

Apprenticeships Today: Research, Public Policies, and International Comparisons

Presentation to the Apprenticeship 2030 Commission

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Let's Start with a Clear Definition

An apprenticeship is a job with structured work-based learning under a qualified mentor/trainer; also requires written agreements between employers and apprentices

Apprentices contribute to production and earn wages

Work-based and related classroom instruction guided by well-defined occupational frameworks; agreements with apprentices

May be time- or competency-based

Completion yields an occupational certification

Registered apprenticeships (RA) programs are those sanctioned by state or federal apprenticeship offices

An RA program is a sponsor-occupation combination

New Opportunities for Expanding US Apprenticeship

“Academic only” is expensive; fails many students and employers

Skill mismatches widespread, high demand for workers with appropriate skills

Recognition that much learning can take place best outside the school environment; increases student engagement

Knowledge of other country systems; 95% of Swiss 25-year-olds have apprenticeship/BA w/ lower BA rate than the US

Widens opportunities, status and earnings for those who learn best by doing

Attracts bipartisan political support

Questions for Today

What do we know about US apprenticeships?

- Structure of the system

- Effects on apprentices

- Effects on employers

- Efforts to expand apprenticeship

How do the research findings inform policies to scale a quality US apprenticeship system?

Evolution of US Apprenticeship

Apprenticeship numbers have increased from 200,000 in 1948 to about 500,000 civilian and 110,000 military in 2022

But the percentage remained about the same, about 0.3%

There may be as many *unregistered apprenticeships*

About *50% of civilian registered apprenticeships are in construction*; aided by Davis-Bacon & prevailing wage rules except for registered apprentices

Building Trade Unions have 1,600 training centers, funded privately with dues, employer contributions, \$1.3 billion

US Apprenticeship System is complex

Official system built around registration with an apprenticeship office

Concept of a sponsor, entity that registers the programs with a state or federal office of apprenticeship, and is responsible for program operations

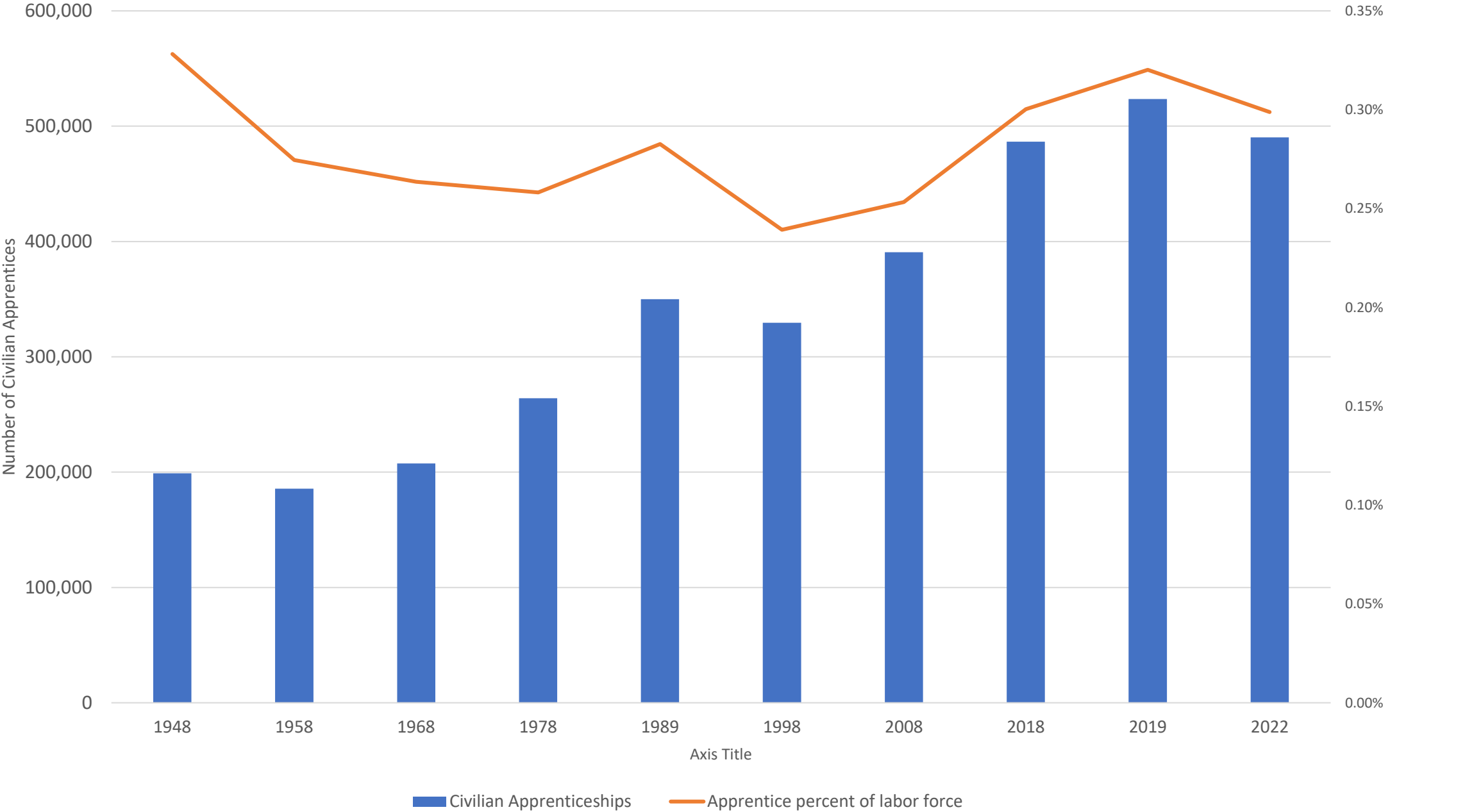
26 states have state apprenticeship agencies that examine sponsor applications that include skills learned at the workplace or in courses, plans for affirmative action, wage progression, apprentice agreement

Modest but growing federal funding for developing apprenticeships

Intermediaries sell employers on apprenticeship and organize programs

New effort to build and distribute skill standards by occupation

Civilian Apprenticeships Increase But Not As A Percent of the Labor Force



Meanwhile, apprenticeship thrives elsewhere

Austria, Germany and Switzerland rely most on apprenticeships for career development

Apprenticeship penetration reaches 40-75% of cohorts.

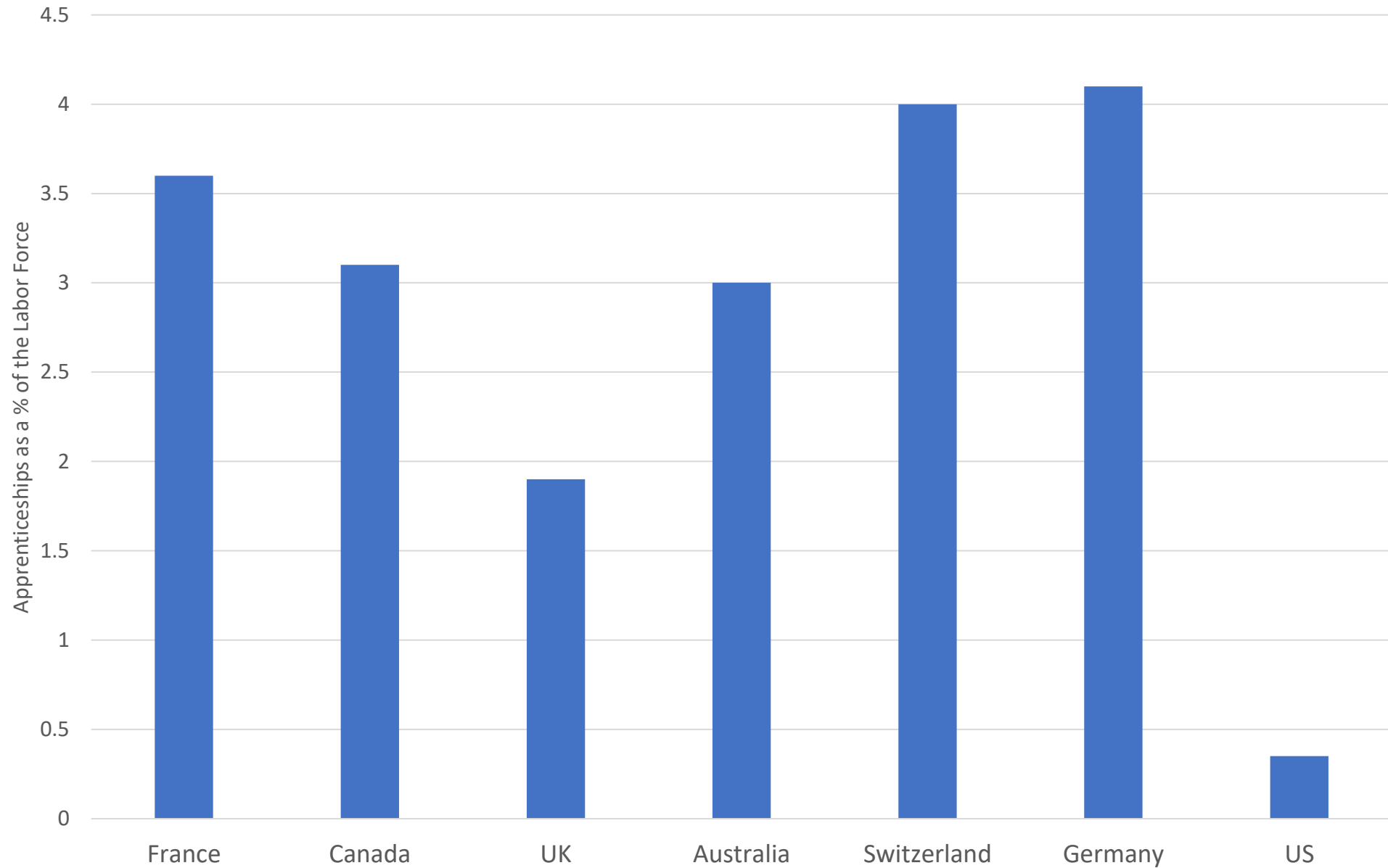
- Apprenticeships start as early as 15 more likely 16-17;
- Off-job learning is in vocational schools; funded by government
- National skill standards, allow for smooth paths to BA programs

Australia, England, and France have scaled their apprenticeship programs using these approaches but at a somewhat higher age group;

Skill frameworks, govt support for the off-job learning;

Intermediaries play major roles in marketing and overseeing employer apprenticeships; all have public service apprenticeships

Figure 2: US Falls Far Behind in Apprenticeship Rates



Apprenticeship Yields Social, Economic Gains for Workers

Substantial gains in earnings without debt, Washington state studies show higher increases than a professional AA degree

Earnings increases vary by occupation; all apprentices gain a sense of pride, become part of a community of practice

It is *an effective mode of learning* since apprentices learn concepts in context and apply them to real world situations.

Apprentices have incentives to perform well in classes; close mentors watch what they learn

Unlike other education and training, *apprentices experience little or no lost or foregone earnings* during the learning process

Learning within the organization raises their value to the employer

Apprentices retain most of what they learn for decades

Figure 3: Earnings Gains for Men and Women Apprentices Relative to Comparison Group

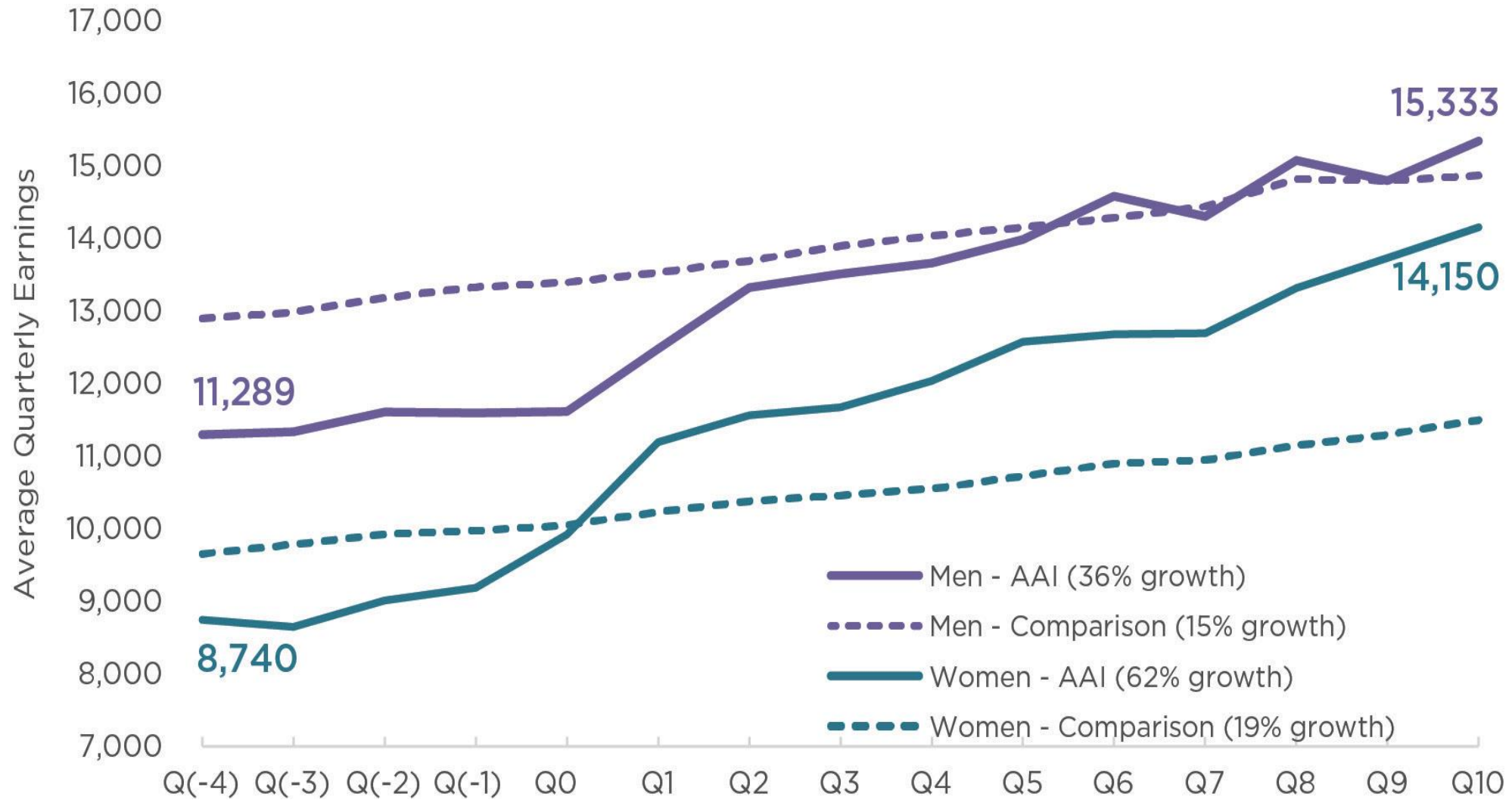
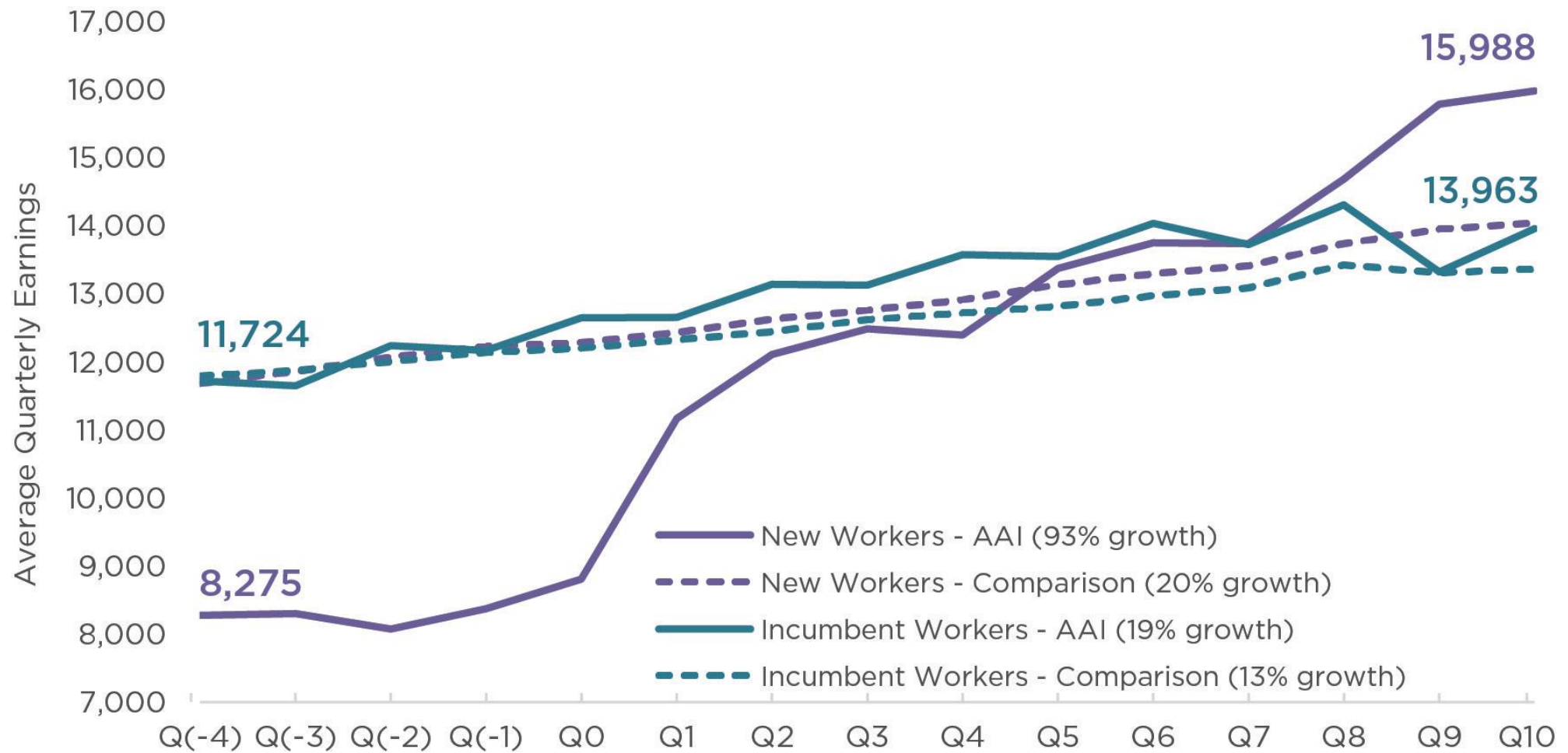


Figure 4: Relative Earnings Gains Are Especially High for New Workers



Apprenticeship yields benefits to employers

Apprenticeships link the content of training with employer demands, thereby avoiding mismatches

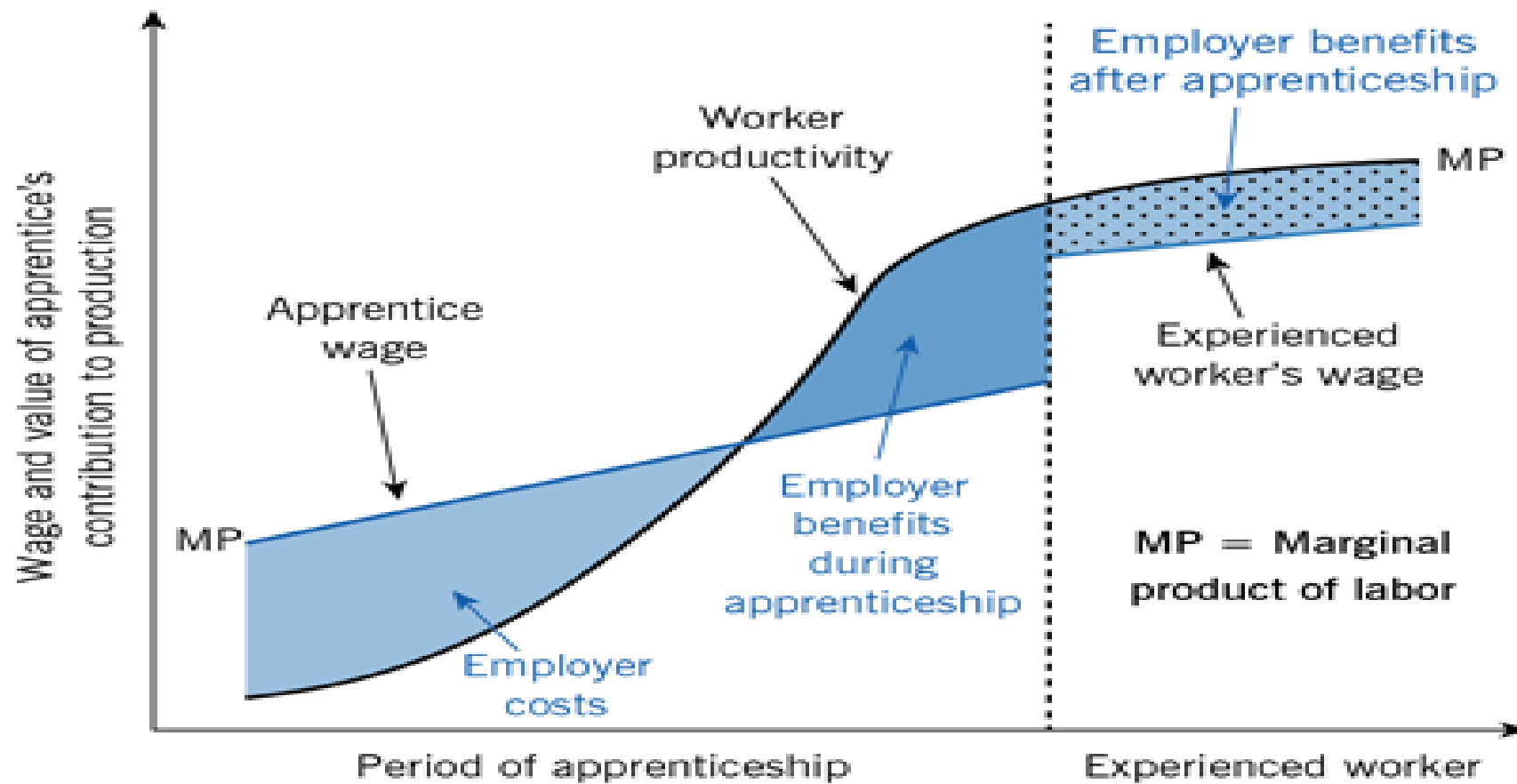
Though apprenticeships represent a substantial investment for employers, *most recoup their apprentice investments* during or soon after the apprenticeship; employers reduce turnover and recruitment costs, ensure skills are relevant to their organization,

Training apprentices create real options, valuable in uncertain times, helps achieve higher capacity utilization

Encourages employers to upgrade jobs

Promotes a learning organization, increase in morale

A stylized model of apprenticeship training



Source: Modified figure based on [1].

	Characteristic	% of employers	direct benefits	all benefits	% at least breaking even
Broad occupational category	Healthcare	17.7	−\$4,408	\$7,787	50.0
	Information technology	17.7	\$11,846	\$30,192	83.3
	Advanced manufacturing	33.8	−\$13,213	\$100,106	78.3
	Other	30.9	−\$7,459	\$1,290	57.1
Usual duration of registered apprenticeship	12 months or less	39.7	\$11,141	\$16,868	70.4
	12 to 36 months	36.8	−\$6,276	\$63,568	72.0
	More than 36 months	23.5	−\$56,283	\$8,277	56.3

Policies for US Scaling Apprenticeship

Effective Branding for an American Apprenticeship system

Create and maintain credible occupational standards

Offer performance-based incentives for intermediaries to sell and organize apprenticeships with employers

Provide automatic funding for the off-job learning

Streamline the process of registration, allowing programs to become registered within no more than three weeks

Improve counseling and screening of apprentices

Audit programs for quality and apprentices' performance

Critical Task to Sell and Organize Apprenticeships

Intermediaries offer one way to do so, as organizations that are between employers and government

They may include industry associations, joint labor-management entities, training organizations, staffing firms, community colleges and other non-profit groups

Some intermediaries become group sponsors, minimizing the paperwork the training employers experience. 50 Iowa high schools have become group sponsors, see:

Apprenticeships for America is creating a network of apprenticeship intermediaries

Pay for Performance to Apprenticeship Intermediaries?

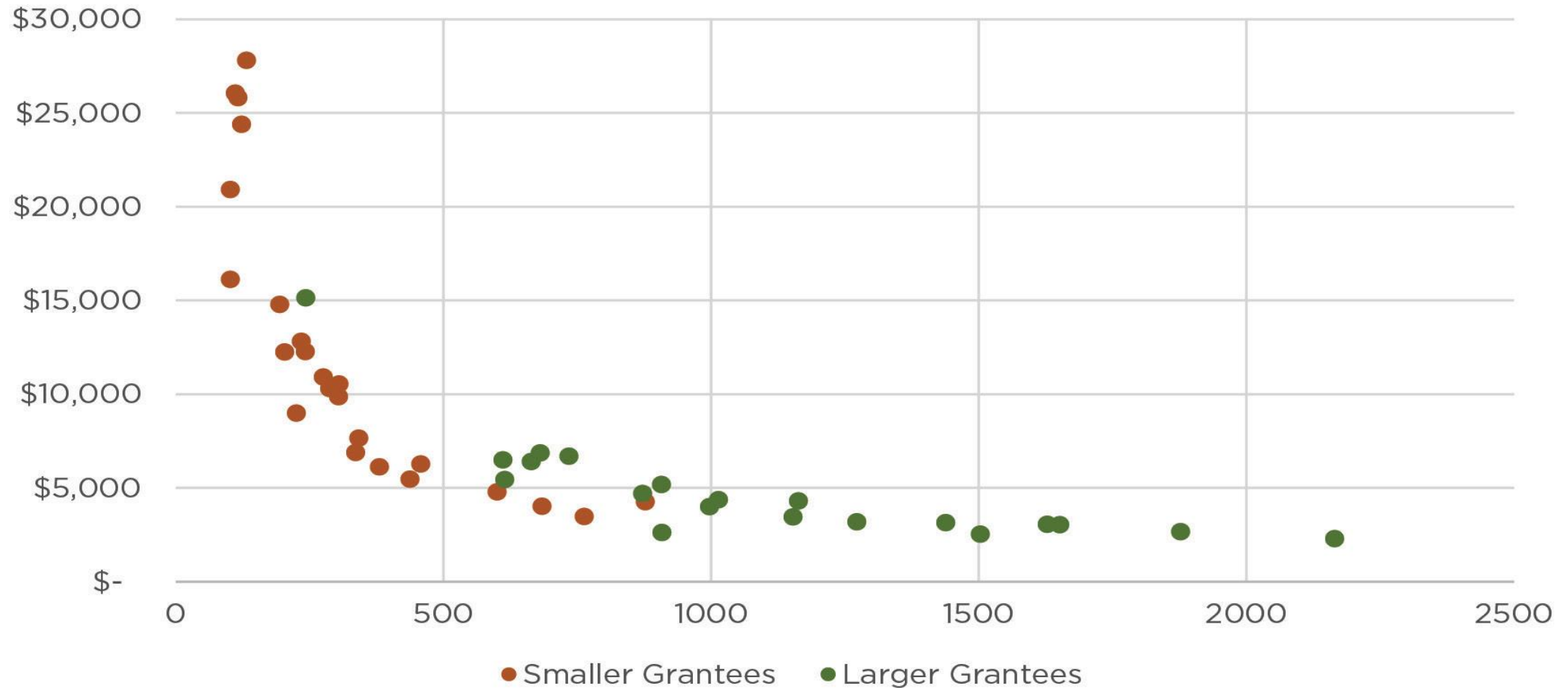
Scaling US apprenticeships requires a significant role for intermediaries, especially to promote apprenticeship's value to employers and to help them organize programs

Intermediaries also help locate funding, identify occupations and skill standards, find appropriate related training, connect to apprentice candidates, form networks, and register programs.

A pay-for-performance initiative can mobilize intermediaries to scale apprenticeships. Stagger the payments to ensure incentives for not only placement but also persistence. Provide bigger bounties for placing (and retaining) socioeconomically disadvantaged candidates, or candidates underrepresented in target industries.

Evidence suggests that financial incentives (\$4,000/apprentice) can stimulate large numbers of apprenticeships

Cost per Apprentice and Number of Apprentices Registered by Grantees During the American Apprenticeship Initiative



What Success Can Mean

A society with increased wages and economic mobility,

A society with lower income inequality and less need for government social transfers

A country with more workers achieving occupational mastery, pride, and occupational identity

Reductions in the government costs of skill development

Increases in productivity and improved business morale

More innovation and ability to adapt to the future of work