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Architectures for Apprenticeship:

Achieving Economic and Social Goals

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Associations between adaptation of German style vocational education models and impact on apprenticeship pathways in regional American labour markets.

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Summary: Developed economies have, for a generation, battled endemic skills gaps and high youth unemployment. Yet these employment market failures do not afflict Germany: it remains a high-value export oriented economy, with high wages and low youth unemployment. What impact could the adaptation of features of the German training model in a foreign market have in addressing these twin problems? The authors applied a qualitative research design to investigate a strategy initiated by a group of German industrial firms operating in the American south, to address local training quality and workforce participation issues. The findings indicate that, through establishing a multi-sector partnership that redesigns training packages consistent with German accreditation standards, stakeholders were able to devise collaborative programs that changed perceptions and local market demand for apprenticeship programs. In determining the key features of the initiative, the authors identified transferable lessons for policymakers seeking to address skills gaps and elevate vocational training career pathways.

Keywords: German VET system, system adaptation, dual certification, qualitative research,

Introduction

Skilled workforce development continues to be a crucial issue affecting jobs and growth in major industrial economies, which perennially battle two endemic workforce participation problems: youth unemployment and the middle-skills gap. Harvard's U.S. Competitiveness Project estimates American manufacturing has 650,000 skill-based jobs that it cannot fill (Pankratz 2014), with projections that this number could grow to over 2 million in the next decade, led by demographic trends.

This constitutes a major missing investment and employment market, which creates significant social and economic opportunity costs. This skills gap manifests as a vicious circle for both employers and prospective employees. Unable to fill entry-level positions, firms cannot confidently make long-term production capacity investments. Potential future employees, faced with uncertain employment pathways are also reluctant to pre-commit to training for a career in a specialised trade.

The U.S. apprenticeship training pathway is highly successful in raising earnings for workers, and productivity for firms (Lerman 2009). However, whilst offering a clear path to a stable career, the operating scale of formal apprenticeship programs in the U.S., at 0.3% of the workforce, is small in comparison with German (and Australian) rates of 4.0% (Lerman 2013).

At a time of widening wage growth and work insecurity concerns, why do skills gaps, unfilled positions and structurally high unemployment persist? What is limiting

the expansion of the apprenticeship training pathway, and what can be done to increase it?

The authors analysed the impact that adaptation of the German certification standards has had on the interest in apprentice positions, key features of this process, and the transferable learnings for employers.

Methods and Research Design

The methodology applied throughout this research utilises a combination of qualitative methods. This research evolved from a fellowship granted to the lead author to investigate new approaches to addressing youth unemployment in Australia.

During the exploratory phase, narrative inquiry and expert sampling techniques were undertaken, including interviews with German and American vocational education thought leaders. As the research question and design was determined, the research was initially executed using critical case sampling techniques and semi-structured interviews with key informants within academic and policy spheres in Germany and the U.S. The insights and examples provided led to a second stage of qualitative interviews with key informants: executives within major German industrial firms, industry advocacy bodies, and educational partnerships operating in Tennessee and North Carolina.

The sample consisted of a dozen interviews with information rich informants. Informants were interviewed once, for a duration of one to three hours. Finally, field research was undertaken in both locations. Data relating to this research was thematically analysed using a conventional content analysis approach, and codified into the solutions and conclusions documented.

The German VET System

Throughout the last 20 years, industrial economies have been transformed from manufacturing to service based economies. Yet in Germany, industrial manufacturing remains central to its economy. Germany trains and retains the world's most skilled workforce, and has led the UNIDO Competitive Industrial Performance Ranking since 2000. Its youth unemployment rate, at 7.2%, is the lowest in the industrialised world (Eurostat, 2015), one-third of the U.S. rate and half that of Australia. Importantly, the country's education system esteems formal apprenticeship qualifications: 55% of German high school students chose a vocational training pathway upon graduation (OECD, 2014)

Germany's superior economic and employment outcomes are significantly attributed to the integrated dual vocational training model, which combines on the job practical training (usually paid) with a theoretical vocational school education. The *Duales Ausbildungssystem* delivers consistently superior results for training program completion, employee retention and productivity.

To understand the extent to which key features driving these superior outcomes are transferable to foreign educational systems, the authors surveyed skills programs in the U.S initiated by German industrial firms, seeking to respond to skilled labour and training quality concerns by developing multi-sector partnerships to adapt and implement German-standard vocational training programs.

Role of the German American Chambers of Commerce (GACC)

In Germany, the Association of German Chambers of Commerce and Industry (DIHK) has the regulatory responsibility to set VET training and certification standards. It plays an active role in market facilitation and mediating training markets to ensure programs reflect projected future labour needs. Membership of a Chamber is mandated, and a board of representative stakeholders, who act together in the common interest, makes operational decisions.

The German American Chambers of Commerce (GACC) fulfills a similar role for U.S. subsidiaries of German firms in advocacy and certifying training and apprenticeship programs. Through regular surveying, the GACC was aware that persistent skills availability and hiring problems had become its members' primary business continuity risk. In 2010, when a group of member firms approached the GACC with a proposal to redress skills issues, the response was immediate.

Members sought help establishing a program to train workers to quality standards identical to the German VET network requirements. On behalf of members, the GACC quickly initiated discussions with educational authorities in multiple U.S. states to establish or adapt training programs to meet DIHK accreditation standards.

Since 2011, under its 'Skills Initiative' program, GACC has been establishing multi-sector partnerships across the U.S., following a three-stage strategy to improve training and recruitment outcomes:

1. Bring together a multi-sector geographic cluster of firms which recognizes that they have a skills problem.
2. Work through a structured process with member firms, to determine skills gaps in the local labour market profile, and skill areas of the curriculum needing further quality improvements for accreditation.
3. Build collaborative alliances between the companies and local community colleges that can deliver the quality academic training employers' want and need in their employees.

A GACC representative interviewed indicated the most difficult part of this process was building collaborative alliances with local community colleges: "Community college leaders don't always 'get it.' They don't always think that serving the training needs of local businesses is part of their educational mission." This strategy provided the GACC with a comprehensive understanding of the skills gaps and employment needs of local firms, enabling the presentation of an accurate, compelling case to educational authorities about the size of the partnership opportunity.

Partnerships in Operation

In 2013 the authors conducted granular field research at the first two GACC-facilitated collaborative alliances in Chattanooga, Tennessee and Charlotte, North Carolina. Its purpose was to: observe the training programs in operation; investigate how the recalibrated curriculum was being marketed to prospective students; and determine the impact this concerted focus to attract young people in apprentice programs was having on local enrolment numbers, and the prestige of the apprenticeship career pathway.

As a sign of commitment to the partnership, the GACC seconded representatives from *Deutsche Gesellschaft für Internationale Zusammenarbeit* to North Carolina to work with stakeholders in developing implementation strategies to manage the qualification adaptation and revision process.

Both partnerships have both been successful in fostering advanced skills development in their local areas. Employer confidence and certainty in local training

quality resulted in firms previously reluctant to engage in promoting apprenticeship pathways devising and executing a range of marketing activities in order to inform school leavers and potential employees of available skilled career pathways. To screen and attract qualified candidates into study, many employers included a conditional job offer upon graduation, and a clear pathway towards a bachelor's degree in engineering or business administration.

The key components of the marketing outreach include open days and tours of high school groups and access to pre-apprenticeship summer internships. Benefits included access to student scholarships and tuition reimbursement upon subject completion, paid training during the programs' second half. Specific program features and individual benefits for the apprentices include regular attitudinal performance reviews, mentoring over the course of studies and, upon graduation, receipt of a qualification from the GACC and local authorities.

Lessons and Results

Having the GACC initiate discussions was significant. Advocating collectively about the size of the problem and impetus to act, it was able to engage policymakers and educators, and encourage them to act systemically to revise a training package, and support its agenda through facilitating DIHK qualification accreditation, in a way an individual firm may not be able to achieve.

Methodically clarifying the scope and size of skills needs, and obtaining upfront commitment from employers to offer apprenticeships pathways to employment was also crucial. With the quality issue addressed firms, reluctant to offer employment pathways before the partnership, reported an increased willingness to hire and train apprentices, and an increased willingness to expand promotion of career pathways available through apprenticeship programs to school leavers.

The GACC initiative, in building partnerships to encourage the establishment of U.S. Programs meeting German DIHK standards, have, where operating, had a significant impact on improving enrolment in vocational training programs and reducing middle skills gaps and youth unemployment rates, and provided participant firms with a powerful pipeline for filling workforce needs across a spectrum of specialties and positions.

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