Popular movements and the diffusion of Swedish sickness insurance in early 20th century*

Liselotte Eriksson, Umeå Centre for Gender Studies, Umeå university
Lars Fredrik Andersson, Geography and Economic history, Umeå university

Abstract

The Swedish sickness insurance system was in the making at the turn of the 20th century – a period of intense industrialization and urbanization. Workers who left the social safety net of the agricultural society primary drove the demand for sickness assurance. As a response, voluntary mutual societies designed to aid their members in the event of illness, sickness or death were established throughout the country. In difference to traditional societies based on compulsory or club-like characteristics, the voluntary help-to-self-help societies became a power full force in the diffusion of health insurance. Although the compulsory and club-like characteristics had a comparative advantage in mitigating adverse selection, the voluntary was more efficient in meeting the demand from the growing working class. By keeping a small-scale local affiliation within a wider organization, the selection and control of members could be combined with a greater risk diffusion and expansion.

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Introduction

Health insurance played a vital role for assuring financial protection in the event of sickness, illness and accidents for the expanding urban wage-labour force. To meet the demand of health insurance protection, a growing body of mutual health insurance was formed. In the UK voluntary health insurance societies played an active role, while e.g. German health insurance providers also was based on compulsory schemes. Murray (2003) argues that a dividing line in the emerging European health insurance was between voluntary and compulsory societies.

There were general characteristics of all mutual health insurance societies that evolved in western countries in the nineteenth century, although all have country specific traits. Health insurance societies provided financial and social services to individuals, often according to their religious, political, or trade affiliations. Societies were often local and remained small to keep social proximity. In the US, labour unions played a vital role in the diffusion of health insurance to the growing wage-labour force, simultaneously fraternal and secret orders could be based on various principles and had the character of exclusion with initiating rites and ceremonies to build around its exclusiveness. The friendly societies in the UK were more often purely financial, with little or no social side, from their foundation. In Sweden, employers could up until 1910 make it compulsory for all employees to enter a specific health insurance society.

Previous literature has argued that occupational compulsory societies managed to reduce the risk of adverse selection by including all employee at a workplace. Murray (2003; 2011) finds that voluntary applicants were more likely to suffer from bad health compared to compulsory members. Guinnane and Streb (2011) further argues adverse selection was almost none existing in that compulsory societies. In turn, voluntary societies faced a greater risk of adverse selection. As noted by Emery and Emery (1999) voluntary societies had to find strategies for mitigating such a risk since unhealthy people are expected to have more incentive than healthy people to purchase health insurance.

To control the selection of members the early societies remained small and local and sometimes the society was not to exceed a certain number like 10 or 50. The club-like characteristics of trust and control have been recognized as an efficient strategy of monitoring and selecting members and thus mitigating the risk of moral hazard and adverse selection (Smith & Stutzer 1990; 1995). The advantages of such underwriting and controlling methods is widely recognised and seen as one of the reasons why mutual health insurance societies emerged in the late 19th and early 20th

century – in a period where public social insurance or corporate health insurance were unsatisfactory to meet the demand of health insurance from the emerging wage-labour class.

In the case of Sweden, a mix of compulsory, club-like and voluntary self-help societies helped diffusing health insurance to the working population on a massive scale in the early 20th century. From covering only a few percent of the working force in mid-19th century, mutual health insurance societies came to cover close to 30% of the labour force in the years before the First World War. Despite the advantageous underwriting principles of compulsory and club-like societies, most of the diffusion was attributed to voluntary self-help societies in the early 20th century.

This paper seeks to trace the evolution and diffusion of voluntary self-help societies at the turn of the twentieth century in Sweden and provide a wider understanding of the advantages of such organizational principles in relation to the compulsory, local and club-like societies. In addressing this issue, we will examine the entry/exit and growth rate by organizational form, the mechanism behind the development of voluntary self-help societies in comparison with compulsory and club-like health insurance societies. Two research questions will guide the empirical analysis; (i) How did differences in organizational characteristics relate to entry/exit and growth rate by organizational form? (ii) How did local industry structure and civil society contribute to differences in entry/exit and growth rate by organizational form?

The first research question will be examined by using statistical reports from a sample of registered health insurance societies operating in Sweden during the years 1901 and 1910. By using a wide range of information regarding economy, members and policy status, the growth performance of societies is analysed. For the second research question, the data on individual societies are aggregated by spatial units of cities and rural areas across the country and compared with the industry structure and civil society movement for the period 1890 and 1910. For the few nation-wide societies with operation in more than one spatial unit, we make a separate analysis by using qualitative evidence on the basis of start-up and growth.

In this paper, we show that substantial organizational capabilities were needed to diffuse and distribute sickness insurance to the growing workforce on a nation-wide scale. Small, local and social proximity based health insurance societies, that historically had been the main voluntary organizational principles, fell short in managing the diffusion of insurance to the growing wage-working class on a large-scale. In this paper, we argue that health insurance societies not only evolved out of popular movements, but that the health insurance movement itself came to be regarded as a popular movement. The character of and function of popular movements, played a vital role for diffusing and distributing health insurance to the masses in Sweden. By using the proximity emanated from shared ideas, ideology and life style, the popular movements were able to effectively monitor and select members and avoid adverse selection. Through trust and social

control, the societies could further reduce moral hazard. By using the national network characterizing popular movements, the diffusion of sickness insurance was arguably facilitated and the risk was distributed on a wider scale across different occupation, geographic and demographic structures.

Analytical framework

Murray (2003) argues that the great divide in European health insurance schemes was between compulsory and voluntary societies. The difference was due to the additional adverse selection problems encountered by voluntary schemes. The voluntary principle could encourage adverse selection since it would be advantageous for sick and elderly to join, as they would receive more benefits than they paid in pensions.

As argued by Leeuwen (2012) in a study on guild welfare in the Netherlands, the problem of adverse selection would further lead to raised premiums and the avoidance of young and healthy to join and subsidize the sick and the old. Voluntary health insurance societies always had to deal with a higher demand for health insurance among the ones with poorest health. Hence voluntary societies had to create defensive mechanisms to handle adverse selection problems (Murray, 2007). Unless successfully, the voluntary societies would suffer from the selection of bad risk; that individuals with a greater risk of becoming sick or suffer from an accident, had a stronger incentive to select a voluntary society.

In turn, compulsory societies could effectively avoid adverse selection by including every employee at a workplace (unless the workplace faced an adverse selection). In their study of German Knappschaften, Guinnane and Streb (2011) argues for the advantageous compulsory principle of including all employees in order to reduce adverse selection. In that regard, the compulsory societies had advantage in underwriting risk and keeping down sickness claims. By reducing the risk of financial distress, the compulsory societies had greater opportunities to expand their business.

Although adverse selection was largely avoided, Guinnane and Streb (2011) find evidence of a significant positive effect of benefits on reported sickness. Knappschaften seem to have faced major problems with simulation. Hence, solidarity among members within compulsory societies may have been different then voluntary solidarity.

Voluntary societies needed to find ways to avoid that bad risks became part of the insurance pool. In order to reduce risks of adverse selection, health insurance societies applied age limits, doctor's and/or priests' certificate, and in voluntary societies it was also a common procedure that

new members only were accepted through recommendations of existing members or that members were admitted through anonymous voting's. To deal with moral hazard, the risk that insured persons reported sick when not and the risk that insured members would be less precautious than uninsured to become sick, health insurance societies applied different monitoring measures. Waiting times and less than full earnings replacement was commonly applied measures. Previous research has further acknowledged that risk could be mitigated in societies through social control. By monitoring members through social control along with the threat of social sanctions, member's incentives to act accordingly increased (Gottlieb 2007, Emery 1994, 1996).

Health insurance societies were built on collective solidarity to mutually assist the fellow members in need. Solidarity implied that members felt reluctant to overuse the system. As recognised in a large body of literature, the success of mutual associations was due to the social ties among members that allowed mutual insurers to monitor sickness more intrusively than formal control applied in a corporate or public setting Emery (1994); Emery (1996); Emery and Emery (1999); Gottlieb (2007). Hence, social proximity was a mean for societies to control its members and reduce moral hazard, while deviation from the acts of conduct would result in social punishments and exclusion from the society. Based on that line of reasoning, one may argue that the small-scale voluntary societies had a comparative advantage over compulsory societies by both reducing adverse selection and moral hazard.

In difference to the compulsory and club-like voluntary societies, a large fraction of the emerging health insurance societies in Sweden was open and voluntary. Much in contrast to the idea of small-scale operation and close social proximity the latter was open for members from a much wider range of social classes. The affiliation could be unions, temperance, Christian, or political movement or general, and much less social proximity with a limited number of members. However, the risk of becoming more open to different social groups was the increased risk of adverse selection. Especially the ones of a more general or national scope of operation. Unless such a more open strategy of operation was balanced with measures to reduce the greater risk of adverse selection, one would expect that individuals with a higher sickness/accident risk would have a stronger incentive to join than a low-risk individual. With less strong social control and trust among members, such societies are also expected to have a higher risk for moral hazard. Individual members would feel less of a risk of social sanction and loss of reputation if reported sick.

In turn, voluntary self-help societies had a greater opportunity to diffuse the risk. By expanding across a wider scope of work-places and occupation, the individual risk was shared across a wider pool of risks. High sickness or accident figures in one part of the pool could be balanced with lower figures in another part of the risk pool. Thereby, the volatility of sickness claims could be kept down, and the need to use ex post premiums or accumulate premium reserves less demanding. By using

formal measures to keep down adverse selection and moral hazard, the open and voluntary societies had greater opportunities to expand their business and reduce the risk of exit.

The development of the health insurance movement

The emerging Swedish health insurance market was based on a mix of different mutual organisations. The European forerunners in mutual health insurance, such as Britain and Germany, greatly influenced the mutual principles of organising health insurance in Sweden (Lindeberg 1949). One of the most important differences in organisational structure between health insurance societies was between compulsory health insurance societies and voluntary health insurance societies (henceforth compulsory societies and voluntary societies). Previous studies have shown that the two forms had implications for sickness absence (Murray, 2003).

Between the years 1901 to 1910 insurance coverage increased from 14% to 30%. Workers who left the social safety net of the agricultural society primarily drove the demand for health insurance and the establishment of health insurance societies, but employers who had incentives to be concerned about their employees' health and absence from work also assisted in establishing occupational societies. Occupational health insurance societies were the most common form of organization and made up 42% of all health insurance societies in Sweden 1901-10. Occupational societies were divided between compulsory and voluntary. Due to a higher rate of entry and growth, the number of members increased more rapidly in voluntary societies (their member share increased from 66% to 77%, 1901-10). This might be due to the fact that compulsory societies almost exclusively recruited new employees as members while voluntary societies could have a broader target group than just employees at one workplace. A few of the voluntary societies were old (founded in the 18th century), but most were founded from the 1860s and onwards. Many were founded in the early 20th century. Compulsory societies on the other hand were only founded from the late 1860s and onwards. One reason for the compulsory societies being younger might be that they to a high extent were dependent on the survival of the industry connected to them (Bohman 1994).

Occupational health insurance societies evolved all over Europe in the late 19th century but received different characteristics. As a contrast to America, France[1], Denmark and Britain, the Swedish system of occupational health insurance societies comprised of both voluntary and compulsory societies (Murray 2007). Based on a sample of 1285 Swedish health insurance societies,

[1] In France, only miners were to be compulsorily insured (Murray 2007, p. 39).

membership was compulsory in 9% of all societies and in 21% of the occupational societies on average between 1901 and 1910 (Kommerskollegium, 1901-1901),

Swedish occupational health insurance societies have their origin from the mining districts in Sweden in the 1500th-1600th centuries and the mill towns. In 1884, one-third of all Swedish workers employed in iron mills had health insurance.[2] Mill towns often functioned as small independent units and were organised along patriarchal principles. The foundry proprietor of the mill towns could supply the workers and their families with services like schooling and medical assistance, and widows and orphans of workers could be provided for. On the other hand, the workers were in the hands of the foundry proprietor who often owned the tied cottages and could put workers in debt in different ways to prevent them from leaving the employment (Rydén 1990). Since the accident frequency in mining and basic metal manufacturing was high, the employer could, by establishing health insurance societies at the workplace, transfer some of this responsibility onto the employees. Further, while membership in a compulsory society often ended if the employee left the workplace, the employer effectively could bind skilled workers to the company and reduce negative effects of too large a labour force mobility (Lindeberg 1949).

The measures by foundry proprietors and employers of industrialised mills and other workplaces to later on introduce compulsory societies were in many cases a way to obey the patriarchal regulations of 1847 and 1871 that implied that employers had supportive duties towards their employees; to watch over their "health, virtuousness and godliness", as long as the employment lasted.[3]

During the last decades of the nineteenth century, societies that based membership on fellowship and specified a maximum number of members – 25, 50, 75, 100, 200, etc. – became especially popular. In our sample of 1,285 Swedish health insurance societies from both rural and urban areas across Sweden, we can identify that between 1875 and 1895, close to 95 societies were based on such an affiliation. Up until 1910, another 45 such societies were established. These societies usually did, as did earlier societies, apply *ex post* premiums, which implied that the costs were shared when all expenditures were known. Health insurance societies based on the *ex post* principle were often like clubs, with fraternal and ceremonial elements, and in many of the societies it was considered an honour to become a member, illustrating that membership in a society not only provided financial support, but also fellowship. The popularity of societies was crucial since, to guarantee financial stability, they needed to continuously add younger members with low risk profiles and retain existing lower-risk members. Lindeberg (1949) has written a comprehensive work on the development of Swedish health insurance societies, and defines societies based on fellowship

[2] *Arbetareförsäkringskomiténs betänkande* III, 6, 1889.
[3] *Arbetareförsäkringskomiténs betänkande* III, 6, 1889, p.14.

as “closed” societies, indicating a restriction on access to the society, by voting or other means. Since these societies had club-like characteristics and were based on male affinity, they often excluded women.

During the late nineteenth and early twentieth century, the three large popular movements, the Temperance movement, the Labour movement and the Non-Conformist movement, grew strong in Sweden and established health insurance societies as part of their ambition to organize utilities of civil-society for members. Lindeberg (1949) defines this type of society as “open”, indicating that these societies welcomed everyone with a temperance and Christian lifestyle, the societies were additionally often established by and for workers. The popular movements were often intertwined with each other in different ways and had as a contrast to previous societies, female members to a much higher extent. In fact, the temperance movement and Non-conformity movements became arenas for women and assisted in realizing civil rights for women (Bengtsson 2011).

Between 1875 and 1895, 30 societies were formed, based on religious (Christian evangelical) affinity. Another 10 such societies were established up until 1910. Apart from the large movements, different smaller open associations established health insurance societies. Between 1875 and 1910, 100 societies were established (Lindeberg 1949). In conjunction with the large popular movements, other societies evolved with the only objective of carrying health insurance and these cannot be attributed to any specific affiliation such as occupation, fellowship or temperance. Several of these societies became, along with temperance health insurance societies, the largest health insurance societies in the country. Societies with no specific affiliation and a number of societies based on popular movements, chose to go national at the turn of the twentieth century. This was in part a response to the limitations the local societies imposed. In general, when a member moved beyond the reach of the local society’s sickness controller, the member lost the previous investments made in the society and had to leave. The first national, affiliated health insurance society in Sweden was established in 1892, and in 1910 there were 28 affiliated societies with 564 lodges comprising over 140,000 members, accounting for 22 percent of all health insurance society members. Hence, although the society was national, it had local lodges or affiliations. The two largest (based on membership) Swedish national health insurance societies were part of the temperance movement that emerged in late 19th century.

The national, voluntary health insurance societies came to insure the largest part of the health insured population by 1910. By 1910, the health insurance movement had further grown to be a powerful political force. By two national organisations that gathered all health insurance societies in Sweden, the health insurance movement could unite and put pressure on politicians to increase state subsidies and improve regulations. The health insurance societies were not only part of a popular

movement but had become a popular movement of its own, illustrated by the development of national societies without specific affiliations to temperance or Christian organizations.

Table 1 shows co-evolution of health insurance societies and four other major popular movements (Temperance, Unions, Christian, Political party) in Sweden between 1851 and 1910. The first wave of popular movements came in the mid -19th century and most was affiliated to the Christian evangelical movement. A second, and more forceful wave came between 1881 and 1910. During the latter period, more than 10 thousand temperance societies was established. The labour movement, following the expansion of manufacturing wage labour expansion during the second industrial breakthrough, led to the establishment of more than 3 thousand trade union associations. At the turn of the 20th century, the first political parties associated with the popular movements emerged.

Table 1. Establishment of popular movement societies and sickness funds in Sweden by decade between 1851-1910.

	Popular movements				Health insurance societies	
Time period	Temperance	Unions	Christian	Political party	Census	Sample
1851-1860	1	0	146	0	10	7
1861-1870	1	0	112	0	75	54
1871-1880	17	1	306	0	290	194
1881-1890	2666	84	867	0	618	300
1891-1900	2926	603	669	86	824	422
1901-1910	4707	2641	813	386	558	290

Source: FOLKRÖRELSEARKIVET 1881-1950, SSD 0209, Carl Göran Andrae and Sven Lundkvist¸ Kommerskollegium, 1901-1910.

Figures on members show that the four poplar movements and the health insurance societies was of equal size at the turn of the 20th century. For the preceding decades, the four popular movements organized a larger fraction of the population. The health insurance movement expanded rapidly in terms of members between 1900 and 1910, as did all other popular movements. The four popular movements increased their number of members from 260 thousand in 1900 till 620 by 1908. In the following years, massive conflicts and the labour market and less interest in the temperance movement led to a declining number of members. In turn, we find that the member figures in the health insurance movement expanded continuously and reached 620 thousand by 1910. The figure corresponds to a 30% share of the labour force.

Stronger together

The reason for societies to remain small was to keep the social affinity and avoid the entering of already sick members (adverse selection) and keep the social control of members and their reported sickness (moral hazard). In a national society with thousands of members, it might be argued that the risks of adverse selection and moral hazard would increase. However, the national society consisted of several small, local affiliations and could perform a similar social control as the local societies. By further having a national selection of teetotallers as members, national societies could combine a more favourable risk selection with social control on the local level.

Up until 1910, the health insurance societies were regulated three times. Similar to the British Friendly Societies Act of 1875, the purpose of first Swedish Act of Registered Health insurance societies of 1891 was not only to support and encourage the development of health insurance societies, but also to induce control over societies through an administrative subsidy for those societies that voluntarily registered with the government.[i] The state subsidy peaked when the society reached a relatively small number of members, the effect of the first regulation therefore worked in favour and encouraged the establishment of small societies.

With the act of 1910, the act instead aimed at creating larger health insurance societies by regulating a minimum of members in a society. This caused a wave of mergers of small societies into larger units. It further became prohibited to exclude members who moved to a different region and to have membership in multiple societies. Previously, if members moved, they could lose their membership and the right to benefits, since sick control became impossible to maintain. After the 1910-act it further became prohibited for societies to apply *ex post* assessments (except for temporary budget deficits) and for employers to impose compulsory membership in the workplace's health insurance society.

Already in late nineteenth century, arguments for introducing a compulsory public health insurance was put forward. It was argued that health insurance societies did not manage to reach the entire population. The realization of a public health insurance was however postponed by two world wars and the depression of the 1930's, in the meantime, the second-best alternative was to be supported. Although the social democrats and the liberals viewed compulsory health insurance as the way forward, occupational compulsory health insurance imposed by the employer became prohibited in the act of 1910, although risk could be shared in compulsory societies more effectively then in voluntary societies. The reason for the choice of regulating against occupational compulsory societies was due to the patriarchal character of the health insurance societies governed by

employers. Emanating from the time when the foundry proprietor had absolute power over the employees, both when it came to protect and provide for employees but also when it came to punish and deny provision. The compulsory occupational societies became viewed as giving employers too much power since it became a way for employers to control workers. Further, since the workers lost their rights to benefits if they ended their employment, compulsory occupational societies also circumvented labor mobility. Hence, both the liberal politicians promoting self-help, and the emerging labor movement preferred the collective force of voluntary health insurance societies to compulsory occupational societies that left employees in the hands of the employer. In Germany, the role of the employer when it came to health insurance remained crucial (Jopp 2011). Instead, the effect of the Swedish regulations made sickness funds resemble the role friendly societies had for the working class in the UK when it came to political activism and social change (Cordery 2003).

Hence, the regulations and political ideas came to work in favor of national health insurance societies. The small health insurance societies were viewed as insolvent and the regulation of 1910 sought to encourage more diversification of risk. The small, local societies, especially those with a limited number of members, could have difficulties with attracting young members since the society and its members over time got older and the disbursements could increase drastically (Emery and Emery 1999). The lack of a constant influx of new, young, healthy members could in the end lead to insolvency and bankruptcy. Our investigation shows that small societies with fraternal- or club-like characteristics had older members than other societies on average, indicating problems with attracting new, young and healthy members.

The national health insurance societies, as a part of a popular movement, welcomed everyone that sympathized with their codes and values, offered leisure and community and primarily social security in the case of sickness to its members. The popular movements - health insurance societies included - further represented values that politicians wished to encourage, like temperance, prudence, thrift and social order in general. The growth of the “open” national health insurance societies therefore partly was due to regulations that strengthened the position of national societies and tried to reduce the role of local, small societies.

Diffusion of health insurance by organizational form

The health insurance coverage increased rapidly during the first decade of the twentieth century. The number of insured members increased from 260 to 620 thousand members between 1900 and 1910. Behind the massive diffusion of health insurance was a dynamic and evolving mutual health

insurance movement organized along different principles and affiliations. As shown in table 2, the number of health insurance societies in operation increased substantially in the early 20th century. It clearly shows that the entry was larger than the exit of societies. The expansion was not however only due to the establishment of new, but also the growth of incumbent. Basically, one can argue that the diffusion of health insurance was of both entry/exit dynamics and the dynamics of growth. During the period 1901 to 1910, the entry of new societies equaled 14% of the stock of existing/incumbent societies. The average society expanded their stock of members by 2.6% annually. In the same period we find that 8.1% of all societies exited.

Table 2 illustrates substantial differences between organizational forms. Most of the expansion took place within the voluntary self-to-self-help societies (open societies). Much less of an expansion took off within the compulsory and the club-like (closed) societies. The latter experienced and annual growth rate of 1.3% in their stock of members. The entry of new societies was almost equal to the exit of old societies. Among the club-like societies the exit rate was even higher, while the entry rate was lower. Among the compulsory societies the growth rate was higher, as well as the entry rate. It seems clear that the club-like societies contributed the least to the diffusion of health insurance in the early 20th century.

Among the open societies, the occupational based contributed to a substantial diffusion of health insurance. The entry of new societies was high as well as the growth rate of incumbent. The exit rate was substantially lower than the entry rate, creating a positive net of entry/exit dynamics. We find that the temperance societies had a slower growth rate and a lower exit rate. One reason was that the temperance societies was fairly large, with a low percentage growth in comparison to the absolute growth of members. Christian societies expanded more than temperance societies, but less than societies with a political affiliation. The highest growth rate is reported for the general/other societies. Such societies had a high entry rate, but low exit rate during the period 1901 and 1910.

Table 2. Growth, entry and exit by organizational form, 1901-1910.

	Share (%)	Growth (%)	Entry (%)	Exit (%)
Closed societies	24,0	1,3	12,4	12,7
-Compulsory	8,9	1,7	37,5	7,9
-Club	15,1	1,1	5,6	14,0
Open societies	76,0	3,3	19,0	6,3
-Occupational	33,3	3,4	38,6	9,6
-Temperance	5,0	0,5	11,1	7,9
-Christian	3,3	2,0	10,6	6,7
-Political	7,7	3,4	9,4	7,1
-Other	26,7	3,8	13,0	3,8
Total	100,0	2,6	14,2	8,1

Source; Kommerskollegium, 1901-1910

In the first decade of the twentieth century, the open societies expanded their share of members from 82% to 90% of all members. The greater share was the outcome of both a higher entry/exit net and a higher growth rate. To further examine the mechanisms behind the stronger development of the open voluntary societies in relation to the closed compulsory and club-like societies, the following section present the organizational characteristics.

Organizational characteristics

The closed societies faced higher figures on sick days compared to the open societies. On average the closed societies had 6.23 sick days per member compared to 5.95 for the open societies. Decomposed into sick cases and sick duration, we find that the reason was the lower figures was on sick cases. Out of 100 members 27 was sick in the closed societies compared to 24 in the open. In turn, the average sick duration was longer for each sick case in the open societies. Put together into sick days, however, the more frequent sick cases outweighed the longer sick duration in favor for the open societies. The face values on sick days do not suggest an adverse selection and or moral hazard disadvantage for the open societies.

One of the reason might have been the less attractive benefit schedules in the open societies. As shown by the benefits rate, the sick pay per day was significant lower, making the incentive less strong for individuals at a higher sickness risk to become members. In combination with lower sickness figures, the open societies were able to keep down premium levels. By offering lower

premium levels, the open societies could attract also member at a lower income level and thereby expand their pool of members.

The closed societies relied to a higher extent on *ex post* premiums. Almost 80% of all societies financed there operation by *ex post* payments, while the open societies had down to almost 60%. One other major difference was size. Especially the club-like societies were rather small, making the average size significantly lower than the open societies. Although different in size, we find no significant difference in age or leverage on average between the open and closed societies.

The open societies accepted slightly younger individuals to become members. The maximum age limit to become member was similar and fairly low. Individuals above the age of 46 faced difficulties to become member in a health societies. The societies put strict limits on when new members were offered benefits. To receive benefits, the member time was 92 days for individuals joining an open society. For the closed societies, the member time was 5 days shorter.

An important threshold to keep down sickness figures was to use a long waiting period. Most of the sickness had a duration of 7 days, so by having a waiting time over that threshold, the societies could effectively keep down the most common cases (Andersson and Eriksson, 2017). We find that the waiting time was significant longer in the opens societies compared to the closed. Another measure to keep down sick payment was to use a maximum of sick days. Also in that case, the open societies used a significant stricter policy, by having a shorter period for which benefits were offered when being sick.

Table 3. Organizational characteristics of health insurance societies

Variable	Definition	All	Closed societies	Open societies	sig
Sick days	Number of sickness days by member	6,00	6,23	5,95	***
Sick cases	Number of sickness cases per member	0,25	0,27	0,24	***
Sickness length	Number of sickness days by cases	25,86	24,45	26,19	***
Premium	Premium payment per member in 1905 price level of Stockholm	10,18	11,86	9,78	***
Benefits	Sickness pay per day in 1905 price level of Stockholm	1,43	1,51	1,41	***
Ex post premium	Societies financed by ex post payments: 1 if ex post, 0 otherwise	0,66	0,77	0,63	***
Size	Number of members	273,94	168,89	298,99	***
Age	Age of society	18,50	18,72	18,45	
Leverage	Premium income to total assets	1,57	1,54	1,57	
Entry age min	Minimum age to become member	16,91	17,16	16,86	***

Entry age max	Maximum age to become member	46,64	46,09	46,77	
Member time	Days before a new member is qualified to receive for sick pay	90,63	84,96	91,87	***
Waiting time	Days of qualifying before benefit/sick pay may be claimed	13,94	12,65	14,24	***
Sick time min	Minimum time of sick leave to receive benefits	6,03	6,20	5,99	
Sick time max	Maximum time of sick leave to receive benefits	93,38	97,65	92,40	***

Source; Kommerskollegium, 1901-1910

Our examination of organizational characteristics shows that the open societies offered less generous sick benefits then the closed societies. By keeping down sick pays (and sick days) by applying stricter measure of when, for how long and a benefit level, the premium levels was 22% lower on average. By offering a cheaper insurance, in combination with stricter benefit schedules, the open societies could attract new members also from low-income classes. Given the strong demand for health insurance from the growing wage-earning class, such societies became an attractive form of insurance.

To find out more of how such societies emerged, the following section will examine more closely into the relation to other popular movement and changing industry structure by local areas.

CONCLUSION

The preliminary results of our study show that “open” national, voluntary societies were not only politically favored, but also more attractive among the emerging wage labour class due to the low premiums and the low risk of insolvency. As a contrast to theory, voluntary societies seem not to have suffered more from adverse selection or adverse selection in comparison with “closed” compulsory health insurance societies. Compulsory societies did not have lower sickness figures than voluntary societies. Open societies offered lower benefits and stricter rules, but at a lower price. In difference, small closed societies faced difficulties when combining high benefits with limiting entrance of new members. As the aging of members was not balanced by the inclusion of new, societies experienced high claim experience, leading to a higher exit rate.

References

Andersson Lars Fredrik & Liselotte Eriksson (2017): Sickness absence in compulsory and voluntary health insurance: the case of Sweden at the turn of the twentieth century, *Scandinavian Economic History Review*

Andrae C. G. and Lundkvist S.¸ Folkrörelsearkivet 1881-1950, SSD 0209, Andra SSD-upplagan 1998, Svensk Samhällsvetenskaplig Datatjänst, Göteborg.

Bengtsson, Åsa. *Nyktra kvinnor* (2011). *Folkbildare, företagare och politiska aktörer. Vita bandet 1900-1930*. [Temperance women. Educators, entrepreneurs and political actors. Woman's Christian Temperance Union 1900-1930]

Beito, D. (2000). *From Mutual Aid to the Welfare State: Fraternal Societies and Social Services*, *1890-1967*. Chapel Hill: University of North Carolina Press.

Cordery, Simon. *Friendly Societies*, *1750–1914.* London: Palgrave Macmillan, 2003.

Kommerskollegium, 1901–1910. Registrerade sjukkassors verksamhet år 1901–1910, [National board of trade, 1901–1910. Registered sickness funds, year 1901-2010] Stockholm, Beckmans, 1905-1912.

Edebalk, P. G. (1987). ”Fackförbunden som sjukkassebildare 1886–1910.” *Arkiv för studier i arbetarrörelsens historia*, Issue 38, pp.31–54.

Emery, G. and J.C. Herbert E. (1999). *A Young Man's Benefit: The Independent Order of Odd Fellows and Sickness Insurance in the United States and Canada, 1860-1929*. Montreal: McGill-Queen's University Press, 1999.

Emery, J. C. Herbert. “The rise and fall of fraternal methods of social insurance: a case study of the IOOFBC sickness insurance, 1874–1951.*” Business and Economic History* 23, no. 1 (1994): 10-15.

Emery, J. C. Herbert. “Risky Business? Nonactuarial Pricing Practices and the Financial Viability of Fraternal Sickness Insurers.” *Explorations in Economic History* 33, no.2 (1996): 195-226.

Gottlieb, Daniel. “Asymmetric Information in Late 19th Century Cooperative Insurance Societies.” *Explorations in Economic History* 44 (2007): 270-292.

Guinnane Timothy W. and Jochen Streb. “Moral Hazard in a Mutual Health Insurance System: German Knappschaften, 1867–1914.” *Journal of Economic History* 71 (2011): 70-104.

Jopp, Tobias A. “Old times, better times? German miners' Knappschaften, pay-as-you-go pensions, and implicit rates of return, 1854-1913.” *Business History* 53, no.7 (2011): 1018-1043.

Leeuwen, Van Marco h. D. (2012) “Guilds and middle-class welfare, 1550–1800: provisions for burial, sickness, old age, and widowhood”, *Economic history review*. P. 1-30.

Lindeberg, Gösta (1949) *Den svenska sjukkasserörelsens historia*. Lund.

Murray, J. E. (2003) “Sick insurance claims as morbidity estimates: sickness or absence?” *Journal of the society for the social history of medicine*, 16:2, pp 225-245.

Murray J. E. (2007) *Origins of American health insurance: a history of industrial sickness funds*, New Haven, Conn: Yale Univ. Press,

Rydén, Göran (1990) *Hammarlag och Hushåll: om relationen mellan smidesarbetet och smideshushållen vid Tore Petréns brukskomplex 1830-1850*, Uppsala Studies in Economic History. Uppsala.

Smith, B. D., and Stutzer M. J. “(1995) A Theory of Mutual Formation and Moral Hazard with Evidence from the History of the Insurance Industry”, *Review of Financial Studies* 8, no. 4:545-77

Smith, B. D., and Stutzer M. J. (1990) “Adverse Selection, Aggregate Uncertainty, and the Role of Mutual Insurance Contracts.” *Journal of Business* 63, no. 4: 493-510