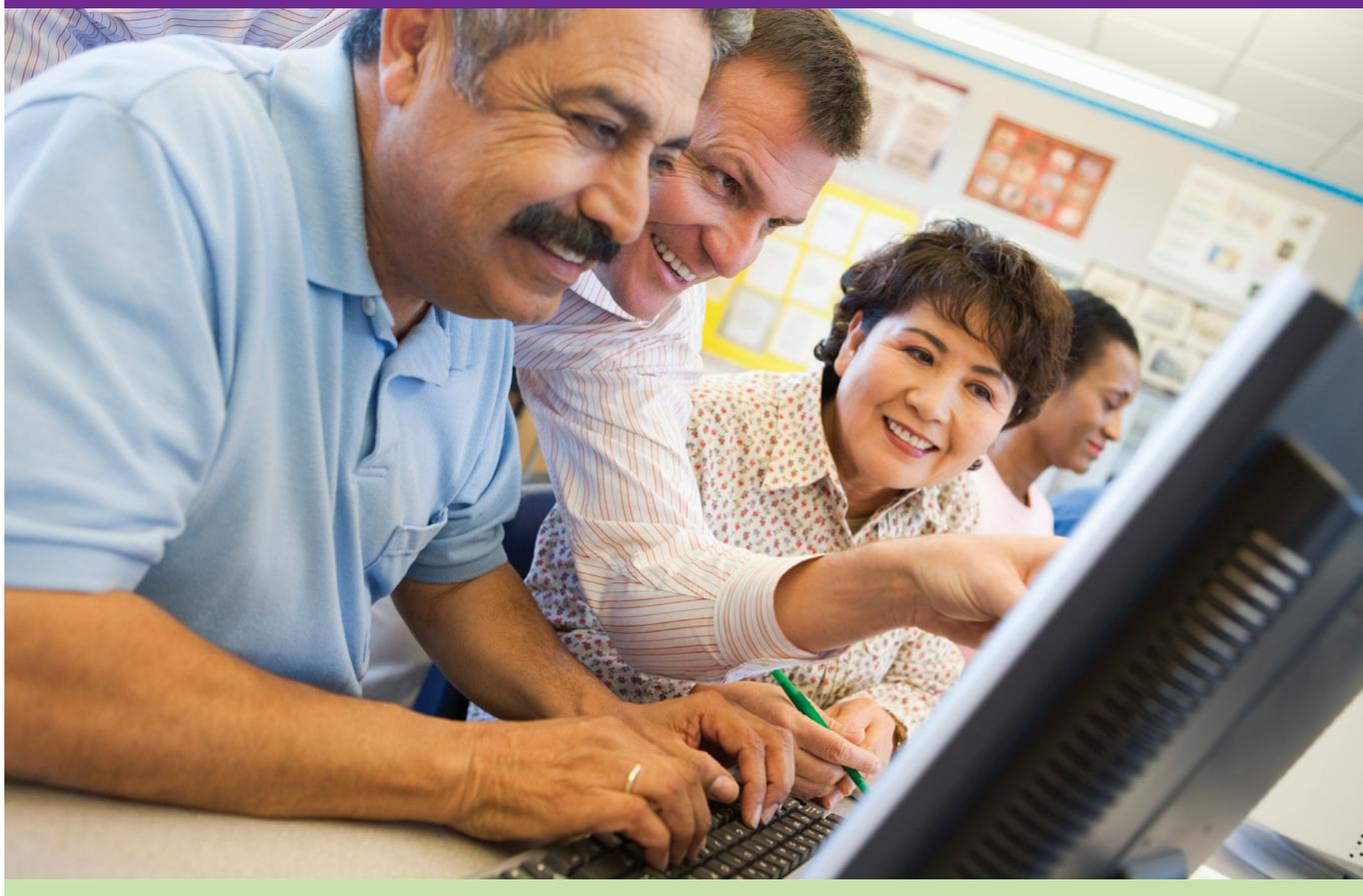


POLICY BRIEF

Using Data to Improve the Performance
of Workforce Training

April 2013



The Hamilton Project seeks to advance America's promise of opportunity, prosperity, and growth.

We believe that today's increasingly competitive global economy demands public policy ideas commensurate with the challenges of the 21st Century. The Project's economic strategy reflects a judgment that long-term prosperity is best achieved by fostering economic growth and broad participation in that growth, by enhancing individual economic security, and by embracing a role for effective government in making needed public investments.

Our strategy calls for combining public investment, a secure social safety net, and fiscal discipline. In that framework, the Project puts forward innovative proposals from leading economic thinkers — based on credible evidence and experience, not ideology or doctrine — to introduce new and effective policy options into the national debate.

The Project is named after Alexander Hamilton, the nation's first Treasury Secretary, who laid the foundation for the modern American economy. Hamilton stood for sound fiscal policy, believed that broad-based opportunity for advancement would drive American economic growth, and recognized that "prudent aids and encouragements on the part of government" are necessary to enhance and guide market forces. The guiding principles of the Project remain consistent with these views.

Hamilton Project Updates

www.hamiltonproject.org
www.facebook.com/hamiltonproject
www.twitter.com/hamiltonproj

The views expressed in this policy brief are not necessarily those of The Hamilton Project Advisory Council or the trustees, officers or staff members of the Brookings Institution.

ADVISORY COUNCIL

GEORGE A. AKERLOF
Koshland Professor of Economics
University of California at Berkeley

ROGER C. ALTMAN
Founder & Chairman
Evercore Partners

ALAN S. BLINDER
Gordon S. Rentschler Memorial Professor
of Economics & Public Affairs
Princeton University

TIMOTHY C. COLLINS
Senior Managing Director
& Chief Executive Officer
Ripplewood Holdings, LLC

JONATHAN COSLET
Senior Partner & Chief Investment Officer
TPG Capital, L.P.

ROBERT CUMBY
Professor of Economics
Georgetown University

JOHN DEUTCH
Institute Professor
Massachusetts Institute of Technology

KAREN DYNAN
Vice President & Co-Director
of Economic Studies
Senior Fellow, The Brookings Institution

CHRISTOPHER EDLEY, JR.
Dean and Professor, Boalt School of Law
University of California, Berkeley

BLAIR W. EFFRON
Founding Partner
Centerview Partners LLC

JUDY FEDER
Professor & Former Dean
Georgetown Public Policy Institute
Georgetown University

ROLAND FRYER
Robert M. Beren Professor of Economics
Harvard University and CEO, EdLabs

MARK T. GALLOGLY
Cofounder & Managing Principal
Centerbridge Partners

TED GAYER
Senior Fellow & Co-Director
of Economic Studies
The Brookings Institution

RICHARD GEPHARDT
President & Chief Executive Officer
Gephardt Group Government Affairs

ROBERT GREENSTEIN
President
Center on Budget and Policy Priorities

GLENN H. HUTCHINS
Co-Founder
Silver Lake

JIM JOHNSON
Vice Chairman
Perseus LLC

LAWRENCE F. KATZ
Elisabeth Allison Professor of Economics
Harvard University

MARK MCKINNON
Senior Advisor
Hill + Knowlton Strategies

ERIC MINDICH
Chief Executive Officer
Eton Park Capital Management

SUZANNE NORA JOHNSON
Former Vice Chairman
Goldman Sachs Group, Inc.

PETER ORSZAG
Vice Chairman of Global Banking
Citigroup, Inc.

RICHARD PERRY
Chief Executive Officer
Perry Capital

PENNY PRITZKER
Founder, Chairman & Chief Executive Officer
PSP Capital

MEEGHAN PRUNTY
Senior Advisor
The Hamilton Project

ROBERT D. REISCHAUER
Distinguished Institute Fellow and
President Emeritus
The Urban Institute

ALICE M. RIVLIN
Senior Fellow, The Brookings Institution
Professor of Public Policy
Georgetown University

DAVID M. RUBENSTEIN
Co-Founder & Managing Director
The Carlyle Group

ROBERT E. RUBIN
Co-Chair, Council on Foreign Relations
Former U.S. Treasury Secretary

LESLIE B. SAMUELS
Senior Counsel
Cleary Gottlieb Steen & Hamilton LLP

SHERYL SANDBERG
Chief Operating Officer
Facebook

RALPH L. SCHLOSSTEIN
President & Chief Executive Officer
Evercore Partners

ERIC SCHMIDT
Executive Chairman
Google Inc.

ERIC SCHWARTZ
76 West Holdings

THOMAS F. STEYER
Co-Founding Director
Center for the Next Generation

LAWRENCE SUMMERS
Charles W. Eliot University Professor
Harvard University

PETER THIEL
President
Thiel Capital, LLC

LAURA D'ANDREA TYSON
S.K. and Angela Chan Professor of Global
Management, Haas School of Business
University of California, Berkeley

MICHAEL GREENSTONE
Director

Using Data to Improve the Performance of Workforce Training

Workforce training programs have the potential to increase the incomes of American workers, lifting low-income workers into the middle class and preventing others from falling out of it. Despite the promise of training programs, however, too many workers enter programs that they are unlikely to complete while others complete programs that are unlikely to raise their earnings. Many more choose not to enroll in effective training programs because they are unsure of which programs are right for them. If workers had access to better information and guidance when selecting their educational investments, the increase in their earnings could be substantial.

In a new discussion paper for The Hamilton Project, Louis S. Jacobson of New Horizons Economic Research and Robert J. LaLonde of the University of Chicago propose a federal competition to incentivize states to develop the information and dissemination systems necessary to help prospective students, or trainees, make

better choices. The competition builds on the progress that states have already made in assembling data on worker training programs, but goes a step further by encouraging states to develop innovative dissemination systems that actually lead to better training choices.

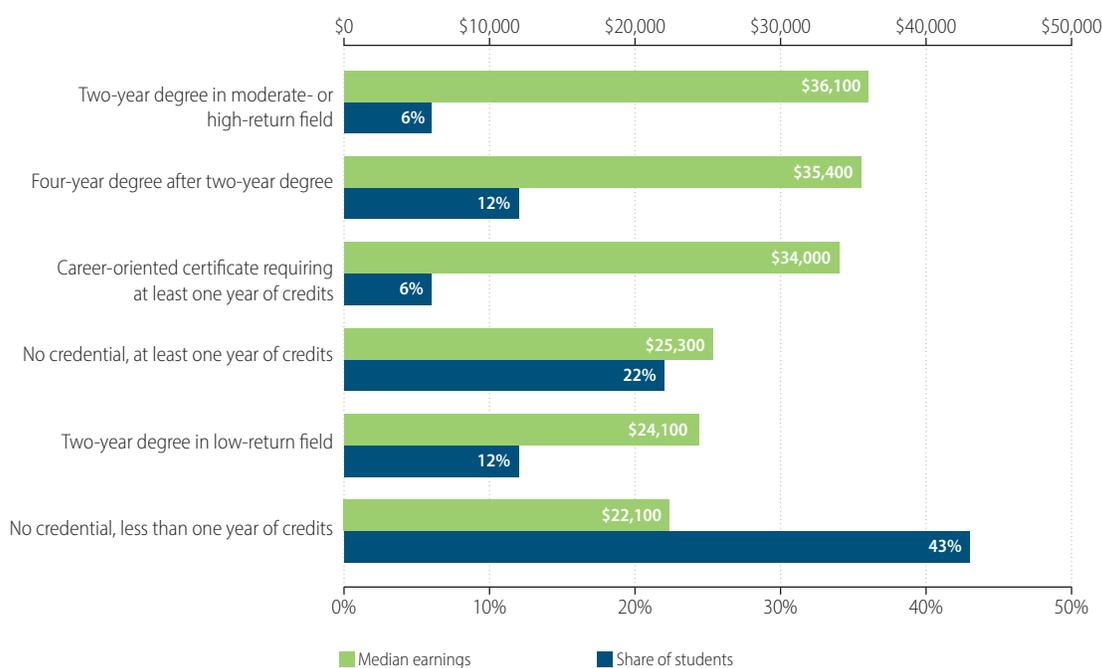
The Challenge

Although individuals pursue education for many reasons, career advancement is an important consideration for virtually all students. This is especially true for experienced workers displaced from long-term jobs or low-wage workers stuck in dead-end jobs—workers with bills to pay and family responsibilities to manage, who need a reliable path to develop new opportunities but do not have the time or funds to sustain years of additional training. The imperative for such workers is to increase their skills quickly and inexpensively so that they get better-paying jobs.

Workforce training programs can help workers build the skills they need to get higher-paying jobs, but not all programs provide the same job-market benefits for all students. For example, as shown by the

Figure 1

Median Earnings and Distribution of Students by Attainment in Community College



Note: These statistics are reproduced from Jacobson (2011) and use the student database provided by the Florida Department of Education covering all students who entered ninth grade in 1996 and attended Florida community colleges from 2000 to 2006. Earnings are examined within the first three years after leaving college for students leaving college before 2005 and for other students between leaving college and 2007.

green bars in figure 1, community college students who complete degrees in low-return courses earn roughly 33 percent less than their peers who spend the same time in school but complete higher-return courses. Despite these very large differences in earnings, many students fail to complete a high-return or moderate-return program. As illustrated by the blue bars in figure 1, only about a quarter of students complete moderate- or high-return degrees or certificates. Most either complete low-return programs or do not complete a program of any sort.

There are several reasons why workers who seek training end up in low-return programs. Students deciding between programs may not be aware of the full range of options for training, and they may not have the information or tools to select a program that matches their interests, academic preparation, financial resources, and local employer needs. As a result, students often enroll in programs they cannot complete or programs that do not lead to increased earnings.

The problems created by the lack of information are further compounded by a lack of guidance. Community colleges spend billions of dollars on instruction, but only tiny amounts on support services. The counseling that takes place is aimed toward helping students select the courses they need to complete a program—after they have selected a program of study. There are few organized efforts to help prospective trainees make sound choices of programs that further their goals and complement their skills. In fact, at most community colleges the ratio of students to career counselors is greater than a thousand to one.

A New Approach

Jacobson and LaLonde propose a federal grant competition among states that incentivizes them to build systems that generate salient statistics to inform training decisions and then disseminate this information to stakeholders. They argue that the key to using data to improve the effectiveness of workforce development programs is not just creating the information but also making sure that individual trainees and other stakeholders have the ability to use it to improve their decisions.

Many states, often with the help of federal grants, have started to collect and analyze data on workforce training programs with the aim of providing the information to equip prospective trainees to select a high-return program that they are likely to complete. This proposal builds on these systems, using the progress already made on collecting data and producing statistics as the foundation of new systems. But the proposal also goes beyond existing systems by focusing on improving the choices trainees make by tailoring information about earnings and completion to the characteristics of the trainee.

To this end, the federal grant competition proposed by the authors takes a comprehensive approach to workforce training data and

how they can inform individual decisions about programs. The competition would reward states that not only produce and disseminate statistics on worker training programs but that also assess the effectiveness of their information systems to ensure that states are putting in place systems that are tailored to the needs of their workers and employers.

One of the main outputs of the competition is a report card that provides the information workers need to compare different training programs. Figure 2 shows a sample report card, which includes information on costs and expected benefits, and other information that could help individuals decide if they would be able to complete the program. Moving forward, more advanced systems could be built that would customize report cards for individuals based on the academic preparation and other characteristics of the worker, as well as local employer demand.

States would submit grant applications detailing how they would create such a report card, how they would disseminate the information, and how they would evaluate the effectiveness of the information systems. Grants would be awarded based on the expected benefits of the proposed system relative to its cost, the feasibility of creating the system, and the sustainability of the

Figure 2

A Sample Report Card



system once built. The goal is to fund innovative proposals that go beyond systems already in place but are still feasible to construct with available technologies. Each grant application would be required to cover four components, detailed below.

Component 1: Assembling the data

Longitudinal data that link completion of specific courses to labor-market outcomes are the central building blocks to the systems proposed by Jacobson and LaLonde. Many states have already made great progress in this component. For this component of the competition, states would be required to identify the sources of data and how they would be matched at the individual level, including safeguards to protect worker privacy. Databases should include statistics on:

- Expected earnings following completion of training programs of different lengths, provided by different institutions, in different fields, and in different labor markets
- Probability of completing programs with different characteristics for trainees with different academic backgrounds, work experience, interests, financial resources, and family constraints
- Program information, including the cost of the programs, entrance requirements, intensity, and flexibility of when and where they meet

Component 2: Measuring the payoffs to training programs

Although nearly all states have the data required to estimate expected completion rates and earnings, or could assemble these data relatively easily, only a few states have organized the data to provide the information required to help actual and potential trainees improve their choices. These states have used the data mostly to produce basic tabulations of the number of students in a training program, number completing the program, basic characteristics of the average student, number employed, and earnings over different periods.

Further analysis could also show the importance of program length and intensity, trainee characteristics that affect outcomes such as academic preparation, and labor-market characteristics relating to local demand for workers in different fields. For example, prospective trainees can be advised that information technology (IT) specialists earn about \$45,000 three years after completing training. However, 90 percent of those completing IT programs had high school GPAs of 3.0 or better and completed at least three years of high school math courses. They also could be informed that IT graduates living in cities with substantial high-tech employment earned about \$15,000 more than IT graduates living in small cities and rural areas far from high-tech centers. All of this information could play a crucial role in guiding the training choices made by prospective students.

Roadmap

A federal grant competition would award money to states to build four basic components of a system to provide trainees with the information they need to make better decisions about programs and classes:

Component 1: Assembling the data

States would identify data sources—including data on individual characteristics such as pre- and post-program earnings, educational attainment, and demographics and data on program characteristics such as cost, completion rates, and prerequisites. They should then outline how these data sources will be linked into a database for analysis.

Component 2: Measuring the payoffs to training programs

States would then describe what statistics they would calculate to populate their report cards and how these statistics would be calculated.

Component 3: Disseminating the information

Grant applications would be required to explain dissemination methods for the statistics calculated—including use of simple online report cards, interactive report cards tailored to trainee characteristics, and expert counselors who could use either of these media. States would also show how they would determine which dissemination methods were actually effective in helping people make better choices.

Component 4: Sustaining cost-effective systems

States would describe how systems that proved to be effective would be funded in the future and how they could create incentives to encourage use.

The grant proposals would be scored using a combination of the expected benefits of the proposed system relative to its cost, feasibility of creating the system, and the prospects for accurately assessing the effect of the systems on trainee choices.

For this component of the competition, states should describe how the data collected in component 1 would be used to create statistics, what statistics would be produced, and what group or body would be charged with the task.

Component 3: Disseminating the information

Once a state produces a working system to create measures that can guide trainee choices, the next step is to package the information in a way that can effectively be used by those trainees and the people who work with them.

The authors suggest the development of a system in stages, starting with the basic report card (see figure 2) and progressing

Learn More About This Proposal

This policy brief is based on The Hamilton Project and Results for America discussion paper, “Using Data to Improve the Performance of Workforce Training,” which was authored by:

Louis S. Jacobson

President

New Horizons Economic Research

Robert J. LaLonde

Professor, Harris Graduate School of Public Policy Studies

The University of Chicago

to more advanced systems that provide customized information. First, a more advanced system could allow trainees to enter personal characteristics to obtain more tailored choices. The list of programs to be considered could be narrowed by putting in personal characteristics such as highest level of education, GPA, number of math courses completed, grades in those courses, as well as characteristics of programs of interest such as cost, duration, flexibility of when and where courses are offered, and fields of study. By providing much more accurate information about the individual’s probability of program completion, the intermediate system would quickly narrow consideration to programs that have a high potential for completion and generate high returns for the individual user.

The system could be further enhanced by assessment and counseling by well-trained staff. These counselors could administer aptitude tests that would help find better fits in terms of possible programs and then could use their expertise to better interpret the information provided by the system.

States would be free to propose creating and testing a range of systems to display and disseminate information. Whatever systems the states implement, they will need to develop rigorous methods to measure their overall effectiveness and how different elements affect users with different characteristics.

Finally, as individuals are empowered to make better choices about what programs to attend, policymakers and program administrators can also be empowered to make better choices about where to devote scarce resources. The same system that

collects data and creates the report cards and expert system above can be harnessed to produce metrics that are useful to decision-makers who want to understand how to better serve program participants. In particular, administrators could use information on labor-market returns to adjust course offerings—dedicating more resources to programs that meet trainees’ needs and cutting back on programs that are mismatched to local employer demand.

Component 4: Sustaining cost-effective systems

The final component of the competition is having states explain how they would permanently fund systems that are proven to be cost-effective. It also could give states opportunities to think about ways to create incentives for trainees to use the systems to achieve their own goals and for program administrators to use the systems to increase the returns of taxpayers’ investments. For example, states could require community colleges to put in place performance-management systems to assess labor-market effects of career-oriented programs and make resource-allocation decisions that increase the number of high-return slots at the expense of low-return ones.

For this component, states should also describe how proven systems would be funded after they were set up using money from the grant, either from new state appropriations or by reallocating money from other sources. For example, they could propose reducing community college career and technical education programs with low enrollment and using those savings to fund the web-based systems and provide more career counselors.

Conclusion

Although millions of workers seek out career and technical training options in the pursuit of financial security and better lives, many ultimately choose programs that do not suit their needs and better their lives, while many others, uncertain of the outcomes, hesitate to invest time and money into training programs altogether. Jacobson and LaLonde propose a federal competition that encourages states to build the capacity to help prospective trainees make better-informed choices. They argue that their approach will increase the return on training investments by developing the data and measures necessary to provide the information prospective trainees need, by presenting the information in user-friendly report cards, by providing help for prospective trainees to use the information effectively, and by creating incentives for states to implement permanent information systems once they prove cost-effective. With the earnings divide between skilled and unskilled workers at a historic high, the authors assert that policymakers must invest in the building blocks necessary to raise overall workforce skills in order to enhance America’s competitiveness and ensure economic growth for all Americans.

Questions and Concerns

1. What progress have states already made toward building these types of workforce data and dissemination systems?

Through competitive grants such as the Department of Education's Statewide Longitudinal Data Systems Grant Program and the Department of Labor's Workforce Data Quality Initiative, and through state initiatives, virtually every state is assembling databases necessary to evaluate its educational and training systems. Certain states already have relatively complete person-level databases. Florida, for example, is linking information on high school and college attendance, earnings, unemployment insurance benefit collection, receipt of Workforce Investment Act funds and other One-Stop services, and receipt of welfare and food stamp benefits. The breadth of the data is exceptionally wide and covers sixteen years, which is essential for obtaining a clear picture of the effectiveness of program participation. This proposal builds on these efforts by encouraging states to go beyond collecting data to produce the most useful information and develop systems to disseminate that information to different stakeholders in a way that changes behavior for the better.

2. Will community colleges and other training providers have the capacity to accommodate students who wish to enroll in high-return classes?

One key source of the needed resources would arise from changes in the demand of trainees' from low- to high-return programs. In addition to empowering trainees to make better choices about what programs to attend, policymakers and program administrators can also be empowered to make better choices about where to devote scarce resources. The same system that collects data and creates the report cards and expert system can be harnessed to produce metrics that tell decision-makers where they should expand offerings to give students higher returns and to match increased demand. Policymakers can complement efforts by administrators to reallocate resources toward high-return options by realigning incentives based on the newly available information.

With the addition of information about program cost, the outcome data could identify programs that are substantially more costly than average but where the labor-market returns justify expanding those programs. This would help resolve a major problem faced by public institutions: the lack of funds to expand high-return career programs that also are often much more costly than low-return academic programs. This is especially true in health-care programs where capacity cannot come close to meeting demand, and as a result, for-profits have filled the exceptionally large gap between supply of slots and demand for this type of training.

Highlights

Louis S. Jacobson and Robert J. LaLonde propose a federal competition to incentivize states to develop the information and dissemination systems necessary to help prospective trainees make better choices.

The Proposal

- **A grant competition for states.** States would submit proposals to build comprehensive data and dissemination systems that create report cards with the statistics that trainees need to choose among training programs.
- **Customized information by trainee characteristics.** Trainees would be presented with information tailored to their academic preparation, location, and interests to help them find programs that they are likely to complete and that will be effective for them.
- **Focus on dissemination.** Many states have already made progress on putting together data and statistics. This competition would go one step further by concentrating on how the information can be distributed—online or through expert counselors—and by requiring rigorous and continuous system evaluation to determine how to effectively present the information to students.

Benefits

Workforce training programs can provide the boost that many Americans need to improve their skills and job prospects. However, individuals often enroll in programs that are not well-matched to their academic background or interests. As a result, they often do not complete the program or do not receive credentials that help them in the labor market. The information provided by this proposal could help trainees make better choices about programs and thus lay the foundation for better private and public investments in workforce development.



1775 Massachusetts Ave., NW
Washington, DC 20036

(202) 797-6279

BROOKINGS



Printed on recycled paper.

WWW.HAMILTONPROJECT.ORG