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Private Deception and the Rise of Public Employment Offices in the United States, 1890–1930

Woong Lee

5.1 Introduction

Public employment offices are nonprofit governmental organizations that match job-seekers and employers, one of their main purposes being to reduce job search costs in order to improve job-seekers' success in finding a job in the labor market.¹ As a labor market intermediary, public employment offices have existed in all of the Organization for Economic Cooperation and Development (OECD) countries since the 1950s (Walwei 1996). Recent trends in European countries have been to deregulate and privatize employment services since the 1990s (De Koning, Denys, and Walwei 1999). Interestingly, the opposite trend took place in the late nineteenth and early twentieth centuries. The establishment of public employment offices was a widespread phenomenon in both Europe and North America during this time.² Many countries also passed laws to abolish or strictly regulate private employment agencies (Martinez 1976; Finkin and

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1. There are other terminologies for public employment offices, such as public employment agencies, bureaus, or services. I use public employment offices in this chapter because historically it was the most frequently used.

2. Public employment offices were established in Belgium in 1870, Sweden and France in 1884, Britain in 1885, the United States in 1890, and Italy and Germany in 1897 (U.S. Employment Service 1935a).

Jacoby 2005).³ As a result, the labor exchange market was monopolized by the central government in these countries. This institutional feature did not change until the late 1980s.

In this chapter, I provide a rationale for the establishment of public employment offices and explore the relationship between the development of public employment offices and labor market conditions in the United States in order to argue that public employment offices were effective in protecting job-seekers, who lacked information and networks with regard to the job search process, from malpractice by private employment agencies.

In the first part of this chapter, I propose a theory that exploitation by private employment agencies with respect to job-seekers resulted from asymmetric information between job-seekers and private employment agencies. Job-seekers who are uninformed cannot distinguish between high- and low-quality agencies, and this may cause them to not pay for high-quality services. This situation could give private employment agencies an incentive to exploit uninformed job-seekers (provide low-quality services) due to their profit-maximizing behavior, thus causing adverse selection. Consequently, the market may disappear—or only low-quality agencies may survive.⁴ In theory, it is possible that introducing public employment offices may eliminate low-quality agencies that exploit uninformed job-seekers, increase competition in the labor exchange market, and thus improve labor market efficiency. The introduction of public employment offices may remove low-quality private employment agencies because such agencies cannot survive if uninformed job-seekers use public employment offices without charge and without the risk of malpractice, while informed job-seekers use public employment offices or high-quality private employment agencies. As a result, no one would use low-quality private employment agencies, which would cause them to eventually disappear. This implies that the introduction of public employment offices could resolve the problem of adverse selection, as they provide an alternative network to uninformed job-seekers in the labor exchange market.

In the second part of this chapter, I estimate the number of job-seekers using public employment offices as a percentage of the labor force to examine the development of public employment offices in the U.S. labor market over time. The data show that public employment offices grew substantially

3. The Canadian Labor Congress requested the complete abolition of private employment agencies in 1913. The German government began to abolish private employment agencies in 1922. Austria declined to issue any new licenses for new businesses after World War I. Finland, Romania, and Bulgaria completely eliminated private employment agencies by 1926 (Martinez 1976).

In the early twentieth century, state governments in the United States (e.g., Washington) tried to abolish private employment agencies, but the U.S. Supreme Court ruled their attempts to be unconstitutional (Finkin and Jacoby 2005).

4. In this chapter, private employment agencies that exploit uninformed job seekers are described as low-quality providers.

and became a major labor market intermediary concurrent with the U.S. involvement in World War I. The use of public employment offices by job-seekers as a percentage of the labor force was at least 4 percent between 1916 and 1940. This shows that public employment offices played an important role in the labor market, and thus could affect the behavior of job-seekers and private employment agencies.

In the third part of this chapter, I show that the majority of public employment office users were unskilled workers, immigrants, or migrants in the early twentieth century. These workers were also major clients of private employment agencies in this period. This finding suggests that these workers, who were most likely to be abused by private employment agencies, tended to utilize public employment offices for their job search.

Finally, I test the relationship between the use of public employment offices and changes in labor market conditions, which were related to asymmetric information such as proportions of immigrants, migrants, and unskilled workers. The key finding is that the relationship between the use of public employment offices and interstate migration is positive and significant in most specifications. This positive correlation may support the hypothesis that public employment offices contributed to lowering the degree of asymmetric information for interstate migrants who were most likely to lack information and networks with regards to the job search process, and thus the most vulnerable to exploitation by private employment agencies.

The rest of the chapter is organized as follows. Section 5.2 proposes a theory of public employment offices. Section 5.3 provides the background of public employment offices in relation to the labor market. Section 5.4 presents the analysis of public employment office users. Section 5.5 provides the empirical work. Section 5.6 concludes the chapter.

5.2 A Theory of Public Employment Offices

Economists have put forth theories about the existence of labor market intermediaries, including private employment agencies (hereafter referred to as “private agencies”) and public employment offices (hereafter referred to as “public offices”), to explain why these intermediaries are necessary and how they help reduce transaction costs in the labor market (e.g., Pissarides 1979; Yavas 1994; Kübler 1999). The fundamental intuition behind these theories is that labor market intermediaries can increase the efficiency of the job matching process by reducing transaction costs (Pissarides 1979; Yavas 1994). It has also been suggested that the coexistence of public and private agencies may improve an employer’s screening ability if there exists asymmetric information between job-seekers and employers (Kübler 1999). However, these theories do not explain why public offices were introduced to restrain private agencies from malpractices with respect to job-seekers. To explain this, I first describe how severe the abuses by private agencies were

and why these were possible. Next, I propose a theory of how public offices served to limit the incidence of malpractices by private agencies.

Around the turn of the twentieth century, in response to the cries of job-seekers who were exploited by private agencies, social reformers and public officials tried to find a solution, one of which was to create public offices (Bogart 1900; Sargent 1912; Leiserson 1915; Herdon 1918).⁵ Two examples, which support the notion that public offices were established to check on the actions of private agencies, are as follows:

[T]he establishment of free public employment offices rests on the abuses which exist in the private agencies. . . . This point is made much of by the commissioners of labor in the various states, and their reports contain many instances of the deception and fraud practiced by these agencies on the unemployed. (Bogart 1900, 345)

One of the influences making for the rapid growth in the number and importance of public employment offices has been the flagrant evils connected with these private employment agencies. (Herdon 1918, 5)

The most common malpractice by private agencies was the misrepresentation of characteristics on occupations to job-seekers (Commons and Andrews 1936). Sargent (1912, 36) summarizes common deceitful practices by private agencies, which took advantage of uninformed job-seekers in some of the following ways:

1. Charging a fee and failing to make any effort to find work for the applicant.
2. Sending applicants where no work exists.
3. Sending applicants to distant points where no work or where unsatisfactory work exists, but whence the applicants will not return on account of expense involved.
4. Collusion between the agent and employer (e.g., foremen), whereby the applicant is given a few days work and then discharged to make way for new workmen; the agent and employer divide the fee.
5. Charging exorbitant fees or giving jobs to such applicants as contribute extra fees, presents, and so on.
6. Inducing workers who have been placed, particularly girls, to leave, pay another fee, and get a better job.

In addition to these malpractices, several private agencies were found to have actually sent women to houses of prostitution (Muhlhauser 1916).

5. Establishment of public offices is an example of the Progressivism movement in the United States in the early twentieth century because they were introduced to eliminate the abuses by private agencies in response to the cries of job-seekers. Thus, this governmental intervention was a kind of social justice to help disadvantaged people.

Stewart and Stewart (1933), Edwards (1935), Commons and Andrews (1936), and Martinez (1976) report that many European countries also established public offices to prevent private agencies from exploiting their clients.

These abuses were possible because many job-seekers who used private agencies were immigrants, unskilled workers, or temporary workers (Sargent 1912; Commons and Andrews 1936; U.S. Bureau of Labor Standards 1962; Rosenbloom 2002). As such, they were most likely to be unfamiliar with the language and customs of the United States less educated, or had little legal recourse to recover damages from private agencies. Thus, I argue that exploitation by private agencies with respect to job-seekers resulted from information asymmetry between job-seekers and private agencies.

Private agencies that exploit job-seekers can be described as low-quality agencies. If job-seekers cannot distinguish between high- and low-quality agencies or if their search cost is very high, then high-quality agencies may have an incentive to reduce their service quality (if they stay in the market) because job-seekers who use private agencies cannot pay for high-quality services. Therefore, the market would disappear or only low-quality private agencies with severe abuses would prevail in the labor exchange market, meaning adverse selection. Furthermore, if private agencies exercise a high degree of market power, then the situation would become worse.

In general, there are two ways to reduce or eliminate asymmetric information that causes adverse selection in this situation: increase in search costs (for information gathering) by job-seekers, and signals by private agencies. Increase in search costs to distinguish between high- and low-quality private agencies is burdensome because job-seekers need to make additional effort. Moreover, it is very costly to those who are unfamiliar with a new environment, less educated, or needy (such as immigrants, unskilled workers, and temporary workers). Theoretically, signaling by high-quality private agencies is feasible, but there may be a possibility of a pooling equilibrium.⁶

The creation of public offices to provide job-seekers with placement services can be seen as a mechanism to eliminate low-quality private agencies, and thus resolve adverse selection caused by asymmetric information between job-seekers and private agencies in the labor exchange market. With the provision of public offices, low-quality private agencies may not survive because job-seekers who are uninformed can use public offices without charge and without the risk of malpractice, while job-seekers who are informed can use public offices or high-quality private agencies.⁷ Under ideal conditions, job-seekers would be fully informed about the quality of the private agencies that they deal with, and thus could make a preferred choice along the quality-price locus. Public offices may help in this regard by driving

6. For example, low-quality agencies may charge high fees to their clients to imitate high-quality service providers because high fees are usually accompanied by high-quality services. This may result in a pooling equilibrium if both high- and low-quality agencies send high-quality signals to the clients.

7. An implicit assumption is that public offices are credibly high quality because services are publicly provided. Even if job-seekers are not sure about the credibility of public offices, they could provide an effective means to solve the information/quality problem faced by job-seekers because services by public offices are free.

deceptive private agencies from the market, allowing job-seekers to choose to use either public offices or credible private agencies. This implies that the creation of public offices can resolve the problem of adverse selection, as an alternative network is provided to job-seekers in the labor exchange market. Therefore, the introduction of public offices may inject competition that either causes low-quality private agencies to improve or drives them out of the market. Throughout this process, high-quality private agencies survive, and without monopolization of the labor exchange market by the government, both public and private agencies can exist together to improve the efficiency of the labor market.

Besides the introduction of public offices, state governments began to regulate private agencies even before public offices were established (see, for example, Bogart 1900). Some state or municipal governments required private agencies to pay license fees, deposit bonds, or both. In addition, several local governments imposed fines on private agencies or shut down their businesses when violation of the regulations was investigated.

Baldwin (1951) and the U.S. Bureau of Labor Standards (1962) insisted that before World War I, public offices did not function well and only restrictions on private agencies were effective in the labor exchange market. However, Devine (1909), Sargent (1912), and Leiserson (1915) argued that restrictions on private agencies were ineffective and the creation of public offices lessened the degree of malpractices, thus contributing to the protection of job-seekers. It is an open question as to which institution worked better to keep private agencies in check, since there is little evidence of specific statistics or detailed reports to compare these two institutions.⁸ However, evidence supporting the effectiveness of public offices is as follows (State of Illinois Bureau of Labor Statistics 1906, 3):

While the primary purpose in establishing these offices was to aid the common or unskilled laborers in getting work without cost to him or her, their influence has not been limited to that class. . . . From this it is shown that nearly 8,000 people, representing established skilled trades, including commercial and professional pursuits, have secured positions during the year. . . . The better class of private employment agencies will accept only applications for a certain service, mainly of a professional character.⁹

8. Fee and bond regulations could be effective because they are likely to raise costs by more for low-quality than high-quality agencies. But if there are no effective means of enforcement, then such mandates would be unlikely to work. For example, the U.S. Supreme Court ruled unconstitutional a New Jersey law regulating the fees that private agencies could charge their clients (Finkin and Jacoby 2005). In addition, inspection of private agencies could be very costly if there are many illegal (unlicensed) private agencies. Several states' labor bureaus reported violations of the license law (see, for example, State of Missouri Bureau of Labor Statistics 1913 and State of California Bureau of Labor 1923).

9. In 1905 the total number of job-seekers placed by Illinois public offices was 39,598 and the number of applicants was 45,323.

5.3 Background of Public Employment Offices

In this section, I provide evidence that public offices were a major labor market intermediary and thus could affect the behavior of job-seekers and private agencies in the United States in the early twentieth century. To do this, I estimate the number of job-seekers who used public offices (the use of public offices by job-seekers) between 1890 and 1940 (see figure 5.1).¹⁰ I also measure the percentage of public office users in the labor force and compare this to the unemployment rate (see figure 5.2).

The first five (continuous) public offices were established in Ohio in 1890.¹¹ Only fifty-one offices were operated in nineteen states by 1910 (Herdon 1918). The use of public offices by job-seekers as a percentage of the labor force also did not exceed 1 percent by 1910 (see figure 5.2). When immigration reached its highest point (1.4 million immigrants) in 1907, the federal government started to intervene in the labor exchange market (U.S. Employment Service 1935a). The Division of Information, the first federal employment agency, was created in the Department of Commerce and Labor. However, its role was restricted to disseminating to immigrants over the states up until World War I (Guzda 1983). Although both federal and local public offices contributed little to the labor market at that time, these organizations aimed to protect immigrants, who were unfamiliar with the urban environment in the United States, from the abuses of private agencies (International Labour Office 1955).

Many firms lost their foreign markets with the beginning of World War I, causing a serious unemployment problem, as shown by the relatively high unemployment rates in 1914 and 1915 (see figure 5.2). However, the problem of lack of labor demand changed to a shortage of labor supply upon the United States' entry into World War I, especially due to higher labor demand in war-related industries as well as demand by the military service (U.S. Bureau of Labor Statistics 1931). Accordingly, the Division of Information, renamed as the U.S. Employment Service (USES), was reorganized to serve as a nationwide labor market intermediary to assist the wartime emergency in 1917. Most public offices, which had the exclusive power of matching unskilled labor to industries, were under the control of USES during the nation's involvement in World War I (Kellogg 1933). The use

10. The first (continuous) public offices were established in Ohio in 1890, and the nationwide system of public offices as a permanent labor market intermediary was set in the United States in 1940 (the author's inspection). That is why the estimates in figures 5.1 and 5.2 range from 1890 and 1940.

11. There were a couple of trials to establish public employment offices before 1890. Examples are the Castle Garden Labor Exchange in New York City, opened in 1850 (Rosenbloom 2002), and the California Labor Exchange, established in San Francisco in 1868 (U.S. Employment Service 1935b). These public employment agencies were eventually discontinued due to a lack of funds.

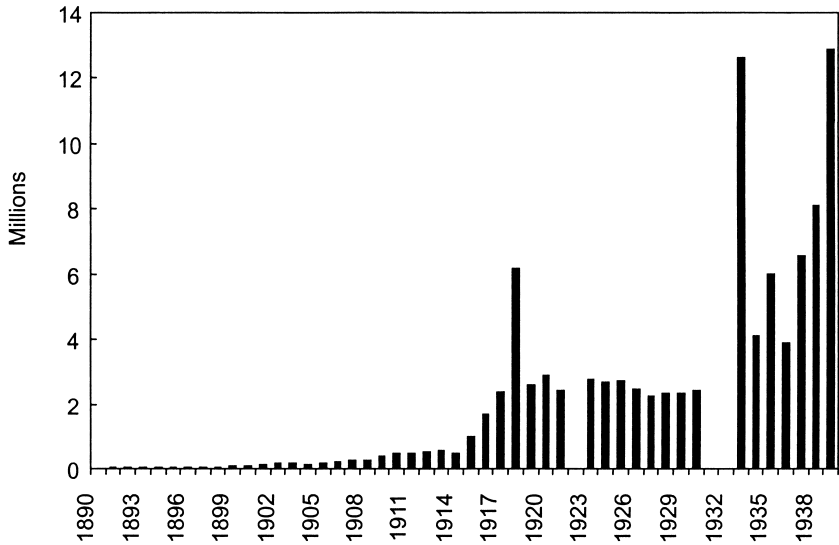


Fig. 5.1 Use of public employment offices by job-seekers

Sources: 1890–1914: Bogart (1900), Conner (1907), Sargent (1912), and various state governments’ reports (State of Colorado Bureau of Labor Statistics 1903–1915; State of Connecticut Bureau of Labor Statistics 1902–1915; State of Illinois Bureau of Labor Statistics 1900–1915; State of Indiana Department of Statistics 1911–1915; State of Kansas Bureau of Labor and Industry 1901–1914; State of Kansas Department of Labor and Industry 1914–1915; State of Kentucky Bureau of Agriculture, Labor, and Statistics 1912–1915; State of Maryland Bureau of Statistics and Information 1904–1915; State of Massachusetts Bureau of Statistics of Labor 1904, 1907–1915; State of Michigan Bureau of Labor and Industrial Statistics 1906–1909; State of Michigan Department of Labor 1910–1915; State of Minnesota Bureau of Labor 1907; State of Minnesota Bureau of Labor 1907; State of Missouri Bureau of Labor Statistics 1900–1916; State of Montana Bureau of Agriculture 1902–1912; State of Montana Department of Labor and Industry 1913–1916; State of New Jersey Department of Labor. *Report* 1910–1915; State of New York Department of Labor 1901–1916; State of Ohio Bureau of Labor Statistics 1891–1914; State of Ohio Department of Investigation and Statistics 1915–1916; State of Oklahoma Department of Labor 1908–1915; State of Rhode Island Bureau of Industrial Statistics 1908–1914; State of Washington Bureau of Labor 1903–1916; State of West Virginia Bureau of Labor Statistics 1901–1915; State of Wisconsin Bureau of Labor and Industrial Statistics 1902–1916). 1915–1916: U.S. Bureau of Labor Statistics, January 1915 (Vol. 1, No. 1) to February 1918 (Vol. 6, No. 2). 1917–1919: U.S. Employment Service (1918, 1919, 1920). 1920–1921: Smith (1923), and Commons and Andrews (1936). 1923–1930: U.S. Employment Service (January 1924 to January 1932). 1933: U.S. Employment Service (1935b). 1934–1939: U.S. Employment Service, September 1934 (Vol. 1, No. 1) to December 1940 (Vol. 7, No. 12).

Notes: 1923, 1931, and 1932 are missing. The following states in each year indicate missing data by state and year: 1903 to 1906 (Kansas); 1907 (Colorado); 1909 to 1910 (New Jersey); 1912 (Kansas, Montana, New Jersey, Oklahoma); 1913 (New Jersey, Oklahoma, West Virginia); 1914 (California, Kentucky, Montana, New Jersey, Oklahoma, Texas, West Virginia). Data from 1915 to 1939 are reported for fiscal years (July to June).

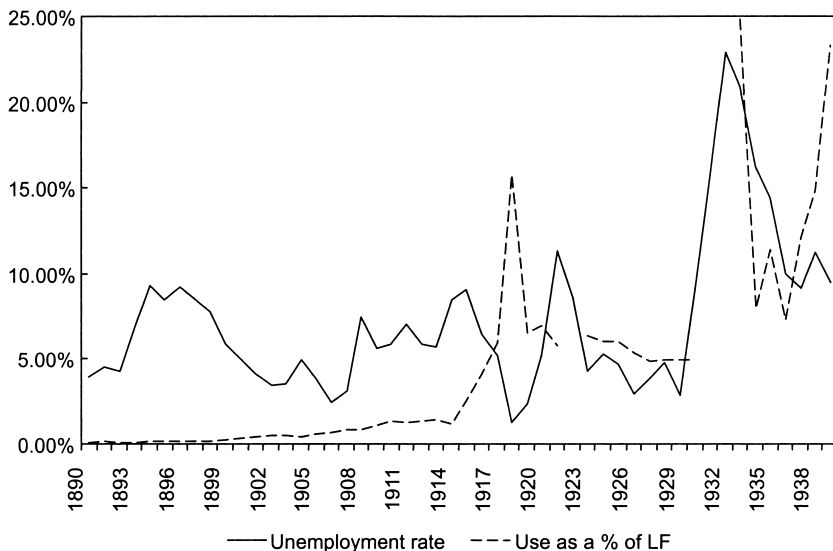


Fig. 5.2 Unemployment rate and use of public employment offices by job-seekers as a percentage of the labor force

Sources: Labor force (LF) and the unemployment rate (Wier 1992) and the use of public employment offices by job-seekers (same as figure 5.1).

of public offices soared during the 1918 fiscal year (see figures 5.1 and 5.2), mainly due to the massive number of returning soldiers and workers who had previously been transferred to war-related industries (U.S. Employment Service 1919). Soldiers and workers went back to their peacetime occupations after the war ceased, and public offices played an important role in reallocating them to their former positions and other places (U.S. Bureau of Labor Statistics 1931).

As the nation returned to normalcy, the use of public offices by job-seekers dropped substantially. The USES, the central authority of public offices during World War I, lost its power over the labor market due to huge budget cuts by Congress. Thus, a substantial number of offices were closed or turned over to state and municipal governments (U.S. Employment Service 1935a). The USES was a paper organization during the 1920s, meaning that the federal government's power over the labor exchange market was minimal. Most public offices were maintained and operated by states or municipalities independently of the federal government. Despite the decentralization of public labor exchange, the use of public offices was nontrivial. Most research and documents ignore public offices' contribution to the U.S. labor market in the 1920s (e.g., U.S. Employment Service 1935a; Commons and Andrews 1936; Adams 1969; Guzda 1983; Breen 1997). However, the evidence in figures 5.1 and 5.2 shows that more than 2 million job-seekers, or

roughly 5 percent of the total labor force per year, used public offices during the 1920s. Public offices also made placements for 1.5 million job-seekers (approximately 3 percent of the labor force) during this period. Therefore, I argue that the role of public offices was also important in the labor market in the 1920s. One might think that public offices played an important role in the labor market only during times of emergency, such as World War I and the Great Depression, as public offices became centralized to resolve these chaotic situations. But public offices continued to serve as a major labor market intermediary in the 1920s, which was a time of peace and economic growth.

As the economy entered the Great Depression, the Wagner-Peyser Act of 1933 revitalized USES to be a nationwide employment service to control public offices across the nation. It was a joint system of federal and state governments.¹² As a main tool to perform New Deal relief programs for unemployment, public offices were influential over the entire labor market during the Great Depression. The substantial increase in the use of public offices by job-seekers in 1933 (as seen in figures 5.1 and 5.2) was mainly due to the public works provided by the Civil Works Administration (CWA). The Civil Works Administration hired more than 4 million people, and almost all placements for this administration were made by public offices. People who wanted to find jobs in the CWA had to use public offices (U.S. Employment Service 1935b).

Public offices also placed millions of unemployed in jobs created by the Works Progress Administration (WPA). High use of public offices since 1935 indicates this (see figures 5.1 and 5.2). The use of public offices was also directly related to the unemployment compensation between 1937 and 1939. The large increase in the use of public offices between 1938 and 1939 demonstrates this fact. Unemployment benefits were paid to jobless people, starting from January 1938, by the Social Security Act of 1935 (Atkinson, Odencrantz, and Deming 1938). People who wanted to receive these benefits had to register with public offices.

One point should be mentioned about the two spikes (around World War I and the Great Depression) in the use of public offices in figures 5.1 and 5.2, related to the argument in the previous section. The high use of public offices by job-seekers during the periods of World War I and the Great Depression is irrelevant to the hypothesis that public offices contributed to lowering the degree of asymmetric information between job-seekers and private agencies. Public offices performed employment services for wartime emergency during World War I and matched job-seekers and public work positions as a major tool to implement the New Deal policies in the Great Depression.

12. The federal government would provide up to 50 percent of the fund support, the remaining 50 percent being provided by the states to maintain and operate public offices (Ruttenberg and Gutchess 1970).

Given all the information provided in this section, it is clear that the impact of public offices on the labor market was not influential in the first two decades of its operation. However, the importance of public offices grew substantially, allowing them to be a major labor market intermediary with their involvement arising from World War I.¹³

5.4 Users of Public Employment Offices

In this section, I analyze users of public offices to test an implication of the theory proposed in section 5.2: The majority of job-seekers using private agencies in the nineteenth and early twentieth centuries were unskilled workers and immigrants who were vulnerable to the abuses of private agencies. If these job-seekers used public offices intensively, then this supports the hypothesis that public offices contributed to lowering the degree of exploitation by private agencies with respect to job-seekers (the degree of asymmetric information between job-seekers and private agencies) by providing an alternative network during their job search process. Therefore, I evaluate whether those who were vulnerable to exploitation by private agencies, such as unskilled workers and immigrants, actually used public offices more intensively.

To do this, I present the gender and occupations of public office users. I also construct the corresponding shares of workers in the population (the nation and state) from the Integrated Public Use Microdata Series or IPUMS (Ruggles et al. 2004) to see how public office users differed from other workers in the labor market in the early twentieth century.¹⁴ In addition, I show other characteristics of public office users to analyze how they were related to the argument regarding asymmetric information.

First, I construct the shares of public office users by gender for a few selected states (Connecticut, Missouri, and Illinois) and compare them to those in the nation and the corresponding states in the early twentieth century (see table 5.1). In Connecticut and Illinois, the share of female public office users were much larger than those of female workers in the nation and in the states between 1900 and 1930, indicating that female workers used public offices more intensively than male workers in those states. In Missouri, the share of female public office users was larger than both the nation and the state female workers in 1900 (23.5 percent in Missouri public offices, 14.1 percent in the state of Missouri, and 18.0 percent in the nation), while this inequality was reversed between 1910 and 1920 (around 10 percent in Missouri public offices, 17 percent in the state of Missouri, and 20 percent

13. The use of public offices by job-seekers was at least 4 percent of the labor force between 1916 and 1940 (see figure 5.2).

14. The estimates for the nation and state workers in tables 5.1, 5.2, 5.3, and 5.4 are constructed from the working age population (aged between sixteen and sixty-five, inclusive) in the labor force.

Table 5.1 Gender of public employment office applicants

Year	Nation		State	State		Public employment offices	
	Men	Women		Men	Women	Men	Women
1900	82.0	18.0	CT	78.6	21.4	49.1	50.9
1910	79.1	21.0	CT	75.1	24.9	52.1	47.9
1920	79.4	20.6	CT	74.1	25.9	57.7	42.3
1930	77.7	22.3	CT	73.5	26.5	56.1	43.9
1900			MO	85.9	14.1	76.5	23.5
1910			MO	83.2	16.8	89.8	10.2
1920			MO	81.5	18.5	89.5	10.5
1930			MO	79.2	20.9	80.0	20.0
1900			IL	83.5	16.5	57.2	42.8
1910			IL	81.3	18.7	71.6	28.4
1920			IL	79.5	20.5	76.9	23.1
1930			IL	77.2	22.8	62.0	38.0

Source: See table 5.2.

Notes: The second and third columns present the percentages of male and female workers in the nation, respectively. The fifth and sixth columns present the percentages of male and female workers in the corresponding states, respectively. The seventh and eighth columns indicate the percentages of male and female job seekers registered in public employment offices in the corresponding states, respectively. All the percentages of the nation and states are calculated from the labor force of working age (i.e., aged between sixteen and sixty-five, inclusive).

in the nation). The shares of female workers in all cases (Missouri public offices, the state of Missouri, and the nation) were almost the same in 1930. Overall, female workers used employment services through public offices more intensively than male workers in Connecticut and Illinois, although this was not the case in Missouri.

Table 5.2 gives the proportions of public office users by occupation in the selected states over time. One clear pattern is that placements by public offices were biased toward service workers and laborers.¹⁵ In Connecticut and Illinois, the largest proportion of public office users was service workers, while laborers formed the majority of public office users in Missouri (see the fourth, sixth, and eighth columns in table 5.2), respectively. As time went by, the importance of agriculture tended to dwindle in Connecticut (11.5 percent in 1900, 14.9 percent in 1910, 3.7 percent in 1920, and 2.7 percent in 1930), but in Missouri, the proportion of agricultural workers rose in 1920 (14.1 percent), declining in 1930 (8.3 percent). All three states' distributions of public offices show a concentration of service workers and laborers, but the degree of concentration was different. In Connecticut, approximately

15. Most of the public office applicants' occupations were also laborers and service workers in Connecticut, Illinois, and Missouri. I provide only the placements of public office applicants because more information on occupations is available.

Table 5.2 Occupations of male and female applicants placed by public employment offices

Occupation	Nation	CT		MO		IL	
		State	Public offices	State	Public offices	State	Public offices
<i>1900</i>							
Professionals and technical workers	4.5	5.0	0.2	4.7	0.2	5.6	0.0
Agricultural workers	33.4	10.3	11.5	39.5	3.2	24.2	2.5
Managers, officials, and proprietors	5.7	5.5	0.1	6.3	0.0	7.1	0.0
Clerical and kindred	3.4	4.0	2.2	3.8	8.3	5.3	0.4
Sales workers	4.5	5.2	8.0	5.2	4.0	6.1	0.7
Craftsmen and operatives	26.9	46.1	4.2	22.3	8.2	29.7	6.1
Service workers	9.3	9.0	66.7	8.6	24.4	9.9	40.3
Laborers	12.3	14.9	5.1	9.5	47.8	12.1	36.1
<i>1910</i>							
Professionals and technical workers	4.9	5.6	0.1	5.0	0.0	5.6	0.0
Agricultural workers	28.6	7.4	14.9	32.8	5.8	18.7	1.6
Managers, officials, and proprietors	6.0	5.7	0.1	6.5	0.0	6.8	0.0
Clerical and kindred	5.6	7.1	0.4	6.4	0.3	8.7	0.6
Sales workers	4.7	4.9	4.0	5.6	1.4	5.8	0.9
Craftsmen and operatives	27.6	43.0	4.1	23.8	6.8	31.8	10.7
Service workers	9.5	10.8	61.1	9.1	35.5	9.5	43.7
Laborers	13.1	15.6	13.4	10.9	43.8	13.1	35.6
<i>1920</i>							
Professionals and technical workers	5.6	6.3	0.0	5.7	0.1		
Agricultural workers	24.1	6.3	3.7	28.8	14.1		
Managers, officials, and proprietors	6.7	6.5	0.1	7.5	0.1		
Clerical and kindred	8.3	10.2	0.5	9.0	4.2		
Sales workers	5.0	4.3	2.8	6.0	0.2		
Craftsmen and operatives	30.8	46.0	7.1	25.0	14.5		
Service workers	8.1	7.9	71.8	8.0	19.4		
Laborers	11.5	12.6	13.6	10.0	46.9		

(continued)

60 to 70 percent of applicants placed were service workers, whereas more laborers were placed than service workers in Missouri (see the fourth and sixth columns in table 5.2). The differential between service workers and laborers was not large in Illinois relative to that in Connecticut (see the eighth column in table 5.2).

To investigate the types of public office users in more detail, I examine the occupations of male and female public office users over time, respectively. The data show that male public office users were largely laborers and the dominant occupation for females was service work, although there were some variations among states.¹⁶ One clear fact is that the difference between

16. Tables for men's and women's occupational shares are available from the author upon request.

Table 5.2 (continued)

Occupation	Nation	CT		MO		IL		
		State	Public offices	State	Public offices	State	Public offices	
		<i>1930</i>						
Professionals and technical workers	6.9	8.0	0.0	6.6	0.0			
Agricultural workers	20.1	4.6	2.7	24.3	8.3			
Managers, officials, and proprietors	7.3	7.4	0.0	7.7	0.1			
Clerical and kindred	9.2	12.2	1.3	10.0	1.3			
Sales workers	6.7	6.1	3.3	7.2	0.7			
Craftsmen and operatives	29.3	41.5	6.3	25.4	10.1			
Service workers	9.7	9.2	67.4	9.1	20.0			
Laborers	10.7	11.1	18.8	9.8	59.6			

Sources (tables 5.1 and 5.2): For 1900 occupation and gender distributions: State of Massachusetts Bureau of Statistics of Labor 1904. For 1910 occupation and gender distributions: Illinois and Missouri, Sargent 1912; Connecticut, State of Connecticut Bureau of Labor Statistics 1912. For 1920 occupation and gender distributions: Missouri, State of Missouri Bureau of Labor Statistics 1923; Connecticut, State of Connecticut Bureau of Labor Statistics 1922. For 1930 occupation and gender distributions: Missouri, State of Missouri Department of Labor and Industrial Inspection 1930; Connecticut, State of Connecticut Bureau of Labor Statistics 1931. For the nation and states' overall occupation and gender percents, IPUMS (Ruggles et al. 2004).

Notes: The first column is the classification of the occupations. The second column displays the percents of occupations of workers in the nation. The third, fifth, and seventh columns are the percents of occupations of workers in each state. The fourth, sixth, and eighth columns are the percentages of occupations of job-seekers placed through public employment offices in each state. The categorization of the occupations in table 5.2 is based on IPUM's 1950 occupation basis, which is the 1950 Census Bureau occupation classification system with some modifications. Agricultural workers include farmers (owners, tenants, farm managers) and farm laborers. Craftsmen and operatives are skilled and semiskilled workers in manufacturing. All the percentages of the corresponding states and the nation are calculated from the labor force of working age (i.e., aged between sixteen and sixty-five, inclusive).

public office users and other workers was not simply due to gender. Service work for women and common labor for men were the main types of occupations dealt with by public offices until 1930. Both service workers and laborers also made up the majority of private agencies' clients, who were vulnerable to the abuses of private agencies in the early twentieth century (Sargent 1912). Therefore, the intensive use of public offices by service workers and laborers supports the argument that public offices contributed to protecting job seekers from exploitation by private agencies. This means that the degree of asymmetric information between job-seekers and private agencies was lowered as an alternative job-matching service was provided by public offices at that time.

Besides the gender and occupations of job-seekers using public offices, interesting facts are revealed in Wisconsin and New York public offices in 1901. Table 5.3 shows some characteristics of public office applicants in Wisconsin for six months (July to December 1901). Approximately 40 percent of Wisconsin public office users were non-U.S. citizens, 80 percent were single,

Table 5.3 Characteristics of Wisconsin Public Employment Office applicants in 1901

	Public offices	State	Nation
Place of origin			
U.S. born	63.8	63.1	77.1
Foreign born	36.2	36.9	22.9
Marital status			
Married	20.1	53.8	57.0
Single	79.9	46.2	43.0
Place of birth			
Wisconsin	26.3	49.4	54.3
Other U.S.	38.0	13.7	22.8
Other nations	36.2	36.9	22.9
Member of labor union			
No	95.9		
Yes	4.1		
Years in the U.S. for immigrants			
Less than 1	6.3		
1–5	15.0		
6–10	17.7		
11–15	17.6		
16–20	18.4		
21–25	10.2		
26–30	5.6		
Over 30	9.2		
Years of residence in Wisconsin			
Less than 1	30.1		
1–5	18.2		
6–10	8.2		
Over 11	18.1		
Since birth	25.7		

Sources: State of Wisconsin Bureau of Labor and Industrial Statistics 1902 and IPUMS (Ruggles et al. 2004).

Notes: Among 4,744 applicants in Wisconsin public employment offices from July to December 1901, 3,890 applicants filled at least one part of the application form. The first column describes personal characteristics of workers. The second column shows the percentages of the corresponding characteristics of public office users. The third and fourth columns are the corresponding percentages of the labor force of working age (aged between sixteen and sixty-five, inclusive) in Wisconsin and the nation in 1900, respectively.

and only 4 percent were labor union members. Compared to workers in the nation, the share of immigrants who used public offices in Wisconsin was higher by 13 percent. However, the difference in place of origin disappeared between public office users and the state workers. This may indicate that the share of immigrants using public offices was large because the immigrant share of state workers was also high. The share of single public office users was much larger than that of the nation or of state workers (approximately 80 percent for public offices, 46 percent for the state population, and 43 percent for the nation). One prominent feature was that only 26 percent of

public office users were Wisconsin-born (about 49 percent for the state and 54 percent for the nation). In terms of residence, almost half of the job-seekers who used public offices had resided in Wisconsin less than five years (see the last part of table 5.3).

Table 5.4 describes several characteristics of public office applicants in New York State in 1901. One distinction is that table 5.4 also provides information on public office applicants separately by gender. Overall, 62 percent of the applicants in New York public offices were non-U.S. citizens (36 percent for the state). By gender, 52 percent of men and 68 percent of women public office users were non-U.S. citizens (versus 37 percent of men and 34 percent of women in the state population). Over 60 percent of the public office applicants were single and 4 percent were illiterate. In general, the share of single users was larger than that of state workers, although this inequality is reversed for women (the proportion of female public office users was 62.1 percent while the proportion of female workers in the state was 78 percent). About 60 percent of public office users were between twenty and forty years of age (see the last part of the second column in table 5.4). The common similarity between Wisconsin and New York is that many of the

Table 5.4 Characteristics of New York State Public Employment Office applicants in 1901

	Public employment offices			New York State		
	Overall	Men	Women	Overall	Men	Women
Place of origin						
U.S. born	38.0	47.9	32.1	63.9	63.3	66.1
Foreign born	62.0	52.1	67.9	36.1	36.7	33.9
Marital status						
Married	34.6	29.2	37.9	52.8	61.8	22.0
Single	65.4	70.8	62.1	47.2	38.2	78.0
Literacy						
Literate	96.3	99.4	94.0	94.8	94.6	95.7
Illiterate	3.7	0.5	6.0	5.2	5.4	4.3
Age of applicants						
Under 20 years	8.3	11.7	6.0			
20–30	37.9	45.1	33.6			
30–40	26.7	24.4	28.1			
40–50	18.8	12.8	22.5			
50–60	6.9	4.6	8.4			
Over 60	1.3	1.3	1.3			

Sources: State of New York Department of Labor 1902 for public offices; IPUMS (Ruggles et al. 2004) for New York State.

Note: The first column describes personal characteristics of workers. The second, third, and fourth columns show the percentages of the corresponding characteristics of overall, men, and public office users, respectively. The fifth, sixth, and seventh columns are the corresponding percentages of, overall, male, and female workers in the labor force of working age in 1900, respectively.

public office users were single around the turn of the twentieth century. In New York's case, it is clear that immigrants used public offices more intensively than U.S.-born workers for their job search.

It is striking that 38 percent of public office applicants in Wisconsin were interstate migrants (U.S. citizens who migrated from other regions in the United States to Wisconsin). Moreover, 50 percent of them had resided in Wisconsin for less than five years. The large proportion of recent migrants among public office users also supports the argument that public offices helped lower the degree of asymmetric information between job-seekers and private agencies because recent migrants from other states were more likely to be exploited by private agencies due to lack of information on the new environment. Even if the existence of public offices did not cause people to migrate to Wisconsin, I can argue that once people moved to Wisconsin, they were likely to look for jobs with the help of public offices if they could not rely on other networks, including private agencies.

In summary, most public office users were unskilled workers (service workers or laborers), immigrants, or migrants in several states' cases. These types of people were also major clients of private agencies in the early twentieth century. This fact, in part, supports the argument that public offices provided an alternative job-matching service for people who had low skills or were unfamiliar to their new environment, and thus more likely to be exploited by private agencies.

5.5 Empirical Work

Theoretically, job-seekers would be fully informed about the quality of private agencies as public offices drive low-quality private agencies from the market. Consequently, job-seekers could choose to use either public offices or reputable private agencies: the establishment of public offices can resolve adverse selection in the labor exchange market. Therefore, the most relevant empirical question from this theory is to explore whether the introduction or development of public offices resolved the problem of adverse selection.¹⁷ However, testing this hypothesis presents difficulties because information on private agencies in the early twentieth century is scarce.¹⁸

Instead, I test the hypothesis that public offices helped lower the degree of asymmetric information for uninformed job-seekers. Even if this hypothesis is valid, it does not guarantee that adverse selection disappeared. However, it

17. Throughout this chapter, I frequently mention "lower the degree of asymmetric information" and "resolve the problem of adverse selection." Lowering the degree of asymmetric information is a process to resolve adverse selection because eliminating the asymmetric information problem is necessary to resolve adverse selection. Therefore, when information symmetry is achieved, low-quality private agencies are driven out of the market, and consequently adverse selection disappears.

18. To test the problem of adverse selection directly, detailed data on private agencies are required, such as fees charged by private agencies.

does tell us that public offices were directed to resolve the problem of adverse selection, because lowering the degree of asymmetric information between job-seekers and private agencies is a part of that process. This hypothesis was proposed in the last section and in part supported by the findings on the types of workers who used public offices. I extend this analysis to an empirical test by examining the relationship between the use of public offices by job-seekers (in terms of the number of job-seekers using public offices) and labor market conditions related to asymmetric information.

To test the hypothesis, a statistical model is constructed. The model describes the relationship between the use of public offices by job-seekers and labor market conditions, including proxy variables for asymmetric information. If the use of public offices and the asymmetric information factors are positively related, then the relationship may support the hypothesis. A positive correlation would indicate that the use of public offices increased as the number of people who were vulnerable to the abuses by private agencies due to lack of information increased. Hence, public offices contributed to lessening the degree of asymmetric information for uninformed job-seekers who were more likely to be exploited by private agencies.

I collected data for the use of public offices by job-seekers from annual reports and monthly bulletins published by the USES. I narrowed my empirical analysis to 1920 and 1930 because most of the labor market data at state or at lower regional levels are available decennially. Moreover, public offices were not influential as a labor market intermediary before World War I (see figure 5.2). I also limited the samples of explanatory variables to the labor force of working age (i.e., aged between sixteen and sixty-five, inclusive) in urban areas.¹⁹ The regression model is as follows:

$$\begin{aligned} \ln(USE)_{it} = & \alpha + \beta_1 \ln(WAGE)_{it} + \beta_2 \ln(EMPLOYMENT)_{it} \\ & + \beta_3 \ln(INCOME)_{it} + \beta_4 \ln(WOMEN)_{it} + \beta_5 \ln(SINGLE)_{it} \\ & + \beta_6 \ln(DSE)_{it} + \beta_7 \ln(ILLITERATE)_{it} \\ & + \beta_8 \ln(IMMIGRANT)_{it} + \beta_9 \ln(MIGRANT)_{it} \\ & + \beta_{10} \ln(SERVICE)_{it} + \beta_{11} \ln(LABOR)_{it} + D_t + X_{it}B + \epsilon_{it}. \end{aligned}$$

The dependent variable USE_{it} measures the use of public offices by job-seekers in terms of the number of applicants who used public offices. The subscripts i and t indicate state and year (1920 and 1930), respectively. $WAGE$, $EMPLOYMENT$, and $INCOME$ are chosen to control for general labor market conditions.²⁰ For the data regarding the wage and employment

19. By definition, job-seekers using public offices are in the labor force and most of them are in the working age population. Most public offices before the Great Depression were located in major cities (Kellogg 1933; Breen 1997).

20. These three variables are not limited to working age population in the labor force in urban areas, unlike all the other explanatory variables, because of unavailability of data.

levels, “Estimates of Average Manufacturing Wages by State” and “Total Employment by State” are used, respectively (Fishback and Kantor 2000).²¹ To control for level of income, I employ “Realized national income,” which is an estimate consisting of “the total of payments to individuals by business and government in the form of wages, salaries, dividends, interest, net rents and royalties, and net profits withdrawn by unincorporated enterprises” (National Industrial Conference Boards, Inc. 1939, 114).

Other explanatory variables are selected based on the analysis of the types of public office users in the last section and constructed from Integrated Public Use Microdata Series (IPUMS) extracts (Ruggles et al. 2004) of 1920 and 1930 samples. *WOMEN* and *SINGLE* are estimates of the numbers of women and single workers. The last six variables (*DSE*, *ILLITERATE*, *IMMIGRANT*, *MIGRANT*, *SERVICE*, and *LABOR*) are proxy variables for asymmetric information. In the early twentieth century, immigrants, migrants, and unskilled workers were vulnerable to the abuses of private agencies due to lack of information about the area or less education. Variable *DSE* is the number of people who did not speak English and *ILLITERATE* is the number of people who were illiterate (i.e., cannot read or write) in any language. I add *DSE* and *ILLITERATE* for asymmetric information proxies because these workers were less likely to be educated and thus seemed to be vulnerable to exploitation by private agencies. The variable *IMMIGRANT* is the number of non-U.S. citizens; *MIGRANT* is the total number of migrants who were U.S. citizens; *SERVICE* is the number of service workers; and *LABOR* is the number of laborers. *MIGRANT* is a measure of interstate migration, which is estimated based on whether a person lived in the state in which he or she was born at the time of the Census (Rosenbloom and Sundstrom 2004). Variable D_t is a time dummy and X_{it} indicates the interaction terms between time and region dummies, to control for unobserved factors, in part, correlated with the explanatory variables over time or region.²²

The summary statistics for the variables are shown in table 5.5 and the results of the regression analysis are provided in tables 5.6 and 5.7. First, I run cross-sectional regressions for 1920 and 1930 separately—the results are shown in table 5.6. Overall, signs of the key estimates are not significant in most specifications. However, the estimates for *MIGRANT*, which indicate the relationship between the use of public offices and interstate migration, are positive and significant. This pattern may imply that public offices helped migrants who were unfamiliar with their new environment and thus most likely to be abused by private agencies in their job search.

Table 5.7 presents the results for the unbalanced panel regressions with

21. “Total Employment by State” is the estimate of the number of employed workers of all kinds in each state.

22. The Census division is used for the regional classification in this chapter: New England, Middle Atlantic, East North Central, West North Central, South Atlantic, East South Central, West South Central, Mountain, and Pacific.

Table 5.5 Descriptive statistics

Variable	1920			1930		
	Observations	Mean	Standard deviation	Observations	Mean	Standard deviation
<i>USE</i>	49	52,861.9	85,955.8	44	54,707.8	72,237.6
<i>WAGE</i>	48	33.3	6.3	43	31.7	6.2
<i>EMPLOYMENT</i>	48	812,186.8	827,466.0	43	980,432.3	990,891.5
<i>INCOME</i>	49	1,398.1	1,780.3	44	1,606.5	2,276.0
<i>WOMEN</i>	49	115,384.6	174,173.1	44	165,598.7	226,613.4
<i>SINGLE</i>	49	189,663.1	297,903.9	44	225,468.7	350,049.2
<i>ILLITERATE</i>	49	19,242.1	29,545.0	44	16,841.8	24,218.5
<i>DSE</i>	49	12,205.5	25,143.8	44	7,618.6	15,561.4
<i>IMMIGRANT</i>	49	68,477.5	149,007.6	44	59,149.3	129,509.9
<i>MIGRANT</i>	49	114,209.6	116,875.0	44	170,187.3	203,006.5
<i>SERVICE</i>	49	49,039.0	68,972.4	44	76,454.7	102,278.1
<i>LABOR</i>	49	59,797.2	78,326.9	44	69,591.3	87,410.9

Sources: *USE* (for 1920, U.S. Employment Service 1921; for 1930, U.S. Employment Service January 1930 to December 1930). *WAGE* and *EMPLOYMENT* (Fishback, Price, and Kantor 2000). *INCOME* (National Industrial Conference Board Inc. 1939). Others (Ruggles et al. 2004).

fixed and random effects.²³ In general, as in the case of cross-sectional regressions, most of the signs for the estimates are not significant. However, the estimates are significant for *ILLITERATE* and *MIGRANT* but negative for *ILLITERATE* and positive for *MIGRANT*. The negative sign for *ILLITERATE* is understandable, since applicants of public offices had to fill out application forms when they registered and had to have interviews with the agents in public offices. Positive estimates for *MIGRANT* are consistent with the results in the cross-sectional analyses. The magnitude and significance of the estimates for *MIGRANT* increase after controlling for time and region-specific fixed effects.

This positive and significant relationship between the use of public offices by job-seekers and interstate migration reaffirms the hypothesis that public offices contributed to lowering the degree of asymmetric information, especially in favor of migrants who were most lacking in information and networks in their new environment.

5.6 Conclusion

Progressive Era (1890s through 1920s) social reformers viewed uninformed job-seekers as vulnerable to exploitation by private employment agencies. In response to the cries of these people, public employment offices

23. The balanced and unbalanced panel regressions produce nearly identical coefficient estimates.

Table 5.6

Relationship between the use of public employment offices and asymmetric information-1: Cross section for 1920 and 1930 separately
Dependent variable: ln (USE).

Explanatory variable	1920	1920	1930	1930
	Coefficient (robust standard error)	Coefficient (robust standard error)	Coefficient (robust standard error)	Coefficient (robust standard error)
Region fixed effects	No	Yes	No	Yes
ln(WAGE)	1.68*** (0.53)	1.17* (0.61)	1.69 (1.80)	2.38 (1.84)
ln(EMPLOYMENT)	-0.28** (0.13)	-0.32* (0.18)	0.25 (1.07)	-0.58 (1.04)
ln(INCOME)	-2.32 (1.54)	-3.40* (1.68)	-3.10 (2.80)	-4.24 (2.65)
ln(WOMEN)	-1.05 (0.72)	-1.14 (0.85)	-1.83 (2.06)	-4.84*** (1.80)
ln(SINGLE)	1.07 (0.87)	2.31* (1.13)	0.43 (1.90)	2.51 (1.78)
ln(DSE)	-0.27*** (0.10)	-0.22** (0.10)	-0.16 (0.13)	-0.06 (0.14)
ln(ILLITERATE)	-0.60*** (0.25)	-0.43 (0.36)	-0.11 (0.20)	-0.19 (0.19)
ln(IMMIGRANT)	0.46*** (0.16)	0.35 (0.24)	0.37 (0.26)	-0.29 (0.36)
ln(MIGRANT)	0.83** (0.37)	0.93* (0.50)	1.28*** (0.41)	1.74*** (0.60)
ln(SERVICE)	-0.03 (0.66)	-0.34 (0.78)	-1.10 (0.69)	0.68 (0.97)
ln(LABOR)	-0.50 (0.51)	-1.36* (0.70)	0.64 (0.59)	-0.11 (0.91)
Constant	-14.40*** (5.78)	-2.27 (8.07)	-12.79 (12.87)	-11.90 (12.46)
R ²	0.86	0.91	0.75	0.86
Total observations	48	48	43	43

Notes: USE (dependent variable): the number of applicants who used public offices in a state in a year. WAGE: average manufacturing wages in a state in a year. EMPLOYMENT: total employment in a state in a year. INCOME: realized income in a state in a year. WOMEN: the number of women in a state in a year. SINGLE: the number of singles in a state in a year. DSE: the number of people who did not speak English in a state in a year. ILLITERATE: the number of illiterate in any language in a state in a year. IMMIGRANT: the number of non-U.S. citizens in a state in a year. MIGRANT: the number of migrants who were U.S. citizens in a state in a year. SERVICE: the number of service workers in a state in a year. LABOR: the number of laborers in a state in a year.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

Table 5.7

Relationship between the use of public employment offices and asymmetric information-2: Panel regressions (unbalanced). Dependent variable: $\ln(USE)$.

Explanatory variable	FE coefficient (standard error)	FE coefficient (standard error)	RE coefficient (standard error)	RE coefficient (standard error)
Time dummy (1920)	Yes	Yes	Yes	Yes
Time*region	No	Yes	No	Yes
$\ln(WAGE)$	-1.44 (1.30)	-1.50 (1.69)	0.93* (0.52)	0.94* (0.57)
$\ln(EMPLOYMENT)$	0.39 (0.48)	0.46 (0.53)	-0.19 (0.22)	-0.27 (0.24)
$\ln(INCOME)$	3.15 (2.68)	2.64 (3.22)	-1.10 (1.28)	-1.03 (1.32)
$\ln(WOMEN)$	-1.53 (1.62)	-1.82 (2.00)	-0.89 (0.64)	0.11 (0.83)
$\ln(SINGLE)$	2.49* (1.43)	1.91 (2.06)	1.09 (0.74)	0.24 (0.88)
$\ln(DSE)$	0.15 (0.12)	0.18 (0.14)	-0.03 (0.08)	-0.03 (0.09)
$\ln(ILLITERATE)$	-1.70** (0.71)	-1.82** (0.72)	-0.68*** (0.20)	-0.69*** (0.21)
$\ln(IMMIGRANT)$	-0.16 (0.47)	-0.25 (0.49)	0.12 (0.17)	0.16 (0.18)
$\ln(MIGRANT)$	1.39 (1.07)	2.48** (1.23)	0.68** (0.29)	0.57* (0.31)
$\ln(SERVICE)$	0.29 (1.11)	0.36 (1.24)	0.31 (0.56)	0.04 (0.58)
$\ln(LABOR)$	-0.07 (1.05)	0.76 (1.23)	-0.19 (0.43)	0.05 (0.46)
Constant	9.28 (23.70)	1.16 (29.03)	-9.38* (5.39)	-9.11 (5.74)
R^2				
Within	0.36	0.56	0.14	0.25
Between	0.09	0.34	0.85	0.87
Overall	0.12	0.37	0.77	0.82
Total observations	90	90	90	90
Total group	47	47	47	47

Note: FE = fixed effects; RE = random effects.

***Significant at the 1 percent level.

**Significant at the 5 percent level.

*Significant at the 10 percent level.

were introduced to restrain private employment agencies from exploitation of job-seekers. I describe this situation as a case of asymmetric information between job-seekers and private agencies that could cause adverse selection in the labor exchange market. Creation of public employment offices can be viewed as a policy device to eliminate low-quality private employment agencies that were committing malpractices with respect to job-seekers.

My analysis shows that the majority of job-seekers who utilized public employment offices were unskilled workers, immigrants, or migrants, who were also major clients of private employment agencies at that time. One of the most interesting findings is a positive relationship between the use of public employment offices and interstate migration in 1920 and 1930. This supports the hypothesis that public employment offices lessened the degree of asymmetric information in favor of migrants in the labor exchange market. In other words, public employment offices were especially helpful for migrants who were most lacking in information and networks in their new environment.

Despite the importance of public employment offices in the early twentieth century, current trends are the reduction in public funding and privatization of public employment services in response to a decrease in their usage by job-seekers.²⁴ This could be in part due to inefficient operation of public employment offices in recent periods (De Koning, Denys, and Walwei 1999). However, the role of public employment offices is still relevant with respect to the asymmetric information problem in the labor exchange market. Autor and Houseman (2005) found that temporary help agencies provide low-skilled workers with jobs that have lower wages and shorter employment durations than do direct-hire jobs. There is a possibility that this ineffective outcome of temporary help agencies may result from asymmetric information between low-skilled workers and temporary help agencies. Temporary help agencies may have an incentive to make use of this information asymmetry to exploit their employees, which is an inefficient market outcome. In addition, services by public employment offices are always pertinent for certain groups such as illegal immigrants, very low-skilled workers, or low-educated workers who have little information about the labor market and little recourse to recover damages if exploited.

As a final remark, the focus of this chapter was on the supply side (job-seekers), but it is also important to investigate the demand side, the activities of private employment agencies, and their interactions with public employment offices. The direct test of adverse selection in the labor exchange market requires detailed information on private employment agencies such as fees charged by private employment agencies and the corresponding clients' characteristics. I plan to explore this in future work.

24. Approximately 19 percent of the unemployed used public employment offices in the United States in 2001, while 30 percent did in the 1970s (Eberts and Holzer 2004).

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