Employment effects of promoting Training and Vocational Education (TVET) in Vietnam

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Extended abstract / paper outline

Preliminary results – do not quote

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What is this paper about?

This paper analyzes the employment effects of promoting Training and Vocational Education (TVET) in Vietnam. The promotion of TVET in Vietnam is a program jointly designed and implemented by the bilateral German-Vietnamese development cooperation. The program has been in place since 2006, it is operated by the German International Cooperation (GIZ, formerly GTZ), and it is currently (since 2010) in its second phase. The program consists of three components:

i. Teacher training
ii. Reform of teaching curricula
iii. Technical support (such as machinery for welding instructions, etc.)

A total of 16 TVET institutions have received this support so far. The ultimate objective of the program is to better match labor supply and demand in the market for TVET graduates in Vietnam, since there is concern that the TVET education does not sufficiently / adequately train young Vietnamese with the skills demanded by the private sector. This is a common concern in many emerging markets and developing countries, hence the relevance of the program.

The paper focuses on an analysis of the labor supply side, i.e. the TVET graduates and the extent to which the program increased their prospects of finding a) employment, and b) employment that matches their qualifications. The demand side is the focus of an ongoing complementing project in which an extensive enterprise survey will be implemented in cooperation with the Vietnamese Ministry of Labor and Social Affairs (MoLISA). Preliminary results from this new, complementing analysis may also be available already at the New Delhi conference.

Why is this a remarkable project?

The authors have been involved in the evaluation of the promotion of TVET Vietnam since 2009. The evaluation is based on data specifically collected for this project within tracer studies. That is, the authors trained staff from the TVET schools in sending out questionnaires, gathering and inputting data, and basic descriptive analyses. These tracer studies are based on two waves of data collection: one at graduation and one follow-up at 6 months (Table 1 e.g. contains baseline data from the supported TVET schools in the 2010/11 wave). This project received full support by MoLISA and the responsible government authority, the General Department for Vocational Training (GDVT). Because of this support, the tracer study was also extended to TVET schools that did not receive the promotion of the GIZ-program, enabling us to use these schools as control schools in the impact evaluation (see below).

The most remarkable aspect of this set-up, however, is that it has generated sustainable structures of monitoring among TVET schools and of gathering data at the level of federal government authorities. Since all stakeholders have been involved in the tracer study project from the beginning – including many workshops and e.g. also extensive discussions on the exact design of the questionnaire – the ownership has been high throughout the project, and all Vietnamese partners – at the school and federal levels – were convinced of its usefulness. Hence, structures have been created that no longer depend on any support from the GIZ program.

What is the design of the impact evaluation?

The set-up delineated above allows us to use tracer study data from both treatment and control schools. In addition, only some of the occupations within the TVET schools received support, such that we can also conduct within-school comparisons across treated and non-treated occupations. The occupations that received support were predominantly

Electrics / Electronics, Welding, and Textile / Garment. Table 2 has a full list of occupations in the 2010/11 wave of the tracer study.

The combination of the comparisons between schools and within occupations allows us to estimate treatment effects on TVET graduates' employment probabilities using a **cross-sectional difference-in-differences** design. This approach nicely takes into account school and regional heterogeneity, and also differences-out potential spillover effects within schools from treated to non-treated occupations.

What are the preliminary results?

Table 3 presents impact estimates of the program on the employment probability of TVET graduates at six months. These are unadjusted cross-sectional DiD estimates. Results indicate a statistically significant increase in TVET graduates' employment performance due to participation in the program. This (preliminary) point estimate indicates a sizeable effect of 14.4 percentage points.

Future analyses will estimate adjusted DiD using individual-level sociodemographic information. We will also look into occupation-specific effects, etc.

Table 1: TVET institutes in tracer study 2010/11 (Treatment group), age at graduation

TVET institutes	mean	min	Max	N
Ninh Thuan Vocational S. School	21.65	17	35	189
Bac Ninh Vocational College	20.63	20	26	265
Long An Vocational College	20.91	18	41	91
An Giang Vocational College	22.73	21	34	45
Hung Yen University of Technical Edu.	21.91	19	34	237
Nguyen Tat Thanh College	22.19	20	28	364
Nghe An V-G Vocational College	21.32	20	35	94
Vinh Phuc V-G Vocational College	20.40	18	31	300
V-G Industrial College	21.04	18	32	374
Thanh Hoa Industrial Vocational College	21.77	20	32	355
Nha Trang Vocational College	22.95	20	35	434
Nam Dinh University of Technology Edu.	21.55	20	29	350
HCM T&T Vocational College	22.67	20	32	402
All schools	21.74	17	41	3500

Table 2: Fields of specialization sorted by proportion of females

Specialization*	obs.	Male	female
Industrial garment	68	0.00%	100.00%
Garment and fashion design	38	10.53%	89.47%
Garment technology	78	11.54%	88.46%
Garment technology - fashion	46	15.22%	84.78%
Accounting	150	16.67%	83.33%
Restaurant service	57	36.84%	63.16%
Informatics	277	37.91%	62.09%
Computer repair and assembly	22	59.09%	40.91%
Graphic (intermediate level)	17	70.59%	29.41%
Turning	9	77.78%	22.22%
Electronics	28	78.57%	21.43%
Metal cutting	370	87.30%	12.70%
Electrics	167	88.62%	11.38%
Industrial electronics	170	89.41%	10.59%
Electrical technique	65	90.77%	9.23%
Mechanics	59	93.22%	6.78%
Industrial electrics	475	95.16%	4.84%
Automobile technology	427	99.77%	0.23%
Welding	516	99.81%	0.19%
Civil electronics	21	100.00%	0.00%
Electrical installation and control	19	100.00%	0.00%
Manufacturing hand operated tool	3	100.00%	0.00%
Mechanical engineering	15	100.00%	0.00%
Refrigerating and air-conditioning	85	100.00%	0.00%
Total	3184	78.49%	21.51%

Table 3. Program impacts on TVET graduates' employment probability at 6 month follow-up: Estimates from cross-sectional difference-in-differences

Group:	Occupations WITH program support	Occupations WITHOUT program support	DiD
TVET schools:			
Treatment schools	0.763	0.698	+0.065
Control schools	0.702	0.781	-0,079
DiD	+0.061	-0.083	+0.144*** (0.039)