The monetary benefits and costs of hiring supported employees: A pilot study

Robert Evert Cimera*

Educational Foundations and Special Services, Kent State University, Kent, OH, USA

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Abstract. This paper illustrates the implementation of a new cost-accounting methodology that can be used to measure the monetary outcomes of supported employment from the perspective of employers. The methodology attempts to ascertain which “type” of employee (i.e., workers with disabilities versus workers without disabilities) is most economical for employers to hire. Avenues for future research are also presented.

Keywords: Supported employment, monetary outcomes, employer perspective

1. Introduction

Over the past decade, several authors have indicated that the supported employment movement has failed to live up to its potential [2,8,11,13]. They have observed that the rate at which supported employees are placed within the community has slowed substantially since the mid-1990s [13]. They also point out that there are presently more people in segregated placements (e.g., sheltered workshops, “day programming”, etc.) than at any other time in the recent past [2,11]. Finally, and perhaps most importantly, funding for non-community based programs continues to outpace funding for supported employment [11].

Why has a program that has been repeatedly shown to be beneficial to both individuals with disabilities and taxpayers [4] failed to thrive?

One potential explanation is that employers are reluctant to hire workers with disabilities [9,12]. That is, they are afraid that supported employees will require extensive training, constant supervision, and expensive accommodations [7,10]. In other words, employers may believe that hiring workers with disabilities will cost more than hiring traditional workers (i.e., individuals without disabilities). Until these fears are addressed, it is likely that few employers will be willing to hire supported employees.

Although there are many studies that have examined the monetary benefits and costs of supported employment from the perspective of the work, taxpayer, and society [1,4,14,15], there unfortunately has been no systematic attempt to investigate supported employment from the perspective of employers. So it is presently unknown whether hiring supported employees is within the economic interests of businesses.

Perhaps the reason for this critical void in the supported employment literature is that, up until recently, there hasn’t been a research methodology that could address the complicated monetary concerns of employers. Past methodologies, such as cost-efficiency and cost-effectiveness analyses, do not simultaneously address the monetary benefits and costs generated by supported employees (i.e., cost-efficiency) as well as whether the net costs of supported employees exceed those from traditional workers (i.e., cost-effectiveness) [5,6].

The purpose of this paper is to illustrate the matched-sample cost-accounting methodology that was proposed in a previous article [6]. This methodology not only examines the monetary benefits and costs that employers experience as a result of hiring supported em-
ployees, but it also determines whether these benefits and costs exceed those generated by workers without disabilities.

2. Methods

2.1. Participants

The author approached coordinators of a supported employment program regarding participation in a study designed to explore the monetary costs and benefits associated with hiring workers with disabilities. The coordinators identified an employer and three supported employees who expressed willingness to collaborate on the project.

The employer ran a typical McDonald’s restaurant located near a busy strip mall. For several years, he had hired workers from the local supported employment agency as well as allowed his business to be a training and evaluation site for students from high school transition programs. At the time of the initial contact for this pilot-study, he had three supported employees working for him.

The supported employees all had mild mental retardation; two had recently graduated from a high school special education transition program through which they job sampled positions within the community. All of the supported employees were informed of the purpose of the study and were willing to give the researcher access to the needed information (e.g., time cards, work schedules, etc.). Each of the supported employees and their essential job duties are described below.

2.1.1. Supported employee #1

“Adam” was 20 years old when he was hired as a cook and “kitchen help.” His responsibilities initially included preparing hamburger buns, stocking supplies, and cleaning food preparation areas. After eleven weeks, Adam also began cooking French fries and various sandwiches. At the conclusion of this study, he was working an average of 23.1 hours per week.

2.1.2. Supported employee #2

“Bart” was 18 years old when he was hired as “lobby staff.” His responsibilities included cleaning tables, sweeping and mopping the lobby and dining areas, cleaning the bathrooms, and taking the trash out. Throughout his tenure, he worked an average 29.8 hours per week.

2.1.3. Supported employee #3

“Calvin” was 31 years old when he was hired as both “lobby staff” and for an “outdoor maintenance” position. In addition to performing the same duties as Bart, Calvin also cleaned the parking lot and brought trash to the dumpster behind the restaurant. Throughout his tenure, he worked an average of 14.5 hours per week.

As part of the matched-sample cost-accounting methodology outline in Cimera [6], supported employees must be “matched” to non-disabled workers who performed comparable job functions. The monetary outcomes associated with the non-disabled, or “matched”, employees are then compared to those associated with the supported employees.

After being informed of the purpose of the study, three non-disabled who were willing to participate were identified. They are described below

2.1.4. Matched employee #1

“Zach” was 16 at the time he was hired to be a cook. Although he mainly prepared hamburgers, he also on occasion cooked French fries. During his tenure at McDonald’s, he worked an average of 14.7 hours per week. He was Adam’s matched employee.

2.1.5. Matched employee #2

“Yedda” was 67 years old at the time she was hired. In addition to cleaning the lobby and bathrooms, as Bart did, she sometimes made coffee and brought food to customers waiting in the lobby. During her tenure at McDonald’s, she worked an average of 9.2 hours per week. She was Bart’s matched employee.

2.1.6. Matched employee #3

“Xenos” was 17 when he was hired by McDonald’s. In addition to performing outdoor maintenance, he also worked briefly as a cook and cashier. During his tenure at McDonald’s, he worked an average of 19.1 hours per week. He is Calvin’s matched employee.

3. Variables

Cimera [6] outlines seven variables that could impact the monetary outcomes experienced by employers. Each of these is discussed below.
3.1. Supervision

Supervision is the process by which employers provide support to employees as they learn their essential job functions [6]. It is also a way for employers to monitor the employee’s productivity, work quality, and behavior.

The costs of supervision lay primarily in the salary of the person supervising the employee. If an employer can hire employees that require less supervision, the salary for the person who would traditionally be providing the supervision could then be reallocated or saved. In other words, it is in the employer’s best monetary interests to hire employees who can learn a task quickly and then not require extensive monitoring.

To determine the hourly costs of supervising supported and matched employees, the staffing patterns when each employee worked were examined over five, one-week intervals throughout the employees’ tenure. In this way, the average number of workers and supervisors were identified for each hour that the supported and matched employees worked. The hourly salary (plus fringe benefits, when appropriate) of the supervisor(s) was calculated and divided by the number of workers being supervised, thus producing an average supervisory cost per worker.

3.2. Reliability

When an employee shows up late for work, calls in sick, or otherwise does not arrive at work when scheduled, employers are likely to incur certain costs. For instance, the employer might have to spend time attempting to find a replacement employee. They may also have to pay an alternate employee overtime that otherwise would not have been paid had the unreliable employee been present.

To calculate the costs of unreliability, the employer identified the number of times each employee was late or didn’t show up to work. When the employee was replaced by another employee who earned a higher hourly wage, the difference in expenditures was noted by the employer. The employer also estimated the amount of time required to obtain a replacement employee. This time was multiplied by the hourly wage of the person attempting to find a replacement.

3.3. Employee turnover

Whenever an employee quits, gets fired, or otherwise leaves a position, employers sustains various costs. For example, the employer may post a help wanted ad in the local newspaper. He or she then must review applications, check references, and interview applicants. All of which takes time away from other, more productive, activities. So it is to the advantage of an employer to hire workers who are going to maintain their employment for the longest period of time possible.

The cost of employee turnover can be calculated by adding up the expenditures associate with the job filling process. These expenditures are then factored by the length of time an employee maintains their position. For example, if a supported employee maintains his job for fifteen months and the matched employee keeps her job for only three months, the employer would have to replace the matched employee four times during the supported employee’s tenure. If it cost employers $1,000 every time they have to conduct an applicant search, the employer would save $4,000 by hiring the supported employees.

3.4. Worker’s compensation and health insurance claims

When employees get hurt on the job and file worker’s compensation claims, the premiums for the worker’s compensation insurance are likely to increase. This increase in premiums can be directly attributed to the workers who file claims.

The same is true with health insurance. If an employee files repeated or extraordinary expensive claims, the employer’s insurance premiums will increase. As with worker’s compensation, these increases can be directly attributed to the employees who file such claims. If multiple people file claims during the period that the increase in premiums occur, the net increase can be divided by the number of claims each person filed.

3.5. Tax credits

There are several Federal and State programs (e.g., Targeted Jobs Tax Credits) designed to improve the employment rates of various non-traditional populations, such as workers who have disabilities. With such programs, employers are offered tax credits for hiring qualifying workers. These tax credits could be a benefit to employers who hire supported employees.
3.6. Accommodations

Not all accommodations will result in a monetary cost to employers. For instance, when job coaches develop “picture checklists” that help supported employees remember what tasks to perform, the employer doesn’t incur any costs at all. Further, accommodations aren’t only furnished to workers with disabilities. Many individuals without disabilities receive accommodations from their employers.

When an employee receives an accommodation that results in a cost to the employer (e.g., purchasing adaptive equipment, modification to the worksite, etc.), the total cost of the accommodations can be divided by the length of time the accommodation is utilized by the employee. If multiple employees utilize the accommodation, the costs can be divided by the number of workers.

4. Results

4.1. Variables

4.1.1. Supervision

Staffing patterns were examined for each employee over five, one-week, periods. Each hour that the employee worked, three variables were recorded: (i) the number of other coworkers working at the same time, (ii) the number of supervisors (i.e., managers, assistant managers, and shift leaders) working at the same time, and (iii) the hourly cost of each supervisor (e.g., their hourly wage, fringe benefits, etc.).

To determine each employee’s supervision costs, the gross supervision costs (i.e., the combined hourly compensation of all supervisors) was divided by the number of workers present. For example, over the five, one-week, periods, Adam worked with an average of 13.8 coworkers each hour that he worked. Moreover, the average hourly cost of the supervision was $19.26 per hour. The hourly cost of supervision was then divided by the total number of workers present ($29.26/14.8 = $1.98). In other words, on average, Adam incurred $1.98 of supervisory costs per hour.

His matched, non-disabled, employee (Zach), on the other hand, averaged working with 16.1 coworkers each hour that he worked during which time the average cost of supervision was $34.12. Thus, Zach incurred $2.00 per hour of supervision costs (i.e., $34.12/17.1 = $2.00). In other words, hiring Zach cost the employer $0.02 per hour more in supervision than hiring Adam. Data for the other supported and matched employees are presented in Table 1.

4.1.2. Reliability

As discussed earlier, if an employee is frequently late or misses work, the employer must find a suitable replacement. This takes time away from other, more productive, activities. Further, the replacement employee may be forced to work overtime to cover for the unreliable employee. The increase in wages paid (i.e., the unreliable employee’s hourly salary minus the salary of the replacement employee) is a cost to the employer resulting from hiring an unreliable employee. So too is the time that it takes for an employer to find a replacement. This cost was calculated by factoring the amount of time the employer had to look for a replacement by the hourly compensation earned by the person looking for the replacement.

During the course of this pilot-study, unreliability was rarely a cost to the employer. For example, during the five, one-week data collection periods, Adam was late to work three times and never missed a full day. For each of the three times that he was late, the employer simply asked somebody else to stay until Adam arrived. In each case, there was no overtime paid so the wage differential between Adam and the replacement employee was not a consideration. Further, given that the employer simply asked a worker who was near-at-hand to remain for a few minutes until Adam arrived, the cost in employer time was minimal.
Table 2
The reliability of supported (SE) and matched employees (ME)

<table>
<thead>
<tr>
<th>Employee</th>
<th>Number of times late to work</th>
<th>Number of times didn’t show</th>
<th>Cost of unreliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE #1: Adam</td>
<td>3</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>ME #1: Zach</td>
<td>3</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td>SE #2: Bart</td>
<td>0</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>ME #2: Yedda</td>
<td>6</td>
<td>1</td>
<td>None</td>
</tr>
<tr>
<td>SE #3: Calvin</td>
<td>0</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td>ME #3: Xenos</td>
<td>11</td>
<td>6</td>
<td>$5.46</td>
</tr>
</tbody>
</table>

In many situations, employees who called in sick or were late to work were never officially replaced. For example, during the five, one-week data collection periods, Yedda was late six times. In five of these six times, nobody replaced her. Dirty tables and trays simply accumulated until she arrived.

The only instances in which unreliability generated a noticeable cost for the employer involved Xenos. During the five weeks of data collection, Xenos missed work six times and was late eleven times. For three of the six times that Xenos called in sick or otherwise did not show up, the employer spent considerable time trying to find a replacement worker (e.g., calling other workers who were scheduled to be off on those particular days).

For these three times, the employer reported spending a total of 45 minutes trying to locate a replacement for Xenos’ shifts. The person responsible for trying to locate the replacement worker earned $7.28 per hour (with no fringe benefits). Therefore the cost of Xenos’ three absences was $5.46 ($7.28 × 0.75).

Table 2 presents the number of time each employee was late or missed work during the five, one-week data collection periods. Although Xenos was the only employee to generate a cost to the employer as the result of being unreliable, the pattern of behavior indicated in Table 2 may prove interesting for potential employers of supported employees.

4.1.3. Employee turnover

Employers experience various costs when trying to fill vacant positions. For example, the employer might have to pay for a help wanted ad in the local newspaper. Therefore, it is to the advantage of employers to hire workers who stay in their positions for as long as possible.

The employer in the present study did not post ads to fill positions. He simply placed a “help wanted” sign in lobby and collected applications on an ongoing basis. However, he did incur significant costs when reviewing applications, checking references, and interviewing applicants. This cost could be estimated by multiplying the amount of time spent performing such activities by the hourly compensation paid to the person(s) conducting the reviews, reference checks, and interviews.

In the case of the present employer, multiple people were involved in the hiring process. For instance, all managers (e.g., full managers, assistant managers, etc.) of the restaurant reviewed applications and at least two managers attended most interviews. The average total compensation paid per hour to the individuals involved in the hiring process was $15.30 (including, when appropriate, fringe benefits).

For a typical applicant search, three managers spent an average of 45 minutes each reviewing applications for a combined total of 2 1/4 hours. One manager spent approximately 2 hours calling references. And an average of two and a half managers each spent 4 1/4 hours interviewing potential applicants (for a total of 10.63 hours). Therefore, a combined total of 14.88 hours were expended trying to hire new employees. At $15.30 per hour, the employer averaged spending $227.66 for each successful worker search.

To calculate the monetary outcomes resulting from employment tenure, the length of time the supported and matched employees were employed were compared. The difference was then factored by the cost of each search conducted by the employer. For example, Bart worked at McDonald’s for 413 days. His matched employee, Yedda, worked for 133 days. Since Bart worked 3.11 times longer than did Yedda, the employer would have had to hire 3.11 workers without disabil-
Employer’s monetary benefits (Costs) from hiring supported employees

<table>
<thead>
<tr>
<th>Cost-accounting variables</th>
<th>Adam</th>
<th>Bart</th>
<th>Calvin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervision</td>
<td>$64.15</td>
<td>($597.79)</td>
<td>($128.38)</td>
</tr>
<tr>
<td>Employee turnover</td>
<td>$828.68</td>
<td>$708.02</td>
<td>$805.92</td>
</tr>
<tr>
<td>Reliability</td>
<td>N/A</td>
<td>N/A</td>
<td>$14.20</td>
</tr>
<tr>
<td>Workers’ compensation and health insurance</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Accommodations</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Net benefit to employer</td>
<td>$892.83</td>
<td>$114.59</td>
<td>$691.74</td>
</tr>
</tbody>
</table>

4.1.4. Worker’s compensation and health insurance

No employees in the present study, either supported or matched, were covered under the employer’s health insurance. Moreover, none of the participating employees filed worker’s compensation claims. Consequently, these accounting variables did not result in benefits or costs to the employer.

4.1.5. Tax credits

The employer in the present study did not apply for any tax credits as a consequence of hiring the supported employees. Therefore, this cost-accounting variable did not enter into this study’s analysis.

4.1.6. Accommodations

Several accommodations were given to the supported employees. For example, Adam’s job coach developed a task analysis featuring pictures of each step in how to “dress” a hamburger bun (i.e., how much ketchup, mustard, pickles, and onions to put on each bun). Further, Bart was given a flexible schedule that matched the city bus schedule. This enabled him to take the bus to and from work. However, none of the accommodations given to the supported employees resulted in a monetary expenditure from the employers’ perspective.

4.2. Employer outcomes

Below are the monetary outcomes generated by each supported employee compared to their non-disabled coworker. Table 4 presents a summary of the findings.

4.2.1. Adam versus Zach

With regard to supervision, Adam was cheaper to supervise than his non-disabled, matched coworker – Zach. Adam saved his employer $0.02 in supervisory costs every hour that he worked. Given that he worked an average of 23.1 hours per week for 138.86 weeks, the total savings to the employer was $64.15.

Adam also remained employed significantly longer than Zach (972 days versus 267 days). In other words, the employer would have replaced Zach 3.64 times during Adam’s tenure at McDonald’s. Since each search for a replacement cost $277.66, Adam saved his employer $828.68.

Neither Adam nor Zach made any worker’s compensation claims or were covered by their employer’s health insurance. Further, they were given no accommodations that produced a cost to the employer. In the final analysis, hiring the supported employee (Adam) resulted in a savings to the employer of $892.83.

4.2.2. Bart versus Yedda

When compared to his non-disabled, matched coworker (Yedda), Bart cost his employer $0.34 in supervisory expenditures every hour that he worked. He worked an average of 29.8 hours per week for 59 weeks for a total cost of $597.79. However, Bart maintained his job 3.11 times longer than did Yedda (413 days versus 133 days). This resulted in a savings of $708.02 to his employer in replacement costs. His net benefit to his employer was thus $114.59.

4.2.3. Calvin versus Xenos

As with Bart, Calvin cost his employer more in supervisory expenditures than did his matched, non-disabled coworker (Xenos). Specifically, Calvin cost his employer $0.19 per hour. Given that he worked an average of 14.5 hours a week for 46.6 weeks, the total cost to his employer was $128.38.

However, also as with Bart, Calvin maintained his employment considerably longer than did Xenos. More precisely, Calvin was employed at McDonald’s for 326 days, compared to Xenos who was employed only 92
days (3.54 times longer). Consequently, he saved his employer $805.92 in replacement costs.

Moreover, Calvin was considerably more reliable than was Xenos, who was late to work 11 times and didn’t show up to work 6 times during the five, one-week data collection periods. His employer estimated that this unreliability cost $5.46 (e.g., time spent trying to find an alternative employee to work his shifts). Assuming that this pattern of behavior was constant throughout the 13.1 weeks that he worked at McDonald’s, Calvin’s unreliability actually cost his employer $14.20, costs that the supported employee did not incur.

Taken in total, Calvin was, economically, a better employee to hire than Xenos. He returned to his employer a net benefit of $691.74.

5. Discussion

This paper illustrates the uses of the matched-sample, cost-accounting methodology outline in a previous work [6]. Although the sample size presented here is much too small for conclusions to be drawn to supported employees in general, it did supply some surprising findings that could be examined in future, larger, analyses.

For example, in all three cases, supported employees produced greater net benefits to employers than did their non-disabled coworkers. If this holds true for the majority of supported employees, these findings will undoubtedly be of interest to employers who are reluctant to hire workers with disabilities.

Moreover, all of the participating supported employees maintained their employment at least three times as long as did their non-disabled peers to whom they were matched. Indeed, one supported employee (Adam) was still employed at McDonald’s at the conclusion of this investigation. Given that employee retention saves employers expenditures associated with hiring new employees, this outcome alone merits further investigation.

Finally, in every case, supported employees were more reliable employees than were their non-disabled coworkers. In fact, of the supported employees, only Adam was ever late for work. Additionally, each time he showed up late, it was only by a few minutes. Each of the non-supported employees, however, was late at least three times and failed to show up for work at least one day. Xenos, in particular, was late nearly every day he attended work and failed to show up four days in a row prior to getting fired. Although such unreliable behavior produced little monetary costs in the present study, it did result in significant non-monetary outcomes for the employer (e.g. increased frustration).

It should be noted that one of the reasons why supported employees produced a positive net benefit for their employers was the group to which they were being compared. Traditionally, fast food establishments, such as McDonald’s, rely on teenagers and older adults for the brunt of their non-salaried workforce. Employers often view these workers as “transitory”; that is, employers do not expect them to remain employed for long periods of time. For instance, the employer participating in this study estimated that his average, non-management, hourly employees retained their positions for approximately two to three months before leaving. Past studies support this estimation [3]. To put it bluntly, very few people who are hired to cook hamburgers or clean lobbies see their employment as their long-term career choice.

Supported employees, on the other hand, appear to be more willing to work in such positions for extended periods of time. If this is the case nationally, thousands of employers might begin to see supported employees as being viable alternatives to non-disabled workers. Thus increasing the success of supported employees and supported employment overall.

5.1. Limitations

As stated earlier, the present study was only intended as an illustration of how the match-sample cost-accounting methodology outline in a previous paper [6] could be utilized. Due to its small sample size, very little (if anything) can be extrapolated to the supported employment population as a whole.

Moreover, as with any economic analysis, the methodology itself is based upon several assumptions and contains many important limitations. For instance, when calculating costs for supervision, it is assumed that supervisors are supervising all employees equally. This may not be the case. It may be that one employee requires much more supervision than all other employees combined; in such a situation that employee should incur the majority of the resulting costs.

Moreover, the proposed methodology only investigates the monetary benefits and costs of hiring workers. Non-monetary outcomes, such as frustration resulting from unreliable workers, are not factored into the analyses even though they may sway employers to hire one group of employees over another.
5.2. Future areas of research

The successful testing of the matched-sample, cost-accounting methodology has certainly opened up a wide range of potentially critical research opportunities. For instance, first and foremost, future research needs to examine the issue of the monetary benefits and costs employers incur when they hire supported employees. Only by having a much larger sample size, or numerous replications of the present study, can the question, “Should employers hire supported employees?” be answered.

Future research should also examine the effects that certain types and severities of disabilities have on the monetary outcomes generated by supported employees. The participants in the present study were diagnosed with mild mental retardation. Perhaps, the results would have been different if they had severe mental retardation or multiple physical impairments.

Finally, future research should investigate whether various training strategies (e.g., “natural supports”), pre-vocational programs (e.g., sheltered workshops, high school transition programs, etc.), or models of supported employment (e.g., individual, enclaves, mobile work crews, etc.) influence the monetary outcomes experienced by employers.

6. Conclusions

Over the past decade, numerous authors have indicated that supported employment has not been living up to its potential [2,8,11,13]. They point out that the rate at which individuals are being served in the community has slowed considerably since the late-1990s [13]. Further, more people are currently in segregated placements than at any other time in the recent past [2,11]. Perhaps most importantly, funding to non-community based programs continues to outpace funding for supported employment [11].

The question that often arises is, “Why has the momentum of the supported employment movement slowed?” The answer may lie with employers.

Many employers are worried that hiring workers with disabilities will cost them money, either by demanding expensive accommodations, requiring extensive training and supervision, or filing numerous health insurance claims [7,10]. If employers are unwilling to hire supported employees, supported employment is doomed to fail. Therefore, these concerns of employers need to be addressed before supported employment can live up to its originally stated potential.

Unfortunately, up until the present study, there has been no systematic effort to investigate the monetary benefits and costs of supported employment from the perspective of employers. The reason for this is likely to involve the fact that there hasn’t been a methodology to conduct such analyses. Hopefully, with the dissemination of the matched-sample, cost-accounting method described here, greater attention will be focused upon this critical issue.

References


