EUROPEAN MASTER IN LAW AND ECONOMICS

How deceit can make the market expand or shrink:

Some Law and Economics of the Inspections in the Temporary Agency Work Industry

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AUTHORSHIP DECLARATION

I hereby declare and confirm that this thesis is entirely the result of my own work except where otherwise indicated. I acknowledge the supervision and guidance I have received from Prof. Dr. Thomas Eger. This thesis is not used as part of any other examination and has not yet been published.

I confirm the count of 15,732 words.

Date/Signature
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<tr>
<td>AGG</td>
<td>Allgemeine Gleichbehandlungsgesetz/ General Equal Treatment Act</td>
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<td>ArbGG</td>
<td>Arbeitsgerichtsgesetz/ Labor Court Act</td>
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<tr>
<td>AÜG</td>
<td>Arbeitnehmerüberlassungsgesetz/ Temporary Employment Act</td>
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<td>BAP</td>
<td>Bundesarbeitgeberverband der Personaldienstleister e.V./ Employers` association in the TAW industry</td>
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<tr>
<td>BT-Drs.</td>
<td>Bundestagsdrucksache/ Bundestag Document</td>
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<td>FKS</td>
<td>Finanzkontrolle Schwarzarbeit/ Financial Control of Illegal Employment</td>
</tr>
<tr>
<td>GA AÜG</td>
<td>Geschäftsanweisung Arbeitnehmerüberlassungsgesetz/ Directive on the AÜG</td>
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<tr>
<td>iGZ</td>
<td>Interessenverband Deutscher Zeitarbeitsunternehmer e.V./ Employers` association in the TAW industry</td>
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<tr>
<td>KSchG</td>
<td>Kündigungsschutzgesetz/ Employment Protection Act</td>
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<tr>
<td>NZA</td>
<td>Neue Zeitschrift für Arbeitsrecht/ New Journal for Labor Law</td>
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<tr>
<td>SchwarzArbG</td>
<td>Schwarzarbeitsbekämpfungsgesetz/ Act to Combat Illegal Employment</td>
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<tr>
<td>TAW</td>
<td>Temporary Agency Work</td>
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<tr>
<td>TzBfG</td>
<td>Teilzeit- und Befristungsgesetz/ Act on Part-Time Work and Fixed-Term Employment</td>
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<tr>
<td>ver.di</td>
<td>Vereinte Dienstleistungsgewerkschaft/ German trade union</td>
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<tr>
<td>WSI</td>
<td>Wirtschafts- und Sozialwissenschaftliches Institut/ Economic and Social-Scientific Institut</td>
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A. Introduction

Bernd Rath is the proprietor of a temporary agency work (TAW) firm called “Bera Personaldienstleistungen” with 1,400 temporary agency workers. He is of the opinion that competition is fierce in the TAW industry. According to Bernd Rath, the basic business calculation in the industry often works as follows: the TAW employee earns the applicable minimum wage of 7.89 € per hour. The user firm will pay the double amount to the TAW firm. From this 16 € social and health insurances, administration costs and minimal downtimes will be deducted. Eventually, this makes an average profit of not more than 80 Cents per hour and per TAW employee for the TAW firm (Bock 2012, TV documentary). Bernd Rath says, this small margin means a steady business in good periods with only little downtimes. For what it means in bad times, he is assisted by Marcus Schulz. Marcus Schulz is the general manager of “USG People Germany”. This makes him the employer of 12,000 TAW employees. In an interview with the German weekly magazine “Wirtschaftswoche” he complained about the systematic fraudulent behavior in the German TAW industry (Schumacher 2010, Wirtschaftswoche). According to Bernd Rath and Marcus Schulz, incorrect handling of pay scale groups, unpaid sickness benefits, incorrectly calculated holiday allowances and employees being forced to take unpaid days off when there is no disposition are frequently used tricks in the TAW industry to reduce cost. These two voices of employers are supported by trade unions and critical media reports (Öchsner 2011, Süddeutsche Zeitung).

The Federal Employment Agency is responsible for monitoring employment conditions in the TAW industry. To find TAW firms which deceive, the Employment Agency conducts inspections. In the inspections a special focus is put on: the correct pay scale grouping, correctly calculated holiday allowances, paid sickness benefits and the correct application of collective agreements (Bundesagentur für Arbeit 2011, p. 69). In 2010, the Employment Agency issued fines amounting to a total of 86,625 € against TAW firms (BT-Drs. 17/6960). The amount of 86,625 € seems to be surprisingly low for an industry with 18,404 firms, 872,000 employees, a yearly turnover of 20.7 billion €, and a reputation as described by Bernd Rath and Marcus Schulz.
How does the story of Bernd Rath and Marcus Schulz go together with this low figure? Are the inspections of the Employment Agency ineffective or is the story of an industry in which deceit is systematic just a fairy tale? What would the economic effects of low intensity control on the TAW market be? Are the comments of leading managers of big TAW firms just selfless or are they likely to be lead by self-interests? It is remarkable that an industry which has created so many jobs in the last ten years in Germany has such a poor public reputation. This thesis will try to give some insights on possible explanations.

I. Research question and value added by the thesis

The following research question should guide us through the thesis:

“How can low intensity inspections in the TAW industry lead to market failures?”

We are dealing with a two-tiered question. First, are the inspections indeed of low intensity? The term “low intensity” is understood in a way that the inspections are not sufficient to induce a behavior that complies with the laws and collective agreements. Second, does this lead to market failures? The goal of the thesis is to show how the size of the TAW market may be affected by the intensity of inspections. Explicitly, it should be shown how under different external conditions the TAW market may expand or shrink due to the intensity of inspections.

It is important to answer the research question because if low intensity inspections lead to market failures implying not concluded mutually beneficial contracts this would be a loss for the whole TAW industry and potentially the whole German employment market. If it could be shown how the size of the TAW market reacts under certain external conditions to the intensity of inspections, important policy advises could be drawn from these findings. Furthermore, it is a very up-to-date topic. The TAW industry is fast growing and very dynamic. There is not much literature on this particular topic and question. In the literature, the market for TAW has not been analyzed from this angle closely before. The thesis could help to close that gap in the legal and economic literature and could be a starting point for further research.
II. Methodology

To answer the research question the economic analysis of law will be used. Behavior is predicted by looking at the incentives of the actors involved. The actors are assumed to be rational decision makers who act to further their self-interest subject to the constraints they face (Miceli 2009, p. 1). In the publication “The Economic Approach to Law” Miceli (2009) gives some enlightening statements: “The economic approach to law assumes that rational individuals view legal sanctions (monetary damages, fines, prison) as implicit prices for certain kind of behavior, and that these prices can be set to guide these behaviors in a socially desirable direction” (Miceli 2009, p. 1). Actors are assumed to be rational calculators who will stretch the limits of the law and will break it without feeling guilty if the perceived gain exceeds the cost (Miceli 2009, p. 2). Under these basic theoretical assumptions the analysis in this thesis will be conducted.

In the Law and Economics literature some tools are frequently used to analyze the effects of legal rules. The tool of principal-agent relationships and the consequential difficulties that arise will be used in the thesis. A theory of “Rational Crime” as presented in Cooter/Ulen’s (2012) standard textbook “Law and Economics” will also be used with some minor alterations by the author. This concept will form a central part of the legal analyses. Finally, information asymmetries and a process of a race to the bottom, possibly resulting in something similar to Akerlof’s (1970) “Market for Lemons”, will be used to explain some of the economic effects. The concept of signaling will be applied to analyze ways to overcome information asymmetries.

III. Scope of the thesis and used sources and literature

The scope of the thesis is strictly limited to aspects necessary to answer the research question. It is recognized that TAW implies potential risks like a possible substitution of permanent employments and possible long-term costs of low wages in the social security systems. These
issues have already been subject to many publications and should be explored in more detail. Nevertheless, this analysis will be limited to the inspections in the TAW industry and possible effects of those on the market. It will explicitly not be argued about the issue whether the fraction of TAW in the German labor market should be larger or smaller. This is a policy issue with very wide ranging consequences. Nevertheless, the author is aware of further implications of TAW for the German labor market and the results of this thesis can only be a starting point for deeper considerations. They are subject to fundamental policy convictions about how the German labor market should look like in the future. The thesis analyses the inspections in the TAW industry at the state of the world at the end of June 2012. The regional scope of the thesis will be limited to the situation in Germany.

There is not much secondary literature on this particular research question and therefore many primary sources like official statistics, parliamentary documents, and laws and also expert interviews will be used in this thesis. I interviewed a political representative, Beate Müller-Gemmeke MdB, the head of the Berlin office of the TAW employer association iGZ, Andrea Resigkeit, and a representative of an employees association who is responsible for the TAW industry in the second biggest German trade union ver.di, RA Gerd Denzel. The questionnaire used for the expert interviews can be found in the appendix.


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1 For example: a detailed study by Sczesny et al. (2008) on behalf of the government of North Rhine-Westphalia concerning possible substitution effects. An analysis of Prof. Dr. Gerhard Bosch (2011) concerning the costs of low wages in the TAW industry for the society in a statement to the Federal Committee of Labor and Social Affairs (Committee bulletin 17(11)438).
IV. Structure of the thesis

First, to make the thesis accessible to everyone, I will give a short overview of the main features and characteristics of the TAW industry in order to provide the reader with sufficient background information. In the line of argumentation it will often be referred to these basic characteristics.

The structure of the thesis largely follows the research question. The first part examines whether the inspections undertaken by the Employment Agency are really of low intensity and if so why they might be of low intensity. Here, an extensive analysis of the law in question will be undertaken. The remainder of the thesis evaluates the economic effects of control in the TAW industry. Here, an extensive analysis of the economics will take place. Throughout the thesis, tools of the Law & Economics methodology will be used and applied to the situation in the TAW industry.

The thesis concludes with a discussion of the results and compares the results of the model to the current situation in the German labor market. This discussion should imply an outlook and suggest new policy advices that can be developed from the findings of the thesis. A final summary concludes the thesis, reiterating the strongest and most important points.

B. Background Information – A Primer to Temporary Agency Work

Temporary agency work is a "three-way" or "triangular" employment relationship involving an employee, a company acting as a temporary work agency (TAW firm) and a user company, wherein the TAW firm employs the worker and places him or her at the disposition of the user company (Bundesagentur für Arbeit 2012, p. 5). In Germany, the special characteristics of TAW are governed by the “Arbeitnehmerüberlassungsgesetz (AÜG)” since 1972.
The AÜG was subject to change many times. Among others, the different changes concerned the maximum duration of a disposition, the strict prohibition of the use of time limitations for employment contracts and the prohibition to “synchronize” the durations of disposition contracts and TAW employment contracts (Bundesagentur für Arbeit 2012a, p. 5).

The most important reform of the AÜG was the “Erste Gesetz für moderne Dienstleistungen am Arbeitsmarkt” („Hartz-I“) (Regulating Modern Services in the Labor Market Act), which came into effect on January 1st 2003. With this law several restrictions were abolished and TAW became much more flexible. The restrictions on maximum duration, the forbidden “synchronization” and the prohibition of the use of time limitations for employment contracts were completely abolished (BT-Drs. 15/25). In return, the legislator introduced the principle of “Equal Pay and Equal Treatment” in § 9 Nr. 2 AÜG to maintain the balance between flexibility and the protection of workers (BT-Drs. 15/25). According to this principle, it is not allowed to deviate from the protective provision in individual employment contracts, with collective agreements being the only exception (§ 9 Nr. 2 AÜG and § 3 (1) Nr. 3 AÜG). Collective agreements can deviate from the provision of “Equal Pay and Equal Treatment”. This exception is frequently used, and almost every collective agreement in the TAW industry deviates from the standard of the law to the detriment of the employees (Däubler 2008, p. 1914). A reference to collective agreements can be found in 90 percent of all employment contracts (Miegel 2007, p. 56). Anticipating the full mobility of workers in the EU since May 1st 2011 and
due to very low wages in some collective agreements\(^2\), a sectoral minimum wage was introduced for the TAW industry in 2011 (BT-Drs. 17/5761).\(^3\)

I. Number of temporary agency workers

Over the last ten years the relative number of employees in the TAW industry has increased tremendously. Since the “Erste Gesetz für moderne Dienstleistungen am Arbeitsmarkt” came into force a rapid growth could be observed. From 2001 to 2011 the industry almost tripled (Bundesagentur für Arbeit 2012\(^a\), p. 6). Today around 872,000 employees work in this industry (Bundesagentur für Arbeit 2012\(^a\), p. 11). These are 2.9 percent of all German employees who fall under compulsory social security regulations (Bundesagentur für Arbeit 2012, p. 12). In figure B.1, a significant decline can be observed for 2008/2009. During the financial and economic crisis around 25 percent of TAW employees lost their jobs (Bundesagentur für Arbeit 2012\(^a\), p. 7). All in all, these numbers demonstrate that to the present day the TAW industry has been a fast-growing and very dynamic industry. Many jobs have been created in this industry over the last ten years. However, from the newest figures of the Federal Employment Agency it can be drawn that the growth pace has slowed down (Bundesagentur für Arbeit 2012\(^a\), p. 4). Although there are currently many vacancies in the TAW industry, the TAW firms have problems to fill them with adequate employees (Bundesagentur für Arbeit 2012\(^a\), pp. 8, 9).

\(^2\) Some company based collective agreements had hourly wages of 4.81 € (Schüren 2008, p. 455).

\(^3\) Currently there is an hourly minimum wage in the TAW industry of 7.89 € in former West Germany and 7.01 € in the rest of Germany (Bundesregierung, press release 20.12.11).
Figure B.1 has been created by the author with the newest figures available from the reports of the Employment Agency (Bundesagentur für Arbeit 2012\textsuperscript{a}, p. 6, Bundesagentur für Arbeit 2011\textsuperscript{c}, p. 19).

II. Further key figures of the industry

In January 2012 there were 18,404 TAW firms in Germany (BT-Drs. 17/8549). About 8,000 of them are small firms with less than 20 employees (Bundesagentur für Arbeit 2012, p. 9). Although only 2.9 percent of all employees work in the TAW industry, about 33 percent of all reported vacancies come from this industry (Bundesagentur für Arbeit 2012\textsuperscript{a}, p. 8). This demonstrates again the very high growth pace of this industry. 91 percent of the temporary workers are working full-time (Bundesagentur für Arbeit 2012, p. 16). In 2011, 29 percent\textsuperscript{4} of the employees in the TAW industry had no formal job qualification (Bundesagentur für Arbeit 2012, p. 16). Slightly less than 50 percent of the employments last less than three months and ten percent of the employments less than a week (Bundesagentur für Arbeit 2012, p. 17). The

\textsuperscript{4} To compare: only 13 percent of all employees have no formal job qualification (Bundesagentur für Arbeit 2012, p. 16).
high dynamic of the industry is also shown by the fact that during the first six months of 2011 around 580,000 new employment contracts were signed, whereas 569,000 employment contracts were terminated in the TAW industry (Bundesagentur für Arbeit 2012, p. 17). There is a very high fluctuation in the market.

According to the Bundesagentur für Arbeit (2012), the gross earnings in the TAW industry are below average (Bundesagentur für Arbeit 2012, p. 20). In 2011, the average remuneration in the TAW industry was 1,419 € per month (Bundesagentur für Arbeit 2012, p. 20). A publication by the IAB came to the following result: When adjusted for job types and social demographics the discrepancy decreases, but there remains an unexplainable discrepancy in earnings between TAW employees and regular employees (Jahn 2011, pp. 40 ff.).

To summarize, the “stereotype worker” in the TAW industry is a man who works full-time in a small firm, is poorly qualified and earns a wage below average. However, it has to be highlighted that this is only the statistic stereotype. There are many exceptions and variants.

III. Virtues and risks of temporary agency work

With the “Erste Gesetz für moderne Dienstleistungen am Arbeitsmarkt”, the legislator intended to permanently reduce unemployment while increasing the international contestability of Germany as a business location (BT-Drs. 15/25). Companies were supposed to be given the opportunity to react more flexible in times of fluctuating workloads (BT-Drs. 15/25). The increased flexibility of TAW was supposed to give incentives to firms to transform overtime hours into additional jobs in times of high workload. Furthermore, TAW was seen as a bridge from unemployment to regular employment (BT-Drs. 15/25). The special vulnerability of employees in the TAW industry and the high requirements in terms of flexibility were explicitly acknowledged by the Act (BT-Drs. 15/25). As mentioned above, the abolishment of restrictions in the TAW industry was therefore accompanied by the introduction of “Equal Pay and Equal Treatment”. Other mechanisms to protect employees’ rights in the TAW industry were however not introduced. Especially, the supervision of employment conditions in the TAW industry remained with the Employment Agency and neither additional staffing nor authority was given to the Employment Agency as a consequence of the reform in 2002 (BT-Drs. 15/25). The supervision stayed as it was before greater flexibility was introduced.
Proponents stress the virtues of the high flexibility for user firms and the creation of new job opportunities due to the high flexibility (Brömser 2008, p. 483). TAW gives new chances to the unemployed to find work again. The fact that 53 percent of TAW employees were unemployed before starting to work in the TAW industry is often seen as a verification of this statement (Bundesagentur für Arbeit 2012a, p. 19). Furthermore, this number is supposed to indicate the bridging function of TAW into regular employment. In 2010, the IAB found that for around seven percent of previously unemployed persons their engagement in TAW leads to regular employment (Lehmer et al. 2010, p. 1). Hence, the IAB-authors called TAW a “narrow passageway” to regular employment rather than a “bridge” (Lehmer et al. 2010, p.8).

Many scientists however emphasize the negative aspects of the TAW industry. For example, Prof. Dr. Gerhard Bosch (2011) criticizes the subsidization of the TAW industry by the state and thus by taxpayers (Bosch 2011 pp. 1 ff.). About ten percent of the employees in the TAW industry have to claim supplementary “Hartz-IV” payments to their earnings (Bundesagentur für Arbeit 2012a, p. 22). The state has to subsidize wages in the TAW industry with around 500 million Euros every year (BT-Drs. 17/487). Additionally, very low wages are linked with even more costs for taxpayers. An increasing percentage of TAW employees who are laid off is not eligible for unemployment benefits (ALG I), either because their employment was too short to make them eligible or because their unemployment benefits would be lower than the non-contributory allowances under basic social security (“Hartz-IV”) (Bundesagentur für Arbeit 2012a, pp. 20, 21). Furthermore, very low wages in the TAW industry will lead to pensions which will be below basic security at retirement age. These low pensions will need to be supplemented by taxpayers’ money and are therefore the long-term costs of low wages. According to Prof. Dr. Bosch (2011), these indirect subsidies allow TAW firms to pay such low wages (Bosch 2011, p. 2).

Furthermore, there is an ongoing discussion about whether TAW substitutes regular employment (Sczesny et al. 2008, pp. 59 ff.). Prof. Franz Düwell (2011) analysed in his statement to the Committee of Labor and Social Affairs the incentives and restrictions in the

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5 Prof. Dr. Bosch (2011) makes the argument that the high percentage of previously unemployed employees in the TAW industry does not necessarily prove the bridging function to regular employment but could have other reasons (Bosch 2011, p. 4). It also shows that the payoff connected with an employment in the TAW industry is so low that nobody in a regular employment has an incentive to enter into an employment in the TAW industry (Bosch 2011, p. 4).
AÜG in connection with the TzBfG to substitute regular employment with TAW (Düwell 2011, p. 2). In his statement, *Prof. Franz Düwell* found various incentives to firms to permanently substitute regular employment by TAW in order to achieve a reduction in costs (Düwell 2011, p. 2).

### IV. Inspections in the temporary agency work industry

According to § 17 (1) AÜG, the Federal Employment Agency is the supervisory authority for the TAW industry. The first task of the Employment Agency is to issue permissions to prospective employers who want to conduct TAW. According to § 1 (1) AÜG every employer who wants to engage in TAW needs the permission of the Employment Agency. The § 3 AÜG regulates the conditions attached to a rejection of the permission. In general terms, the permission is to be rejected if facts justify the assumption that the employer in question is not reliable and does not obey laws and collective agreements (§ 3 (1) AÜG). If those facts come to the attention of the Employment Agency with delay, the agency can withdraw the permission subject to the conditions of §§ 4 and 5 AÜG.

Additionally to issuing permissions, the Employment Agency supervises the general employment conditions in the TAW industry. Therefore, the Employment Agency conducts inspections. § 16 (1) Nr. 3 to 7a and 8 to 10 AÜG list all offences which fall under the supervision of the Employment Agency, for example, whether employers do not provide the agreed conditions of work and collective agreements (§ 16 (1) Nr. 7a AÜG). The questionnaire used for inspections by the Employment Agency can be found in the annex two of the “Geschäftsanweisung zum Arbeitnehmerüberlassungsgesetz” (GA AÜG) (Directive on the AÜG) which is issued by the Employment Agency (Bundesagentur für Arbeit 2011, Annex 2). According to number 7.6 of the GA AÜG, the focus of the inspections should lie on the correct pay scale grouping of employees, the correct application of the TzBfG, vacation pay, sickness benefits, the correct application of collective agreements and the correct reimbursement of expenses (Bundesagentur für Arbeit 2011, p. 69).
The “Finanzkontrolle Schwarzarbeit” (FKS) is the supervisory authority for further offenses concerning TAW. The FKS controls whether an employer does have the permission to conduct TAW and whether the applicable minimum wage is paid (§§ 16 (1) Nr. 1 – 2a and 7b AÜG). The FKS is vested with strong enforcement rights (§§ 16 (1) Nr. 11 – 18 AÜG), which are identical to the enforcement rights of the “Schwarzarbeitsbekämpfungsgesetz” (SchwarzArbG) (§ 5 SchwarzArbG).

C. A Law and Economics Analysis of the Intensity of Inspections in the Temporary Agency Work Industry

In this section it will be explored from a Law and Economics perspective whether the inspections are effective to induce TAW firms to obey the rules of collective agreements and labor protection laws. A thorough and detailed analysis is of utmost importance because according to the official position of the federal government and authorities the inspections are sufficient and effective. (BT-Drs. 17/2101). TAW firms are not suspected to deviate from the rules in a distinctive manner. Findings of a low intensity of inspections would oppose the official position and therefore need to be very well founded.

Two preliminary remarks to the analysis should be made. First, the TAW industry is an industry which is particularly prone to abuses (Fuchs 2009, pp. 58, 59). The triangular employment scheme makes it easy to shift or disguise employers’ responsibilities. The employees’ vulnerability to abuses is acknowledged by the legislator through several rules. For example, permission is needed to engage in TAW, there are various required information duties on TAW firms (§ 7 and §§ 11 (1) and (2) AÜG) and there is a unique form of extra control by the Employment Agency: namely the inspections in question. Second, there are hardly any workers councils in TAW firms and only very few of the TAW employees are members of a trade union (Ulber 2008, p. 439). This means that many of the traditional ways to detect misdoings in firms are missing in the TAW industry. All in all, these two preliminary remarks show that there is a tremendous need for inspections by state authorities in the TAW industry, and in case of

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6 It should be noted that to give competencies to two different public authorities implies the danger of unnecessary double inspections (BT-Drs. 17/6960).
failure of state control those inspections are not likely to be substituted by other institutional actors.

I. A Theory of “Rational Deviation”

From a Law & Economics perspective a deviation from rules is likely to happen whenever the expected benefit of deviation is higher than the expected punishment multiplied with the expected likelihood of detection (Cooter/Ulen 2012, p. 465). This assumption does not mean however that people are suspected to be generally amoral. Many people will not be affected by the sanctions of legal rules because they obey to the laws anyway (Miceli 2009, p. 2). The behavior of these people will not be in the focal point of this analysis. Instead, a focus will be put on the incentive effects of law on “those to whom it is a binding constraint” (Miceli 2009, p. 2).

The theory used in this analysis is often called “Rational Crime” (Cooter/Ulen 2012, p. 463). In this analysis I will often speak of “Rational Deviation”. The theory predicts how “a rational, amoral person might decide whether to commit a crime” (Cooter/Ulen 2012, p. 463). For reasons of simplicity risk neutrality is assumed. Furthermore, it is assumed that individuals try to maximize their net payoffs. They do so by calculating the expected benefits and expected costs of their actions. In the calculation the private costs and benefits of the employer are taken into account. Deviation from rules implies a benefit to the employer. To give an actual example: by not providing adequate security clothing, incorrect pay scale grouping or tampering with the working-time account, the employer saves costs and derives an economic benefit. Deviations can be ranked, and the letter \( x \) will denote the degree of deviation in the model. A higher degree of deviation is connected with a higher benefit to the employer. Let \( y \) denotes the employer’s payoff. The employer’s payoff \( y \) is increasing in \( x \). Cooter /Ulen (2012) assume the function \( y(x) \) to increase in a linear way (Cooter/Ulen 2012, p. 463). However, it seems more likely that in the beginning a small degree of deviation from the rules yields a high benefit, and at an already high level of deviation the same amount of additional deviation is connected only with a lower increase in benefits. Therefore, in the model of the thesis, the used curve is concave with a decreasing positive slope.
Another small variation of the model of Cooter /Ulen (2012) is the change from a certain benefit to an expected benefit. The argument for this is that the employer does not know for sure how high exactly all the benefits will be yielded by a certain degree of deviation. Sometimes the benefits will depend on external circumstances which cannot be influenced by the employer. Hence, to look at the expected benefit seems to be more realistic. The probability is denoted with $\pi_B$.

The costs of the employer equal the expected punishment. Expected punishment consists of the amount of the actual punishment and the likelihood of detection. Punishment or fine can also be ranked and is denoted with the letter $f$. More serious deviations are connected with higher punishments. Therefore, $f$ increases in $x$. The curve has an increasing slope to indicate that punishments become increasingly severe with a higher degree of deviation. Furthermore, the positive slope increases because it is assumed that less severe deviations are more likely not to be detected, and with an increasing degree of deviation the likelihood of detection increases (Cooter/Ulen 2012, p. 465). The probability of detection is denoted with $\pi_C$. To actually punish an employer, the costs must exceed the benefits. Hence, there is punishment if $f(x) > y(x)$. The point where actual punishment starts is denoted with $d$. As the employer strives for the highest net payoff, he will try to maximize his net benefits and this calculation can be expressed in marginal values. So, in general terms, $x^*$ solves

$$\max \pi_B(x)y(x) - \pi_C(x)f(x)$$

The point $x^*$ is then the degree of deviation the employer will choose. The figure C.1 depicts and summarizes all presented assumptions and considerations.
The legislator and the authorities may influence the expected costs for the employer. They do so by increasing the amount of fines and/or by increasing the probability of detection. To a certain degree it is a policy decision how much deviation is tolerated. If fines are increased or inspections are extended, the expected cost curve for the employer steepens. In the used model the new curve with higher fines and a higher rate of detection is denoted with $\pi_{C1}(x)f_{1}(x)$. Subject to the new conditions the employer still strives for maximization of his net payoff. But the new expected cost curve changes his choice of $x^*$. Now, the employer will choose $x_1^*$ instead of $x^*$. In comparison, this means a lower degree of deviation and a higher compliance with collective agreements and workers’ protection laws. Also, actual punishment starts earlier at the point $d_1$. Figure C.2 depicts and summarizes this idea.
It should be kept in mind that a steeper cost curve is connected with higher costs to the Employment Agency. For example, an increased staffing of the Employment Agency could help to increase detection. This can be depicted in a social cost curve. Here, only the private costs of TAW firms are taken into account. In the next sections the expected benefits and expected costs to the TAW firms will be explored in more detail to make a prediction about the likely degree of deviation in the TAW industry.

1) Expected benefits from deviation in the temporary agency work industry

A calculation of possible benefits of deviation is highly speculative. The following considerations draw on a publication of the “Arbeitnehmerkammer Bremen” (Strüßmann et al. 2009, pp. 66 ff.). A medium-size TAW firm with 200 employees is assumed. All employees work in the lowest pay scale group. The disposition price, which the TAW firm can offer to user firms, depends heavily on the working costs and the hours the TAW employees can be placed at disposition. First, a possible and lawful calculation of the assumed TAW firm is presented. Subsequently, ideas are presented on how to save working costs deviating from laws and collective agreements.
Hourly wage employee: 7.89 € (Pay scale group 1)
Weekly working time: 37.5 hours
Paid hours a year (37.5*52 weeks): 1,950 hours
Official holidays (10*7.5): - 75 hours
Holiday (25*7.5): - 187.5 hours
Illness ca. 5 %: - 97.5 hours
No disposition ca. 5 %: - 97.5 hours

Effective working time: 1,493 hours

For example, TAW firms can shift the risk if there is disposition to the employees. Times in which there is no disposition are not paid. Employees are forced to take days off, or all hours without disposition are offset with the working-time account. Per year, this could help the TAW firm to save 153,855 €. The same amount could be saved by not paying sickness leave. Employees who are ill are just let off or are told to take days off to go to the doctor. An incorrect pay scale grouping is another possibility to save on wages. In the second pay scale group, the hourly wage is 8.53 €. If employees are incorrectly grouped in the first pay scale group, the TAW firm could save 388,422 € yearly. The total savings in cost sum up to 696,132 € per year.

There is currently no data available to which extent such deviations are possible. Here, it is therefore assumed that in one of ten employments deviations take place. This would equal saved costs of 69,613 € per year for the assumed TAW firm. With this saved costs, the firm can offer lower disposition prices and will enjoy a competitive advantage in the market. It should be emphasized again that this is a very rough calculation and it is only supposed to give the reader an idea about the figures involved.

2) Expected costs from deviation in the temporary agency work industry

The expected costs are determined by the possible range of fines in the AÜG, by the likelihood of detection and the fines actually issued by the Employment Agency.
a) The amount of fines in § 16 AÜG

There are ten different offences listed in § 16 AÜG for which the Employment Agency is the supervisory authority. The possible fines of these ten different offences vary from 1,000 € up to 500,000 € for not providing “Equal Pay and Equal Treatment” or the working conditions of an applied collective agreement. Hereby the law only constitutes an upper limit but no lower limit. It is up to the Employment Agency to decide about the actual amount of the fine. Furthermore, the wording of § 16 AÜG gives the Employment Agency the power to decide whether it is necessary to issue a fine at all or whether a warning might be sufficient (§ 16 (2) S. 1 AÜG). In addition to fines, the most severe penalty is the withdrawal of the permission to conduct TAW (§§ 4 and 5 AÜG). A less fundamental sanction is the issuing of special conditions which have to be obeyed by the TAW firms (§ 2 (2) AÜG).

A more detailed exploration of the fines shows that five of the ten offences can be sanctioned with a maximal fine of 1,000 €. Three different offences can be penalized with 2,500 €, one offence with 30,000 € and one offence with 500,000 €. The offence of § 16 (1) Nr. 7a AÜG, with a maximal fine of 500,000 €, is the most important offence concerning the research question of this thesis. This offence states that only if there is a violation of § 10 (4) AÜG, meaning a violation of the provisions of collective agreements or other labor protections laws, this very high sanction can be imposed. For example, this fine could be imposed in cases of a violation of provisions concerning the working-time account, the provisions of the pay scale grouping, and the regulations of the TzBfG or the KSchG. Additionally, a withdrawal of the permission will be considered in those cases (§§ 4 and 5 AÜG). However, the Employment Agency neither keeps statistical record about how often violations of the particular offence § 16 (1) Nr. 7a AÜG are detected nor the statistical average punishment issued by the Employment Agency for this offence (BT-Drs. 17/6960).

b) Likelihood of detection

Effective deterrence is also depending on the likelihood of detection. The likelihood can be influenced by many different aspects. This section explores in more detail the means to detect misdoings in the TAW industry, the staffing of the inspection teams, and the design of the inspections. Furthermore, I will take a look at the incentives of the Employment Agency and
consider whether there might be a principal agent conflict between the legislator and the Employment Agency.

aa) Means to detect misdoings in the temporary agency work industry

In more traditional industries there are various ways to detect misdoings of employers. Samples would be: workers’ councils, strong representation of trade unions, whistleblowers or individual employees engaged in promoting good and lawful working conditions in their long-term employment. The TAW industry is however unique in that sense. Most of these traditional mechanisms are missing. Furthermore, over 50 percent of the employments last no longer than three months (Bundesagentur für Arbeit 2012, p. 17). This implies that an improvement in working conditions would not yield a big benefit to the reporting employee. Additionally, there are many reports that TAW workers are particularly afraid of losing their jobs if they report a misdoing. Colleagues are changing frequently, which makes collective action very difficult (Bundesagentur für Arbeit 2012a, p. 18). Altogether, there are very little incentives for an individual employee to report a misdoing to the Employment Agency.

bb) Staffing of the Employment Agency

One possible reason for a low likelihood of detection could be the staffing of the Employment Agency. 55 inspectors are assigned to examine 18,404 TAW firms with 872,000 employees (BT-Drs. 17/9796 and BT-Drs. 17/8549). This means, each inspector is responsible for the control of roughly 335 TAW firms with approximately 15,855 employees. Due to the frequent termination of contracts the total sum of different employment contracts supposedly adds up to an even higher amount for every supervisor. During the last years the ratio between inspectors and TAW employees has deteriorated from approximately 1 : 7,000 in 2004 to roughly 1 : 16,000 in 2012. Even though the comparability might be limited in several ways, the “Finanzkontrolle Schwarzarbeit” (FKS) had a staffing of 6,723 inspectors in 2011 and for about 2,700,000 employees a sectoral minimum wage was applicable for this year (BT-Drs. 17/5863, Lohse 2011, tagesschau.de). This constitutes a ratio of one FKS-inspector to 402 employees under minimum wage regime. The FKS is not only responsible for the supervision of minimum wages. However, looking at the ratio of one FKS-inspector with respect to all 28,370,000
employees who fell under compulsory social security in 2011 in Germany, this constitutes a ratio of one FKS-inspector to 4,220 employees (BA Monatsbericht Juli 2011). This reveals a striking discrepancy. The ratio in the TAW industry of one Employment Agency-inspector to 15,855 employees seems to be extremely unfortunate in comparison. With a staffing this poor a comprehensive and effective control in an industry which is prone to abuses seems unlikely.

cc) Design of the inspections

The Employment Agency has a right to inspect the TAW firms. However, the inspectors of the Employment Agency are not allowed to check employment conditions in the user firms (BT-Drs. 17/6960). Normally the inspections take place in the office buildings of the TAW firms. The Employment Agency notifies the TAW firms about the planned date of the inspection in advance and asks the management to prepare the relevant documents for the inspection (BT-Drs. 17/6960). The contact persons and interview partners for the inspectors are the management or the proprietor of the TAW firm (BT-Drs. 17/6960). Employees are usually not interviewed (BT-Drs. 17/6960). In 2011, in twelve percent of the inspections TAW firms had to deliver the relevant documents via postal service to the Employment Agency (BT-Drs. 17/6960).

Furthermore, the Employment Agency is not vested with strong enforcement rights. The inspectors are not allowed to search the office buildings of the TAW firm. A search is only allowed on the basis of exigent circumstances (§ 7 (3) AÜG). In comparison, the “Finanzkontrolle Schwarzarbeit” (FKS) is allowed to enter every office building without previous notification and to look for all relevant documents without judicial authorisation (§ 4 (1) SchwarzArbG). If managers or proprietors do not comply with the requests of the inspectors of the FKS they have to pay a fine up to 30,000 € (§ 8 (3) in connection with § 5 (1) SchwarzArbG).

This first look at the design of the inspections gives the impression that deliberately concealing deviation seems to be rather manageable for employers in the TAW industry. The Employment

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7 It is of course noticed that not all employees of the FKS actually work as inspectors and the FKS has more tasks to fulfil than the inspectors of the Employment Agency.
Agency is not originally a supervisory authority such as other institutions like the FKS and is hence not used to enforce und supervise laws. Because the inspections only take place in the office building of the TAW firm the inspectors almost never meet employees because they work somewhere else: in the user firms. Also, one might ask how the inspectors of the Employment Agency can possibly monitor whether the user firms obey their duty to inform TAW employees about vacancies in their firms (§ 13a AÜG) and to allow TAW employees to use facilities like the employee cafeteria, childcare service or transportation in the user company (§ 13b AÜG). The Employment Agency is the supervisory agency for these offences too (§ 16 (1) Nr. 9, 10 AÜG).

\( \text{dd)} \quad A \text{ qualitative break in the inspections} \)

Between the years 2010 and 2011 the staffing of the Employment Agency raised from 75 to 100 employees (BT-Drs. 17/9796). This equals an increase of 33 percent. In the same time the number of inspections increased from 781 inspections in the first six months of 2010 to 2,306 inspections in the first six months of 2011 (BT-Drs. 17/6960). This is an increase of 296 percent. Since 2011, the number of inspections stayed at this level (BT-Drs. 17/9855). In the last six years there have been around 600 – 700 inspections per half a year (BT-Drs. 17/464). The minor increase in staffing cannot explain the sudden rise in inspections. A possible explanation would be that quality and breadth of the inspections were lowered in order to achieve a higher rate of inspections. This argument can be supported by the fact that in spite of the quickly rose number of inspections the Employment Agency did not detect more misdoings (BT-Drs. 17/6960). The issued fines even declined from approximately 40,000 € in the first six months of 2010 to 33,790 € in the first half of 2011 (BT-Drs. 17/2236, BT-Drs. 17/6960). Deliberately disguising minor wrongdoings becomes significantly easier for TAW firms following this explanation of a qualitative break.
c) The actual amount of imposed fines: a look at the incentives of the Employment Agency

Concerning TAW, the legislator gave the Employment Agency two main instructions: First, to put the unemployed back to work with the help of TAW firms, and, second, to control these TAW firms (BT-Drs. 15/25 and § 17 (1) AÜG). These two goals are to a certain degree contradictory and thus there arises a conflict of interests within the Employment Agency. This is that the Employment Agency needs a good relationship with the TAW firms to bring the unemployed back to work. A dynamic and fast growing TAW industry facilitates this task. Strict inspections and punishments for misdoings would negatively affect this relationship. Therefore, the Employment Agency has an interest in lax controls. A recent survey by Prof. Dr. Egle, on behalf of the biggest German TAW firm Randstad, came to a similar result: Because the Employment Agency works closely together with the TAW firms in its daily business a simultaneous supervision seems hard to realize (Egle 2012, p. 8). The § 16 AÜG leaves the amount of fines issued to the discretion of the Employment Agency. The conflict of interest may affect the amount of fines actually issued against TAW firms and may also lead to lower fines on average. In 2010, the Employment Agency imposed 709 fines which added up to 86,625 € with a resulting average fine of 122 € (BT-Drs. 17/6960).

Very recently, in July 2012, the Employment Agency completely separated the daily business with TAW firms and the inspections. New and independent inspection teams were established (BT-Drs. 17/9855). The separation should help to increase the effectiveness of the inspections and secure a high rate of inspections (BT-Drs. 17/9855).

d) The possibility of a principal agent conflict

Additionally to conflicting incentives within the Employment Agency, we could be dealing with a principal agent conflict. In Law and Economics, and especially in the Public Choice literature, the reader is often confronted with a principal agent conflict between legislator and bureaucracy (Mueller 2003, pp. 359 ff.). There is room for a principal agent relationship whenever the well-being of one party depends on the action of the second party (Cahuc/Zylberber 2004, p. 309). Additionally, two different “ingredients” are needed. There
must be conflicting goals and information asymmetry on which the following subchapters will have a closer look (Beck 2011, pp. 207/208).

\textit{aa) Information asymmetry}

Concerning the results of the inspections the recordkeeping of the Employment Agency is quite poor. The Employment Agency presents the number of inspections and the total amount of fines each year to the legislator. Although a standardized questionnaire is used for the inspections the results are not published (BT-Drs. 17/6960). This means that the principal (the legislator) is not informed about the kind of offences committed and the way how the bureaucracy uses its leeway provided by the wording of § 16 AÜG to determine the actual amount of the fine. Thus, a reliable evaluation of violations of employees` rights is extremely difficult. This creates information asymmetry and gives the Employment Agency the possibility to behave opportunistically.

\textit{bb) Conflicting goals}

It is doubtful whether there are conflicting goals. The representatives of the legislative are unlikely to admit that a lax control is favored and in their interest. It could be argued though that there is a political will behind the poor staffing and the weak enforcement rights of the Employment Agency (Beate Müller-Gemmeke MdB 2012, expert interview). The legislator might desire low intensity inspections to boost the TAW industry and to put many unemployed back to work, regardless of a strict compliance to laws. If this is true, there is no real conflict of interests and therefore there would be no principal agent conflict. Nevertheless, it seems to be far-fetched to argue that the legislator does not want an industry to comply with the law. Revealing the real intention of the legislator is very difficult in this context. It should therefore just be concluded that there is room for a potential principal agent conflict.
II. Findings of this section: A low intensity of inspections

It is very difficult to calculate the benefits of deviation accurately within the scope of this thesis. One can only work with the considerations presented above. The analysis of the expected costs reveals three main points:

(1) The fine of 500,000 € for the decisive offence in § 16 (1) Nr. 7a AÜG seems to be high enough for effective deterrence.

(2) There seems to be a very low likelihood of detection. The ratio between inspectors and employees in the TAW industry has deteriorated in the last years. When compared to the FKS the ratio is extremely low. The weak design and the previous announcement of inspections make a deliberate concealing of a deviation possible. Furthermore, the sudden rise in the number of inspections without a corresponding rise in fines hints at a low effectiveness of inspections. The Employment Agency is not an original supervisory authority like the FKS and is not vested with strong enforcement rights.

(3) The amount of imposed fines is surprisingly low. Although the Employment Agency can issue a single fine of 500,000 €, all 709 fines in 2010 only added up to only 86,625 € with a resulting average fine of 122 €. In order to keep a good relationship with TAW firms, the Employment Agency could be induced to be lenient with fines. The current re-organization and separation of competencies within the Employment Agency also indicates in this direction and may lead to an improved control and deterrence in the future.

Correspondent to the theory of “Rational Crime”, expected punishment is denoted with \( \pi_C(x)Jf(x) \). In particular because of the low \( \pi_C \), the expected costs may often be perceived as low by TAW firms. In terms of figures, there could be 4,365 firms like the in the beginning imagined TAW firm with 200 employees and expected benefits of 69,613 € in the whole TAW market.\(^8\) When these 4,356 firms compare their expected benefits to the expected costs, many of them

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\(^8\) 873,000 employees in the total TAW market divided by 200 (the size of the imagined TAW firm) equals 4,365 TAW firms of this size and with this expected benefits. Of course, this does not reflect the structure of the real TAW market.
may conclude that a deviation pays off. Therefore, it will be assumed for the next section that the inspections of the Employment Agency are of low intensity and cannot induce TAW firms to closely obey laws and collective agreements. The economic question is what will happen to the TAW market under this premise.

D. An Analysis of the Economic Effects of the Intensity of Inspections in the Temporary Agency Work Industry

In this section TAW firms are assumed to rationally deviate from the provisions in labor laws and collective agreements. On the one hand this will affect the employees` rights and remunerations negatively, on the other hand it might also affect the TAW market and lead to market failures. To make a preliminary remark, a low intensity of inspections can have various effects on the market. The unique triangular form of employment and the resulting interaction between two markets make the analysis very complex. Even contradictory effects are imaginable. Which effect prevails will be a question of the external conditions that influence the markets. In the next sections the different economic effects will be explored in more detail, followed by a discussion about the prevailing effects under changing conditions.

I. How lawful firms leave the temporary agency work market

One possible economic effect is that lawful firms are driven out of the market and only deviating companies prevail and stay in the market. This means that a race to the bottom would be the first economic effect of a low intensity of inspections.

1) A race to the bottom

The low intensity inspections create the opportunity for firms to engage in opportunistic behavior and to deviate from laws. A rationally calculating TAW firm will try to set its degree of deviation as close as possible to the point \( x^* \) in figure C.1. Whenever one firm starts to act
opportunistically, this creates a cost advantage. Due to the opportunistic behavior the firm is more competitive than its rivals and is able to eventually drive them out of the market. A possible response of the other firms is therefore opportunistic behavior as well. If the next firm starts to deviate even more from the law, the other firms have to react and retaliate until point $x^*$ is reached. Hence, up to a certain degree information asymmetry and the resulting possibility to engage in opportunistic behavior could lead to a race to the bottom. A further deviation from laws and collective agreements ($x > x^*$) would yield a lower net benefit. TAW firms have therefore no incentives to deviate further. As a result, lawful TAW firms ($x = 0$) and firms with a deviation smaller than $x^*$ will be driven out of the market eventually.

2) A race to the bottom or redistribution between employers and employees

There is an additional condition for a race to bottom. A race to the bottom can only start if the TAW firms do not keep the extra profit - gained from deviating from the law - to themselves. At least partially they have to hand the profit down to the user firms. User firms cannot know how TAW firms achieve low prices. They will use the price as a criterion when deciding between different TAW firms and user firms will generally have a preference for the lowest price. If the TAW firms keep all the benefits to themselves there is no perceived difference between a lawful and a deviating TAW firm and therefore no pressure would be created for lawful TAW firms to additionally reduce costs by unlawful behavior. Therefore, no race to the bottom would commence. The only effect would be redistribution between employees and TAW firms.

According to a study of Dr. Sandra Siebenhüter, working for the WSI institute in Berlin, competition in the TAW industry is driven by prices rather than by quality (Siebenhüter 2011, p. 146). User firms are often price-sensitive. TAW Firms go out of business frequently and new firms enter the market (Siebenhüter 2011, p. 146). This was also the experience of the expert interview partners that have been selected for this study (Beate Müller-Gemmeke MdB, RA Gerd Denzel, Andrea Resigkeite 2012, expert interviews). Due to the high competition it is likely that TAW firms give at least parts of their saved costs to the user companies in order to have a competitive advantage in the market. Hence, a race to the bottom up to $x^*$ starts.
For reasons of simplicity it will be assumed that the TAW firms are forced by competition to hand down all of their saving in cost to the user firms. Even if the TAW firms would keep some of the saved cost to themselves the results of in the further analysis would not be changed in general direction.

3) Information asymmetry and prohibitively high transaction costs of enforcement

This subchapter analyses why employees cannot recover their losses at court. If they did so, deviations would have no economic effects on the market. A race to the bottom would not happen. Individual employees could just go to court and sue for the additional parts of their remuneration or, for example, for ordering the employer by a court decision to provide adequate security clothing or similar conditions.

There are two problems with this assumption. First, there is an information problem. TAW firms will try to conceal deviations from legal rules or collective agreements. It will often not be easy for the individual employee to detect a misdoing. Not everyone knows how to correctly calculate a working-time account or how to calculate expenses allowances accurately. Hence, the first hurdle is information.

Transaction costs of enforcement are the next hurdle. Only if the expected transaction costs are lower than the expected benefits of enforcement an individual employee will sue. The costs of enforcement are determined for example by the necessary legal expenses. At the employment tribunals of the first instance in Germany the own legal expenses have to be paid by each party (§ 12a (1) ArbGG). It does not matter whether the court decides in favor of the employee or not. With an average gross remuneration of 1,400 € per month only few TAW employees will have an own legal costs insurance and only very few will have a legal costs insurance by trade union membership. Additionally, there is the time consumed by a dispute and emotional costs in a wider sense. All in all, transaction costs of enforcement seem rather high to an individual employee. The other important aspect is the expected benefit. The expected benefits of a trial are determined by the amount of lost remuneration per month times the length of the employment. Generally it can be said that the longer the employment, the higher the accrued damage. Around half of the employments in the TAW industry last less than three months. This lowers the expected benefits of a trial dramatically. A cost benefit
calculation reveals only small incentives for an individual employee to sue. Private enforcement will not stop the race to the bottom.

4) Result and effects on the market

The presented analysis revealed that there is indeed a race to the bottom up to the point $x^*$. Lawful TAW firms are driven out of the market. Consequently, all TAW firms are assumed to deviate until the point $x^*$. The deviation to $x^*$ makes it possible for TAW firms to offer TAW cheaper and the demand for TAW increases. Graphically this means that the supply curve is shifted downwards. The x-axis in figure D.1 shows the quantity of the TAW market. The y-axis shows the price which user firms have to pay. The aggregated demand and supply are shown by lines $D$ and $S$ respectively. The aggregated supply under optimal deviation is shown by line $S_{x^*}$. Under optimal deviation the TAW firms can offer the same amount of TAW for a lower price. Initially for price $p_1$ the market has the quantity $q_1$. For the lower price $p_2$, the user firms demand more TAW. The size of the market is increasing from $q_1$ to $q_2$. So, in the first step of the analysis, deviation makes the market for TAW expand.

Figure D.1
Generally, collective agreements determine the minimum remuneration in the TAW industry. With deviation this minimum remuneration can be slightly lower. It should be emphasized that the price under deviation until $x^*$ acts as a second minimum remuneration. TAW firms cannot offer TAW any cheaper than under optimal deviation. There is a connection between the disposition price and the remuneration of TAW employees. Under the assumed race to the bottom employees will expect TAW firms to offer only jobs connected with “optimal deviation” and a respectively lower remuneration. In the next step the significance of the reputation of the TAW industry will be demonstrated.

II. How employees leave the temporary agency work market

As explained earlier, the TAW industry is special in the sense that it is a triangular relationship. An increasing demand of user firms for TAW leads to an increasing demand of the TAW firms for employees. The second economic effect of a low intensity of inspections could be a process in which many employees leave the TAW market or do not even enter into the market due to a lower payoff connected with “optimal deviation”. To approach this question it will first be outlined under which conditions parties generally conclude a contract and why an employment contract is an experience good.

1) The conclusion of contracts

Whenever there is a temporal element in exchange, parties are likely to conclude an enforceable contract to overcome distrust in performance (Shavell 2004 p. 297). An employment contract is a typical example for this kind of contract. Generally, a contract is only concluded if it makes both parties better off. This means that employees will only enter into an offered employment contract with a TAW firm if this contract is associated with a higher benefit than the benefit of the best outside option. Let $a$ denote the benefit to an employee of

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9 There are no remunerations below collective agreements because of the principle of “Equal Pay and Equal Treatment” in the AÜG.
concluding an employment contract with a TAW firm. The payoff \( a \) should represent the total remuneration an employee derives from the job, including hourly wage, correct working-time account, correct pay scale grouping. The payoff \( a \) is depending on the degree of deviation \( x \). A higher degree of deviation is associated with a lower payoff. For example, if the TAW firm deviates and tampers with the working-time account the payoff for the employee decreases although the hourly wage stays the same. The symbol \( a_{x0} \) should denote the payoff to the employee with no deviation and the symbol \( a_{x*} \) the lower payoff under optimal deviation. The letter \( b \) should denote the employee’s payoff for the best outside option. The term “outside option” is given a broad meaning here. It includes the possibilities to find employment elsewhere, possible unemployment benefits or the possibility of continuing education etc. Employees are assumed to have different payoffs and outside options, depending on their different qualifications, opportunities and preferences. For further analysis the different payoffs of working in the TAW industry and the different outside options will always be compared for each employee. To summarize, an employment contract in the TAW industry will be concluded whenever \( a > b \) for an individual employee.

2) An employment contract is an experience good

In his paper “Information and Consumer Behavior” Phillip Nelson (1970) distinguishes between “search goods” and “experience goods” (Nelson 1970, p. 312). It is not always possible for the consumer to assess the quality of goods (Nelson 1970, p. 318). TAW firms will try to disguise their deviations. This makes it very difficult for the prospective employee to assess the quality of a TAW firm by search. He or she can compare the gross remuneration, such as hourly wage, but not the payoff in a wider sense. The employee will only find out later whether the TAW firm continues payment of wages in case of illness and keeps a correct working-time account. This makes the employment contract an experience good.

As described in Akerlof’s (1970) paper “The market for “Lemons”: Quality Uncertainty and the Market Mechanism” prospective employees can only make a best guess about the quality of TAW firms (Akerlof 1970, p. 489). With the probability \( q \) it may be a “good” job and with probability \( (1-q) \) it may be a “bad” job, a “lemon”. This leads to an expected average job quality or payoff. In case of experience goods the recommendations of others will be used very often (Nelson 1970, p. 327). Employees may ask friends about their experience use the
internet or watch reports in television to form an opinion about the expected payoff. In section I. of this chapter, the race to the bottom was described. The “lemons” drove all the “good-quality jobs” out of the market. Hence, the prospective employees expect a payoff connected with optimal deviation.

It should be emphasized that employees cannot distinguish between the different TAW firms because the jobs offered are experience goods. That means that even if a TAW firm would be willing to offer a payoff without deviation in order to induce more employees to enter into a contract, the firm will have to overcome difficulties to credibly do so.

3) The groups of employees affected by deviation

When looking at the effects of the assumed deviation of TAW firms, three different groups of employees can be distinguished. The three groups will be characterized by their odds between \( b \) and \( a_o \) and \( a_x^* \).

The first group of employees is characterized as \( b > a_o > a_x^* \). This group is not affected by the decision of TAW firms to deviate from the rules or not. They would not accept an employment in the TAW industry anyway.

The second group can be characterized as \( a_o > a_x^* > b \). The decision of this group is also not affected by deviation up to the point \( x^* \) because the employees of this group will accept employment in the TAW industry regardless of deviation. Their outside option \( b \) is always lower.

All employees who have an outside option characterized as \( a_o > b > a_x^* \) will conclude a contract if there is no deviation, but will not conclude an employment contract in the TAW industry if there is deviation up to point \( x^* \). This group of employees is at the margin. It is affected by the decision of the TAW firms to deviate or not to deviate. Observing the reactions of the members of this group one can make assumptions about the effects of deviation on the TAW market.
4) The costs of dishonesty and the effects on the market

Comments on the costs of dishonesty can be made when a market for TAW in which everyone acts honestly is compared with a market for TAW in which dishonesty prevails. Most obviously a dishonest market is connected with losses for employees. Parts of the employees’ payoffs are shifted to the TAW firms and to the user firms. Less obviously, there is another cost of dishonesty. There may be potential employees willing to work in a good quality TAW job and there may be potential TAW firms willing to offer those jobs, however, the presence of TAW firms offering low quality jobs tends to drive the legitimate firms out of business (Akerlof 1970, p. 495). Therefore, the total costs of dishonesty do not only lie in the amount employees’ rent diminishes. The costs must also include the losses incurred from driving lawful firms out of business (Akerlof 1970, p. 495).

The number of employees willing to work in the TAW industry may shrink due to two reasons. The outside option \( b \) is getting better or \( a \) is getting worse. When \( b \) is getting better this means that due to an improving development of the total employment market or increasing unemployment benefits more employees will leave the TAW industry or will not enter because they have a better outside option. But the variable \( b \) cannot be influenced by the inspections of the Employment Agency and can therefore be taken as exogenous.\(^{10}\) The focus of the analysis is therefore put on \( a \). The payoff \( a \) is influenced by the degree of deviation and the optimal point of deviation \( x^* \) can be influenced by the intensity of inspections.

A contract in the dishonest market is only concluded if \( (a^* > b) \) with \( (a^* < a_{w}) \). This lowers the number of potential contracts in the TAW industry in comparison to a honest market. In the previous section three different groups of employees were presented. The group at the margin, characterized as \( a_{w} > b > a^* \) represents the not concluded contracts due to deviation. One general statement can be made: The bigger the difference between \( a_{w} \) and \( a^* \), the more employees will leave or choose not to enter the market as an effect of a low intensity of inspections. This means the magnitude of the effect depends on the degree of deviation. This general statement needs however more detailed explorations. Particularly in need of further

\(^{10}\) Due to the narrow research question, a change in the variable \( b \) will be left out of the considerations although it might be of vital importance for explaining changes in the TAW industry. For example, a big change in the TAW industry was induced by the “Hartz-Gesetze”. These bills included the worsening of the outside option \( b \) especially by the “Vierten Gesetz für moderne Dienstleistungen am Arbeitsmarkt” (“Hartz-IV”) (BT-Drs. 15/1516). Nevertheless, an analysis with a wider scope should take changes in the outside option into consideration.
examination are the effects on the TAW market under previous equilibrium in the employment market if the model allows for previous unemployment.

a) Economic effects on employment markets in previous equilibrium

After general considerations of the costs of dishonesty in the TAW industry a more detailed analysis of the costs will follow in this section under the assumption that initially markets are in equilibrium.

The analysis connects two markets. The first market is the market in which user firms demand TAW and TAW firms supply TAW. The second market is the market for labor in which TAW firms demand employees and employees supply their workforce. The market for TAW will be called the first market and the market for labor will be called the second market. The first market is known from figure D.1. In the connected graph on the right in the figure D.2, the prices of the first market are translated into correlating payoffs for the employees. Every price \( p \) is connected with a certain payoff \( a \). The line has a slope of more than 45°, indicating that the payoff for employees is a fraction of the price. For reasons of convenience a linear transformation is assumed. Another form of transformation would not change the general direction of the effects. In the second market, the left vertical axis measures the price for TAW paid by user firms. The right vertical axis measures the correlating payoff \( a \) to employees. The \( x \)-axis measures the quantity of TAW. The lines \( D(p) \) and \( S(a) \) show the aggregated demand and supply of TAW. It should be noted that the supply of workforce is depending on \( a \) but the demand is depending on \( p \).

In the beginning, both markets are assumed to be in equilibrium. For the received price \( p_1 \) the TAW firms are able to supply jobs in the second market with the payoff \( a_{x_0} \) to the employees. With the payoff \( a_{x_0} \) in the second market demand and supply are in equilibrium. The TAW market has the quantity of \( q_1 \).

In the next step the described race to the bottom starts and deviation up to the point \( x^* \) takes place. As shown in figure D.1 the market for TAW enlarges as the supply curve is shifted downwards. For the price \( p_2 \) the market of the TAW industry expands up to \( q_2 \). When including the second market it has to be noted that for \( p_2 \) the TAW firms can only offer jobs in the second market with a payoff of \( a_{x^*} \). For this payoff we have a demand for employees of \( q_2 \) but
only a supply of workforce of $q_3$ ($q_2 > q_3$). Without enough employees the TAW firms cannot supply the demanded amount in the first market. The supply is limited to $q_3$. As a result, the first market also shrinks to $q_3$ when firms deviate. Here, one can see the cost of dishonesty in the TAW market in detail. Due to dishonesty, the contracts between $q_1$ and $q_3$ are not concluded on the second market even though there are potential employees and employers under honest conditions. Consequently, the same effect can be observed in the first market. The disposition contracts between $q_1$ and $q_3$ are not concluded due to the effects of dishonesty.

Figure D.2
As we know, markets strive to equilibrium (Mankiw 1998, p. 89). The reaction of the markets should be that individual TAW firms start to increase the payoffs to employees to attract more workers in order to be able to provide more TAW. There is a demand in the first market for additional TAW. This process should continue until both markets are in equilibrium again and the first market would again have the quantity of $q_1$. Hence, there would be no losses in market sizes in the end. As in the paper “Quacks, Lemons, and Licensing: A theory of Minimum Quality Standards” by Hayne Leeland (1979), this process is hindered by information asymmetry between TAW firms and prospective employees (Leeland 1979, p. 1329). The employment is an experience good. Therefore, employees can only form general expectations about the working conditions and payoffs in the TAW industry. As described by Akerlof (1970), there is always an incentive for individual employers to deviate from the rules, since the returns on lawful working conditions accrue mainly to the entire TAW industry rather than to the individual employer (Akerlof 1970, p. 488; Leland 1979, p. 1339). When individual firms provide lawful working conditions, the guess (with probability $q$ a good firm, with $(1-q)$ a “lemon”) about the received payoff in the TAW industry improves. This induces some additional employees of the group ($a_{a0} > b > a_*$) to enter the market. However, because prospective employees cannot distinguish between lawful and unlawful firms, the lawful firms cannot derive an additional advantage of not deviating from the rules. The additional employees would spread evenly over all TAW firms. The benefit accrues to the whole industry. Hence, social and private returns differ in this case. As a result there will be deviation and a reduction in the employees’ payoff and also in the size of the market. The two markets do not reach equilibrium again.

b) Economic effects on employment markets with previous unemployment

The next consideration also refers to the two markets. The alteration is that the second market is not assumed to be in equilibrium initially. There is unemployment in the second market. That means that initially for the price $p_1$ with the correlating payoff $a_{a0}$ an excess supply of labor can be observed. For the payoff $a_{a0}$ a quantity of $q_4$ employees is willing to work in the

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market, but only \( q_1 \) is demanded. When the TAW firms deviate the supply curve in the first market is shifted downwards again. The price of \( p_2 \) can only be supplied by the TAW firms if they reduce the payoff to the employees to \( a_{x^*} \). Because there was an excess supply of workforce for the payoff \( a_{x_0} \) this reduction in the payoff does not lead to a point in which the supply of workforce cannot satisfy the demand. Enough employees are still willing to work for the lower payoff \( a_{x^*} \) and unemployment is only reduced. Nevertheless, some employees leave the market. The employees with the best outside options leave the market. These are the employees characterized as \( a_{x_0} > b > a_{x^*} \). Only the employees characterized as \( a_{x^*} > b \) stay in the market. This leads to an increased market volume of \( q_2 \). Hence, under the condition of previous unemployment dishonesty leads to a market expansion.

\[ F i g u r e \ D.3 \]
For a better understanding it should be emphasized again that the flexibility of prices and payoffs is constrained in the TAW industry. The price $p_1$ represents the minimal possible price and remuneration under lawful conditions. Wages, pay scale groups etc. are determined by collective agreements. Under optimal deviation this “minimum wage” is lowered to $p_2$ or the correlating $a_{x^*}$. It is not possible for TAW firms to reduce the price or payoff further in order to reach equilibrium between demand and supply.

III. Do only the “underperforming” workers stay in the temporary agency work industry?

It is assumed that employees are heterogeneous in their abilities and productivity. Therefore, employees have different outside options. The better the outside option $b$, the less likely it is for an employee to work in the TAW industry. The reduced payoff $a_{x^*}$ in the dishonest market has the effect that the employees with the best outside options leave the TAW market. Only the employees with outside options lower than $a_{x^*}$ stay in the market. If we assume that the value of the outside option is positively connected with the performance and productivity of employees, then the tentative conclusion can be drawn that due to the low intensity of inspections the best employees leave the market. The TAW firms are left with the “underperforming” employees.

In both discussed constellations, under previous equilibrium and under previous unemployment, the employees with the best outside options leave the market. Under the assumption that $b$ is positively correlated with performance. This means that both times the average quality of employees is lowered. This may have several effects, which will be explained in the following subchapter.
1) Information asymmetry between TAW firms and prospective employees

TAW firms cannot distinguish between “underperforming” and “well-performing” prospective employees. At the time of the conclusion of an employment contract there is information asymmetry between TAW firms and employees (Beck 2011, p. 212). An “underperforming” worker may mimic a “well-performing” worker and reveal his true type only after expiration of the probation time. As a result, firms can only form an expectation about the quality of employees and make a best guess. Under lawful conditions the average performance of TAW employees will be determined by all outside options connected up to $a_{x\alpha}$ and under deviation by all outside options connected up to $a_{x*}$.

2) Reactions of user firms and economic effects

Simultaneously, the user firms will form an expectation about the quality of TAW employees. A lower expected quality of workers will lead to a lower willingness to pay for TAW services on the side of the user firms. For the same amount of TAW the user firms are willing to pay less. The demand curve is shifted southwest. Consequently, the market for TAW will shrink.

However, the effective results are supposedly different in the two analysed constellations. Looking at the external condition of previous equilibrium, it is not the demand of user firms that is the limiting factor, but the supply of workforce. Even if user firms reduce their demand, the TAW firms might not be able to supply enough TAW to satisfy this reduced demand. A small reduction of demand would not effectively affect the market. This can also be interfered from the figure D.2. To have an effect the reduction in demand would need to be very high.

Under the assumption of previous unemployment the resulting economic effect is different. A reduction of demand from the user firms would in every case effectively affect the market. In the following figure D.4, the demand curve is shifted southwest and is now represented by $D_{x*}$. As emphasized above, the price $p_2$ for TAW, connected with optimal deviation, is the lowest price possible. TAW firms cannot reduce this price any further to reach a new equilibrium of supply and demand. This means that the important information is how much TAW are user firms willing to demand for the price $p_2$. This equals $q_6$ under reduced demand and a loss in the market size ($q_6 < q_2$). In the second market this would lead to a higher excess supply of
workforce and again to higher unemployment. The amount of how much the market shrinks depends on various conditions and cannot be determined accurately within the scope of this thesis. One condition is that about 33 percent of TAW employees work in unskilled labour jobs and quality of employees is assumed not be the driving factor in this industry (Bundesagentur für Arbeit 2012a, p. 14). Therefore, it is assumed that the reduction in demand due to a lower quality of employees will only be moderate. Figure D.4 depicts these assumptions and considerations.

Figure D.4

IV. How lawful companies may prevail in the temporary agency work market

It has been shown that there are potential employment contracts which are not concluded due to information asymmetries and the resulting dishonesty in the market. In the case of the assumed previous equilibrium of labor markets this is prominent. All contracts of \( a_{10} > b > a_{1*} \) are not concluded even though under honest conditions there are employees willing to work and a demand for additional TAW from user firms. To bring employees and TAW firms together, information asymmetries must be overcome. A way to do this is signaling (Beck 2011, pp. 211, 212). If signaling was successful it would help to avoid or reduce the number of

\[ q_6 < q_2 \]

\[ D_{x^*} \]

\[ S_{x^*} \]

\[ S \]

\[ P \]

\[ Q \]

\[ x^* \]

\[ p_2 \]

\[ D \]

\[ q_6 \]

\[ q_2 \]

\[ x_{10} \]

\[ x_{1*} \]

\[ a_{10} \]

\[ a_{1*} \]

\[ b \]

\[ 1^2 \]

However, this might be different, for example, in the metal- and electrical industry. In these sectors the quality of employees might be more decisive.
not concluded contracts due to information asymmetries and dishonesty. The TAW firms would signal their quality and connected higher payoffs to attract more and better employees.

Another discussed possible consequence of a reduction in the market is an information asymmetry between TAW firms and user firms. Because of an expected low quality of service user firms reduce their demand for TAW. Hence, TAW firms will also try to signal their quality to user firms. This means that TAW firms try to signal that they work with “well-performing” employees and some user firms might be willing to pay a premium for a good quality service.

1) The theory of signaling

A signal is only credible if it involves costs to send a false signal (Parkin et al. 2012, p. 446). Richard Posner (1998) emphasizes in his textbook “Economic Analysis of Law” the virtues of voluntarily negotiated penalty clauses (Posner 1998, p. 142). By agreeing on an extra penalty the informed parties can communicate credible information about their own estimation of their reliability (Posner 1998, p. 142). Another reason for a penalty clause might be that if there is some probability that a breach will not be detected the liability of the breaching party will be too low and too many breaches will occur from an efficiency standpoint (Posner 1998, p. 143). These ideas of Richard Posner can to a certain degree be transferred to this analysis. The parties in the TAW industry do not negotiate private penalty clauses in their employment contracts. However, putting something at stake that is of value to the TAW firm and will be taken away in case of a breach is likely to have the same effect as a penalty clause. A straightforward idea might be a trustworthy reputation which was costly to build up. The penalty would be that in case of deviation this reputation is damaged. The good reputation of a trustworthy TAW firm is an implicit part of employment contracts and acts as an extra penalty in case of deviation.

2) How temporary agency firms signal their quality

The described issues of a possible shortage of employees and a low average quality of employees willing to work in the TAW industry have also been recently recognized by the TAW industry itself (Andrea Resigkeit, iGZ 2012, expert interview). Hence, firms try to signal their quality in order to be able to attract enough employees. Signaling is done, for example,
through codes of best practice, higher wages or self-regulations. There are various examples. Individual TAW firms and mostly employers’ associations in the TAW industry are concerned with this issue. It supports the analysis that employers’ associations are particularly concerned with this task because, as argued above, the benefits accrue to the whole industry.

One of the most prominent examples is the campaign “Einstieg, Aufstieg, Wachstum”\(^{13}\). The campaign was launched by the Bundesarbeitgeberverband der Personaldienstleister (BAP) in summer 2011. The goal of the campaign is to promote the virtues and advantages of TAW for the individual employee and for the German economy in total (BAP press release, 10.5.2011). The campaign distributes material and publishes surveys about the TAW industry. For instance, a leaflet called “Ten truths about TAW”\(^{14}\) was published in 2011. Six of the ten truths deal with working conditions, the compliance with German labor law and remuneration (BAP “Ten truths about TAW”). The campaign is clearly aimed at improving the public reputation and perception of the TAW industry. In the words of the model used here, prospective employees are induced to connect a higher expected payoff \(a\) with an employment in the TAW industry. For instance, the TAW firm Trenkwalder states that the firm received more requests and applications from employees explicitly due this campaign.\(^{15}\)

Another attempt to improve the reputation of the TAW industry is the resolution of a “code of ethics” by the employer association “Interessenverband deutscher Zeitarbeitsunternehmen” (iGZ) in 2012 (iGZ 2012, Code of ethics). In the code of ethics, TAW firms promise to obey all German labor and social laws, especially the AÜG and the General Equal Treatment Act (AGG) (iGZ 2012 Code of ethics, Nr. 2). In the preamble of the code it is stated that there will be an arbitration board in case of complaints about violations of the code. This also indicates that enforcement via courts does not suffice in the TAW industry. Individual employees may complain to the arbitration board. In the foreword TAW firms are encouraged to give the contact details of the arbitration board to every employee as a tangible signal to employees that the TAW firms will comply with the standards of the code of ethics (iGZ Code of ethics, foreword).

\(^{13}\) http://einstieg-aufstieg-wachstum.de/

\(^{14}\) Leaflet: http://www.personaldienstleister.de/branche/fakten/ueber-die-zeitarbeit/10-wahrheiten.html

Also, TAW firms recently started to put more weight on signaling their quality to user firms. For example, the biggest TAW firm in Germany, Randstad, published a survey concerning quality management in the TAW industry in 2012. In this survey it is explicitly asked how the satisfaction of user firms with the services of TAW firms can be improved (Egle 2012, p. 11). According to the websites of the 25 biggest TAW firms in Germany about 18 of them have implemented a quality management system (Egle 2012, p. 8).

3) The additional costs of signaling and economic effects on the market

Signaling always comes with additional costs. If signaling was costless it would not reveal any private information because everyone would send the signal (Mankiw et al. 2011, p. 470). This hints at another feature of signaling. Signaling must be less costly to the parties with high-quality products (Mankiw et al. 2011, p. 470). For example, for lawful TAW firms it is less costly to agree to a code of ethics with a compulsory arbitration board than for a deviating company. For the lawful firm no additional costs accrue.

When employers’ associations signal about the quality of the whole market it has the same economic effects as a closer supervision by public authorities. For employees the expected average payoff increases. The benefits of signaling for individual TAW firms mainly accrue to the signaling firms themselves. Generally, the economic effect of signaling is that less employees of the group \( a_{x0} > b > a_{x*} \) leave the market. Therefore, the market shrinks less due to a potential shortage of employees or due to a too low quality. The problem of a low quality of employees is also tackled by signaling. The general quality of employees will improve.

As we live in an imperfect world there will always be information asymmetries. The crucial question is therefore whether it is less costly to observe and guarantee the quality of TAW firms by the state or to by privately signaling quality. A close public supervision would make some parts of signaling superfluous in the TAW industry. In his standard textbook “Economics” Gregory Mankiw (2011) states that an effective supervision by public authorities might be more efficient than private signaling under certain conditions (Mankiw et al. 2011, pp. 472, 473). Hayne Leland points out that if quality standards are set by the industry itself, it is likely that the standards will be too high (Leland 1979, p. 1328). However, an argument for private signaling is that public authorities rarely have more information than private firms. TAW firms
may know better than public authorities whether there really is an urgent threat of a shortage of employees or a too low average quality in the market. Generally, signaling by private firms or a close supervision by the state only pay off if the costs of these activities are lower than the benefits. Hence, the exogenous conditions have a strong effect on whether signaling or a close supervision pays off from an efficiency point of view.\textsuperscript{16} An argument in favor of public supervision is that signaling involves additional costs for lawful firms and these costs make it even more difficult for those firms to stay in the TAW market. The incentives to deviate and to enter into a race to the bottom may prevail.

\textbf{V. Discussion of the economic results in context with the current situation in the German labor market}

It should be reiterated that the model leaps to extremes which are not necessarily characteristic for the real TAW industry. Prospective employees will almost always have some knowledge about the quality of a TAW firm, either from the word of mouth, TAW firm’s signaling or in some other way. Furthermore, not every single TAW firm will stretch the limits of the law and break it if the perceived gain exceeds the costs like the theory of “Rational Deviation” predicts. Many TAW firms will simply obey German laws (Miceli 2009, p. 2). Also, some employees will privately enforce employment contracts. But the simplifications in the model make the general economic effects clearer and more comprehensible.

The market for TAW and the market for labor are markets with asymmetric information. As suggested by \textit{Akerlof} (1970), quality deterioration may take place in such markets (Akerlof 1970, pp. 489 ff.). In the first section of the thesis a low intensity of inspections was found and thus the prevalence of asymmetric information in the TAW market. This leads to three main economic effects:

(1) A race to the bottom takes place up to point $x^*$. This is the point of optimal deviation. The race to the bottom is not hindered by private enforcement of employment contracts. It illustrates the general idea that markets with informational asymmetries

\textsuperscript{16} It should be mentioned that there might be other convincing reasons for a close supervision by the state beyond the reason of efficiency. These might be reasons of fairness.
reach equilibrium at suboptimal quality levels (Leland 1979, p. 1342). The intensity of inspections determines how strong the effect of a race to the bottom is. This also affects the magnitude of the following economic effects.

(2) The employees with the best outside options leave the TAW market because of reduced payoffs. Normally this should lead to a reduced market, meaning that some mutually beneficial contracts are not concluded. Here, a special characteristic of employment markets and especially the TAW market steps in. Wages are not totally flexible. “Equal Pay and Equal Treatment” or collective agreements determine the minimal remuneration in the TAW industry. If the remunerations set by collective agreements are too high this might have resulted in previous unemployment. With deviation, the remuneration will be closer to the equilibrium point and hence the TAW market grows. Unemployment is thereby reduced. As can be seen, the economic effects depend on the external conditions. Additionally, the average quality of TAW employees is likely to deteriorate due to the lowered payoffs.

(3) User firms will react with a lower demand to the deteriorated quality of TAW employees. This leads to a decrease in market volume. Again, the actual effects depend on the outside condition and the magnitude of demand reduction.

The results of the model are reflected by the German TAW market. As long as there was a high unemployment rate with a resulting low outside option \( b \), TAW firms did not have to worry about their payoffs offered to employees. The market for TAW expanded irrespectively. This is what the model predicts under the mentioned conditions. However, it seems as if this is currently somewhat changing (Beate Müller-Gemmeke MdB, RA Gerd Denzel, Andrea Resigkeit 2012, expert interviews). The rapidly increasing TAW market and the improving general employment market made the group \( a_{-} > b \) shrink. For about one year TAW firms have now more and more trouble in finding suitable applicants (Bundesagentur für Arbeit 2012\(^a\), pp. 8, 9). The number of vacancies in the TAW industry has increased. Also the average period of a job position remaining vacant in the TAW industry has increased from 67 days to 75 days during the last year (Bundesagentur für Arbeit 2012\(^b\), p. 9). Sooner or later the TAW industry will need some employees of the group \( a_{-} > b > a_{-} \) to fill all vacancies. This is shown as well by the recently increased efforts by the TAW industry to signal quality. This effect will be particularly relevant for some industry sectors with an upcoming shortage of skilled employees (Bundesagentur für Arbeit 2011\(^a\), pp. 6 ff.). With the offered low payoffs the TAW industry will not be able to compete for these scarce employees. With regard to those employees, the
If there is a shortage of employees, a reduction of the payoff will lead to a decrease in market size. In the real world, both effects are observable simultaneously. It depends on the magnitude of both effects which one dominates.

If it is true that the effect of employees leaving or not entering the market becomes stronger at the moment, then some effective minimum quality standards are desirable for the TAW industry. The issue is that TAW firms are caught in a race to the bottom. It will involve costs to reduce information asymmetries. The used model of rational deviation assumes that the expected payoff \( a \) could be increased by intensifying the inspections of the Employment Agency. Akerlof (1970) proposes licensing practices to reduce quality uncertainty (Akerlof 1970, p. 500). Licensing is already conducted in the TAW industry (§ 1 (1) AÜG), but it needs more effective control. The TAW firms would react respectively to the intensified inspections and adjust their optimal point of deviation. Therefore, a counter-intuitive result of the study is that it could be in the interest of the TAW industry itself to intensify the inspections. The same result could be achieved by private signaling. An interesting question for further research is which way is likely to be more effective and efficient. The statements of Bernd Rath and Marcus Schulz in the introduction of this thesis can be understood this way. Individual TAW firms cannot easily escape the race to the bottom and the deviating firms harm the whole industry. Therefore, it is in the very interest of lawful TAW firms to push the “black sheeps” out of business.

As intended in the beginning of the thesis it was shown how the size of the TAW market reacts under certain external conditions. Five policy advices or considerations can be drawn from the analysis:

1. The intensity of inspections can be used to influence the size of the market.
2. If huge unemployment remains an issue during the next years there remains a trade-off between low control and putting unemployed back to work.
3. In times of a shortage of (skilled) employees it might be worthwhile to increase the intensity of inspections to prevent a shrinking of the market.

\[\text{\textbf{Note:}}\]

The policy advices ignore on purpose the question whether a smaller or bigger fraction of TAW is desirable in the employment market. Furthermore, it deliberately ignores the policy consideration whether it may be worthwhile to limit a shift of employees’ payoffs to TAW firms and user firms due to distributional reasons.
(4) It might be more efficient to increase quality in the TAW market by state supervision than to wait for private action. This remains a point of further research.

(5) In order to increase the effectiveness of inspections it might be worthwhile to reallocate the inspections to an originally supervisory authority like the FKS with stronger enforcement rights and a different design of inspections.

E. Conclusion

To conclude, the research question should be answered: “Can low intensity inspections in the TAW industry lead to market failures?” As in Akerlof’s “Market for Lemons” the analysis shows the interaction of quality differences and uncertainty (Akerlof 1970, p. 488). The effect of a “Market for Lemons” is a deterioration of quality resulting in not concluded mutually beneficial contracts. Minimum quality constraints are a possible solution to the problem. This hints at the answer to the first part of the research question, asking about the intensity of inspections:

(1) The thorough analysis of the expected costs of deviation revealed a low likelihood of detection and a low average of fines imposed. It is argued that this equals an overall low intensity of inspections. The problem of quality differences and uncertainty is not solved by the inspections of the Employment Agency.

The TAW market is complex. The prices are not completely flexible. Collective agreements set minimum prices without deviation. The intensity of inspections of the Employment Agency determines minimum prices with deviation. This leads to the answer to the second part of the research question about the economic effects of a low intensity of inspections:

(2) It depends on the external conditions whether a low intensity of inspections leads to an expansion of the TAW market and to more concluded contracts, or whether this effect is dominated by resulting market failures with not concluded mutually beneficial contracts.
APPENDIX

APPENDIX 1 – EXPERT INTERVIEW WITH BEATE MÜLLER-GEMMEKE MdB

Beate Müller-Gemmeke is a member of the German Federal Parliament. She belongs to the Green party. Furthermore, she is the spokesperson of her fraction for employees’ rights. The TAW industry belongs in her area of responsibilities. The interview was conducted on the 10th of May 2012 in Berlin.

Contact details:

Beate Müller-Gemmeke MdB
Platz der Republik 1
11011 Berlin
Tel.: (030) 227-73041

APPENDIX 2 – EXPERT INTERVIEW WITH ANDREA RESIGKEIT, iGZ

Andrea Resigkeit is the head of the Berlin office of the TAW employer association iGZ. The interview was conducted on the 8th of August 2012 in Berlin.

Contact details:

Andrea Resigkeit
iGZ Hauptstadtbüro
Schumannstraße 17
10117 Berlin
Tel.: (030) 28045989

APPENDIX 3 – EXPERT INTERVIEW WITH RA GERD DENZEL, ver.di

RA Gerd Denzel is responsible for coordinating the activities of the trade union ver.di concerning the TAW industry. The interview was conducted on the 7th of August 2012 in Berlin.

Contact details:

RA Gerd Denzel
ver.di Bundesverwaltung
Paula-Thiede-Ufer 10
10179 Berlin
Tel.: (030) 69562008
Questions asked:

1) From your experience, is there a disproportionally high number of offences against the law and collective agreements in the TAW industry in comparison to the rest of the labor market?
   a. If yes, can you substantiate?

2) By which means could TAW firms save labor costs?

3) What could be the reasons for offences in the TAW industry?
   a. Are the fines in § 16 AÜG sufficient?
   b. Is the staffing of the Employment Agency sufficient?
   c. Are the competencies of the Employment Agency to conduct inspections sufficient?
      i. If not, which competencies are missing?
   d. Do you miss a powerful will in the Employment Agency to issue high fines (conflict of interest)?
   e. How should the inspections be reorganized?

4) Do you see a secret political intention to tolerate a low intensity of inspections if this could lead to the creation of additional jobs?

5) Which consequences could a low intensity of inspections have on the TAW market?
   a. Is a “race to the bottom” observable?
   b. Do TAW firms give parts of the saved costs to the user firms?
   c. How do you see the situation changing with regard to an upcoming lack of skilled employees?

6) Did TAW firms and employer associations recently put the issue of a better quality of TAW more in the focus of their work?
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