

**Estimating Return-on-Investment (ROI) for  
Texas Workforce Development Boards:  
Lessons Learned and Next Steps**

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This report describes challenges faced and offers lessons learned from an initial attempt to estimate the returns on investment (ROI) in workforce services in Texas (King et al. 2003). It also suggests a number of possible next steps for enhancing and improving upon our initial effort. The Workforce Leadership of Texas, the statewide association of workforce board chairs and directors, initiated this project to estimate workforce services ROI, contracting with researchers at the Ray Marshall Center for the Study of Human Resources, a research center of the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin. This project builds directly upon an earlier phase of the project (Workforce Leadership of Texas, 2001).

## **CHALLENGES**

We adopted an ROI estimation approach that was simpler, quicker and cheaper than conducting experiments or quasi-experiments, but it was also less precise. It avoided the principal pitfalls of the most common approach practiced across the country in both the public and the private sector, namely under-measurement of costs and over-attribution of benefits. But, it fell short of estimating ROI based on true net program impacts. Given budget and time constraints, our approach did produce *reasonable first-approximations* of the returns on key workforce investments for Texas boards. In the process, we encountered several two major challenges: serious data-related problems, and inadequate resources. There were others as well, but these were the most serious given the task.

### **Data-related Problems**

At the beginning of this project, we anticipated that the data required to estimate workforce investment returns would not be of the highest quality and would be somewhat difficult to obtain. In fact, the data were in far worse shape than we had expected. The problems with the data have several dimensions. First, individual level data simply were not available for all relevant workforce development funding streams (e.g., ES, NAFTA/TAA, adult education) in a form that we could use for estimating ROI. For example, community and technical college data might be available but were not for the time frames necessary for this analysis.

Second, data that were available were not readily accessible or usable. For example, while the TWIST system contains earnings data (UI wage based) for many of the workforce funding streams, they were incomplete or covered timeframes that were too short to accurately capture earnings gains for participants.

Third, data quality was an important issue for many of the information sources. Examples include expenditures data for the various programs, as well as outcomes data for a number of the programs.

Fourth, data variability was also a major challenge. Lack of common definitions and timeframes, variations in accounting practices and reporting approaches among the boards and the various funding streams were serious challenges. We derived our own taxonomy of services to bridge between the funding streams and attempted to validate it with local board staff; this process could be improved upon.

Fifth, the absence of unit-of-service measures that would allow us to more reliably analyze service costs was also an issue affecting the data available to us, especially since individuals are often co-enrolled in different funding streams.

### **Inadequate Resources**

The resources we were able to devote to the ROI estimation project were inadequate to the task as we anticipated they would be when we began. While we were able to perform relatively simple ROI analyses at the board level, a number of relatively powerful enhancements were not possible. For example, we were unable to allocate a Center systems analyst's time to access TWIST data directly and perform the requisite data runs. Another example is that with additional funding, this systems analyst could have prepared unduplicated, individual-level files by Social Security Number and then paid the Texas Workforce Commission to link longer-term pre- and post-services labor market outcomes data (i.e., UI wage records) to allow us to directly measure outcomes (and indirectly attribute impacts) for nearly all of the major workforce funding streams at the individual board level. Finally, resource constraints precluded preparation of the ROI "how-to" guide that we had hoped to prepare with additional funding.

## **LESSONS LEARNED**

We also learned a series of important lessons in the process of estimating workforce ROI at the board level that would allow us to carry out our task far more efficiently and effectively in future efforts.

### **Additional Resources Are Needed**

As indicated above, additional resources would have allowed us to do a much more complete job of estimating ROI in many respects, including directly accessing board-level participation and outcomes data, estimating quasi-experimental net impacts for key workforce services, expanding the project's scope to encompass more of the major workforce funding streams (e.g., community and technical college participation), and developing a detailed "how-to" guide for ROI estimation at the board level.

### **Centralizing Data Acquisition and Analysis Is Needed**

One of the more time consuming tasks involved in estimating ROI was accessing data (for both expenditures and returns). While we had anticipated this at the start of the project, it turned out to be far more time consuming and difficult than expected. In addition, centralizing this task would facilitate data quality control in important respects.

### **Expenditures Data Are Problematical**

Wide variations in data collection and reporting of expenditures by board and funding stream merit more careful attention.

### **Existing Workforce Data Systems Are Program Patchworks, Not a 'System'**

While TWIST is a relatively comprehensive data collection and reporting system that allows for statewide analysis, it remains largely a patchwork of programs rather than a true "system." Considerable work is required – some of which is already underway – before Texas has a real workforce information system.

### **Impact Estimation Is Feasible, But More Costly**

Working with partners at the Upjohn Institute for Employment Research on a project for USDOL/ETA, we have developed and refined techniques for estimating net impacts from participating in workforce services that could be applied to the development of ROI

estimates (e.g., Hollenbeck et al., 2003; Hollenbeck, King and Schroeder, 2002). Doing so would require additional resources, but it would also substantially improve the precision and quality of our ROI estimates.

### **Data Reported for Performance Management May Be Unsuitable for ROI**

Much of the data collected and reported for performance management purposes (e.g., WIA wage change and wage replacement measures) is not suitable for workforce ROI estimation. Texas maintains archived UI wage records that span many years before, during and after participation in workforce services that are far more useful for estimating ROI than is the WIA performance measures information maintained in TWIST.

## **OPPORTUNITIES & NEXT STEPS**

We see several opportunities in the near future that suggest fruitful next steps for our ROI estimation efforts.

### **Build Upon and Leverage Existing Efforts**

The Center is and has been engaged in several related research and evaluation efforts — ranging from WIA services, client flow and net impact estimation in seven states for the U.S. Department of Labor, tracking subsidized child care outcomes in five states and evaluating Texas' welfare reforms to documenting patterns of participation and analyzing the returns from Texas career and technology education — all of which present major opportunities for improving our ROI estimation efforts in the future.

### **Enhance the Data**

There are enhancements to Texas workforce data that also present opportunities. First, TWIST is now entering Phase IV, which will allow program staff (and researchers) to drill down by individual participants to determine more easily and reliably the various workforce funding streams that have touched them. Such capability will allow associating multiple investments with common outcomes. It should also be possible to develop mechanisms for allocating costs for units of service across these funding streams.

With added resources, we could also access existing TWIST participation data from the Center, create individual level files with identifiers necessary for linking to longer-term pre- and post- employment and earnings data, as well as welfare and related information. Directly collecting individual-level data over longer time frames would be a considerable improvement for this work.

### **Wider Investment Scope**

We could also expand the scope of our ROI efforts to encompass postsecondary education and training, special training projects, and other workforce investments at the local board level that we were unable to include in this phase of our ROI estimation.

### **Additional Perspectives**

We could also expand our analysis of the costs and returns associated with workforce services to include both the individual's and society's perspectives. From an economic standpoint, with respect to justifying the allocation of scarce resources, society's perspective is the most important perspective. If an investment fails to generate positive net returns to society, it should not be made, unless it can be justified on non-economic grounds.

### **Economic Impact Estimation**

Some workforce board members have asked whether it might be possible to gauge the broader economic impact of workforce services expenditures in their regions. In fact, Center staff have conducted analyses documenting the University of Texas at Austin's contribution to the regional economy in the recent past, and we are currently discussing conducting a comparable analysis for one of the larger community colleges in the state. Such an analysis would differ in key respects from ROI estimation. It would serve a different need and answer a different question.

In terms of specific next steps (and timelines), we propose to:

- ❑ Develop a ROI estimation prospectus and budget for Phase III (during April 2003).
- ❑ Circulate the prospectus to interested funding sources, including the Rockefeller and Ford Foundations, the Texas Workforce Commission, the Texas Council on Workforce

and Economic Competitiveness, as well as the national and regional offices of the U.S. Department of Labor's Employment and Training Administration (April & May 2003).

- ❑ Secure funding commitments from these sources, as well as additional matching funds from the Workforce Leadership of Texas, to expand, enhance and continue our ROI estimation in Phase III (June through August 2003).
- ❑ Launch Phase III of an expanded and enhanced workforce services ROI project (September or October 2003).

## REFERENCES

- Hollenbeck, Kevin et al. (2003 forthcoming). *Net Impact and Cost-Benefit Evaluation of Washington State's Workforce Training System: Final Report*, Kalamazoo, Michigan: W. E. Upjohn Institute for Employment Research.
- Hollenbeck, Kevin, Christopher T. King, and Daniel Schroeder (2002). "Design for Estimating Quasi-Net Impacts for WIA Services," Paper prepared as part of the ADARE Project with funding from the U.S. Department of Labor, Employment and Training Administration.
- Workforce Leadership of Texas (2003). *Return-on-Investment (ROI) Estimates for Workforce Services in Texas, State Fiscal Year 2000-2001, Summary Report*, Austin, TX: WLT, March. Prepared by Christopher T. King, Dan O'Shea, W. Lee Holcombe, Sarah W. Looney, and C. Andrew Redman.
- Workforce Leadership of Texas (2001). *Improving Performance Measurement for Texas Workforce Development Boards: Final Report-Phase One*, Austin, TX: WLT, December. Prepared by Christopher King, Robert McPherson, Daniel O'Shea and Ying Tang.