

Impact Evaluation for a Nation-Wide Multi-Level Joint TVET Intervention

Experiences from Designing and Implementing a Robust Methodological Framework for the Evaluation of German Development Cooperation with the Philippines

Consultants:

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Centrum für Evaluation



Center for Evaluation

Scope

Objectives

Problems &
StrategyOrganisational
Aspects

Database

The Graduate
Survey

Data Triangulation

Methodological
Findings

- ✓ Evaluandum: Contribution of the German DC to improve the Philippine TVET system by introducing and establishing dual training approaches
 - Training of administrative staff from vocational training institutions
 - Training of trainers
 - Provision of equipment and teaching aids
 - Provision of technical assistance to training institutions
 - Provision of technical assistance to TESDA
- ✓ Timeframe: All relevant activities implemented between 1996 and 2007
- ✓ Implementing agencies: DED, GTZ/CIM, InWEnt and KfW
- ✓ Strategic partner institution: Technical Education and Skills Development Authority (TESDA)

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- ✓ Identification of the development results at the level of the...
 - **target groups:** beneficiary level, i.e. trainees/graduates from supported training institutions, participating enterprises,
 - **intermediaries:** institutional level, i.e. supported training institutions
 - and on the **systemic level**, i.e. TVET system, labour market, social and economic development
- ✓ Assessment of the **relevance, effectiveness, impact, efficiency** and **sustainability** of the intervention
- ✓ Development of **recommendations** for future programs

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Challenges in framing the evaluandum

- ✓ Number and types of measures
- ✓ Different intervention approaches
- ✓ Number and types of supported institutions
- ✓ Regional distribution of supported institutions
- ✓ Number, types and distribution of stakeholders
- ✓ Intervention timeframe

Evaluation strategy

- ✓ Hypothesis guided analysis
- ✓ Mixed-method approach including qualitative and quantitative instruments
- ✓ Development of a quasi-experimental research design
- ✓ Combination of random and stratified selection
- ✓ Application of descriptive and inferential statistics

- ✓ Development of an overarching analysis grid and data collection plan
- ✓ Division of the data collection phase into a 'pre-' and a 'main mission'
- ✓ Deployment of a four-member evaluation team
- ✓ Set up of both a locally and a HQ based support structure (management team and steering committee)

- ✓ Qualitative data from 150 interviewees from the GIOs, TESDA, NEDA, training institutions, industry partners, business associations (incl. 5 group discussions)
- ✓ Quantitative survey data from 197 graduates from 14 supported training institutions (treatment group) and 112 graduates from 7 not supported training institutions (comparison group)
- ✓ Quantitative survey data from 61 former participants of training measures
- ✓ Program documents (proposals, project place descriptions, reports, evaluation reports etc.)
- ✓ Statistics on vocational education and labour market (national statistics office, census and ILO data)

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Problems &
StrategyOrganisational
Aspects

Database

The Graduate
Survey

Data Triangulation

Methodological
Findings

Preparation issues

- ✓ Identification of all supported training institutions (!)
- ✓ Assuring representativeness of the sample in terms of...
 - ...ratio of the different subject areas
 - ...equal consideration of individual contributions of the GIOs
 - ...adequate representation of regional differences
- ✓ Development of a working plan and a timetable
- ✓ Identification of door openers and resource persons

Practical constraints during the data collection

- ✓ Double difference not possible because of...
 - No baseline data or comparable monitoring system
 - Incomparability of vocational status of trainees/graduates before and after the training
- ✓ Traceability of the graduates
- ✓ Logistics and timeframe

Example hypothesis

- ✓ Qualification of graduates from supported training institutions is regarded superior (in comparison to those of not supported institutions), hence the participating enterprises have a stronger interest to employ them

Comparison without matching

- ✓ Comparison between treatment and comparison group shows a positive treatment effect (+ 18% pts.)

Comparison with matching (PSM)

- ✓ PSM results do not confirm results

Qualitative data

- ✓ Interviews with representatives from partner enterprises reveal: Graduates from supported training institutions are more likely to get a better job (than the one at the participating enterprise)

Conclusion

- Qualitative data support findings of comparison without matching and reveal intervening effects

Scope

Objectives

Problems &
StrategyOrganisational
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Database

The Graduate
Survey

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Example hypothesis

- ✓ Graduates from supported training institutions earn more money because of their better qualification

Comparison without matching

- ✓ Comparison between treatment and comparison group shows a (not significant) negative treatment effect

Comparison with matching (PSM)

- ✓ PSM results do not show any differences between treatment and comparison group regarding their income

Qualitative data

- ✓ Interviews with representatives from the training institutions show that one particular training institution from the comparison group was cooperating with an enterprise that offered very well paid jobs

Conclusion

- Qualitative data reveal bias that could not be neutralised by matching socio-economic covariates of the graduates

Scope

Objectives

Problems &
StrategyOrganisational
Aspects

Database

The Graduate
Survey

Data Triangulation

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Example hypothesis

- ✓ On average graduates from supported training institutions are more satisfied with their current job situation because they were able to find a more adequate job

Comparison without matching

- ✓ Comparison between treatment and comparison group shows a positive treatment effect (+24% pts.)

Comparison with matching (PSM)

- ✓ PSM results approve results

Qualitative data

- ✓ Interviews with representatives from the training institutions reveal the reasons for this rather surprising finding (higher job satisfaction vs. supposedly lower income)

Conclusion

- The qualitative data makes this finding plausible as it reveals a systematic bias (cf. example II)

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Problems &
StrategyOrganisational
Aspects

Database

The Graduate
Survey

Data Triangulation

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- ✓ Matching treatment and comparison group units is a useful (additional) strategy to improve the quality and robustness of quantitative analysis results
- ✓ However matching does not 'automatically' lead to more robust results (even when controlled for systematic bias)
- ✓ The combination of quantitative and qualitative instruments is crucial, particularly when
 - additional information about the theoretical construct (cause-and-results-chains, framework conditions etc.) is necessary
 - the sample size is comparatively small
- ✓ Of course socio-scientific approaches cannot replace (macro) econometric research designs when it comes to the measurement of systemic effects
- ✓ However small scale surveys can also provide robust results when the data quality is sufficient and allows reasonable plausibility assumptions

Thank you very much for your attention!

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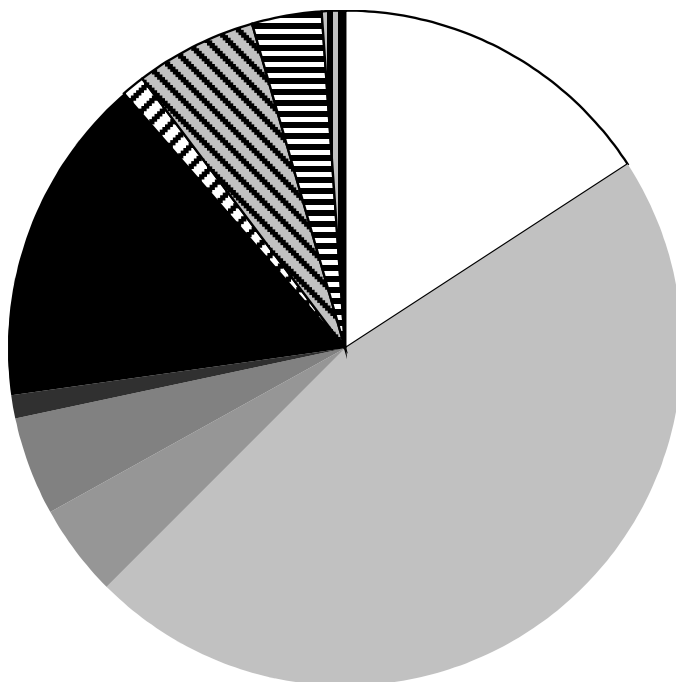
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	Subject area categories	Basic population	Share	Ideal sample size	Real sample size
1	Automotive (technology), autotronics	26	26,53	3,98	4
2	Electrician, electronic, electronics	23	23,47	3,52	4
3	Welding, metal fabrication/engineering/working	17	17,35	2,60	3
4	Refrigeration, air-condition technology, pneu./hydro.	9	9,18	1,38	1
5	Mechatronics, automation, mechanical technology	6	6,12	0,92	1
6	Animal production, farming, agro technology, fishpond proc.	4	4,08	0,61	1
7	Tourism, food preparation	3	3,06	0,46	1
8	Cabinet and furniture making	3	3,06	0,46	0
9	Shoe manufacturing	1	1,02	0,15	0
10	Health care	1	1,02	0,15	0
11	IT	1	1,02	0,15	0
12	Pedagogy	1	1,02	0,15	0
13	Jewelery making	1	1,02	0,15	0
14	Wood technology	1	1,02	0,15	0
15	Other (not specified)	1	1,02	0,15	0
		98	100,00	15,00	15



- DED
- InWEnt
- DED & InWEnt
- GTZ & KfW
- CIM & InWEnt
- GTZ, InWEnt & KfW
- ▨ CIM, GTZ & KfW
- ▨ CIM, GTZ, InWEnt & GTZ
- ▨ DED, GTZ, InWEnt & KfW
- ▨ CIM, DED, InWEnt, GTZ & KfW

GIO	No. of supported training institutions	Share within basic population
CIM	8	5,16
DED	22	14,19
GTZ	28	18,07
InWEnt	69	44,52
KfW	28	18,07
Total	155	100,00

	Northern cluster	Western cluster	Metro Manila cluster	Central cluster	Southern cluster
Average per capita income (national mean: 173 thousand pesos in 2006)	Below national mean (142.5 tP)	Slightly above national mean (177.7 tP)	Considerably above national mean (311 tP)	Below national mean (133 tP)	Considerably below national mean (120 tP)
Share of total GDP (2005-2007)	33,2%		32,6%	16,5%	17,7%
Population density	Average population density	High population density	Highest population density	Low population density	Lowest populations density
Ethnical composition	Homogeneous (less than 5 different ethnic groups)	Homogeneous (mostly Tagalog)	Heterogeneous	Heterogeneous	Homogeneous (mostly Muslims)
Geographical composition	Coherent land disposition, mainly rural	Coherent land disposition, mainly urbanized	Coherent land disposition, highly urbanized	Very disparate land disposition, mainly rural	Coherent land disposition, mainly rural
Vicinity of training institutions	Disparate	Contiguous	Very contiguous	Very disparate	Very disparate
Sectoral characteristics	Industrialized western region, more rural eastern region	Industrialized	Industrialized with high share of service sector	Rural character	Rural character

Training institution	Subject area category/random number									
	1	2	3	4	5	6	7	8	9	10
Northern cluster										
RTC II Cagayan			0,589490516							
RTC CAR Baguio			0,925845346							
RTC I La Union		0,27200696								
Western cluster										
Tarlac Training Center			0,765095257							
Conception Vocational School, Tarlac						0,548973018				
Angeles City National Trade School		0,49439473								
Angeles Systems Plus Computer Foundation		0,90964118								
Bataan Polytechnic State College	0,793655982									
RTC III - Mariveles (Bataan)			0,005674749							
Columban College (Olongapo)					0,566304157					
Mary Help of Christians School, Mabalacat		0,04304048								
Clark Development Cooperation					0,573280338					
Metro Manila cluster										
RTC IV - Batangas		0,29532654								
Pablo Borbon Memorial Institute of Technology			0,951245205							
Marikina Institute of Science and Technology					0,147521294					
Monark Foundation Technical Institute, Quezon City					0,697804971					
Hotel and Tourism Institute, Intramuros							0,240494413			
Punlaan School, San Juan							0,083765761			
Footwear Association (CITC), Marikina									0,869770583	
TESDA Regional Training Center, Taguig		0,76941206								
Center cluster										
Quezon National Agricultural School						0,391397136				
RTC V - Pili	0,002878484									
RTC VIII Tacloban				0,402254524						
New Lucena Polytechnic College										0,091401303
RTC VI Talisay	0,515036399									
RTC VII Cebu	0,650631162									
Center for Industrial Technology and Enterprise, Cebu		0,21790756								
Southern cluster										
Camiguin School of Arts and Trades							0,175533442			
RTC X Tagaloan			0,527792114							
RTC XI Davao					0,347421574					
Lupon School of Fisheries						0,706961505				
RTC IX Zamboanga	0,990729933									
MEIN Collge Zamboanga	0,033321725									
	4 highest	4 highest	3 highest	1 highest	1 highest	1 highest	1 highest			