

## Cost–Benefit Analyses in (Dual) VET

### DC dVET Literature Overview

*This literature overview has originally been compiled in view of the DC dVET Webinar held on 14 May 2020, which had a focus on the Western Balkans, Republic of Moldova, South Caucasus and the Ukraine. It has been updated for the Newsletter on cost-benefit analyses in August 2021. It makes no claim to completeness.*

#### Generic overview of cost-benefit analyses

**Bertelsmann Stiftung.** Muehleemann, S., Wolter, S.C. (2019). The economics of apprenticeship training. Seven lessons learned from cost-benefit surveys and simulations, available at: [https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/LessonsLearned\\_2019\\_EN.pdf](https://www.bertelsmann-stiftung.de/fileadmin/files/BSt/Publikationen/GrauePublikationen/LessonsLearned_2019_EN.pdf) and Spanish Version: [https://www.dcdualvet.org/wp-content/uploads/2019\\_JPMorgan-Bertelsmann\\_Los-aspectos-economicos-de-la-FP-Dual.pdf](https://www.dcdualvet.org/wp-content/uploads/2019_JPMorgan-Bertelsmann_Los-aspectos-economicos-de-la-FP-Dual.pdf)

**ILO International Labour Office.** (2019). Measuring the Costs and Benefits of Apprenticeship Training, available at: [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/documents/publication/wcms\\_715099.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_715099.pdf)

**ILO International Labour Office.** Hauschildt, U., (2018). A Review of Methodologies for Measuring the Costs and Benefits of In-Company Apprenticeship Training, available at: [https://www.ilo.org/wcmsp5/groups/public/---ed\\_emp/documents/publication/wcms\\_725494.pdf](https://www.ilo.org/wcmsp5/groups/public/---ed_emp/documents/publication/wcms_725494.pdf)

**IZA Institute of Labor Economics.** Muehleemann, S., Wolter, S.C. (2014). Return on investment of apprenticeship systems for enterprises: Evidence from cost-benefit analyses. *IZA Journal of Labor Policy*, 3:25, available at: <https://izajolp.springeropen.com/track/pdf/10.1186/2193-9004-3-25>

**IZA Institute of Labor Economics.** Lerman, R. (2014). Return Do firms benefit from apprenticeship investments? Why spending on occupational skills can yield economic returns to employers, *IZA Journal of Labor Policy*, 3:25, available at: <https://wol.iza.org/articles/do-firms-benefit-from-apprenticeship-investments>

**OECD.** Hoeckel, K., (2008). Costs and Benefits in Vocational Education and Training, available at: <http://www.oecd.org/education/innovation-education/41538706.pdf>

**SFIVET.** Schweri, J., Aepli, M., Kuhn, A. (2021). The costs of standardized apprenticeship curricula for training firms. *Empirical Research in Vocational Education and Training (2021)* 13:16. Available at: [https://www.dcdualvet.org/wp-content/uploads/2021\\_SFIVET\\_The-costs-of-standardized-apprenticeship-curricula-for-training-firms.pdf](https://www.dcdualvet.org/wp-content/uploads/2021_SFIVET_The-costs-of-standardized-apprenticeship-curricula-for-training-firms.pdf)

**UNESCO and the National Centre for Vocational Education Research.** (2020). Understanding the return on investment from TVET. A practical guide, chapter 5-6, Paris and Bonn, available at: <https://unevoc.unesco.org/home/ROI+practical+guide>

## Cost-benefit analyses (evaluations) from countries with a dual VET system

---

Cost-benefit-studies (with actual data from the countries with dual apprenticeship systems) have a long tradition in Germany ([5 studies so far](#) and [summary in German of most recent cost-benefit study](#)) and Switzerland (4 studies so far, 3 previous studies conducted by Prof. Wolter / University of Bern).

**Austria:** Bundesministerium für Digitalisierung und Wirtschaftsstandort (2020). Die Lehre - Duale Berufsausbildung in Österreich. Wien: BMDW - Abteilung IV/7: Berufsausbildung, available at: [https://www.dcdualvet.org/wp-content/uploads/2020\\_BMDW\\_Die-Lehre\\_Broschüre\\_aktuell2020\\_barrierefrei.pdf](https://www.dcdualvet.org/wp-content/uploads/2020_BMDW_Die-Lehre_Broschüre_aktuell2020_barrierefrei.pdf)

Dornmayr, H., Schlögl, P., Mayerl, M. and Winkler, B. (2016). Hintergrundanalyse zur Wirksamkeit der Betrieblichen Lehrstellenförderung (Gemäß §19c BAG). Synthesenbericht., Wien, available at: [https://www.dcdualvet.org/wp-content/uploads/2016\\_ibw-oeibf\\_bericht-lehrstellenfoerderung-synthesebericht.pdf](https://www.dcdualvet.org/wp-content/uploads/2016_ibw-oeibf_bericht-lehrstellenfoerderung-synthesebericht.pdf)

**Comparison of Austria and Switzerland:** Moretti, L., Mayerl, M., Mühlemann, S., Schlögl, P., Wolter, S.C. (2017). So Similar and Yet So Different: A Comparative Analysis of a Firm's Cost and Benefits of Apprenticeship Training in Austria and Switzerland. Bonn: Institute of Labour Economics, available at: [https://www.dcdualvet.org/wp-content/uploads/2017\\_Moretti-et-al\\_So-similar-and-yet-so-different-costs-benefits-CH-and-Austria.pdf](https://www.dcdualvet.org/wp-content/uploads/2017_Moretti-et-al_So-similar-and-yet-so-different-costs-benefits-CH-and-Austria.pdf)

**Comparison of Germany and Switzerland:** Dionisius, R., Muehleemann, S., Pfeifer, H., Walden, G., Wenzelmann, F., Wolter, S.C. (2009). Costs and Benefits of Apprenticeship Training. A Comparison of Germany and Switzerland, Applied Economics Quarterly, 55:37, available at: <https://elibrary.duncker-humboldt.com/zeitschriften/id/22/vol/55/iss/1404/art/4598/> (click on "Preview" to see the abstract)

**Germany:** Schönfeld, G., Jansen, A., Wenzelmann, F., Pfeifer, H. (2016). Kosten und Nutzen der dualen Ausbildung aus Sicht der Betriebe. Ergebnisse der fünften BIBB-Kosten-Nutzen-Erhebung, Bielefeld: W. Bertelsmann, available at: <https://www.bibb.de/veroeffentlichungen/de/publication/show/9106>

**Switzerland:** Gehret, A., Aepli, M., Kuhn, A., Schweri, J. (2019). Lohnt sich die Lehrlingsausbildung für die Betriebe. Resultate der vierten Kosten-Nutzen-Erhebung. Zollikofen: Eidgenössisches Hochschulinstitut für Berufsbildung (EHB), available at: [https://www.ehb.swiss/sites/default/files/obs\\_ehb\\_bericht\\_kosten-nutzen.pdf](https://www.ehb.swiss/sites/default/files/obs_ehb_bericht_kosten-nutzen.pdf)

Strupler, M., Wolter, S.C. (2012). Die Duale Lehre: Eine Erfolgsgeschichte - auch für die Betriebe. Ergebnisse aus der dritten Kosten-Nutzen-Erhebung der Lehrlingsausbildung aus der Sicht der Betriebe. Rüegger Verlag, Glarus/Chur, Book, short summary available at: [https://www.panorama.ch/dyn/1125.aspx?id\\_article=222](https://www.panorama.ch/dyn/1125.aspx?id_article=222)

## Evaluation and Simulation studies – applying methodology from dual VET countries to others

---

**Chile:** De Amesti, J., Bordón, P., Bolli, T. (2021). Dual TVET education in Chile: Why do companies train students?, available at: [https://www.dcdualvet.org/wp-content/uploads/2021\\_LELAM\\_Dual-TVET-education-in-Chile-Why-do-companies-train-students.pdf](https://www.dcdualvet.org/wp-content/uploads/2021_LELAM_Dual-TVET-education-in-Chile-Why-do-companies-train-students.pdf)

**Italy:** Muehleemann, S., Wolter, S.C., Joho, E. (2018). Apprenticeship training in Italy – a cost-effective model for firms?, available at: [https://www.dcdualvet.org/wp-content/uploads/2018\\_Bertelsmann\\_LL\\_cost\\_benefit\\_study\\_Italy.pdf](https://www.dcdualvet.org/wp-content/uploads/2018_Bertelsmann_LL_cost_benefit_study_Italy.pdf)

**Philippines:** Mapa, D.S., Almeda, J.V., Albis, M.L.F. (2016). A cost benefit study on dual training system, Asia Society for Social Improvement and Sustainable Transformation (ASSIST), Makati City, Philippines, available at: [https://www.bibb.de/dokumente/pdf/PCCI\\_costbenefit-10172016\\_print.pdf](https://www.bibb.de/dokumente/pdf/PCCI_costbenefit-10172016_print.pdf)

**Singapore:** Renold, U., Bolli, T., Wolter, S.C. (2018). Does it Pay for Firms? Costs and Benefits of the Skills Future Earn and Learn Programme in Singapore, available at: [https://www.dcdualvet.org/wp-content/uploads/2018\\_KOF\\_Renold-Bolli-Wolter\\_Does-it-pay-for-firms-in-Singapore.pdf](https://www.dcdualvet.org/wp-content/uploads/2018_KOF_Renold-Bolli-Wolter_Does-it-pay-for-firms-in-Singapore.pdf)

**Spain:** Wolter, S.C., Muehlemann, S. (2015). Apprenticeship training in Spain – a cost-effective model for firms?, available at: [https://www.dcdualvet.org/wp-content/uploads/2015\\_Bertelsmann\\_LL\\_GP\\_cost\\_benefit\\_study\\_spain.pdf](https://www.dcdualvet.org/wp-content/uploads/2015_Bertelsmann_LL_GP_cost_benefit_study_spain.pdf)

**United Kingdom:** Wolter, S.C., Joho, E. (2018). Apprenticeship training in England – A cost-effective model for firms?, available at: [https://www.dcdualvet.org/wp-content/uploads/2018\\_Bertelsmann\\_LL\\_cost\\_benefit\\_study\\_England.pdf](https://www.dcdualvet.org/wp-content/uploads/2018_Bertelsmann_LL_cost_benefit_study_England.pdf)

### Case studies, projections, and other methodologies

**Georgia:** Maerz, U. (on behalf of GIZ) (2017). Costs and returns of Dual Technical Vocational Education and Training Programs Methodology of Estimation and Illustration for the Dual TVET Program of Vine Growers and Wine Makers in Georgia. (Unpublished).

**India:** Rothboeck, S. (2014). Using Benefit Cost Calculations to Assess Returns from Apprenticeship Investment in India: Selected SME Case studies, available at: [https://www.dcdualvet.org/wp-content/uploads/2014\\_Rothboeck-ILO-Cost-Benefit-Analysis-India.pdf](https://www.dcdualvet.org/wp-content/uploads/2014_Rothboeck-ILO-Cost-Benefit-Analysis-India.pdf)

**Mongolia:** GIZ (2020). Return on investment or an investment without return? A cost-benefit ratio analysis of in-company training in Mongolia, Bonn and Eschborn, available at: [https://www.dcdualvet.org/wp-content/uploads/2020\\_GIZ\\_Return-on-investment-or-an-investment-without-return-Mongolia.pdf](https://www.dcdualvet.org/wp-content/uploads/2020_GIZ_Return-on-investment-or-an-investment-without-return-Mongolia.pdf).

**Nepal:** Bolli, T., Kemper, J., Parajuli, M. N., Renold, U., Thapa, B. K. (2020). Projection of Net Benefits for Companies in the Dual VET-Apprenticeship Programme in Nepal, available at: [https://www.dcdualvet.org/wp-content/uploads/2020\\_KOF\\_WP\\_Projection-of-Net-Benefits-for-Companies-in-the-Dual-VET-Apprenticeship-Programme-in-Nepal.pdf](https://www.dcdualvet.org/wp-content/uploads/2020_KOF_WP_Projection-of-Net-Benefits-for-Companies-in-the-Dual-VET-Apprenticeship-Programme-in-Nepal.pdf)

**Pakistan:** GIZ (2019). Return on investment or an investment without return? A cost-benefit ratio analysis of in-company training in Pakistan, Bonn and Eschborn, available at: [https://www.dcdualvet.org/wp-content/uploads/2019\\_GIZ\\_Return-on-investment-Build4skills-Pakistan\\_long.pdf](https://www.dcdualvet.org/wp-content/uploads/2019_GIZ_Return-on-investment-Build4skills-Pakistan_long.pdf) (long version) and [https://www.dcdualvet.org/wp-content/uploads/2019\\_GIZ\\_Return-on-investment-Build4skills-Pakistan\\_short.pdf](https://www.dcdualvet.org/wp-content/uploads/2019_GIZ_Return-on-investment-Build4skills-Pakistan_short.pdf) (short version).

**Vietnam:** Jansen, A., Horn, S., Nguyen, N.H. (2016). Costs and benefits of company-based training in Vietnam; Chances and limitations of applying the BIBB cost-benefit-model, available at: <https://www.bibb.de/en/49208.php>

Aipperspach, C., Specht, G., Ahnfeld, O. (on behalf of KfW) (2012). Cost-Benefit-Analysis of Enterprise-based Vocational Training in Vietnam, Hamburg. (Unpublished).