

# The cost of supported employment in Wisconsin (FY 2002 – FY 2005)

Robert Evert Cimera  
Kent State University, Kent, OH, USA  
E-mail: rcimera@kent.edu

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**Abstract.** This study investigated the costs of supported employment in Wisconsin over a four-year period (FY 2002 – FY2005). Findings suggest that the average annual per capita cost incurred by Vocational Rehabilitation rose 61.7% over the duration of the study. Further, this increase was not influenced by the supported employees' disabling condition or its severity.

Keywords: Supported employment, costs, cost-effectiveness, taxpayers

## 1. Introduction

It has long been argued that supported employment is a better investment than sheltered workshops and other segregated programs. In fact, over the years numerous articles and studies have indicated almost unanimously that supported employment generates greater monetary benefits than monetary costs.

Specifically, reviews of the literature published in 2000, found that over twenty studies have explored the monetary costs and benefits resulting from supported employment [6,12]. These literature reviews reported that 83% of studies concluded supported employment was cost-efficient from the perspective of the worker [6]. That is to say, the majority of available data indicated that workers with disabilities obtained more monetary benefits than monetary costs as a result of being in supported employment (cf. [1,3,7,11,27,29]).

The data regarding the economic viability of supported employment from the perspective of taxpayers was a little less definitive [6,12]. Reviews of the literature determined that 46% of the studies published since 1980 concluded supported employment produced greater monetary benefits to the taxpayer than monetary costs (cf. [8,9,17,23]), 39% indicated that initial monetary costs exceeded initial monetary benefits (cf. [18,20,22,25]), and the remaining 15% of the studies found that supported employment was sometimes

cost-efficient and sometimes cost-inefficient depending upon the population being served (cf. [15,29]). Conclusions drawn from this literature base as a whole indicate that, over time (e.g., after four-years of operation), supported employment is cost-efficient from the perspective of taxpayers [6,12,17].

The assertions that supported employment advocates have been making over the past twenty-five years thus appear to be accurate. Supported employment programs are good investments for public funds [2,10,16,24,28]. Or are they? Recent ancillary evidence suggests that supported employment may no longer be the lucrative investment that many have claimed it to be and that the cost-differential between supported employment and sheltered workshops may no longer exist [4].

In their 2004 article, *Adult Day Programs versus Supported Employment (1988–2002): Spending and Service Practices of Mental Retardation and Developmental Disabilities State Agencies*, Rusch and Braddock [21] presented longitudinal data on the federal funding of, and enrollment in, supported employment programs throughout the United States. From these data, the authors concluded that: 1. supported employment is under-funded compared to segregated options, and 2. “the growth of supported employment has all but stalled” [21, p. 2]. A re-aggregation of their data may present some explanations for these findings.

According to Rusch and Braddock [21], there were approximately 97,000 supported employees being served in the United States in 1998 at a cost to the federal government of \$35 million. This translates to a per capita annual cost of \$360.82. By 2002, the number of supported employees and amount of federal funding increased to 118,000 and \$108 million, respectively, or a per capita annual cost of \$915.25. Thus, in four years, the costs of supported employment from the perspective of the federal government rose by nearly 154%.

Also according to the data presented by Rusch and Braddock [21], in 1998 there were approximately 490,000 individuals being served in segregated programs at a cost to the federal government of \$517 million. This is a per capita annual expenditure of \$1,055.10. By 2002, there were 483,000 segregated employees accruing a total cost of \$488 million (i.e., \$1,010.35 per person).

In other words, as the average annual per capita cost of supported employment to the federal government increased dramatically from 1998 to 2002 (e.g., \$360.82 to \$915.25), the per capita cost of sheltered placements declined 4.2% (e.g., \$1,055.10 to \$1,010.35). Therefore, according to Rusch and Braddock's 2002 figures, the average supported employee was only \$95.10 cheaper per year to serve from the perspective of the federal government than the average sheltered employee.

However, this is only one analysis based upon very indirect data. Additionally, it does not take into consideration that other, non-federal, dollars are being spent on supported and sheltered employment. It may very well be that once all disbursements are tabulated, supported employment will continue to be cheaper than sheltered programs. Moreover, we may find that its annual per capita expenditures are actually decreasing over time.

Further, even if the costs of supported employment *are* increasing, the costs extrapolated from Rusch and Braddock [21] are too general to explain why. For instance, perhaps supported employment programs are beginning to serve greater numbers of individuals with severe (and potentially costly) disabilities; whereas, sheltered workshops may be catering to individuals with fewer (and potentially cheaper) needs. This would explain the increase in per capita costs of supported employment and decrease costs of sheltered workshops described above. Unfortunately, without demographic and individualized cost data, this potential explanation cannot be explored.

Another source of information that indirectly suggests supported employment's costs are increasing comes from <http://www.statedata.info/> which gives internet users access to, among other data sources, the Rehabilitation Services Administration's 911 database. This database contains the cost of successful case closures (i.e., status 26) for each state as well as the nation as a whole.

According to the RSA-911 database located on <http://www.statedata.info/>, the average cost per successful case closure in 1991 was \$2,785. By 2004, this figure was \$4,072, an increase of 46.2%. Interestingly, the average costs per successful case closure in Wisconsin in 1991 and 2004 were \$2,854 and \$6,413, respectively. This is an increase of 125%.

Granted, these figures include *all* successful case closures and not just those involving supported employment. However, it leads one to wonder, are the costs of supported employment increasing? If they are, the competitive employment futures of tens of thousands of individuals with disabilities may be at stake. Such a finding may prompt policymakers to allocate still less federal funding to supported employment. Even if levels of funding remain constant, increased costs will result in fewer supported employees being placed in the community. Either way, the future of supported employment and individuals with disabilities will be adversely affected.

The purpose of the current study is to expand upon the discussion presented earlier by investigating the costs of supported employment to taxpayers (via Vocational Rehabilitation) over an extended period of time (e.g., four-years). Costs will be explored in relation to the supported employee's disability (e.g., mental retardation, sensory impairments, TBI) as well as the severity of these conditions (i.e., "significant" versus "most significant"). Findings and implications will also be discussed.

## 2. Methods

Data on every supported employee funded through Vocational Rehabilitation in Wisconsin from FY 2002 to FY 2005 was obtained from Wisconsin's Department of Workforce Development. Data comprising the present study included:

1. A non-personal identification number (e.g., case ID number) for each supported employee,

2. An indication of the supported employee's primary disability (e.g., mobility limitation, mental retardation, deafness) and its cause, if known (e.g., accident, congenital defect, illness, etc.),
3. The perceived severity of each person's disability (i.e., "most significant" versus "significant") as determined by their VR counselor during the intake process, and
4. The total cost of all employment-related services paid for by VR during each fiscal quarter the individual was enrolled in supported employment.

The financial data furnished by the Department of Workforce Development included payments for all services provided by Vocational Rehabilitation during the fiscal quarter. They did not include other supported employment costs and services (e.g., follow-along) that are provided by non-VR funding sources (e.g., Department of Mental Health). Consequently, the data comprising the present study do not represent the complete cost of supported employment, but rather the costs accrued between in-take and case closure by VR.

For the sake of simplicity, the fifty-six disabling conditions and etiologies coded by VR counselors were collapsed into nine categories: (i) *sensory impairments*, (ii) *physical and mobility limitations*, (iii) *other health impairments* (e.g., cancer, blood disorders, asthma), (iv) *mental retardation*, (v) *traumatic brain injuries*, (vi) *other learning difficulties* not caused by mental retardation, autism, or TBI (e.g., specific learning disabilities, attention disorders, etc.), (vii) *mental illnesses* (e.g., depression, schizophrenia, anxiety disorders), (viii) *communication difficulties* not caused by sensory impairments, mental retardation, or autism (e.g., speech impairments resulting from strokes), and (ix) *autism spectrum disorders*.

The severity of each person's disability was assessed at the time of their application for services. VR counselors classified each person's disability as being either "significant" or "most significant." *Significant disabilities* (also referred to as "category two" disabilities) involved conditions that produced substantial limitations in at least one functional area (e.g., mobility, self-care, communication). *Most significant disabilities* (or "category one" disabilities) involved conditions that produced substantial limitations in at least three functional areas.

Complete data were obtained on 1,084 supported employees being served by VR in FY 2002, 1,178 supported employees in FY 2003, 1,258 supported employees in FY 2004, and 1,150 supported employees in FY 2005. Some participants received services over

multiple years. The total number of individual supported employees examined over the four-year period was 2,271.

Because the value of the dollar varies over time (e.g., \$100 in FY 1970 does not have the same value as \$100 in FY 2000), all costs in the present study had to be converted to identical units (i.e., dollars in FY 2005). This was done by taking the monetary value of services and multiplying it by the consumers' price index (CPI) of the base year (i.e., FY 2005). The resulting number was then divided by the CPI of the year that the dollar value was originally designated [14]. For example, in order to convert \$100 worth of services obtained in FY 1970 to FY 2005 dollars, \$100 would be multiplied by FY 2005's CPI (i.e., 195.3). The product (i.e., 19,530) would then be divided by the CPI of FY 1970 (i.e., 38.8). The result indicates that \$100 of FY 1970 dollars is the equivalent of \$503.35 in FY 2005 dollars. The CPIs that were utilized for these computations were annual averages obtained by the US Bureau of Labor Statistics. They can be found at [www.bls.gov/home.htm](http://www.bls.gov/home.htm).

### 3. Results

As can be seen in Fig. 1, the average cost to VR per supported employee in FY 2002 was \$4,553. This number increased 8.7% to \$4,950 in FY 2003 and then dropped 44.2% to \$2,760 in FY 2004. By FY 2005, the average cost to VR per supported employee rose approximately 166.8% to \$7,364. Examined from FY 2002 to FY 2005, the average per capita cost increased 61.7% in four years. Figure 2 presents these data by fiscal quarters.

As indicated in Fig. 3, the increase in costs depicted earlier is evident across disabling conditions. In fact, with the exception of individuals with autism and mental illnesses, all disability groups experienced the same cost-trends. That is, their costs increased from FY 2002 to FY 2003, decreased from FY 2003 to FY 2004, and then rose to record highs in FY 2005. Costs associated with individuals who had mental illnesses and autism decreased in FY 2003 and FY 2004 before more than doubling in FY 2005.

Finally, as indicated in Fig. 4, individuals who were classified by their VR counselors as having a "most significant" disability were more expensive to serve in three out of the four periods (i.e., FY 2002, FY 2004, and FY 2005) than individuals classified as less significantly disabled. However, these cost differentials

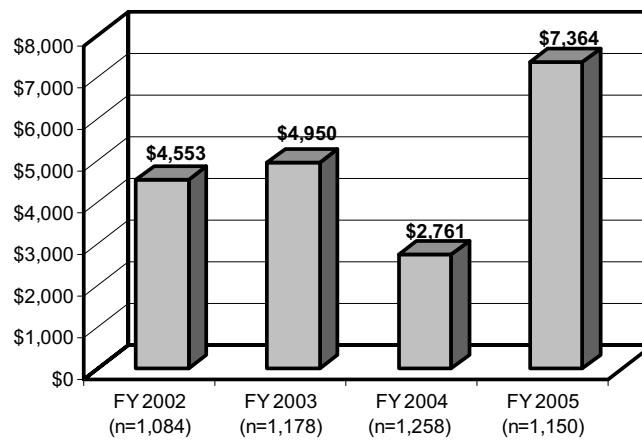


Fig. 1. The Average Annual Cost to Vocational Rehabilitation per Supported Employee.

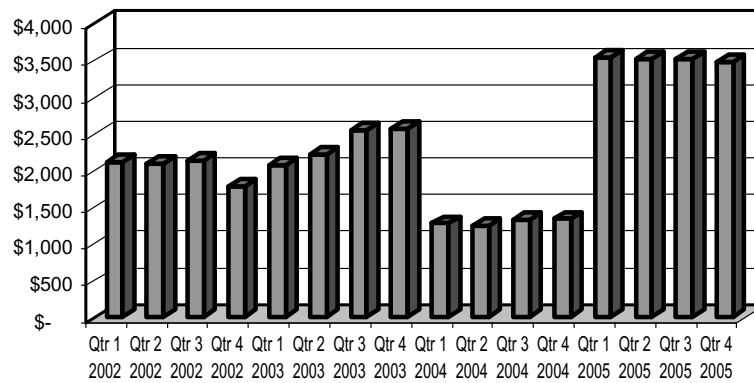


Fig. 2. The Average Quarterly Cost to Vocational Rehabilitation per Supported Employee.

were minimal across all four years (i.e., ranging from \$736 to -\$438). Further, both categories of supported employees experienced the same trends discussed above; that is, their costs increased from FY 2002 to FY 2003, decreased in FY 2004, and then increased to unprecedented highs in FY 2005.

#### 4. Discussion

There are at least three conclusions that can be drawn from this study's findings. The first is that the costs of the services provided to supported employees by Vocational Rehabilitation in Wisconsin from FY 2002 through FY 2005 appear to be increasing. More precisely, in FY 2002, the average supported employee accrued services costing VR \$4,553. This figure rose to \$4,950 in FY 2003 (an increase of 8.7%) and then dropped to \$2,761 in FY 2004 (a decrease of 44.2%) before increasing by 166.8% to \$7,364 in FY 2005. Ex-

amined in total, the costs of services VR provided supported employees increased by 61.7% from FY 2002 to FY 2005.

The second conclusion is that, although individuals with the most severe disabilities generated greater expenditures than individuals with milder disabilities in three out of four years, severity of condition did not seem to significantly influence costs incurred. At the widest point of disparity (i.e., FY 2005), individuals with more significant disabilities were only \$736 more expensive to serve per year than their less disabled peers (i.e., \$61 per month). Conversely, in FY 2003, they were actually \$438 cheaper (i.e., \$36.50 per month).

So, despite what other authors have noted in past benefit-cost analyses (cf. [1,5,13,26]), supported employees with severe disabilities sustained relatively comparable costs to VR as supported employees with milder disabilities. This finding is critical given the repeated calls for supported employment to serve individuals with more pronounced needs [10,16,19,28].

	FY 2002	FY 2003	FY 2004	FY 2005
<i>Sensory Impairments</i>	\$3,562 (37)	\$8,690 (43)	\$4,131 (47)	\$9,593 (40)
<i>Mental Retardation</i>	\$4,909 (504)	\$4,883 (528)	\$2,835 (547)	\$8,225 (503)
<i>TBI</i>	\$3,484 (46)	\$5,399 (64)	\$3,100 (66)	\$7,651 (65)
<i>Physical and Mobility Limitations</i>	\$5,415 (119)	\$6,402 (122)	\$2,412 (128)	\$7,420 (109)
<i>Autism Spectrum Disorders</i>	\$7,088 (18)	\$3,882 (35)	\$3,238 (55)	\$6,705 (46)
<i>Other Learning Difficulties</i>	\$3,400 (75)	\$4,842 (97)	\$2,876 (111)	\$6,571 (108)
<i>Other Health Impairments</i>	\$2,394 (2)	\$2,841 (5)	\$1,708 (7)	\$6,331 (8)
<i>Communication Difficulties</i>	\$1,962 (10)	\$5,175 (15)	\$2,492 (16)	\$5,989 (27)
<i>Mental Illnesses</i>	\$4,095 (273)	\$3,940 (269)	\$2,329 (281)	\$5,814 (244)
<i>Grand Average</i>	\$4,553	\$4,950	\$2,761	\$7,364
<i>(Sample Size)</i>	(1,080)	(1,178)	(1,258)	(1,150)

Fig. 3. Average Annual Cost to Vocational Rehabilitation By Disabling Condition.

The final conclusion that can be drawn from the presented data is that the cost-trend noted above (i.e., an increase from FY 2002 to FY 2003, followed by a decrease in 2004, and then a considerable increase in FY 2005) was not attributed to a change in the population being served. Although the proportion of individuals with “most significant” disabilities being served increased slightly each year (i.e., from 78.9% in FY 2002 to 80.2% in FY 2003, 81.9% in FY 2004, and 82.4% in FY 2005), these small variations couldn’t have been responsible for the sizable increase in average costs.

For instance, had the percentage of individuals with “most significant” disabilities remained constant from FY 2002 to FY 2005, the average annual per capita cost of supported employment in FY 2005 would have been \$7,341, rather than \$7,364. Thus, only \$23 of the \$2,811 cost differential that occurred between FY 2002 and FY 2005 (i.e., \$4,553 in FY 2002 versus \$7,364 in

FY 2005) would have been attributable to changes in the population being served.

Although the present study has a larger sample size than any cost-efficiency study reviewed by previous authors [6,12], and had a longer duration than most, it has several fundamental limitations. Chief among them is that the data was gathered from only one state (i.e., Wisconsin). Given that funding mechanisms and rates of reimbursement vary from location to location, it is very likely that the results would have differed had data been collected elsewhere. Then again, the data presented earlier from RSA’s 911 database suggest that costs of successful case closures are increasing nationally. So perhaps Wisconsin isn’t an outlier after all.

Moreover, the outlays generated by supported employees in the present study were only calculated using data from Vocational Rehabilitation, which does not fund ongoing follow along services that many sup-

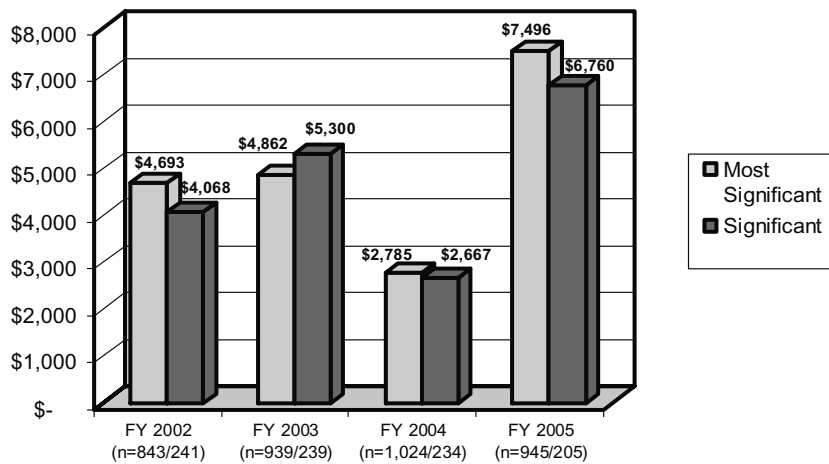


Fig. 4. The Average Annual Cost to Vocational Rehabilitation By Severity of Disability.

ported employees may require. Consequently, the present study does not reveal supported employment's complete costs. Still, the expenditures covered by Vocational Rehabilitation represent the lion's share of those generated during the supported employment process and are therefore critical to examine. Additionally, of the more than twenty economic analyses previously published, none examined the complete costs of supported employment (i.e., from intake to job placement to follow along to case closure) [6,12], so this study is not uniquely disadvantaged in that respect.

Another limitation of this study is that it did not examine the monetary benefits that taxpayers experience as a result of funding supported employment. Such a variable is crucial to the decision-making process of policymakers and politicians. For instance, although the costs of supported employment are increasing, perhaps its monetary benefits are increasing even faster. As a result, the net costs of funding supported employment may be decreasing overtime. Future research will need to be conducted to determine if this is the case.

Finally, the sudden and substantial decrease of per capita annual costs to VR in FY 2004 remains unexplained. It was initially believed that some of the costs of services obtained in the fourth quarter of FY 2004 may have been deferred to the first quarter of FY 2005, thereby decreasing the yearly totals for FY 2004 while artificially inflating those of FY 2005. However, an analysis of expenditure patterns for these years reveals no billing abnormalities (see Fig. 2).

Also, there were no changes in how or what services could be reimbursed by VR during the duration of the study. Consequently, the significant decrease experienced in FY 2004 was not the result of a change in

reimbursement rates or funding mechanisms. Regrettably, the present study is unable to determine whether the reduction in cost experienced in FY 2004 was a singular aberration or part of a larger cyclical trend.

Regardless, or perhaps because of, the unexplained abnormality experienced in FY 2004, the investigation of the costs of supported employment needs to continue. Understanding the cost-drivers as well as developing interventions and strategies to reduce programmatic expenditures will help to enhance supported employment's future and jumpstart the anemic growth cited by many authors over the past decade [2,16,21,24].

## 5. Conclusions

Given the current political and economic climate of the United States, human service programs, no matter how beneficial, will not be able to obtain adequate public funding if they are not deemed to be cost-efficient. Although numerous articles from the 1980s and 1990s have reported that supported employment generates more monetary benefits than monetary costs from the perspectives of the worker and taxpayer, evidence disseminated in this study raise some concerns. Specifically, the present study found that the costs of supported employees appear to be increasing over time. That is, from FY 2002 to FY 2005, the per capita costs of supported employees funded by Vocational Rehabilitation in Wisconsin rose 61.7%. Further, this increase occurred regardless of the supported employee's disabling condition and its perceived severity.

Although the present study does not provide data from alternative programs that are competing against

supported employment for federal and state funding (e.g., sheltered workshops), any increase in the cost of supported employment is cause for alarm. Even if current rates for funding do not change, an increase in cost translates to fewer people being successfully integrated within the community. Further, an increase in cost might stifle supported employment's already lackluster growth [2,16,21,24].

Although a previously well-mined field of study, supported employment's cost-effectiveness and cost-efficiency need to be re-investigated. If the costs of supported employment are increasing, as the data in the present study suggest, then future research needs to ascertain why. Additionally, advocates of supported employment would be prudent to develop new job development and training strategies that not only enhance the success of workers with disabilities, but do so with minimal costs to funding agencies. Only by improving programmatic outcomes and reducing corresponding costs can supported employment recapture its momentum and reach its full potential.

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