Work attendance, gender and marital status:
Absenteeism among Swedish tobacco workers, 1919-1950

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Abstract
This paper presents evidence on rates of absenteeism for men and women employed in the Swedish tobacco industry from 1919 to 1950. The tobacco workers were employed by a public-private monopoly that undertook considerable rationalizations of production while at the same time having to live up to social constraints. The managers of the Tobacco Monopoly became increasingly interested in monitoring work attendance and sick leave. Throughout the period of investigation, and in contrast to the situation two decades earlier, women had about two times higher rates of absenteeism and more sick days than men. The number of hours lost due to sickness and other causes became significantly higher towards the end of the period, probably as a consequence of increased work intensity. Further investigations initiated by the management in the end of the 1930s showed big differences among women. Married women were more often absent, both due to own illness or non-illness related causes, than unmarried women, even if absenteeism associated with child births were discarded. The findings suggest that employers had incentives to undertake various kinds of statistical discrimination and exclude women from rewarding jobs.

Key words: tobacco industry, twentieth century, Sweden, labour markets, absenteeism, gender
Introduction

Time discipline was an important feature of the industrial revolution (Clark 1994; Landes 1983; Rifkin 1987; Thompson 1967). With the introduction of more capital-intensive technologies, new types of employment contracts emerged, which not only rewarded output but also behavior in the working place. Regular work attendance became a virtue. Previously, workers had been allowed to decide the timing and intensity of work. This was not only characterizing for the putting-out system, but also for many early workshops. Coordination of factors of production became even more urgent towards the end of the nineteenth century (Chandler 1977). Electricity and combustion engines replaced steam as the main sources of power and made it possible, and highly profitable, to achieve a higher and more even pace of production. Workers who quit without notice, did not show up when the factory bells rang or deviated from the job gave rise to costly interruptions of the production process. It was in this context that the punch card-clock was invented, which gave employers better opportunities to keep track of the attendance of their workforces.\(^1\)

During World War I and the following years, characterized by tight labour markets, absenteeism was defined as a serious problem (Frankel 1921; Jacoby 2004: 100; Murray 2007). Somewhat later, during World War II, when many women temporary filled jobs that previously had been done by men, gender differences in absenteeism became a big issue (Patton & Johns 2007; Weatherford 2009). Academic studies and anecdotal evidence showed that women were more often absent from work than men. Gender differences in absenteeism were also emphasized in some early feminist works published in the post-war period, most notably *Women’s two roles* by Alva Myrdal and Viola Klein (1956). Surprisingly, the gender gap in absenteeism has not been a central theme in the growing literature on gender and work that has appeared from the 1970s onwards (Mastekaasa & Modesta Olsen 1998). The same applies to the economic history literature (c.f. Goldin 1990). Women’s responsibility for childbearing and resulting career interruptions, male chauvinist trade unions and bureaucratic employment relationships are often mentioned aspects in accounts of women’s work in the twentieth century. Whether women were equally able and inclined to regularly show up at work as men, how such differences changed over time and why, are not discussed. Although male-female gaps in absenteeism have been established in numerous studies from the 1940s onwards, it is not obvious that the pattern has been time-invariant. Pre-modern work cultures,

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\(^1\) The punch-card clock or time clock was invented in 1888. However, there are earlier examples of attendance records, see for example Williams (1997).
including huge alcohol consumption and the habit of frequently taking days off, lingered on in some trades throughout the nineteenth century, and possibly beyond (Cooper 1987; Gutman 1973; Kirby 2012).

A more precise picture of the development of gender differences in absenteeism over time may have fundamental implications for our understanding of women’s opportunities in the labour market, such as the existence of occupational crowding, wage discrimination and marriage bars. If women had higher inclination of being absent from work, employers would have had incentives to undertake various kinds of statistical discrimination and exclude women from rewarding jobs.

In this paper I investigate the patterns of absenteeism in the Swedish tobacco industry in the period 1919-1950. This industry employed both men and women and was run by a public-private joint venture, the Swedish Tobacco Monopoly. The company initiated profound technological changes that made great numbers of workers redundant, reduced the reliance on manual skills and increased the importance of work attendance. The managers of the Tobacco Monopoly annually reported information on overall rates of absenteeism and sick leave to its owners and other stakeholders. Since it had exclusive production rights and enjoyed some tariff protection, the Tobacco Monopoly operated under fairly soft budget constraints. At the same time, state ownership and the position as the sole employer in the industry implied that the Tobacco Monopoly faced stricter social constraints than most companies. Unlike companies operating in more competitive environments, the Tobacco Monopoly could not easily discharge individuals on the grounds of poor health. These circumstances make the rates of absenteeism and sick leave found in the annual reports of the Tobacco Monopoly particularly worthwhile to consider. By compiling the data in the reports we may get a better idea of how big the gap in absenteeism between men and women actually was and how it evolved over time, in the light of substantial macroeconomic and technological changes.

Determinants of absenteeism

The levels and fluctuations of absenteeism may be seen as the sum of choices made by individual workers and managers. For the individual, the choice of showing up at work or not is dependent on the costs and benefits of absence, which in turn are related to personal characteristics, such as health, sex, age and marital status, the institutional setting and labour market conditions.
Poor health is often considered to be the most important cause of absenteeism. Some illnesses or injuries are so serious that going to work is hardly a choice. Other health problems are possible to combine with work, but with greater or smaller levels of inconvenience. Health does not only seem to be associated with age but also with sex. At least in modern societies, women are more likely to report poor health status and chronic conditions (Paringer 1983: 124-125; Mastekaasa & Olsen 1998: 203). Whether this reflects underlying differences in morbidity or subjective experiences of illness is an unresolved question.

In most historical and present-day contexts, the costs and benefits of work attendance look different for men and women and for unmarried and married. Women and men have typically different wages and different roles in the home. The importance of the gender wage gap for absenteeism is an open question as it involves both income and substitution effects. It is likely that married women’s greater responsibility for unpaid work in the home make them more exposed to physical and mental exhaustion and raised the benefits of absenteeism. Yet, the evidence from modern studies on the importance of marital status and dependency burden is ambiguous (Mastekaasa & Modesta Olsen 1998: 202). For women in modern-day Sweden, for example, the number of children is negatively related to short-term absences (Björklund 1991).

The institutional setting involves restrictions and rules at the company level as well as welfare schemes with wider coverage. As has been shown in numerous studies on contemporary settings, generous benefits levels in sickness insurance systems are associated with high degrees of absenteeism. In Sweden during the period of investigation there was no general sickness insurance, instead workers could join a variety of mutual aid societies that often were associated with particular occupations and sometimes sponsored by employers. Frequent absence from work is associated with a higher risk of losing the job, which in turn is more or less costly depending on the situation on the labour market. All else equal, workers are more likely to show up at work in bad times, when their chances of finding a new job are small. At the same time, employers may be more selective when hiring and firing workers, which tends to lower rates of absenteeism (Murray 2007). In this regard, the period of investigation begins with a couple of years (1919-1920) with low levels of unemployment, continues with a deep crisis in 1921, high unemployment throughout the rest of the 1920s, a further aggravation of the situation in the early 1930s and decreasing unemployment in the latter part of the decade to very low levels in the late 1940s. After World War II, many Swedish employers began to complain over difficulties to attract and retain labour.
The benefits of absenteeism are to a great extent related to the working environment and job content. Poor conditions on the working place are making leisure a more attracting option. Whether the working environments generally became better or worse in the period of investigation is a matter of debate but it is clear that great transformations were initiated, including increased use of machines, electricity, performance-based pay and time studies. Previous studies of accidents shows that work in the first half of the twentieth century became safer (fewer serious accidents) but more intense and monotonous (more light injuries, see Lundh & Gunnarsson 1987).

As this development went on, managers got stronger incentives to monitor and influence work attendance. Direct and indirect efforts of managers to influence work attendance is a variable that is often missing in studies of absenteeism, which may give rise to misleading results (Barmby & Treble 1991; Brown & Sessions 1996). The costs of absenteeism are particularly high where worker productivity is interdependent, that means where work is performed in teams (Heywood & Jirjahn 2004). The historical literature is often emphasizing how managers used punishments to maintain discipline. Those who failed to show up could get wage reductions or even be fired. But managers had also other means. One way, was to select workers according to perceived group characteristics or, which became widely spread during the twentieth century, to use medical expertise to screen workers before hiring. Furthermore, as respected members of society, factory owners and managers could encourage the virtues of punctuality, orderliness and sponsor health improving activities, such as sports or temperance organizations (c.f. Williams 1997). Yet, managers have not always been successful in their attempts to improve attendance and have instead adapted the work organization to high levels of absenteeism, for example by overstaffing (Clark 2007: 353-370).

The Swedish tobacco industry – from manual work to machines
Around 1900 there were about 100 tobacco factories in Sweden, producing cigars, cigarettes, smoking tobacco, chewing tobacco and snuff. Due to an imminent need to increase state revenues, production of tobacco goods was monopolized in 1915 and run by a public-private partnership. The managers were instructed to treat the workforce with particular care, while at the same time run the business as efficiently as possible. Over the years, the Tobacco Monopoly’s personnel consultants initiated a wide range of corporate welfare schemes for the
employees, including health and child care (af Trolle 1965). The company also sponsored an existing sickness insurance fund, to which most of the workers were subscribing.

In order to achieve economies of scale, the Swedish Tobacco Monopoly concentrated production to fewer locations. In 1919, production of tobacco goods was undertaken at 11 factories, together employing 5,700 blue-collar workers. Of these, about three fifths were employed in production of cigars and cigarillos and another fifth were making cigarettes (see table 1). Both branches of production employed over 80 percent women. Cigar production was still essentially a craft, requiring a considerable proportion of skilled workers, whereas cigarettes were produced in great numbers with the use of machines (af Trolle 1965).

Figure 1. Total number of blue-collar workers and share women employed by the Swedish Tobacco Monopoly, 1919-1950 about here

Table 1. Employment shares by branch of production at the Swedish Tobacco Monopoly, selected years about here

Table 2. Productivity changes (tons per worker) in percent by branch and decade about here

During the deep depression of 1921, the Tobacco Monopoly began to mechanize production of cigars. Initially, the machines were operated by women, but as the demand for hand-made cigars declined, male cigar makers were transferred to machine work as well. The transformation of the production process had far-reaching consequences. Labour productivity, if measured in tons per worker, was almost doubled 1920s (see table 2). As a result, the company cut its workforce by over 50 percent from 1919 to 1928 (see figure 1). Most of the reduction was accomplished by mass-layoffs in 1921. The layoff policy shifted over time. In the first big reduction in 1921, the order of selection was determined on the basis of age and length of service. The seniority norm was later abandoned. Married women, and in particular those whose husbands also were tobacco workers, were first in line for layoffs in 1927, but this was not a part of a consistent policy. In the 1930s, the mechanization process was smoother and mainly affected preparation work, and in the 1940s cigar production was almost fully mechanized with only small improvements of productivity. This stands in contrast to the development of productivity in the cigarette factories, which was accelerating in the 1930s

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2 At least officially, absenteeism was not stated as a layoff criterion during any of the major reductions that took place in the 1920s, 1930s and 1940s, see Karlsson (2008).
and 1940s. Furthermore, in cigarette production the introduction and improvement of labour-saving technologies was combined with increasing product demand, wherefore the share of workers employed in this branch increased.

The Tobacco Monopoly was not severely affected by the Great Depression in the 1930s. World War II implied more serious challenges due to the limited supply of raw tobacco and technology. Shortage of raw tobacco made it necessary to change direction of production, which was difficult since machines often were product-specific. The solution was to use existing capital and labour more intensively, by imposing over-time and shift work (Annual report 1943, STM). When the supply of raw tobacco and technology resumed after the war, the Tobacco Monopoly instead got problems to recruit workers in enough numbers, which led to underutilization of machines for cigarette production (Annual report 1945, STM).

With the exception of snuff production, work in the tobacco factories did not involve great requirements on physical strength. It is believed that male tobacco workers were relatively often disabled, or at least unsuitable to perform heavy labour (Fogelström 1965: 204). According to a labour statistical investigation from 1898, the self-reported health was considerably better among male workers. At the same time, male workers had more often received treatment for illness in respiratory organs (Elmquist 1899: 161-163). The frequency of sickness was also higher among male members of sickness insurance funds than female members (Elmquist 1899: 173). The average number of sick days differed somewhat between different types of funds, but ranged between five and eight days for men and three to six days for women. The mentioned investigation did not include figures of overall absenteeism, but it was noted work attendance often was irregular. The custom of taking a day off in the beginning of the week was particularly common among male cigar makers (Elmquist 1899: 101).

As seen in figure 1, the gender composition of the workforce remained fairly stable around 75 percent throughout most of the period of investigation, with a drop to 66 percent in the second half of the 1940s. Male tobacco workers were on average a few years older and more often married than female workers. Since the initial workforce reductions were aimed at young workers and since few new workers were recruited in the 1920s, the mean age of

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3 The different frequencies of treatment remained also after controlling for ‘occupational age’.
4 The average number of sick days per occasion was about the same.
5 Work was also irregular on Saturdays, the day after pay day.
6 Figures on the composition of the workforce with regard to sex, age and marital status were obtained from the Tobacco Monopoly’s annual reports.
workers increased with about ten years from the early 1920s to the mid-1930s (see figure 2). By various means, including a pension scheme and increased recruitment of young workers, the Tobacco Monopoly managed to reverse the trend towards workforce aging and decrease the mean age of men and women with a couple of years. The workforce rejuvenation in the 1930s and 1940s was not associated with a decrease in the share married (see figure 3). Among male workers, the share was stable around 70 percent until World War II and the following years, when it approached 80 percent before it began to return to the previous level. Among female workers, the share married was about 40 percent in the early 1930s and increased to almost 50 percent in the end of the 1940s.

Figure 2. Mean age of blue-collar workers at the Swedish Tobacco Monopoly, men and women, 1919-1950 about here

Figure 3. Share married of blue-collar workers at the Swedish Tobacco Monopoly, men and women, 1931-1949 about here

Mechanization had not only implications on the quantity and occupational composition of labour demanded but also on skill requirements and other qualitative characteristics of the workforce. Before mechanization, firms in the tobacco industry relied on high- and semi-skilled workers who processed the tobacco leaves manually. The supply of trained cigar makers and packers was limited and personnel turnover was considered as a serious problem by employers and managers (Elmquist 1899). The introduction of cigar machines had deskilling nature and managers came to describe turnover as something desirable. New cigar workers could be trained on short notice and replace worn out ones; those who could no longer keep up with the high pace set by the machines and often were absent from work (Kvinnoarbetskommittén 1938: 315).

Mechanization of cigar production also meant increased importance of team work. The cigar machines were operated by three workers, each with specific tasks, and the output of each machine was ultimately dependent of the performance of its operators. In this context, absenteeism became problematic, both for the workers and for managers. If a team-member was absent, the remaining members had to co-operate with a less familiar colleague, with the

7 Previously, the process of cigar making was sometimes performed by pairs of workers, consisting of a bunch maker and an over-roller. This simple team work was however disliked by the trade union and was only applied in some factories.
likely result of lower productivity and lower earnings. From the employers’ perspective, team work made it necessary to have a labour reserve. In fact, the Tobacco Monopoly is said to have employed four workers per machine instead of three. Thus, absenteeism meant that the company could not fully exploit the productive potential of the new technology.

Keeping track of work attendance

In the pre-monopoly era, managers of tobacco factories had few reasons to keep detailed records of work attendance. Most jobs were paid by the piece and there was certain flexibility for workers to come and go (Elmquist 1899: 98-99, see also Cooper 1987: 41-42). After a few years of existence, the Tobacco Monopoly undertook a major reform of the system of remuneration. Straight piece rates were replaced by premium bonus plans, which included a minimum hourly wage and additions for those workers who produced more than an established rate per hour (Annual report 1919, STM). Hence, it became necessary to keep records of not only the output, but also the working hours of each worker. This information was also considered of interest to the company’s owners and other stakeholders.

From 1919, the annual reports of the company board include information on actual number of working hours for male and female blue-collars at factory level, in relation to number of hours offered by the company. The annual reports also include information on the average number of sick days for blue-collars and white-collars. Reporting of sick days and overall rates of absenteeism required a system for time and attendance monitoring at the level of each factory. Exactly how this system worked is not fully known. In the early years, from 1917 to 1919, notes of absenteeism (dates and cause) were made in the ordinary personnel records, which was a card register. From 1919-1920 to the late 1940s, absenteeism was most likely registered in the pay rolls until the late 1940s, when the company introduced a special card register for time and attendance monitoring.

A general problem with company-level statistics on work attendance is that pay rolls and other personnel records may contain significant numbers of workers who have resigned without notice (Frankel 1921). Rates of absenteeism are thus inflated. In this regard, the quality of the absenteeism reporting of the Tobacco Monopoly was improved in 1931 when the head office demanded factory managers to submit details on individual workers who had been absent for a longer period or who had showed a pattern of repeated absenteeism. The head office was to decide whether the absent workers were to be removed from the personnel
records, if the absenteeism had not been caused by sickness of other “circumstances of particular distress”.

**Overall rates of absenteeism**

Firms and researchers have come up with a various measures of work attendance and absenteeism. Frankel (1921), for example, is reporting the number of absentees in relation to the average number of workers during a particular period. This is a rough measure since it does not include information on whether spells of absence are clustered among certain individuals or how long each spell typically lasts. The information disclosed in the annual reports of the Tobacco Monopoly is different than Frankel’s data as it is time lost as a percentage of possible working time. Yet, the annual reports do not specify the distribution and length of absence spells. This is a limitation that is worth keeping in mind when going through the following tables and something that I intend to follow up in future studies.

The rates of absenteeism presented in this paper have been calculated by subtracting the actual working hours from the number of ‘working hours offered’ by the employer and dividing with the same number. The definition is consistently applied throughout the period of investigation. The number of working hours offered is a concept that is found in the original source and is to be understood as normal working hours adjusted for interruptions of production due to public holidays or shortage of work. The collective agreement between the Tobacco Workers’ Union and the Tobacco Monopoly stipulated reductions of working hours in temporary downturns. Such reductions of hours were undertaken in the 1920s (Karlsson 2008: chapter 7). Since men and women were unevenly distributed among jobs, the number of working hours offered was not exactly the same for men and women. In all years for which I have information, the number of working hours offered to women was somewhat lower than for men. In most years, the difference was small, amounting to one or two days of work. An exception is the year 1940, when the difference was three weeks due to reductions of working hours in production of cigars and cigarillos (Annual report 1940, STM).

| Table 3. Working hours by sex | about here |

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8 This measure is known as the ‘time lost index’ and was frequently used as an indicator of absenteeism in the decades after World War II, see Chadwick-Jones et al (1971).

9 Workers who did not use more than 60 percent of the offered hours were excluded from the calculation (Annual report 1919, STM).
When looking at time lost by sex for the entire firm, summarized in figure 4, an overall impression is that the series for men and women follow similar patterns: decrease in the initial years, relative stability in the 1920s and early 1930s, thereafter a tendency of absenteeism to increase to higher levels. The rate of hours lost for women was in all years higher than for men. While absenteeism among female blue-collars amounted to 7-8 percent of the offered working hours in the 1920s and reached levels of 15 percent or more in the late 1940s, the rates among male workers were typically under 4 percent in the 1920s and 7-8 percent in the end of the period. In relative terms, there are some fluctuations between the years, as revealed in figure 5, but no consistent time trend. The rate of absenteeism was typically between 2 and 2.5 times higher among women than men.

Figure 4. Time lost in percent by sex, 1919-1950 about here

Figure 5. Female-male rate of time lost, 1919-1950 about here

Before further interpretation and explanation of the development of absenteeism among male and female tobacco workers it is worth looking separately at sick leave and other reasons for failing to attend work and into differences among women.

Sick leave
The information on sick leave among tobacco workers in the annual reports is less detailed than that on overall absenteeism. The number of sick days is not specified for men and women until 1925.10 As with overall absenteeism, the data available in the annual report does not allow an analysis of the distribution and length of sick leave.

Based on data in the annual reports it is possible to estimate that about 65-70 percent of all working hours lost at the Tobacco Monopoly were caused by sickness. Sickness was somewhat more important to men than to women. There is no clear trend of sickness to become more or less important as a driver of absenteeism.

Figure 6. Number of sick days by sex, 1925-1950 about here

10 From 1935 the annual reports also include sick days for male and female white-collars.
As seen in figure 6, the number of sick days follows a very similar pattern to that of overall absenteeism: higher levels for women than for men and a period of relative stability before a dramatic rise in the 1940s. From 1940 to 1949, the number of sick days increased from six to 15 for men and from 18 to 30 for women.

Like with absenteeism in general, there is a clear correlation between men’s and women’s sick leave. If the number of sick days among women increases, the same thing often happens for men as well, and vice versa. Furthermore, the correlation becomes stronger over time. For the period 1919 to 1935, the correlation coefficient is 0.54. The equivalent coefficient for the period 1935 to 1950 is 0.88. I interpret this finding as an indication that the jobs of men and women in the tobacco industry become more similar as a consequence of technological changes. This is also in accordance with qualitative evidence.

Other causes of absenteeism

For the period 1935 to 1950 it is possible to calculate the rates of absenteeism for men and women excluding sick leave. This is done by assuming that sick days are equally distributed among the working days, multiplying the average length of a working day (8 hours) by the average number of sick days and thereafter subtracting from the average number of absent hours. The statistic we obtain is a summary measure of absenteeism due to causes such as military service, permissions (allowed and non-allowed) and caring of sick or disabled family members in the home.

As with overall absenteeism and sick leave, the residual rate of absenteeism was higher among women than men (see figure 7). Whereas the rate for women fluctuated between 3 and 6 percent, men’s rate was between 1 and 2 percent in most years of observation.

The higher rates of residual absenteeism among women are most likely due to their greater caring responsibilities in the home. Measured in time, this responsibility outweighed men’s obligations to do military service. In fact, it is surprising to see that there is no clear effect of World War II on absenteeism among male tobacco workers. It seems like those men who were enlisted for military service left their employment, instead of being counted as absent.
Unlike overall rates of absenteeism and sick leave, there is no clear time trend in the series of residual absenteeism. The residual rates for men and women are also less strongly correlated than sick leave.\textsuperscript{11}

**Differences among women**

As rates of hours lost began to increase in the second half of the 1930s, so did the interest of the Tobacco Monopoly’s managers for the whole issue. It was clear that women on average were more absent from work than men, but what about differences among women according to age, marital status and family obligations? In 1938 the Tobacco Monopoly conducted more detailed investigations of absenteeism among women.\textsuperscript{12} The investigations focused on the factory in Stockholm, which was the company’s biggest in terms of employment and had relatively high rates of absenteeism.

Figure 8. Married women’s relative absence (unmarried women=100), tobacco workers in Stockholm, second half of 1937 about here

The investigation, summarized in figure 8, showed that age, marital status and absenteeism were interrelated. Whether married women were more absent than unmarried depended on age and type of absenteeism. Married women in all age groups had more sick days than unmarried women, even though leaves associated with child births had been excluded from the count.\textsuperscript{13} The difference was 34 percent in the age group 19 to 30 and exceeded 71 percent in the age group 51-60. Even stronger effects of age were found with regard to absence due to other causes, but here the greatest differences between married and unmarried were found among younger women. In the age group 19-30, married women had over three times as high rates of absenteeism than unmarried women. Among women over 40, married women had about 50 percent higher rates of absenteeism.

Follow up investigations of the female tobacco workers in Stockholm were made in the years 1943 to 1948.\textsuperscript{14} Here it was shown that differences between married and unmarried

\textsuperscript{11} For the period 1935 to 1950, the correlation coefficient between men’s and women’s rates of absenteeism excluding sick leave is 0.33.

\textsuperscript{12} Tobaksarbeterskorna, B: 9, Vol. 64, Kvinnohistoriska samlingarna, Göteborgs universitetsbibliotek.

\textsuperscript{13} Widows and divorced with under-aged children were counted as married.

\textsuperscript{14} In contrast to the investigation made in 1938, widows and divorced women were counted as unmarried. Another difference was that absenteeism due to child births was specified.
women were particularly pronounced in the years 1942 and 1943 and thereafter became smaller (see table 4). The difference in the rate of sick leave was reduced from about 50 percent to about 25 percent and the residual rate of absenteeism from 250 percent to under 50 percent. In the follow-up investigations, leaves due to child births were specified, but there inclusion did not change the overall picture. Compared to 1937, the difference between married and unmarried women was smaller in 1948.

Table 4. Married women’s relative absence (unmarried women=100) by age group, tobacco workers in Stockholm, 1937 and 1942-1948 (leaves due to child births excluded) about here

Interpretation and discussion

The finding that women consistently have higher rates of absenteeism than men in the tobacco industry during the period 1919 to 1950 is remarkable towards the background that female tobacco workers around the turn of the century 1900 had fewer sick days and less often adhered to irregular, pre-modern habits of work. In the Swedish tobacco industry, it seems like the gender gap in absenteeism appeared in the early twentieth century, that is, before mechanization of cigar production and before production of cigarettes became significant. Questions for further research are whether gender differences were becoming more pronounced in other industries as well and why. Aspects worth considering in this context are regulations of the distribution of alcoholic beverages and sickness insurance funds.\(^{15}\)

Another central finding is that the series of overall time lost and sick days for men and women are highly correlated. This support the idea that women employed at the Tobacco Monopoly had a greater disposition for being absent. If the gap in absenteeism had been caused by the gender division of labour it would have been more reasonable to find a convergence over time since the changes in the production process most likely made the jobs of men and women more similar.

The correlation of the series also suggests that absenteeism of men and women over time were influenced by similar variables. Even though it is beyond the scope of the present paper to formally estimate the importance of various determinants of absenteeism, it may be interesting to put the observed development in the light of changing conditions in the labour market, demographic characteristics of the workforce, internal work processes and personnel

\(^{15}\) In the late nineteenth century it was possible, and particularly common among men, to be members of several sickness insurance funds at the same time.
policies. The rate of absenteeism was fairly high when unemployment was low in 1919 and 1920. Absenteeism decreased during the crisis in 1921 and thereafter remained at a low level. Although managers did not directly and openly select unhealthy and irregular workers for layoffs, these may in practice have been overrepresented in the reductions. The mechanization of cigar production in the 1920s was not associated with higher absenteeism. This was in spite of the facts that the average tobacco worker became substantially older and more often married than before. Facing few alternatives in the labour market, tobacco workers accepted the higher work pace and noise levels set by the machines. It is also possible that peer pressure among workers, associated to the team-based nature of machine work, played a role here.

In the 1930s, the Tobacco Monopoly began to rejuvenate its workforce. Young men and women were replacing worn out workers. But instead of achieving higher levels of work attendance, absenteeism became an even more serious problem. This may be due to several reasons. One possible explanation is that the situation in the labour market improved. The threat of unemployment was not as effective in strengthening labour discipline as before. It is possible that the new generation of tobacco workers had different attitudes towards work and did not accept the conditions of mass production. But when assessing the importance of external conditions it should be noted that the increase in absenteeism was driven by sick leave. Other types of absenteeism did not become more common as unemployment levels decreased. Therefore, it seems reasonable to emphasize internal causes, such as exhaustion due to intensification of work, for the development in the 1940s. One direction of further research is to explore the importance of shift work in combination with gender and civil status. Even though the age of the typical female worker decreased, her likelihood of being married increased. It is possible that shift work, which was applied at times during World War II, may have been particularly detrimental to the health of married women. This could also be an explanation of why differences in hours lost between married and unmarried women tended to become after World War II.

There are several possible ways to deepen the analysis of absenteeism among the Swedish tobacco workers. One way is to look closer at differences between factories, making use of variation in the composition of workforces and production. Most of the firm-level data presented in this is also available for particular factories. Another possibility is to analyze the individual determinants of hours worked and lost. Personnel records from at least one of the

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16 This was at least a view that existed among employers in other industries at the time.
Tobacco Monopoly’s factories have survived. The material from this factory is particularly rich in detail from the late 1940s onwards, including information on the duration and causes of absences. This could shed light on the central question whether the difference in time lost was due to women having more frequent spells of absence or if their spells were of longer duration. Frequent spells of short duration are typically more costly for employers, and more likely to affect personnel policies, than if absenteeism is concentrated in long spells.

A third direction of further research into the Tobacco Monopoly is to get a better understanding of how managers perceived the problem of absenteeism and what measures they undertook to solve the problem. Even though the managers could not undertake the drastic measures, there may have invented other, more subtle ways to reduce the number of hours lost.

Conclusions and implications for further research

This paper presents evidence on rates of absenteeism for men and women employed in the Swedish tobacco industry from 1919 to 1950. The conditions in the Swedish labour market were slack from 1921 until the latter half of the 1930s when demand for labour increased. The tobacco workers were employed by a public-private monopoly that undertook considerable rationalizations of production while at the same time having to live up to social constraints. The managers of the Tobacco Monopoly became increasingly interested in monitoring work attendance and sick leave. Throughout the period of investigation, women had about two times higher rates of absenteeism (or more) and more sick days than men. The number of hours lost due to sickness and other causes became significantly higher towards the end of the period, probably caused by increased work intensity. Further investigations initiated by the management in the end of the 1930s showed big differences among women. Married women were more often absent, both due to own illness or non-illness related causes, than unmarried women, even if absenteeism associated with child births were discarded.

The observed correlation in the time series for men and women indicate that jobs became more homogenous and that the consistent gender difference was a result of differences in an underlying inclination of absenteeism. This latter result has important consequences for our understanding of women’s position in the labour market during the twentieth century. If women were more disposed to being absent, and if employers became increasingly concerned with work attendance, which we have good reasons to believe, statistical discrimination with regard to earnings and careers are likely outcomes, also in cases
where piece-rates are applied. That the Swedish Tobacco Monopoly did not impose strict marriage bars or similar policies is not surprising given its particular character. The findings of this study suggest that it is worth reconsidering the personnel policies of employers facing stricter budget constraints. How did they handle absenteeism among men and women? To what extent did they impose marriage bars or other means of statistical discrimination?
Sources

Archives
Tobaksarbeterskorna, Kvinnohistoriska samlingarna, Göteborgs universitetsbibliotek

Printed documents
Annual reports, various years, AB Svenska Tobaksmonopolet (STM)

Literature
Clark, Gregory (2007), A farewell to alms: A brief economic history of the world, Princeton University Press


Kvinnoarbetskommittén (1938), Betänkande angående gift kvinnas förvärvsarbete m.m. Stockholm


Weatherford, Doris (2009), American women during World War II: An encyclopedia

Table 1. Employment shares by branch of production at the Swedish Tobacco Monopoly, selected years

<table>
<thead>
<tr>
<th>Year</th>
<th>Cigars</th>
<th>Cigarettes</th>
<th>Smoking</th>
<th>Chewing</th>
<th>Snuff</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1919</td>
<td>0.59</td>
<td>0.21</td>
<td>0.03</td>
<td>0.05</td>
<td>0.04</td>
<td>0.08</td>
</tr>
<tr>
<td>1930</td>
<td>0.50</td>
<td>0.23</td>
<td>0.04</td>
<td>0.04</td>
<td>0.04</td>
<td>0.14</td>
</tr>
<tr>
<td>1940</td>
<td>0.46</td>
<td>0.21</td>
<td>0.09</td>
<td>0.02</td>
<td>0.04</td>
<td>0.18</td>
</tr>
<tr>
<td>1950</td>
<td>0.34</td>
<td>0.27</td>
<td>0.07</td>
<td>0.04</td>
<td>0.04</td>
<td>0.24</td>
</tr>
</tbody>
</table>

Source: Annual reports, relevant years, STM.

Table 2. Productivity changes (tons per worker) in percent by decade

<table>
<thead>
<tr>
<th>Decade</th>
<th>Cigars</th>
<th>Cigarettes</th>
<th>Smoking</th>
<th>Chewing</th>
<th>Snuff</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920s</td>
<td>94</td>
<td>83</td>
<td>46</td>
<td>-12</td>
<td>12</td>
</tr>
<tr>
<td>1930s</td>
<td>22</td>
<td>95</td>
<td>-1</td>
<td>-3</td>
<td>3</td>
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<tr>
<td>1940s</td>
<td>4</td>
<td>106</td>
<td>69</td>
<td>-55</td>
<td>58</td>
</tr>
</tbody>
</table>

Source: Own calculations, data from af Trolle (1965: 365).

Table 3. Working hours by sex, 1935-1950

<table>
<thead>
<tr>
<th>Year</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1935</td>
<td>2301</td>
<td>2291</td>
</tr>
<tr>
<td>1936</td>
<td>2294</td>
<td>2285</td>
</tr>
<tr>
<td>1937</td>
<td>2293</td>
<td>2283</td>
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<td>2290</td>
<td>2283</td>
</tr>
<tr>
<td>1940</td>
<td>2240</td>
<td>2098</td>
</tr>
<tr>
<td>1941</td>
<td>2249</td>
<td>2198</td>
</tr>
<tr>
<td>1942</td>
<td>2261</td>
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</tr>
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<td>1943</td>
<td>2278</td>
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<td>1944</td>
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<td>2283</td>
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<tr>
<td>1945</td>
<td>2270</td>
<td>2256</td>
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<tr>
<td>1946</td>
<td>2290</td>
<td>2265</td>
</tr>
<tr>
<td>1947</td>
<td>2259</td>
<td>2235</td>
</tr>
<tr>
<td>1948</td>
<td>2290</td>
<td>2289</td>
</tr>
<tr>
<td>1949</td>
<td>2283</td>
<td>2260</td>
</tr>
<tr>
<td>1950</td>
<td>2287</td>
<td>2262</td>
</tr>
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</table>

Source: Annual reports 1935-1950, STM.
Table 4. Married women’s relative absence (unmarried women=100) by age group, tobacco workers in Stockholm, 1937 and 1942-1948 (leaves due to child births excluded)

<table>
<thead>
<tr>
<th>Year</th>
<th>Age group</th>
<th>Illness</th>
<th>Other</th>
<th>Total</th>
<th>Illness</th>
<th>Other</th>
<th>Total</th>
<th>Illness</th>
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<td>41-50</td>
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<td>51-60</td>
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<td></td>
<td></td>
<td>1937</td>
<td>134</td>
<td>413</td>
<td>186</td>
<td>127</td>
<td>255</td>
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<tr>
<td></td>
<td></td>
<td>1942</td>
<td>130</td>
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<td>192</td>
<td>141</td>
<td>386</td>
<td>178</td>
<td>144</td>
<td>174</td>
<td>149</td>
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<td>221</td>
<td>159</td>
<td>149</td>
<td>245</td>
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<td>132</td>
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<td>1944</td>
<td>28</td>
<td>189</td>
<td>40</td>
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<td>298</td>
<td>201</td>
<td>103</td>
<td>162</td>
<td>113</td>
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<td>1945</td>
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<td>1946</td>
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<td>309</td>
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<td>106</td>
<td>115</td>
<td>107</td>
<td>142</td>
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<td>1948</td>
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<td>105</td>
<td>126</td>
<td>247</td>
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<td>122</td>
<td>124</td>
<td>122</td>
<td>105</td>
<td>184</td>
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</table>

Source: Tobaksarbetskorna, B: 9, Vol. 64, Kvinnohistoriska samlingarna, Göteborgs universitetsbibliotek.
Figure 1. Total number of blue-collar workers and share women employed by the Swedish Tobacco Monopoly, 1919-1950

Source: Annual reports 1919-1950, STM.

Figure 2. Mean age of blue-collar workers at the Swedish Tobacco Monopoly, men and women, 1919-1950

Source: Annual reports 1919-1950, STM.
Figure 3. Share married of blue-collar workers at the Swedish Tobacco Monopoly, men and women, 1931-1949

![Graph showing share married of blue-collar workers at the Swedish Tobacco Monopoly, men and women, 1931-1949.](image1)

Source: Annual reports 1931-1950, STM.

Figure 4. Time lost in percent by sex, 1919-1950

![Graph showing time lost in percent by sex, 1919-1950.](image2)

Source: Annual reports 1919-1950, STM.
Figure 5. Female-male rate of time lost, 1919-1950

Source: Own calculations based on data in annual reports 1919-1950, STM.

Figure 6. Number of sick days by sex, 1925-1950

Source: Annual reports 1925-1950, STM.
Figure 7. Time lost in percent by sex, excluding sick leave, 1935-1950

Source: Own calculations based on data in annual reports 1935-1950, STM.
Figure 8. Married women’s relative absence (unmarried women=100), tobacco workers in Stockholm, second half of 1937

Comment: Widows and divorced with under-aged children counted as married. Absence due to child birth have not been counted.

Source: Tobaksarbeterskorna, B: 9, Vol. 64, Kvinnohistoriska samlingarna, Göteborgs universitetsbibliotek.