>70</sup> that could be cited as a counter-argument to the rational choice theory, it is much more probable that a potential offender consciously weighs costs and benefits in economic and tax crimes so that the action can be influenced by government action and there is no inevitable potential for repetition. On the other hand, a prison sentence only protects society for a certain period of time against offenses committed explicitly by the offender. However, if intermediaries are

<sup>64</sup> See Dennis Bock, *STRAFRECHT ALLGEMEINER TEIL* (2018).

<sup>65</sup> See Helmut Kury & Albert Scherr, *Kritik des Strafgedankens – abschließende Thesen*, 24(1), *SOZIALE PROBLEME*, 164–173 (2013).

<sup>66</sup> See Helmut Kury & Albert Scherr, *Kritik des Strafgedankens – abschließende Thesen*, 24(1), *SOZIALE PROBLEME*, 164–173, 168 (2013).

<sup>67</sup> See Klaus M. Böhm, *Opferschutz und Strafvollzug: Neue Wege zum Schutz vor gefährlichen Gewalt und Sexualstraftätern*, 40(2), *ZEITSCHRIFT FÜR RECHTSPOLITIK*, 41–72 (2007).

<sup>68</sup> See Christin Armenat & Sebastian Kretschmann, *Die Ausweitung des Maßregelrechts – Ein probates Mittel zur Verhinderung terroristischer Straftaten?*, 54(1), *RECHT UND POLITIK*, 22–35 (2018).

<sup>69</sup> See Florian Follert, *Kriminalität und Strafrecht aus ökonomischer Sicht*, 130(2), *ZEITSCHRIFT FÜR DIE GESAMTE STRAFRECHTSWISSENSCHAFT*, 420–437, 433–436 (2018).

<sup>70</sup> See Klaus M. Böhm, *Opferschutz und Strafvollzug: Neue Wege zum Schutz vor gefährlichen Gewalt und Sexualstraftätern*, 40(2), *ZEITSCHRIFT FÜR RECHTSPOLITIK*, 41–72, 41 (2007).

commissioned to carry out further tax evasions, they cannot be prevented by a prison stay. It could also be argued that contact with criminals in a prison could tend to increase the prevalence of other crimes. If one assumes—contrary to the approach advocated in economic theory—that economic and tax crimes are not rational behavior, then one will have to admit that the probability of recidivism of an economic or tax criminal is most likely to be assessed differently than, for example, a violent criminal who is based on a personality disorder, which is why for this reason alone one would have to plead against imprisonment.

However, with regard to the implications of this analysis, it must be mentioned that the fine can in practice cause implementation problems. For example, it is conceivable that an offender may not be able to pay an ordered fine due to pennilessness or the early transfer of assets to related persons. However, this does not alter the fact that the fine—at least from an ex post perspective—is preferable to imprisonment from an economic point of view. In addition, it would be conceivable that the offender would repay his or her liability to the state by paying the attachable portion of his or her future income over a longer period of time.<sup>71</sup> Here the legislator would have to create appropriate regulations, which do not make it possible for an economic or tax criminal to get rid of the fine all too easily. If a fine is not an option, the judiciary could resort to imprisonment as a last resort.

#### IIV. CONCLUDING REMARKS

Economic and tax offenses result in considerable economic damage, which is why the topic is open to economic analysis. Starting with Becker (1968), numerous theoretical and econometric studies look at the decision calculus of a potential economic or tax criminal and work out how the (rational) decision can be influenced by the state and society, while the present article takes an ex post view. It analyzed which type of punishment proves to be efficient from an economic perspective in order to punish an economic or tax criminal. While in judicial practice a prison sentence is often pronounced—the most prominent cases in Germany in the recent past were Middelhoff and Hoeneß—the present article argues that the imprisonment of a criminal in the area of economic and tax crime should be rejected from an economic point of view. A benefit of imprisonment could at best be seen in the deterrent effect, since the renunciation of freedom will result in a lowering of the level of satisfaction and a loss of reputation. If a deterrent effect is generally assumed, this could possibly also be achieved by a fine, as wealthy offenders in particular attach a high value to financial prosperity. The great advantage of a fine can also be seen in the fact that, from a macroeconomic perspective, a transfer payment flows, which results in a benefit, while tax-financed resources flow away within the framework of a prison sentence. While Becker (1968) generally pleads for fines, this article takes a differentiated look at economic and tax crimes, which, in particular, affects material goods, and other acts that impair the welfare of individuals. In particular because there is no need for special physical

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<sup>71</sup> Gary S. Becker, *Crime and Punishment: An Economic Approach*, 76(2) JOURNAL OF POLITICAL ECONOMY, 169–217, 196 f. (1968), already pleaded for instalment payments.

protection of the population against tax and economic criminals—this is certainly not the case with violent criminals—the fine can be applied as a punishment when cost-benefit aspects are considered.

Future research in this area should address the question of what level of penalty for a fine can be considered efficient in an economic sense. It certainly makes sense to start from relative values that are oriented to the individual financial situation of the offender. Within the framework of such considerations, the interlinking of economic happiness research and (criminal law) economic analysis should also be further promoted.