

Notes & Comments

Has Internet Recruitment of Workers Replaced Help Wanted Ads? Evidence from a Survey

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ABSTRACT. The goal of this note is to ascertain whether the recruitment of workers through the Internet has affected the use of Help Wanted Ads (HWA) in newspapers by surveying employers in a small statistical metropolitan area. No such switch was found from HWA to Internet ads. This indicates that HWA continue to be useful components of local economic leading indicators and useful proxy for vacancies.(J23, J63)

I. Introduction

The goal of this note is to ascertain how the recruitment of workers through the Internet has affected the use of help wanted ads (HWA) in newspapers. It is found that at least in a small statistical metropolitan area there has not been such a switch from HWA to Internet ads to recruit workers. This is important for two reasons. Researchers have used HWA as components of Leading Indicators.¹ Secondly, HWA are a proxy for vacancies in the study of the Beveridge curve, which shows an inverse relationship between vacancies to unemployment rates and whose shifts may indicate changes in structural unemployment.²

The advent of the Internet job search engines could be changing employers' use of HWA to post their vacancies. Indeed, Richard Freeman (2002) argued that nearly all major firms in the United States (USA) and in the United Kingdom (UK) post job vacancies online and cited additional evidence of Internet use by employers in both the USA and UK. He suggested that the reason for the "movement of job search and recruitment to the Web is simple....Firms can post advertisements for jobs on the Web for roughly a tenth of the price of buying a want-ad in

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the newspaper classifieds and obtain rapid responses through online applications” and it is less expensive for workers to use the net to search and apply for jobs (2002, p.299). Further, in a recent poll of its subscribers, *Workforce Week Management*, a publication aimed at human resource managers, found that nearly one-fourth of human resource managers do not advertise their job vacancies in print publications anymore.³ If this switch has occurred, the use of HWA as a component of leading indicators would be compromised. In addition, future research on the Beveridge curve would need to adjust the HWA statistic to reflect properly the number of vacancies.

The surveys cited above, however, included only employers large enough to have human resource managers and human resource departments in their samples. The authors are not aware of any survey that included a sample from a spectrum of company sizes and industrial categories, which may provide a more complete picture of the phenomenon.⁴ To address this issue, we developed a questionnaire that was administered to a random sample of members of the Chamber of Commerce in the Fargo, North Dakota and Moorhead, Minnesota metropolitan area.

To accept the hypothesis that employers are switching to internet recruiting from HWA, the evidence must show that first, employers are using the internet to recruit workers and that, second, those employers who use the internet to recruit workers have reduced their HWA. We reject that hypothesis. Evidence indicates that less than half of employers are using the internet to recruit, and employers who use the internet indicate that they continue to use HWA at the same levels as in the past.

II. The Survey

The telephone survey was administered between July 25 and September 26, 2005 to a random sample of the 1975 entries in the directory of members of the Fargo-Moorhead Chamber of Commerce. A total of 315 employers were called, of which 120 completed the survey (38 percent completion rate), representing 6 percent of the Chamber’s membership. The Chamber of Commerce is a local business organization where dues determine membership; therefore, its membership is not representative of the entire business population. The decision to focus on Chamber members thus introduced a bias against small businesses; approximately 52 percent of employers in the sample have less than ten employees, while 73 percent of businesses in the Fargo-Moorhead area are small businesses.⁵ Otherwise, the sample captured employers of all sizes.

Undersampling small businesses may favor employers that use the Internet. Small firms have very few vacancies and their recruiting methods will not change the results of this paper.⁶ The sample captured employers in every sector of the economy. As expected in today's economy, most employers are in the Services and Retail Trade sectors, followed by the Finance, Insurance, and Real Estate sector, reflecting the role the Fargo-Moorhead area plays as a health services and financial hub for western Minnesota and a large section of North Dakota. The survey undersampled employers in the transportation and wholesale trade sectors and oversampled employers in the services sector. The biases are due to the self-selected membership of the Chamber of Commerce.

Employers were asked how many vacancies they had since July 2004 and the method of advertising the vacancies. There were 86 employers with vacancies and among these, 33 reported having used the internet to recruit. Table 1 shows the frequency distribution of recruiting tools used by employers who had vacancies. Since employers may use more than one mean to recruit workers, the sum total is more than 86. The Z-test supports the hypothesis that less than 50% of employers used search engines to advertise, $p = 0.013$.⁷ Statistically, our sample indicates at least 28 percent of the companies with vacancies are now utilizing the Internet to recruit employees, but no more than 49 percent with a 95% level of confidence.

TABLE 1—Recruiting Tools Used by Fargo-Moorhead Employers
in the Chamber of Commerce Survey Data

Recruiting Tool	Number	Percentage (%)
Newspaper	64	74.4
Search Engines	33	38.4
Own Web Page	17	19.8
Personnel Agencies	12	14
Trade Magazines	5	5.8
Other	26	30.2

Source: Survey of members of Fargo-Moorhead Chamber of Commerce.

Note: Employers may use more than one recruiting tool to advertise vacancies, therefore, the sum of frequencies is more than 100 percent.

Of the 33 employers that used Internet search engines to advertise job vacancies, 15 used Job Service North Dakota, a free government-provided service. Only 6 reported using Monster.com, while the rest reported using some other local Internet search engine.

Only 1 out of the 33 Internet users reported having reduced their reliance on HWA since starting to use the Internet to advertise their job vacancies, and there were 4 non-respondents. Table 2 summarizes those results. The Binomial Test rejects the hypothesis that the proportion of employers who use the internet and have not reduced HWA is 0.5, in favor of the alternative hypothesis that the proportion is more than 0.5 with $p < 0.001$. More starkly, the data indicate that at least 83.4 percent of companies who use the Internet to recruit continue to use HWA at the same level as before they started using the Internet to recruit, and potentially 99.8 percent continue to use HWA at the same level as before they started using Internet, at the 95% level of confidence.⁸

Importantly, none of the firms with large numbers of vacancies reported reducing HWA. These results suggest that employers using the Internet consider advertising on the Internet and HWA to be complements, rather than substitutes, in the recruiting process. Employers are adding the Internet to their employee search toolkit but are not eliminating other search tools.

TABLE 2—Change in use of HWA among employers that use the Internet to recruit

Change in HWA	Number	Percentage
Have reduced HWA	1	3.0
No change in HWA	28	84.8
No response	4	12.1

Source: Survey of members of Fargo-Moorhead Chamber of Commerce

III. Concluding Comments

The FM survey indicated that while between 28% and 49% of employers have adopted the internet to recruit workers; Internet users have not

reduced their reliance on HWA. This suggests that HWA and the Internet are complementary inputs in the employee recruiting process among employers using the Internet to recruit. While the FM area may not be representative of the US economy, this survey provides an examination of a small midwestern community and its results contrast other assessments that there has been a significant movement to the Internet and away from HWA. These results suggest the need for a broader survey to ascertain the impact of Internet recruiting on HWA at the national level. This survey shows that HWA remain a useful research tool in metropolitan areas similar to Fargo-Moorhead.⁹

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Endnotes

1. For a sample of this literature consult, Steven Crane (1993), Alan Clayton-Matthews and James Stock (1998/99), Benjamin Amoah (2000), Oscar Flores (2004).
2. Literature in this area includes Katherine Abraham (1987), Oliver Jean Blanchard and Peter Diamond (1989) and Hoyt Bleakley and Jeffrey Furher (1997).

3. EnhanceMedia. 2002. National Online Recruitment Audience Survey, April 2002. www.wnhancemedia.co.uk
4. The Bureau of National Affairs previously conducted a national survey of recruiting practices among employers. They have, however, not conducted a survey for at least ten years. The newsletter *The Advantage* (1999) makes reference to another survey on recruiting practices conducted by the Society of Human Resource Management (SHRM) and CCH Incorporated in 1998. Several attempts to contact SHRM and CCH to receive a copy of the report have not yielded results.
5. Estimated with data from Job Service North Dakota
6. Employers in the sample reported having 2052 vacancies since July 2004, 63 percent of which were accounted by the five firms with over 150 vacancies.
7. The null hypothesis and alternative hypothesis are $H_0 : p = 0.5$ and $H_a : p < 0.5$, where p = proportion of employers who use the internet to advertise vacancies and $n = 86$.
8. The binomial test and the confidence interval assume $n = 29$, as the four non-respondents were taken out of the sample. Two of the non-respondents reported using HWA in 100% of the vacancies, so it is possible that they did not change their reliance on HWA. The two others reported advertising 50% and 0% of their vacancies in the HWA, yet 4 out of 5 employers who use the internet and use HWA in less than 50% of their vacancies and answered this question, reported no change in their use of HWA. So, it can not be assumed that these two reduced their use of HWA.
9. While the Job Openings and Labor Turnover Survey provides a direct measurement of vacancies, the series is too new to be used in time series studies. In addition, the data available are for the US as a whole and four regions encompassing several states and hence can not be used for studies at the state or local level.