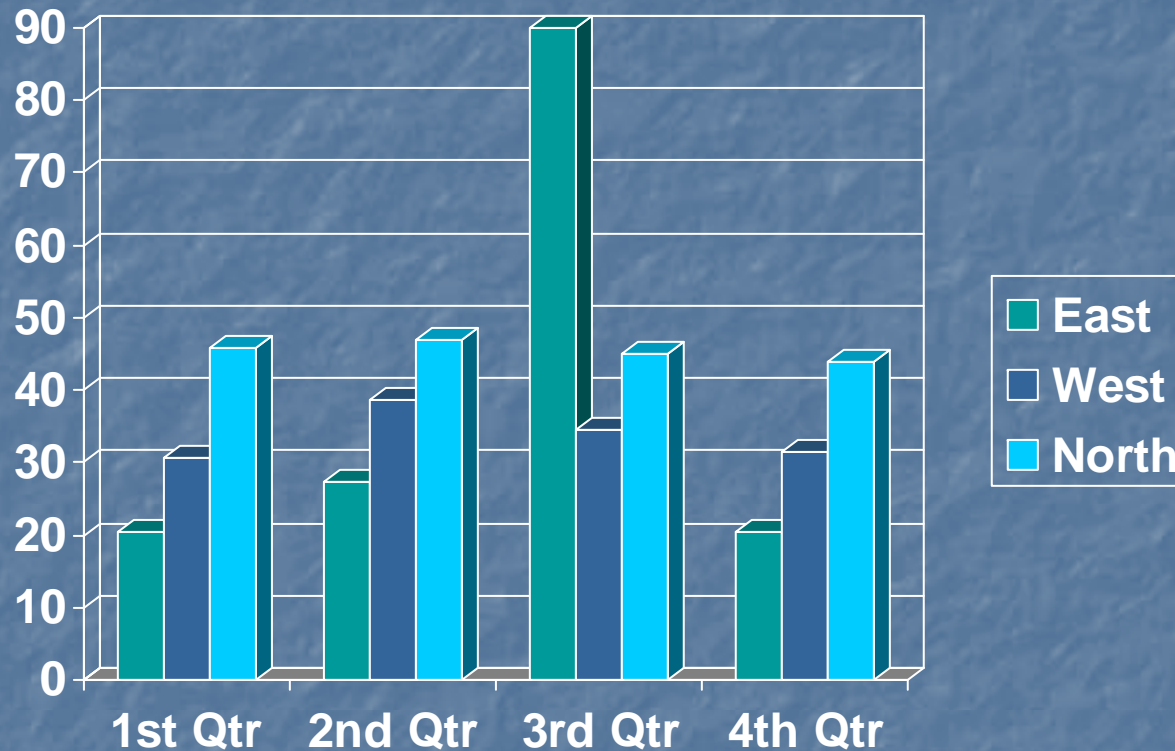


Expanding Apprenticeship in the United States: Why and How?



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Apprenticeship—A Traditional System But Is It Still Effective?

- Apprenticeship as a training method goes back centuries and all over the world
- In the 20th century, schools became primary method of develop work skills; Jobs increasingly reward formal education
- Some countries abandoned apprenticeship as no longer relevant to modern economies, but now countries are bringing back apprenticeship
- Look at apprenticeship in context of the labor market, learning theory, and experience

Evolution of the US Job Market

- Solid job growth, low unemployment rates
- Rising demand for skills
 - Wage gap widens between college-educated and high school-educated workers despite rising share of college educated workers
 - Decline in manufacturing employment lowers share of good-paying jobs not requiring BA
- Stagnant wages, jobholding for non-college men
- Usual recommendation—more schooling

Skills Go Beyond Education

- Existing measures of skills rely almost entirely on educational attainment
- Other skills must be important since wage gaps within education levels are as high as for total work force
- Usual measures of skills—formal education—do not count what employers demand, including occupational skills, motivation, and non-cognitive abilities, such as communication, teamwork, responsibility, planning, and reliability—noted in major commissions (e.g., SCANS)
- Because US does not measure these skills, policymakers do not focus on improving them

Learning Theory, Employer Attitudes Are Consistent with Apprenticeship

- Cognitive scientists find that learning in the context of real-world tasks and of applying knowledge learned in the classroom to outside activities is particularly effective—this is the apprenticeship approach
- Contextualized learning in registered apprenticeship provides technical skills and fits well with skills required for lean production, such as problem solving
- Employers rank attitude, communication skills, previous work experience, employer recommendations, and industry-based credentials ahead of years of schooling, grades, and test scores; again, the favored skills are best demonstrated through apprenticeship

Labor Economics Theory

- But will employers have any incentive to offer apprenticeships?
- Original human capital theory says no, that firms cannot recoup investment in general skills because of “poaching”
- Extensions of the theory show that often employers will have such incentives when there are transaction costs in hiring and when general skills and specific skills are complementary

Reality--Widespread Use of Apprenticeship in Other Countries

- Switzerland, Germany, Austria, Denmark, traditional apprenticeship countries, train 55-70% of labor force entrants using apprenticeship in white and blue collar positions—highly valued route used by many college-going youth
- Australia triples apprenticeships in 10 years
- New Zealand, UK, France are all expanding apprenticeship significantly
- Covers computer, finance, sales occupations as well as traditional craft careers

Research on Costs and Benefits

- Recent studies indicate employers can break even over full period with the training
- Employers face net costs in the first year, but in 2nd and 3rd years, the productivity of an apprentice relative to fully skilled worker is higher than their relative wage
- Programs in high quality systems are cost-effective and they raise productivity

Can Apprenticeship Apply to the U.S. Job Market?

- Current systems emphasize “academic only” approach, perhaps because of misimpression that middle skill jobs are withering away, with mainly high and low skill jobs being created
- In fact, jobs openings in the middle range of skills continue to expand and will account for nearly half of jobs and openings
- Examples of high future job openings include computer specialist not needing BA, nurses, technicians, construction and maintenance jobs

Benefits for US Workers

- Workers can learn skills valued in the job market without facing having to forego earnings from current employment
- Offers wage progression within program, wage gains as skilled workers—some evidence of returns of \$4,000 per quarter (\$16,000/year)
- Natural mentoring process and clear relevance of classroom learning motivates workers, especially less advantaged
- Classroom learning provides credits toward AA

Record in the U.S.

- US program trains nearly 500,000 in registered system—more in other programs; numbers have increased in recent years
- Covers white collar and blue collar occupations
- Employer sponsors of apprenticeship express high levels of satisfaction with the program and with the amount of related instruction
- Apprentices have mobility—registered programs provide recognized certification

How to Move Forward

- Expand the federal budget from current minimal level
- OA's budget is only \$20 million, some states help
- Assure some public funding to employers for classroom-based program
- Fund rationalization of existing occupational profiles and publication of skill standards in main occupations
- Improve linkages between apprenticeship programs and one-stops (sponsors report few referrals currently)
- Develop major demonstrations to prove the program's effectiveness for workers and firms

Worth the Effort

- Widening the scope of education and training can greatly enhance opportunities for workers and improve productivity at the same time
- Most important, a high quality, career-focused approach can reduce earnings inequality, enhance youth development, and create pride
- Expanding apprenticeship works on both supply and demand sides—it encourages the structuring of industries for good jobs and high productivity
- One of the few policy areas where great strides are possible with modest increases in public spending