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Labor Platforms with Unions

Discussing the Law and Economics of a Swedish collective bargaining framework used to regulate gig work

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Abstract

Developments of online labor platforms has lead to discussions over appropriate regulatory measures in a number of countries. The labor platform debate tangents a broader discussion over reduced labor market resilience in OECD-countries, where decreased trade union density and collective bargaining coverage provides one explanation for such developments. In Sweden, where union density and collective bargaining coverage is still high, we have observed labor platform firms voluntarily signing sectoral collective bargaining agreements without prior industrial action. Here, we conduct a law and economics analysis of the temporary work agency collective bargaining agreements, using input from interviews with signatory platform firms, and insights from their institutional setting. We discuss future developments and opportunities to regulate labor platforms through collective bargaining, better reflecting regulatory preferences, as described by Calabresi. We argue that algorithmic management practices have potential to increase regulatory compliance, subject to well-functioning co-determination institutions.

Keywords: Platform economy, Industrial relations, Law and Economics, Collective bargaining, Trade unions, Employers' associations, Temporary Work Agencies, Structural change, Labor Economics

JEL: K31, J41

1 Introduction

The combination of atypical work arrangements and digital labor platforms are widely discussed topics of great public and academic interest. The phenomenon is captured under a plethora of terms such as the sharing economy, collaborative economy, gig economy, and platform economy. Although different terminology may reflect different aspects of the topic at-hand, they often discuss the implementation of technical-organizational innovations that enable firms to match and facilitate transactions between dispersed parties through digital platforms. As innovations, digital platforms can lead to higher efficiencies and lower transaction costs (McAfee and Brynjolfsson 2017, Hansen Henten and Maria Windekilde 2016). Further, labor platforms that facilitate work in remunerated transactions often display characteristics of algorithmic management, as described by Lee et al. (2015). Economists have taken a keen interest in the development of labor platforms. One reason is their resemblance to the deduced form of labor markets described in neoclassical, "textbook" labor economics, where labor supply and product market demand can meet and adjust themselves to market dips and surges with little-to-no frictions (for example, see Chen and Sheldon 2016).

The current discussions tangents more dismal developments in labor markets over the past decades. Platform firms have come under scrutiny due to issues over poor working conditions, low wages and poor predictability in earnings, inadequate social protection for platform workers, unregulated hiring and firing practices (so-called deactivations), business risk distribution, and lack of neutrality of competition between platform firms and incumbents (see for example Leighton 2016, Schor 2017, Frenken 2017, or Domurath 2018). Although labor platform share of total employment is disappearingly small in studied countries (Katz and Krueger 2019, Pesole et al. 2018), future developments of platform work might exacerbate a number of negative developments relating to labor market resilience – a term which has become more pronounced in the aftermath of The Great Recession. Many OECD countries have faced lower growth, staggering productivity development, low income growth for broad groups in society, and poor performance in employment and unemployment metrics (Hijzen et al. 2018, OECD 2018). The global trend of declining trade union density and collective bargaining agreement (CBA) coverage in past decades provides one explanation for many faltering resilience metrics (for example see OECD 2015, Jaumotte and Buitron Osorio 2015, Garnero, Kampelmann, and Rycx 2015).

Incumbent and newly formed labor organizations are currently undertaking various efforts to organize workers and pursue collective bargaining objectives platform firms (Vandaele 2018). In Sweden, we have observed a number of labor platform firms signing sectoral CBAs. The first observed CBA-signing by a labor platform firm in Sweden was registered on February 1, 2015 in Stockholm.¹ This signing predates the "World's first collective agreement between a platform company and a trade union" signed by Danish union 3F and cleaning platform Hilfr, which came into force on August 1 2018.² Asserting such claims is difficult due to the ambiguous definition of what constitutes a labor, gig, or sharing economy platform. Not least when considering how such firms differentiate from incumbent firms using nearly identical technologies. Uber and its taxi platform is often used as an archetype to describe other app-based, gig-economy firms. Yet, we seldom con-

¹According to the trade union Unionen's CRM-system "Primus".

²See Hilfr's press release from April 10 2018 <https://blog.hilfr.dk/en/historic-agreement-first-ever-collective-agreement-platform-economy-signed-denmark/>

sidered legacy firms adapting similar technological, app-based solutions in their business models in this archetype. Should Taxi Stockholm, founded in 1899 (Haventon 1989) and one of Stockholm’s largest taxi firms, be considered a platform or gig-economy firm, given that consumers and taxi drivers face a nearly identical application-based taxi switchboard/hailing system?

Despite ambiguities in terminology, it is of high interest to analyze the dynamics and institutional responses to the introduction of general-purpose technologies, such as labor platforms and algorithmic management practices. Not least if we suspect that institutional design have bearing on outcomes in resilience metrics and welfare.

A labor platform firm is defined as a firm that acts as an intermediary, facilitating transactions between dispersed parties using a matchmaking digital platform, and utilizing algorithmic management practices. Algorithmic management is defined as human jobs being assigned, optimized, and evaluated through autonomous or semi-autonomous systems using algorithms and tracked data (Lee et al. 2015). The platforms may display degrees of multi-sidedness (see Weyl (2010), and Hagiu and Wright (2015)), but our focus lies in resulting platform markets that display a high degree of commandification (Calabresi 2016). The digital platform itself is viewed as an innovation that can be applied within the framework of a firm and its operations, but does not exclude it as an externalization-enabling innovation.

Here, we discuss the institutional background of Swedish industrial relations in the temporary work agency (TWA) industry, and conduct a law and economics analysis over the CBA framework which cover the observed labor platform firms.

Industrial relations-institutions are complex and highly heterogeneous between and within jurisdictions. Their corresponding institutions have all adapted over time to address issues of relevance to firms, organized labor, and legislators. Such settings typically include both formal and informal institutions. The historical rationale behind current regulations thus need to be considered and weighed into evaluations or analysis.

The precision in our law and economics analysis is further informed by interviews with the selected firms over their rationale and experience of implementing their CBAs. This allows us to pin-point specific provisions in the CBAs of particular interest in regulating labor platforms. The platform firms are newly founded (less than five years old), have publicly self-identified themselves to the gig-, platform-, or sharing economy terminology, and have signed and implemented some Swedish CBA. features of sectoral CBAs, signed by Swedish firms implementing digital labor platforms in their business models. Our law and economics analysis draws inspiration from Calabresi’s (2016) insights over the failure of neoclassical economic analysis of law to include preferences for market regulations. We assume trade unions and employers’ associations are entities designed to reflect and represent the regulatory preferences of their respective members in bargaining.

Our subsequent closing discussion focuses on some challenges and opportunities the introduction of digital labor platforms and algorithmic management pose to the Swedish model. We find that the challenges are far from insurmountable, but require addressing several issues within the existing framework. One opportunity lies in creating better digital standards of CBA regulations through dialogue, so as to lower the transaction costs of regulatory compliance. The discussions leave many

loose ends, which we hope will inspire future research of practical and theoretical.

2 Platform firms under collective bargaining agreements

The interviews ask senior staff at platform firms to discuss firm background and development, their rationale for signing CBAs, experiences in the signing and implementation process of the CBAs, whether the regulations in the CBAs have necessitated adaptations to their business models, to elaborate and discuss on positive or negative aspects of regulations in their CBAs, and finally, how they wish to develop the contents and institutions surrounding the CBAs in the future.

The interviews were conducted in the early fall of 2018. The questionnaire is available in appendix A. We have chosen to anonymize the responses, and use aliases in stead of firm names.

Firm characteristics and their sectoral CBAs

Our small sample of three platform firms are, as expected, heterogeneous with regard to their history, business model, targeted markets, and function of their digital platforms. Apart from utilizing digital platforms, the most striking commonality lies in the leasing of employed staff to business clients. All firms are active in white collar category jobs (as defined by CBA signatory unions). Two of the firms also lease staff for blue collar jobs, but appears to do so to a smaller extent. Two of the firms were started as independent ventures, while the third is a subsidiary of a larger TWA firm. Two of the firms focuses on the leasing of young professionals in higher education or with recent degrees, while the third focuses on recently arrived immigrants and labor market integration. Below we will refer to the firms as "The Subsidiary TWA", which primarily leases employees under the white collar TWA CBA, "The Integration TWA" which leases staff for both blue and white collar jobs, and "The Non-TWA" firm, which focuses primarily on short term leasing of white collar employees.

The two TWA platform firms have signed the white and blue collar TWA sectoral CBAs³ while the third has a non-TWA white collar sectoral CBA⁴. The non-TWA firm state that their current CBA is "perhaps[...] not the most optimal" for their business model, a reccuring observation in their interview. This factor has bearing on our law and economics analysis, and our choice to limit ourselves to TWA CBAs. All firms use variants of general fixed-term contracts for their platform workers.

Firm rationale for signing CBAs

All interviewed firms signed and implemented CBAs voluntarily without prior industrial action. One of the firms signed a CBA immediately at launch, while the other two did so after some period of business operations with alternative employment arrangements. All three firms raised CBA's

³The white collar TWA CBA *Tjänstemannaavtalen* between unions Unionen and Akademikerförbunden, and the employers' association Almega Kompetensföretagen (The Competence Agencies of Sweden); and *Bemanningsavtalet* between LO (The Swedish Trade Union Confederation and Almega Kompetensföretagen

⁴*Tjänstemannaavtalet* between Unionen and Almega Medieföretagen (The Media Industries Employer Association).

as a hallmark of fair working condition and credibility, which provides legitimacy toward potential employees and clients.

Regarding the rationale in appealing to employees, all firms state some ambition to appeal as a "fair option". One firm alludes to a tight, "employees labor market" where a CBA helps attract talent. The Integration TWA alludes to CBAs giving their group of "particularly vulnerable" employees better protection than otherwise. Further, their employees do better in longer assignments, which their current CBAs are well suited to regulate. The Non-TWA firm decided, it appears, almost as an afterthought to cover its platform workers while signing a CBA to cover their main office employees. The rationale for signing was to assure fair working conditions, but also to bring better structure to previous employment forms and payment methods.

Regarding clients, the two TWA firms lift a peculiarity related to Sweden's high CBA coverage, as many private sector clients only permit authorized TWAs when procuring such services. One firm raised that TWAs suffer from a poor reputation, which increases the pressure to act legitimately. By signing CBAs, TWAs can stave off non-CBA firms that compete with lower prices through social dumping, and thus damage the public's perception of TWAs.

The signing and implementation process

All firms have slightly different experiences in signing and implementing their respective sectoral CBAs. Both TWA firms have gone through TWA authorization (and yearly re-authorization), which is a prerequisite for employers' association membership. The process of authorization was described as a somewhat burdensome and "overly manual" process, not least in the amount of standardized documentation required to be sent in each year. The Non-TWA firm describes few problems in signing the CBA, however, alludes to some problems in implementing certain aspects of the agreement due to poor coverage for employees with low billing hours. Again, the CBA "sub-optimal fit" point is raised.

Adaptations to business models to accommodate CBA regulations

The Subsidiary TWA firm designed their business as a TWA from the get-go, but with digital platform development and automation of specific TWA features at the core of their business model. Therefore, the business model did not require adaptations. However, as sectoral CBAs are renegotiated with regular intervals, the firm lifts that they will need to address eventual changes in CBAs as provisions are renegotiated in future bargaining rounds. A similar discussion was held with regard to changes in legislation outside of CBA regulations.

The Integration TWA firm previously facilitated peer-to-peer transactions, using non CBA-regulated umbrella company (*egenanställningsföretag*) as a proxy employer. This business model faced an immature market with low demand for "peer-to-peer" services, which warranted a "pivot" of their business model. As the firm facilitates jobs to groups "further-from-the-labor-market", focusing on facilitating work in longer assignments made sense in business-to-business transactions. Regarding the switch to the TWA CBA model, the firm states that the cost of switching was higher compared to their earlier peer-to-peer model, and that the TWA construction risks being overly "costly for a small business". The firm solved the increased costs with a philanthropic financing

round (the firm is a non-profit).

The Non-TWA firm did not signal any major adaptations in their business model due to the CBA signing. However, due to the self-described sub-optimal fit of their CBA, the firm has had to procure additional insurances, likely due to platform employees not accumulating enough billed hours to be covered by insurance provisions in the CBA.

Positive and negative aspects of the CBAs

Our questions on positive, negative, or problematic aspects of the CBAs garnered slightly different responses, but all reflected on the operational reality of their firms. To our surprise, none of the firms discussed labor costs of the CBAs, but devoted much discussion on transaction costs relating to implementation.

On the positive side, one firm lifts the positive aspect of being a part of "something greater" through which they can offer better working conditions. The "fair option"/hallmark/legitimizing aspects of CBAs is alluded by all firms. Having a CBA helps them in their role as an employer, and gives a better sense of doing things "by the book". The willingness from white collar unions to take digital technological adaption of regulations into discussion of CBAs was also raised as positive by one firm. On the negative aspects, both TWAs reflect on the burdensome aspects of implementing the blue collar CBA.

One of the TWA firms devotes significant resources to develop automated functions in their platform, including addressing compliance with CBA regulations. Doing so "saves time in the end" as "everyone is in agreement". The firm lifts interpretations of certain provisions (unspecified) in the CBAs as problematic, but also that the clarity in CBA regulations are positive, particularly the white collar CBA. As the white and blue collar CBAs have extension clauses, the firm is automatically⁵ covered by the blue collar TWA CBA. The firm devotes significant discussion to differentiate and highlight burdensome aspects in the blue collar CBA. Unlike the white collar CBA, the blue collar CBA is an umbrella agreement where many aspects in the CBA are regulated in the "regular", non-TWA sectoral CBAs as applied in clients' workplaces. CBAs can be subject to non-standard local deviations, complicating regulation compliant automation. Second, the wage setting process is complicated, as wage levels are set as an average of the particular client's workplace and job description. This system of wage calculation, called GFL (*genomsnittligt förtjänstläge*, roughly translated to average earnings level) requires significant manual processing and data input. The availability of data makes it difficult to build a logical construct around the agreement, in the end making platform development and automation of regulatory routines more difficult. The GFL wage-setting procedure is described as more transaction cost-heavy compared to white collar wage-setting procedure, which has explicit levels in the CBA. Another transaction cost-related negative aspect comes from risks in interpreting provisions. If provisions are interpreted ambiguously in the blue collar CBA, there are several stakeholders (locally applied CBA signatory unions) to take into account, as opposed to a single counterpart for the white collar CBA. The firm summarizes the problem as a lack of standardization.

⁵The extension is not entirely automatic. If a firm signs either a white or blue collar CBA, the other union party is notified and offered a possibility to automatically extend the agreement to also cover their member groups.

The Integration TWA reflects on the perceived loss of flexibility found in their earlier peer-to-peer business. They also raise the issue of "other primary employment" provisions (*huvudsaklig sysselsättning*) in the TWA CBA, which today does not cover employees in Swedish language courses for adult immigrants.

Thoughts on future developments

One firm wishes for more work on digital standardization and simplification of regulatory procedures in the CBAs and surrounding institutions. "The dream would be to download code for the different agreements" the firm summarizes, reflecting on the disparities and difficulties in interpreting the blue collar CBA versus the white collar CBA. One firm wishes that the "manually" burdensome process of being authorized and re-authorized to become digital and allowing for more automatized reporting.

On a more political note, one firm describes the regulatory debate around TWAs and labor platforms as limited to too few parties, wanting more input from other stakeholders, such as government agencies. Further, they think the current TWA regime is "too defensive" and not focused enough on future developments.

Another firm lifts its own recent expansion to the UK where they have been able to niche themselves as a fair working conditions alternative. CBAs, and other fairness-asserting criteria, are an integral part of their business model, but lifts risks of throwing "gravel in the machinery" if such regulations become too complicated.

3 Institutional framework

With signed CBAs, the interviewed firms are now part of the so-called Swedish Model, signified by an industrial relations regime with 69 percent union density, 78 percent employers' association membership coverage⁶, and a collective bargaining coverage of 90 percent (2017 numbers as reported by Kjellberg 2018).

The entry of digital labor platforms that facilitate short term leasing of staff to perform "gigs" in the mid 2010's shares many similarities with the introduction of TWAs in Sweden in the 1980's and 1990's (Söderqvist 2016). TWAs have played an integral part in the making of the Swedish industrial relations regime, both in its early and latter days. Understanding the background is important when analyzing the rationale behind specific provisions in CBAs and legislation. As the firms are employers of their leased employed staff, an anomaly in labor platform discussions, we also provide some background to the ongoing development of employment classification on Swedish labor platforms.

Our brief historical background below is based on Lundh's (2010) economic history of Swedish industrial relations, and Walter's (2012) thorough historical description over the development of modern TWAs in Sweden, with some additional sources added for emphasis.

⁶Percent of employees working for employers with employers' association membership.

3.1 Collective Bargaining and Legislative Framework

Swedish industrial relations is a voluntarist system, where firms can choose to sign CBAs or become employers' association members. Not having ratified a CBA, or CBAs for specific categories of employees at a firm, means the firm may be subject to industrial conflict. CBAs are primarily sectoral, supported by a plethora of central agreements that regulate issues of intra-sector relevance, such as pensions and work safety. CBAs typically extend over a negotiated (yearly) time period, and are re-negotiated prior to their termination. Once terminated, there is no obligation of industrial peace, and all parties can be subject to industrial conflict. There exists no legal extensions, or *erga omne* clauses of CBAs, meaning CBA provisions are not legally extended to cover all firms in the applicable sector. Procedural regulations for union and employer bargaining are regulated in a main agreement, rather than legislation. Freedom of association among unions and employers' associations also entails negative freedom of association; non-union member are covered by local CBA provisions, and firms with CBAs may choose to not be employers' association members (any sectoral CBAs would thus be signed directly with the signatory trade union). (Medlingsinstitutet 2016)

The sectoral (and supportive central) CBAs can be described as a play book which are designed to be implemented at firms by local union representatives and an employer (typically the HR department). The flexibility of regulations can vary within and between CBAs. Many rules leaves high degrees of freedom to reach local formal or informal agreements in order to reduce frictions, and achieve regulatory compliance with low transaction costs. Compliance of regulations is assured by self-policing of trade unions, employers' associations, and their respective representatives at different levels. The CBAs are generally written to be applied by laypersons. The collective bargaining regime is categorized as "highly coordinated" and "organized-decentralized" by the OECD (2017).

The CBA system at all levels is to a varying degree supported by legislation and state institutions. The Co-determination in the Workplace Act sets rights and obligations of employers and employees over engaging in bargaining or dialogue at the local level, and the Employment Protection Act regulates dismissal procedures. Much legislation is dispositive, or semi-dispositive, meaning regulations in CBAs may deviate from legislation under different conditions, in order to accommodate sectoral and local deviations. CBAs can also be dispositive, allowing for locally negotiated deviations. Institutional support covers a broad spectra of arrangements, such as a Ghent system of unemployment insurance, to mandated state mediation in negotiation of CBAs.

Since the 1950's, Swedish trade unions have adapted a positive view of technological adaptation in the workplace. The rationale us that higher levels of structural change leads to the creation of more higher value-added jobs, from which greater welfare can be extracted in our small, open economy. Adverse effects of the ensuing creative (or wage-level driven) destruction of lower value-added jobs is handled through active labor market policies and social insurance schemes. The acceptance of creative destruction is thus conditioned on mitigating re-skilling of afflicted individuals. Further, the model promotes responsibility in both fiscal and CBA policy, where the role of central wage negotiations has been a means to keep wage increases in line with productivity developments. The framework is known as the Rhen-Meidner model, after the authors who formalized it (LO 1951, Erixon 2010).

It is likely the above described framework has had a significant impact on the developments of resilience related variables in Sweden. An important feature of our system is adaptability to

exogenous shocks, which also relates to resilience. The introduction of TWAs is such an example.

3.2 Institutional background of TWAs in Sweden

Leasing of staff was prevalent in the early twentieth century, when private employment offices (*privata arbetsförmedlingar*) supplied firms with strikebreakers during industrial conflict. After a particularly violent conflict in 1931, where The Swedish Armed Forces opened fire on striking workers in the northern town of Ådalen, private employment offices in exasperating industrial conflict led to a ban of private employment offices in 1935. The ban improved the prospects of attaining industrial peace, which helped lay the foundation to Sweden's change of industrial relations regime from 1938 and onward ⁷.

In the 1980's private employment offices were once again discussed by politicians, unions, and employers, but now in a more positive light. Public inquiries, appointed by a Social Democratic government, suggested a liberalization of the 1935 ban in order to facilitate better matching in labor markets, and help firms meet temporary demands for peaks and troughs in production. The ban on private employment offices was proving increasingly difficult to uphold. In 1989, Sweden's Supreme Court tried the owner of a so-called secretary bureau (*skrivbyrå*), that leased secretarial staff to clients with short notice, for breaching the Employment Office Act of 1935. The defendant's attorney showed that both the Supreme Court and The Prosecutor General's Office (the plaintiff) had leased staff from secretary bureaus on several occasions. The court ruled to acquit. The ruling devotes significant discussion on discerning the objective of the 1935 act, not least in the light of ongoing political discussions on the more positive aspects of private employment offices compared to their 1930's equivalents. The fact that the leased staff were employees of the secretary bureau, and were covered by a sectoral CBA with a major trade union were weighed into the ruling (Supreme Court of Sweden ruling no. DB22-89).

The TWA discussions coincided with an infected period of Swedish industrial relations that begun in the 1970's. A loss of central wage coordination, an ensuing wage/inflation spiral, trade union single-handed pursuit of legislative action, and a significant increase in industrial conflict lead to souring labor relations. To complicate matters further, a major recession occurred in 1990.

In 1991 the government made limited liberalizations of employment office regulations, followed by a more thorough liberalization in 1993 by a subsequent government. The second liberalization was heavily criticized by the opposition and the major trade union federations, as a highly regulated market was nearly entirely deregulated over the course of two years. The government responded by exhorting unions and employers' associations to self-regulate the market through collective bargaining. In 1994, a newly elected Social Democratic government appointed a public inquiry to evaluate the TWA reforms. It would not recommend a reintroduction of prohibitive legislation, but rather propose to actively steer the newly created TWA industry to legitimacy and acceptance. One proposal was to create a state-run authorization process, which would stave off "non-serious" actors. The government, realizing such a construction would be costly and complicated, preferred a self-regulated authorization, but kept the threat of state authorization as a legislative threat to

⁷When the Main Agreement (*Huvudavtalet*), also known as the *Saltsjöbaden*-accord (*Saltsjöbadsavtalet*) was signed

exhort pressure in reaching CBA solutions.

As referenced in the 1989 Supreme Court ruling, parts of the new TWA market were already regulated through a sectoral CBA preceding TWA legalization. The first agreement was signed by the white collar union HTF (Swedish Union of Commercial Salaried Employees) and HAO (today The Swedish Trade Federation) in 1988 for "ambulating staff", primarily targeted at regulating work practices for employees at the secretary bureaus. After the liberalization process, a new CBA was signed in 1994, which attempted to normalize TWA employment in relation to employment in the rest of the labor market. This included making open ended contracts, subject to the employment protection act, the norm, and a 50 percent guaranteed salary, paid to employees in periods of no activity (i.e. when they were not being leased to clients). The implementation of the CBA would not live up to expectations, as TWA workers were hired on fixed term contracts which were terminated in periods of low activity, unloading business risks onto the individual and society. Ensuing political and union pressure resulted in a new CBA in 1997, which raised the guaranteed salary to 75 percent, and established open-ended contracts as the norm. These CBA constructions would prove normative for the Swedish TWA industry.

Whereas white collar unions actively sought to shape the regulations of the TWA industry by engaging in collective bargaining, the blue collar unions of the Swedish Trade Union Confederation (LO) remained largely passive due to fears of legitimizing TWAs by engaging in bargaining. The hope for a reintroduction of prohibitive legislation proved fruitless, and due to public and political pressure, the LO signed their first CBA in the year 2000 (Bergström et al. 2007). As described in our interviews, the LO's blue collar CBA would in some aspects work in tandem with the white collar CBA, including a (semi-) automatic extension clause, and guaranteed salary provisions. The agreement differed in its bench-marking of "regular" sectoral CBAs, most notably the GFL wage-setting provision.

In 2003, the TWA trade organization became a proper employers' association and thus the sole cosigner of their CBA (a role previously handled through the employers' association Almega). In 2007 the TWA authorization process became obligatory for employers' association membership. The current authorization board includes seats for employers' and union representatives. These adaptations were partially due to political pressure from the EU and the impending Temporary Work Agency Directive.

Other relevant developments in CBA provisions include deviations from the open-ended contract norm and guaranteed salaries. These were first introduced as provisions for students taking holiday work on fixed-term contracts, which are common features in other CBAs. Over time, practice has extended these holiday clauses to cover students working throughout the academic year. The union rationale of accepting such relaxations relates to a perceived mutual demand for flexibility. Due to the uneven nature of students' workload, students would benefit from the flexibility to turn down work with short notice and at irregular intervals. Further, students often have other primary sources of income, usually in the form of government funded student loans and grants. As of 2017, the white collar agreement was broadened to include fixed-term exemptions for persons with other primary sources of income from regular work (*Tjänstemannavtalen, 2.3 Villkor för tidsbegränsande anställningar för ambulerande tjänstemän*).⁸

⁸The exemption was negotiated as a part of a larger bargaining reform increasing pension payments in the private

In 2017, 1.7 percent of the employed population were employees of TWAs, which is a low degree of TWA "penetration" by international standards (Bemanningsföretagen 2018). Collective bargaining coverage is exceptionally high at 97 percent (2016 estimate, Bemanningsföretagen 2017). Regarding fixed term contracts, the TWA industry (compared to the whole labor market) employed 43 (21) percent of their blue collar workers and 36 (12) percent of their white collar workers on fixed-term contracts, with an industry average of 38 (15) percent (Larsson 2017). Union density in the TWA sector is believed to be relatively low, but we have found no official sources of such estimates. 64 percent of employees in the "Business services etc" sector are union members, but this category also includes consultancies and other service sector jobs.⁹

3.3 Gig platforms and employment classifications

An important aspect of the TWA legitimization process was establishing rights and obligations in the employer-employee dimension that prevailed elsewhere in the labor market. As indicated in the 1989 Supreme Court ruling, the acquitted secretary bureau had accepted their employer status toward their ambulating staff. An employment relationship which in turn was regulated in the newly signed CBA with the trade union HTF.

Current developments in employment status on labor platforms are difficult to foresee due to the heterogeneity and shifting practices in platform firm business models. As of yet, there are no estimates over the use of various employment forms on labor platforms in Sweden. Our own experience of dialogue with platform firms since 2015 indicates that many platform workers have been classified as employees. However, variations of classification exist between, and sometimes within, platform firms themselves. For example, two of the major international platform operators in Sweden, Uber Eats, Foodora (Delivery Hero), both have bicycle couriers classified as employees, but with significant divergence. Whereas Foodora is the employer of their couriers, Uber Eats uses a so-called umbrella company¹⁰ as a "proxy employer". This proxy-employer construction is behest with legal uncertainty, but has to our knowledge not been tried in any courts (Unionen 2017). There are also platform firms that act as intermediaries for self-employed freelancers. We have not observed any miss-classification cases involving such platforms in the Swedish courts either. In some cases there seems to be little reason to question such praxis. Discussions over Uber's taxi services in Sweden was primarily focused on unlicensed taxi operations (Thelen 2018), rather than employment classification. Taxi "switchboards" in Sweden are generally not viewed as employers of taxi drivers, including app-based solutions. This role is filled by the taxi owners, which are either firms with employees driving a fleet of taxi vehicles, or self-employed taxi owners.

From a union perspective, Sweden has a comparatively "generous" model of classifying employees from (Engblom 2003). Our own analysis of why we have observed relatively few employment classification controversies involving labor platforms comes down to work done by government agencies. Much of the corralling of platform workers into employee status has been due proactive classifications by the Swedish Tax Authority, with the intent to insure compliance with the tax law

sector.

⁹In Kjellberg's (2018) yearly estimates of Swedish union density, the TWA industry is a subset of the "Business services etc" (*Företagstjänster m.m.*) sector, and excludes full time students working part-time jobs.

¹⁰As described by <https://www.breakit.se/artikel/7599/i-spent-two-weeks-delivering-for-uber-eats-and-made-4-4-per-hour>

definition of employer-employee relationships, establishing which party is obligated to pay social security and employer's contributions (Swedish Tax Authority 2016).

4 A law and economics analysis of the TWA CBA framework

With the interviews and institutional backdrop we now look closer at the two TWA CBAs that cover two of our interviewed firms. The choice to omit the analysis of the non-TWA firm's CBA rests on several considerations, and not just the "sub-optimal fit" comment by the firm. As labor platforms lease staff for temporary assignments, TWA-regulations might be a realistic regulatory path to pursue for unions and firms with similar business models, which has been raised as a regulatory option by Swedish legal scholars (Westregård 2017), and international union and employers' confederations (Askitas et al. 2018). Another consideration lies in the fact that the process of legalizing TWAs in Sweden prompted interesting responses from the trade union movement, which in turn highlights important characteristics of institutional adaptability.

Our law and economics analysis covers assumptions and aspects of Sweden's current industrial relations regime at-large, and narrows down to specific provisions in TWA CBAs, with particular focus on the topics raised by the interviewed platform firms. The studied agreements are the earlier described white and blue collar TWA sectoral CBAs, active from May 1 2017 to April 30 2020.

4.1 Our law and economics framework

Out of necessity, economic models are simplifications of complex realities. The positivist view of Milton Friedman (1953) states that economic models should strive to create theories with consistent systems and verifiable components, from which we may derive inference. In the positivist tradition of scientific methodology, models should aim to free themselves from normative judgments. The merits of a theory/model should be judged by its simplicity (its ability to predict as an alternative theory with less information) and fruitfulness (its ability and scope to generate derivative research). If successful, the merits of economic models lie in their ability to provide normative-free guidance or heuristics in normative situations, not in their realism.

Although a highly heterogeneous "school", a law and economics analysis based on a neoclassical framework will generally view trade unions as welfare-reducing, anti-competitive elements on labor markets. At the heart of neoclassical economics lies the profit maximizing firm that sell goods and services on product markets, and produce these outputs by combining labor and capital production factors, procured in factor markets. Prices are determined by the laws of supply and demand. By monopolizing labor input and raising wages above some market-clearing level, and reducing the opportunity for entrepreneurs to adjust wage levels (downward), unions are assumed to take wages, and thus labor markets out of competition. Activities or disturbances (often in the form of regulations) that move or hinder the adjustment of prices towards a theoretical equilibrium, moves markets further away from their perfectly competitive "market clearing" state. As perfectly competitive market equilibria are viewed as Pareto-optimal, union activities would likely be considered welfare-reducing. Subsequent recommendations deriving from such law and economics analyses (or more specifically, economic analyses of law) often recommends regulators to increase competitiveness of (labor) markets by removing obstacles to freer competition. Effects of trade union-related activities such as collective bargaining that aims to raise wages, have historically been associated with

a number of adverse effects on employment, firm-level transaction costs, *higher* income inequality, and lower productivity developments through various channels. From these insights, neoclassical economic analysis of law proposes regulation by norm, where employees may exercise their right to quit in order to produce pressure for better working conditions or higher wages, rather than seek to regulate work relationships through CBAs or contracts. (see Freeman and Medoff (1984), Kaufman (2012) or Wachter (2012))

We have resisted the urge to engage in discussing the shortcomings of the neoclassical school of law and economics, but instead acknowledge that many of the shortcomings¹¹ described above are frequently discussed and addressed issues in collective bargaining between employers' associations and trade unions at a variety of levels in our institutional setting. One major difference lies in the *gestaltung* of the employer as the vicar of the invisible hand, which we believe exist in some sum of all markets, rather than in a single, defined entity. Changing jobs is but one mechanism to improve ones lot in the labor market, and single-handed championing of this measure as the only efficient option ignores eventual preferences of workers to improve conditions in their current internal labor market (firm). This does indeed introduce subjectivity into our model, but as preferences, which by definition are subjective.

Our model of unions and employers' associations is based on the insights presented by Guido Calabresi (2016) in "The Future of Law and Economics", and his critique of neoclassical economic analysis of law. In short, Calabresi points to the problem in applying a framework with an explicitly "correct" benchmark (attaining equilibrium in markets and/or profit maximization) when studying and proposing improvements to legislation. Legislation is a reflection of societal preferences. As legislation can regulate markets, directly or indirectly affected agents likely have preferences over the design of markets. Recommending changes in regulations to improve market functions by removing of "frictions", bench-marked on stylized Pareto optimality assumptions, risks violating exogenous preferences over the design of a market. A clumsy application of a neoclassical analysis also risks neglecting mechanisms that set prices on externalities, i.e. addressing social costs (Coase 1960). The proposed remedy is for economists to attempt to incorporate preferences (utility functions) for market design principles, including preferences *against* using the market mechanism, and be explicit about which assumptions on preferences they include.

A criticism of Calabresi, presented in a book review by Posner (2016) points to the fact that economic models "aren't intended to reflect all of reality". Rather their simplifications are necessary to generate insight, and "Calabresi advocates modeling choices without demonstrating that they are fruitful".

Over the past decades, much effort has been devoted to modeling trade union behavior. One common representation in the 1980's and 1990's are "monopoly union models", which act as "quasi-firms" with objective functions, subject to constraints (see for example Farber 2001, or Garonna, Mori, and Tedeschi 1992). Such models risk excluding important features that determine the behavior and ultimate outcomes on labor markets, due to the difficulties to "derive a tractable and logically consistent union objective function from the diverse preferences of the membership" (Kaufman 2012).

¹¹Which we interpret as discussing specific shortcomings of the US industrial relations model, but might be erroneously applied in non-US settings.

If stylized models provide poor representations of reality, they risk discarding important variables and metrics that determine outcomes in a system. If models that claim some form of universality are derived from institutional experience in a specific industrial relations context (textbook labor economics and the US labor market), the fit of the model is likely worsened when applied elsewhere. Our institutional setting differs vastly from the US, but has grown from similar beginnings and influences (Karadja and Prawitz 2018).

It is comprised of private entities of unions *and* employers' associations, devoted to representing regulatory preferences of their respective members. Unions and collective bargaining not only cover lower skilled workers, but include separate, high density organizations for white collar workers. The differing preferences of these groups are expressed in the contents of their respective CBAs. As described above, the scope and reach of bargaining is broad, and can at times complement or replace the role of legislation.

We define our high density union and employers' association-setting as a labor market where self-interested parties unite and represent their respective members, and engage in self-regulated, repeated bargaining games, under scrutiny of a third-party "garden-tending" legislator.

Unions represent the interests of labor and employers' associations the interests of capital. If any one or both cartels expresses significant preferences for regulatory reform, these will be addressed in collective bargaining rounds or in legislation. Due to the scope and reach of collective bargaining, these can be described as a process which addresses and sets prices on social costs as viewed from the interests of labor (Prasch 2005), capital, or the general public, on a national level. Wage and salary negotiations are included in this framework. The content of resulting CBAs are costs borne by firms individually or collectively. Costs can be negative, meaning CBA reforms can save money on unit labor costs. Due to high CBA coverage, contents of agreements have a normative effect on non-signatory firms.

Bargaining is defined as the process of enshrining CBA contents, and takes place in a sectoral and central setting over repeated games. Unions practice constraints set by macroeconomic considerations (as per the Rhen-Meidner framework). The scope of bargaining is broad, including issues of mutual interest, to issues of fundamental disagreement; the distribution of macroeconomic surpluses being the most obvious example of the latter. Sectoral CBAs regulate matters of interest to sectoral competitors in the employers' collective, and central CBAs issues of interest to the entire employer collective.

Central and sectoral CBAs are designed to be implemented locally by union and firm representatives. This creates incentives for both parties to the address transaction costs for implementation and compliance in local settings. Enshrining overly complicated provisions that entail high transaction costs run a risk of low compliance.

All parties utilize forms of democratic decision making in order to sort and prioritizes the regulatory preferences of their members. Regulatory preferences change over time, and thus new social costs can be "discovered". If such discoveries can be handled locally, they will be handled in in local compliance bargaining above. If not they will be delegated to sectoral discussion. A preference for

paid paternal leave is an example of this, and employer preferences for flexibility and precision in staffing is another. Intensity in preferences can be reflected through a number of channels, where industrial action in the form of strikes and lockouts are but two examples. Fixed term CBAs are often utilized to insure that labor costs are adjusted to CBA "reform space" at regular intervals, but also to address new preferences for regulations of either party. CBA reforms which entail significant costs are often financed by "taxing" future wage increases. As described above, employers buy labor peace from unions. The sum of costs of implementing CBAs resulting from a bargaining round are equal to the cost of labor peace to the sectoral employer collective.

Democratically elected legislators play a "garden-tending" role, encouraging employers' and unions to address social costs and act in the public interest, including issues related to industrial peace (a role played by The National Mitigation Office) to insider-outsider dilemmas¹² (Lindbeck and Snower 1988). As parliamentary majorities shift, CBAs can provide a degree of legislative insulation to either party. We assume that changing regulations through CBA provisions also entail lower transaction costs and higher reform precision compared to changes in legislation. As a result, we assume that both parties prefer CBA solutions over legislation. If legislation is deemed warranted, the parties may cooperate in seeking changes in legislation, but may also pursue legislative change single-handedly. If single-handed legislative pursuits are successful, it will likely damage the party's trustworthiness in the eyes of the other, affecting future bargaining prospects due to an overhanging risk of single-handed legislative retaliation by the other party.

The above definitions are an attempt to capture the spirit and mechanisms of the Swedish Model. It focuses on tripartite dynamics in regulating labor markets through contracts and/or legislation. The effectiveness and resilience of the system depends on each party's ability to address issues deemed as legitimate by their members, subject to other parties' preferences. Before we consider shifting dynamics in such a system due to exogenous technological shocks, we need to discuss a limitation of scope in our framework.

4.2 Coase and platform employment classification

Our described framework is designed for a setting with defined employer-employee relationships. The framework has had limited application to regulate the relation between self-employed¹³ and client firms. The analysis does not cover platforms that facilitate work to self-employed, i.e. where employment classification is uncontested. As many labor platforms have attempted to avoid employer-employee relationships by classifying workers as self-employed, access to collective bargaining frameworks may be restricted due to institutional particularities. The result is likely a one-sided regulation "by norm" (Wachter 2012) of the owner or operator of the platform (Economist 2016). Here, we briefly address the economists' (lack of) perspective and theory in considering employment classification issues on labor platforms. For a more thorough discussion on these topics see Prassl (2015) or Selberg (2017).

Ronald Coase's (1937) "The Nature of the Firm" considers why firms choose to hire labor on

¹²Which in reality has been a framework mainly applied to change trade union behavior, but given the existence of employer cartels, the logic of symmetry dictates the framework can also be applied to firms and their shareholders.

¹³The main exemption being the Freelance Agreement, signed by the Swedish Union of Journalists and Alemga Medieföretagen.

open ended contracts instead of only hiring contractors on markets, and theorizes that this is due to the transaction costs of using the latter. These include, but are not limited to search and information costs, bargaining costs, and compliance costs. Innovations, such as the telephone or telegraph, are technologies which "lessens spatial distribution" and thus reduce transaction costs. Labor platforms fit well into this description. Coase assumes that these innovations lower transaction costs for organizing work within the confines of the firm, and thus allows for the hiring of more internalized (employed) labor, growing the firm in size. However, innovations can also lower transaction costs in externalized markets.

If a labor platform classify their workers as self-employed, and it is contested, the ensuing argument can be seen as a disagreement over the application of Coase's framework. Coase's theory of the firm was likely informed by institutional arrangements specific to his time and setting. His introduction of transaction cost-lowering innovations result in increased internalization and growing firm size, which is indicative of the prevalent employment norm of his time. Labor platforms normally operate in an institutional setting where their choice of labor classification may be constrained by labor, tax, work safety, or anti-trust laws. Employer-employee status is thus exogenously determined by the institutional setting, assuming distinctions between employed and self-employed exist. This answer implies that economists can offer little guidance to the question, which is both unfruitful and dissatisfying. Our Calabresian framework with individual preferences for regulations and market (non-market) design can provide further insights.

Firms that actively avoid employment classification might produce unaddressed social costs by unloading business risks onto individuals and society at-large. Especially if such practices are introduced in parallel to an existing order such social cost issues are addressed, and are judged by in comparison (see Van de Stadt, Kapteyn, and Van de Geer 1985 or Tversky and Kahneman 1991) to similar employment practices. The lower prices faced by consumers would thus be subject to negative externalities, unaddressed by the market price. These considerations are described in our institutional backdrop of the legalization of TWA in Sweden. Regulatory preference for neutrality of competition might produce unaddressed social costs. A platform-related example is discontent over "ridesharing" taxi services competing in the same relevant market as non-ridesharing taxi firms might. If legislators introduce separate regulations for ridesharing business, non-ridesharing taxi firms will have their regulatory preference violated, as the rules may be considered unfair. In a Calabresian framework, the perceived fairness of a market matters as it reflects regulatory preferences.

In Coase's theory of the firm, transaction costs are determined by the relationship between costs of externalizing and internalizing labor, as viewed from the perspective of the firm. Externalized labor markets are not firms, but markets due to their inherent transaction costs. Firms are not markets, but rather commandified decision making structures (Calabresi 2016).

If a firm leases staff from a TWA in such a setting, the client firm would be engaging in an externalizing activity. However, if the TWA itself functions as a commandified decision structure, regardless of employment status of the TWA worker, can this still be considered a "pure" externalization? Although the client firm may hire fewer employees as a result of the outsourcing or externalization, the total number of workers in commandified decision structures might not have changed. In a setting where neutrality of competition in the allocation of social costs is valued, this distinction matters.

An economist's determination of employment can thus consider how "free" or "unfree" the provided platform market is. Considering platform freedom, we might compare to some perfect competition benchmark; or "unfreedom" by the individual entities' possibility to bargain or affect the terms and conditions over the transactions in which they engage.

From the platform's perspective, we often hear of the prohibitively limiting effect an employer classification would ensue. Such claims are entirely subject to institutional specifics. If employment status entailed little-to-no obligations for the firm, employment classification would not be an issue, lest a re-branding of the concept would serve some purpose. If we consider a hypothetical platform market that combines nearly perfect competition and low transaction costs, workers would be able to design contracts reflecting each of their individual preferences in regulations. Such platforms do not exist. Real-world platforms, such as our interviewed firms, devote much effort to standardize and automate features of its business model through programming algorithms. Much of a platform's competitive advantage lies in its ability to facilitate transactions between dispersed parties at low transaction costs, driven by market demand. Platform processes are often embedded in algorithms, and often backed by non-negotiable, standardized contracts for its workers and users. If labor platforms lower transaction costs through the standardization of platform internal processes, it is likely they will be perceived as commandified decision structures, and not markets. Such firms thus prefer platforms resembling commandified decision structures over markets.

Much of the current debate about platform labor classification is due to the dissonance of platform firms favoring commandified decision structures but believing their workers are externalized labor. If such actions result in lower consumer prices and competitive advantages with unaddressed social costs, it is not unlikely platforms will be blamed for acting opportunistically. This simple analysis is unlikely to provide much guidance in the legal addressing of employment classification, but could explain discontent over outcomes.

4.3 The White and Blue Collar TWA Collective Agreements

As digital labor platforms are innovations that help firms compete in markets by lowering their operational transaction costs, we consider a number of issues relating to the rationale, design, function, and pricing of social costs in sectoral CBAs of interest to such firms. If algorithmic management practices continue to develop over the coming years, negotiating algorithms (De Stefano 2019) will likely need to be addressed explicitly in sectoral CBAs in the near future. Our interviewed firms point us to a number of aspects relating to regulatory compliance and flexible working arrangements.

4.3.1 Union strategies in situations with multiple employers

Regarding CBA compliance of TWAs, unions are faced with a challenge. A local union officer, representing regular staff, is tasked with ensuring compliance of a CBA. Issues relating to compliance of a CBA in a local workplace will normally be discussed or negotiated with the local employer. We assume it is in both the union's and the employer's interest to strive for compliance with minimal transaction costs. A TWA employee (a union-member) is being leased to this workplace, doing the same work as the regular staff. Through extensions in the TWA CBA, the workplace is covered by nearly identical regulations. If the TWA employee raises an issue regarding CBA compliance at

the local workplace, whom should the TWA employee turn to? As the person is covered by a TWA CBA, regulating the relationship between herself and her TWA employer, there will be a union officer at the TWA tasked with assuring just implementation and compliance of the TWA CBA. Resolving the dispute at the local workplace could mean introducing two non-locally present parties – the TWA employer and the TWA union representative. Under this construction, it is likely that dispute resolution through the TWA entails higher transaction costs, lest the local union officer agrees to solve the matter through local channels. Such a solution would likely not be considered "by the book", and also risks causing grievance with the TWA employer.

The situation above attempts to illustrate the difficulties in regulating work relationships in situations with a non-present intermediary employer. Although the situation is not insurmountable, it adds complications that may produce adverse outcomes which unions have a strong incentive to address in CBAs. In our self-policing system, having two separate systems for assuring CBA compliance in the same workplace, but with differentiated transaction costs, will likely affect outcomes relating to CBA compliance. This may in turn affect bargaining symmetries between the parties, not unlike the consequences of fissurization, as described by Weil (2014) in the US context.

Outcomes to the hypothetical situation above may hinge on a number of variables. This will in turn affect trade union responses who wish to mitigate adverse effects and assure CBA compliance. Arguably the most important lie in the nature of the work being carried out by the TWA employee. In our example, the TWA employee is leased to carry out the same work as the local staff. The work is thus arguably of a more replaceable nature. If the nature of the work is dangerous and there exists risks of harm (high social costs) unions will pursue strategies of proactive and systematic preventative safety measures. These in turn require well-functioning systems for compliance. Unions will thus pursue strategies that maximizes the number of employees in systems with lower transaction costs in compliance.

However, if the work is deemed less replaceable, and entails tasks that lie outside the capacity of the firm, the TWA employee is not a "temp" in the common use of the word, but would likely be described as a consultant. If the work is conducted in an office environment, incentives to addressing social costs relating to risks to human life and limb are likely lower. Swedish TWAs are engaged in leasing of staff in for both (and in between) these broadly defined categories. The segmentation of these groups roughly resemble the division of blue and white collar labor as enshrined in the TWA CBAs. The ensuing contents of the separate agreements mirror such considerations.

4.3.2 Wage-setting and flexibility provisions

All CBAs reflect some form of compromise between bargaining parties. In the opening "Co-Party Intentions" (*Partsavsikt*) of the LO's blue collar CBA we find many of the principles relevant to the Swedish TWA CBA. The first paragraph states that the TWA CBA "is a sectoral agreement (*avtalsområde*) on the Swedish labor market which is regulated on equivalent grounds (*likvärdiga grunder*) as other sectors." Read with the final paragraph of the statement, it highlights a mutual preference for neutrality of competition in regulations of the parties between "leased" and regular staff at a local firm. It is unlikely that this enshrined mutual preference is derived from the employers' association. The "co-party intention" continues to lists the mutual responsibility to adapt CBA regulations to a changing industry and broader market forces, recognition of employers' demand

for flexible work arrangements and of the TWA industry itself in the short and long term, the joint responsibility to ensure competitiveness and good working conditions for TWA employees, and that local cooperation under high density conditions (among unions and employers' association) is important. (LO Bemmanningsavtalet, pp.1)

The white collar CBA does not include such a statement, and generally reflects the "lower replaceability" of white collar labor, but shares many traits with the blue collar CBA due to its historical role in setting sectoral regulatory norms. Both CBAs reflect a stated preference that TWAs leasing staff for more replaceable work should be limited to covering business cycle-related peaks and troughs in demand. As business risks to TWAs lie in their periods of lower demand, regulations ensuring such business risks are not unloaded to individuals or society, obligate TWAs to pay a guaranteed salary to their employees in downturns and make open ended contracts the norm.

Such provisions require TWAs to insure themselves in order to pay guaranteed salaries and cover eventual redundancy and severance negotiations. Associated costs are passed on to their client firms who pay a premium for leasing TWA staff. This "insurance" method of regulating TWAs has likely had an effect on the size and business practices of TWAs in Swedish labor markets. The "penetration" of TWAs in Sweden is low by international comparison (1.7 percent of employed persons), and TWA employees are better educated than the labor market average. These factors are likely indicative of TWAs responses to such regulations, with an increased focus on facilitating the matching function in labor markets, rather than being agencies that lease lower-skilled labor (Bemanningsföretagen 2018, Walter 2012). With the realistic assumption of negative price elasticity of TWA labor demand, the losses are likely compensated by TWAs ability to innovate in their intermediary matching functions.

Wage and salary formation differ between the agreements. The blue collar CBA utilizes the earlier described GFL system of "average earnings level", calculated as the average of all wages under the relevant non-TWA CBA in a local workplace. Depending on the degree of local wage differentiation, the higher cost for leasing blue collar staff increases the TWA's incentive for hiring and leasing higher-skilled blue collar staff. The white collar TWA CBA utilizes individual, differentiated salary or wage bargaining, where the CBA sets a framework for individual wage negotiations, as is common in white collar CBAs on the rest of the private sector labor market. The minimum salary is explicitly set in two stages; one for employees of 20 up until 24 years old¹⁴, and one for employees 24 or older. None of our interviewed firms comment on the wage levels themselves, but rather the critique relates to transaction costs (search costs) of implementing blue collar provisions in a standardized system.

Both CBAs provide explicit exemptions to open ended contracts and guaranteed salary provisions. The rationale for the student exemption lies in that the employers' demand for high flexibility can be granted due to a recognition of mutual flexibility in this category, and the assumption that students have other primary sources of income. The introduction of the new "other primary source of income" exemption to the white collar CBA follows the same logic, and may over time enable larger groups to be exempted. A conservative assumption of perfect CBA compliance shows the usage of these exemptions are commonplace, with 38 percent of TWA employees having fixed-term

¹⁴Although not stipulated in the CBA, persons under 20 will receive this wage.

contracts, compared to 15 percent in the rest of the labor market (Larsson 2017). The measures do not include the new "other primary source of income"-provision, as these were introduced in 2017. The resulting exemptions mean TWA have a lower business risk for these exempted groups.

4.3.3 Compliance and regulatory transaction costs

As indicated by the hiring practices of our interviewed platforms, such exemptions are likely of high interest to labor platforms that wish to provide on-demand labor services. In theory, dispersed platform workplaces can provide income for workers with varying degrees of commitment, including those doing part-time side-gigs, and those working full time doing tasks for the platform. If an individual has work dispersed between such "exemptions", will the resulting sum of working conditions be on-par with the rest of the "regular", open-ended labor market? The answer depends on the situation, but it is probable that some may fall in-between the cracks. Ensuring compliance in a system of such a mix of CBA provisions will require more self-policing efforts by unions, making sure full-time platform workers receive adequate insurance, countering possible opportunistic TWA behavior due to the differentiated price levels.

Failure of compliance will likely not be tolerated by union (or non-union) members in the long run. Prospects of improved CBA compliance are complicated by declining union density among Swedish blue collar unions, particularly among younger age-groups (Kjellberg 2018). If such matters are left unaddressed, there rests an overhanging risk of the current CBA regime being replaced by legislation or one-sided, monopsony labor market regulation, which will likely leave many social costs unaddressed.

An alternative approach, alluded to by our interviewed firms, is to consider new approaches to regulatory compliance. By developing new, more efficient digital standards for regulatory compliance in CBAs, collectively bargained regulations can be enshrined in algorithms with lower transaction costs. As algorithms have the nice property of always following programmed instructions, a system with a higher degree of compliant algorithmic management practices may lead us to a system with higher compliance, compared to traditional "human" management practices that are more prone to opportunistic behavior. The largest trade union party of the white collar TWA agreement, Unionen, has already suggested such a strategy (see Söderqvist 2016 and Söderqvist 2017).

5 Discussion

The first white collar TWA CBA was signed by the union HTF in 1988, three years prior to the legalization of TWAs. This fact was weighed into the Swedish Supreme Court acquittal ruling of 1989, providing an example of the legitimizing strength of CBAs in our high density setting. The bold, preemptive act by HTF helped set a regulatory norm, creating a distinct TWA industry in Sweden. TWAs were gaining public acceptance, indicating increased legislative pressure, which likely spurred HTF to act. Regulating TWAs through CBAs is no easy feat, and it is unlikely unions representing broad groups in labor markets would voluntarily engage in such legitimizing practices without public or legislative pressure.

The Swedish union movement has been faced with the fact that TWAs are now an integral part of the Swedish labor market. And as the shape of TWA operations are shifting, regulations need to be re-addressed. The introduction of labor platforms and algorithmic management functions is such a development that will need to be addressed in the near future. The TWA CBAs of our law and economics analysis are designed to regulate business-to-business leasing of staff. Consumer-to-consumer, or business-to-consumer services facilitated through labor platforms will likely fall under other sectoral agreements. Will flexibility provisions spread to such settings, and in what form?

The introduction of transaction cost reducing, general purpose technologies that "lessens spatial distribution", as described by Coase can redefine the boundaries of the firm. Such innovations also improve coordination, which could be said is closely related to compliance. The expansion of collective bargaining to also encompass algorithmic management practices is interesting, as unions may discover that such technologies can help improve CBA compliance, given there are well-functioning forums to address discovered social costs of such practices over time. Other possibilities of such technologies lies in unions using similar technologies for their own purposes, enabling them to better unite and represent members in pursuing their regulatory objectives (Economist 2018).

Our small sample of interviewed platform firms all address issues of CBA compliance to varying degrees. The firm discussing possibilities of institutional innovation to address the transaction costs of regulatory compliance is particularly interesting, as this is may be a mutual interest to unions. If employers demand differentiated flexibility provisions (fixed and open ended contracts), they are also subject to differentiated social costs. Such settings create strong incentives for profit-maximizing employers to act opportunistically. If unions address compliance through algorithmic management practices, automating conversion to open-ended contracts once a specified threshold is reached, is one interesting venue to explore. In order to assure compliance, the latter will likely require features that place a "veil of ignorance" between employment forms on the TWA employer. It is unlikely such proposals will be met with open arms by employers' associations. However, institutions that address TWA compliance already exist through the self-regulated co-party authorization institution. If authorization is automated, as suggested by one of the interviewed firms, why not base authorization on flows of data rather than periodic reporting?

Such approaches ought to fit well to Swedish unions, that by tradition have taken a technology-friendly stance, as formalized by the Rhen-Meidner model. Considering regulatory preferences of union members, the tech-friendly stance is conditioned on functioning a safety-net and mitigating the adverse effects of structural change through unemployment insurances and active labor market policies. The institutional features of Sweden are largely modeled on these principles, and may explain much of its performance in labor market resilience. Such principles can be useful in situations that warrant strategic decision making. Not least when the forces of structural change are strong. Here, economics may help improve decision making in such situations. But as the financing of mitigation efforts are a joint responsibility of unions, employers, and legislators, major changes in flexibility require considerations of the re-distribution of risks.

Advances relating to algorithmic management change the dynamics of industrial relations, and creates many challenges to trade unions, not least if such practices create unaddressed social costs. A few of these are discussed in this paper. If platform developments lead to labor market flexibility without addressing social costs, it is likely that the trade union movements Rhen-Meidnerian

acceptance of structural change will evolve into nothing more but a lip service. In recent years, the membership cadres of the blue collar unions have taken a more pessimistic stance towards TWAs, resulting in demands for single-handed legislation (LO 2018). We have observed several actors claiming that young people prefer a labor market characterized by gigs. However, if we look at the labor market flexibility preferences of Swedish youth between the ages of 15 to 35, 74 percent prefer fixed over variable income, and 78 percent prefer steady employment over freelancing (Ungdomsbarometern 2018). Firms' single-handed pursuit of flexibility and precision staffing may risk significant backlash if such groups are mobilized with less compromising objectives.

During the writing of this paper, we have observed the use of a variety of algorithmic management practices in different forms at larger (non-TWA) firms listed on the Stockholm Stock Exchange. The observations come from local union chapters, where some have utilizing existing CBA provisions and legislation in order to engage in dialogue over the implementation of such practices. One example includes negotiating ethical aspects in the implementation of work safety-related tracking devices.¹⁵ Our current institutional framework thus supports unions in pursuing objectives that reflect members' preferences in algorithmic management to some extent. It also shows the issue at-hand is not only related to employers' demand for flexible work arrangements.

The aim of this paper is to provide insight to a collective bargaining framework covering labor platforms, with a well-functioning system of addressing regulatory preferences of labor and capital, and ensuing pricing of discovered social costs. By discussing the developments in the TWA CBA and reflecting on regulatory preferences as described by Calabresi, we hope to broaden the perspective relating to the parties' objectives in regulating labor markets. Although the paper looks at approaches unique to Sweden's labor market model, where unions and employers' associations practice high degree of contractual freedom, the paper also provides insight to the challenges and opportunities in a system of well-developed sectoral bargaining. A number of areas are left unaddressed, which we hope will inspire more research on resilient labor market institutional design, particularly from the economist's perspective.

¹⁵The monitoring of bathroom breaks.

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