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An assessment of the enterprise-based training modality in the Philippines: Barriers, incentives, and policy gaps

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An Assessment of the Enterprise-Based Training Modality in the Philippines: Barriers, Incentives, and Policy Gaps

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Chrislyn Joanna F. Eñate, Frances Camille G. Dumalaog,
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Abstract

Demand-driven technical and vocational education and training (TVET) has been associated with positive economic outcomes for the trainees and the participating firms and enterprises. Despite these potential positive implications, numerous studies consistently show the limited involvement of the private sector in training provision and curriculum development in the Philippines. Thus, this study examines the enterprise-based training (EBT) modality in the country by identifying the barriers to entry of industries in co-developing and offering upskilling programs and by evaluating existing incentive mechanisms. A series of key informant interviews (KIIs) and site visits with various stakeholders are conducted to identify prevailing issues and challenges that firms and industries face. To better contextualize the EBT situation, these are complemented by a desk review of the literature and the policy and legal framework governing EBT and an analysis of recent data. This study uncovers the multidimensional and interconnected issues surrounding the alarmingly dismal contribution of EBT to training provision. This study finds clear evidence that despite the abundance of financial and non-financial incentives, existing mechanisms have not been effective in attracting private actors, including firms/enterprises and technical vocational institutions (TVIs), to implement EBT programs. Other factors include gaps in the definition, scope, and measure of EBT, limited capacity of implementers, unresponsiveness of training programs, and intersectoral and interagency coordination concerns. This study has three main contributions. First, the elaborate discussion of the various EBT programs and the associated incentives can facilitate a better understanding and deeper appreciation of EBT. Second, policymakers can learn from and adopt good practices on industry involvement in TVET highlighted throughout the study. Finally, policy recommendations are formulated and presented to address the identified barriers and disincentives which have persistently discouraged industry involvement in skills development.

Keywords: enterprise-based training, TVET, industry-led, barriers, incentives

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1. Introduction

Even prior to the COVID-19 crisis, multiple studies have provided supporting evidence on the deteriorating skills situation among the Filipino workforce, characterized by high levels of skills mismatches in various forms, such as overeducation (Epetia 2018), skill shortages (Acosta et al. 2017; Jaymalin 2018; Campos 2017; ADB 2021), and training-job mismatch (ADB 2021; Generalao 2019), among others. The widespread and prolonged closures of technical and vocational institutions (TVIs) to stem the transmission of COVID-19 resulted in drastic drops in training output (Epetia & Villena 2023). There was also a shift towards the uptake of training programs away from hard-hit sectors (e.g., tourism) towards more resilient ones (e.g., agriculture) (ILO, forthcoming-a). Coincidentally, these hard-hit sectors are also the most attractive among trainees, which implies that skills learned from these training programs may no longer be relevant, at least in the short run. These developments underscore the growing critical role of TVET in upskilling and reskilling the workforce to make their skills future- and pandemic-proof.

To address the skills gaps and develop a globally competitive workforce, the Technical Education and Skills Development Authority (TESDA), the national skills authority in the country, anchors its national plans, such as the National Technical Education and Skills Development Plan (NTESDP) 2023-2028 (TESDA 2023a), to its central strategy of Area-Based and Demand-Driven (ABDD) TVET. This overarching strategy emphasizes the active involvement of industry in crafting policy directions in bridging the skills gaps towards job creation. This is consistent with the skills development literature in the international and national contexts which strongly highlights the crucial role of the private sector in effectively responding to rapidly evolving world of work not only through direct training provision (OECD & ILO 2017; McMaster 2020; Jagannathan 2012; Kumar & Ngangom 2017; Rashidi 2013), but also in the planning and design of training programs (UNESCO-UNEVOC n.d.-a; Jagannathan 2012; Legaspi 2012; McMaster 2020; Brings 2017; Kumar & Ngangom 2017; Legaspi 2012; Martinez-Fernandez & Choi 2012) and even as advocates of policy reform (McMaster 2020; Tamrat 2022; Flake 2017).

A key component of industry-led or demand-driven TVET is the delivery of skills training through firms and enterprises, or commonly known as work-based learning in other countries and enterprise-based training (EBT) modality in the Philippine context. This modality has been associated with better labor market and skills outcomes of trainees (ADB 2021; ADB 2009; TESDA n.d.-a; Hansson 2009); greater productivity, profitability, and innovation among participating firms and enterprises (Flake 2017; Sweet 2018; Tan & Batra 1995); and relatively higher levels of overall labor productivity and competitiveness (ADB 2009; Flake 2017; Jagannathan 2012). The role of EBT has grown in importance in the context of rapid changes

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in production technologies (e.g., fourth industrial revolution) (ADB 2021 and Dadios et al. 2018 as cited Orbeta & Paqueo (2022)). Keeping training programs up-to-date and responsive is also essential to facilitate information on emerging industry adjustments and technological adaptations with the rise in regional qualifications frameworks and international accords (Orbeta & Paqueo 2022).

Amid these potential positive implications of EBT, one of the persistent issues of TVET in the Philippines has been the low level of industry engagement in TVET provision (Orbeta & Paqueo 2022; Epetia & Villena 2023; ADB 2021; ILO forthcoming-a; ILO forthcoming-b). Official statistics clearly show the persistent dismal and stagnant contribution of enterprise-based training (EBT) in terms of enrollment and graduation. This has been attributed not to the lack of effort (Orbeta & Paqueo 2022), as evidenced by the implementation of many programs (Dernbach 2020), including the recent TESDA campaign called “EBT to the Max” to ultimately promote EBT (TESDA 2022a). Assessments of existing policy and legal frameworks governing various forms of EBT, such as apprenticeship and dual training system (DTS), through the filing of several bills (e.g., SBN 363 or the “Enterprise-Based Education and Training to Employment Act”; HBN 6523 or the “Revised National Apprenticeship Program Act”) in Congress are also under way.

Thus, this study aims to assess the EBT modality in the Philippines by identifying the barriers to entry of industries in co-developing and offering upskilling programs. Also, this study intends to evaluate the existing incentives designed to entice firms and enterprises to engage in training provision and curriculum development. In summary, this study has three main contributions. First, TVET stakeholders can better understand and appreciate EBT given its clear definition and scope, with an emphasis on its processes and benefits. Second, policymakers can learn from and adapt best practices on industry involvement in TVET in various contexts, which are highlighted throughout the study. Finally, policy recommendations are formulated to address persistent barriers and disincentives, which have deterred upskilling and reskilling initiatives of firms/industries.

This study finds that the drivers of the persistent limited involvement of industry in training provision and curriculum development in the Philippines are multifaceted in nature. This phenomenon can be mainly attributed to the lack of clear scope and measure of EBT and the failure of existing financial and non-financial incentive mechanisms to effectively attract firms/enterprises and private TVIs to participate and promote the EBT modality. Other explanatory factors are elaborated throughout the study. These include the limited operational and technical capacity of EBT implementers, flawed design and arduous development of training programs, prevailing issues within and across interagency and intersectoral bodies, and the restrictive policy and legal framework.

This study presents actionable and specific recommendations directly targeted to address these barriers and disincentives. These include efforts to clearly define and market EBT, highlighting the various incentives and benefits a prospective implementer can gain. Revamping the existing financial and non-financial incentive mechanisms will also be paramount to effectively entice private actors to participate in any of the EBT programs. Alternative financing mechanisms to promote EBT are also discussed in this report. Multiple ways to resolve the other persistent issues and concerns related to EBT implementation and promotion are also expounded.

This study is divided into nine sections. Based on a review of literature, Section 2 contextualizes EBT by describing its various definitions, measures, costs and benefits,

financing mechanisms, and selected best practices on involvement in training provision and curriculum development. Section 3, on the other hand, briefly discusses the data and methodology used in the study. Section 4 discusses the definition and scope of EBT in the Philippines, with a focus on the key elements of each type, including its design, costs, and incentives. Meanwhile, Section 5 provides a brief overview of the existing mechanisms available to industries to directly influence policymaking related to EBT. Section 6 assesses EBT by analyzing recent trends and correlates of key indicators. Section 7 outlines specific barriers to entry industries, as well as disincentives in co-developing and offering upskilling programs. Specific policy recommendations are formulated and presented in Section 8 to address the issues and challenges of promoting EBT in the Philippines. Finally, Section 9 concludes with a summary of findings and a brief discussion of ways forward.

2. Review of related literature

This section contextualizes enterprise-based training based on a review of literature in international, national, and local contexts. It is divided into four subsections: 1) definitions, characteristics, and measures of enterprise-based training (EBT); 2) competitive advantage of EBT; 3) financing mechanisms of EBT; and 4) role of private sector in skills development.

The first subsection delves into the various definitions of EBT, with the focus on identifying common themes across various contexts and describing the typical characteristics and measures of EBT. Meanwhile, the second subsection presents existing evidence on the competitive advantage of EBT to trainees, employers, and overall economy. How EBT is commonly financed in other countries is discussed in the third subsection, which can serve as a key starting point of discussion in the Philippine context. Finally, this section ends with a discussion on how the private sector has contributed to the skills development systems across countries. A brief discussion of good practices of other countries is highlighted throughout the section.

2.1. Definitions, characteristics, and measures of enterprise-based training (EBT)

2.1.1. Definitions of EBT

A review of literature reveals that the concept of work-based learning is synonymous to enterprise-based training (EBT) (Billet 2021; Cedefop 2015; Kis 2016; European Training Foundation 2013; Green et al. 2009; Sweet 2018). Table 1 outlines the various definitions of work-based learning according to various organizations. One of the organizations is the Inter-Agency Working Group on Work-Based Learning (IAWG-WBL), which was tasked to consolidate, assess, and address issues and concerns related to work-based learning (WBL), through sharing and discussing of WBL-related activities, identifying emerging trends and developing joint products and tools, among others.² Although there are nuanced differences by various institutions and organizations on work-based learning, a common theme encapsulating EBT is practical learning in a workplace setting.

² Originally set up in 2015, it is a subgroup of the Inter-Agency Group on Technical and Vocational Education and Training and comprise of the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO), the Organisation for Economic Co-operation and Development (OECD), United Nations Industrial Development Organization UNIDO), the World Health Organization (WHO) and the World Bank (WB). Regionally-based members include the African Development Bank (AfDB), the Asian Development Bank (ADB), the European Commission (EC), the European Training Foundation (ETF), the European Centre for the Development of Vocational Training (Cedefop), the Inter-American Development Bank (IADB) and the Islamic Development Bank (IDB).

Table 1. Various International Definitions of Enterprise-Based Training

Organization	Definition
Inter-Agency Working Group on Work-Based Learning	“Work-based learning refers to all forms of learning in a real work environment. It provides individuals with the skills needed to successfully obtain and keep jobs and progress in their professional development. Apprenticeships, internships/traineeships and on-the-job training are the most common forms of WBL. They all, usually, – but not always - combine elements of learning in the workplace with classroom-based learning” (Billet 2021, p.10).
European Centre for the Development of Vocational Training (Cedefop)	“Work-based learning is defined as intended and structured learning of direct relevance to a worker’s current or future tasks and taking place in simulated or real work conditions, or outside of the workplace but with specific learning tasks that must be applied in the workplace and afterwards reflected upon (train-apply-reflect method) (Cedefop 2015, p. 7)”
European Training Foundation (ETF)	“[Work-based learning] WBL includes a number of different activities that can be situated along a continuum from shorter-term introductory types of experiences in a workplace to longer-term, more intensive placements, including internships, apprenticeships and in-company employee training. Applied learning that takes place through school-based or student-led enterprises, workplace simulations, workshops and even project-based learning in the classroom can also be labelled as WBL. WBL programmes may be designed exclusively for students at different levels of education or for employees. They may be company-specific, school-wide, local, regional or national, or they may include a combination of local and national implementation and oversight” (Yasso 2000 as cited in European Training Foundation 2013, pp.12–13).
Organisation for Economic Co-operation and Development (OECD)	Work-based learning is defined as “learning that takes place through some combination of observing, undertaking, and reflecting on productive work in real workplaces. It may be paid or unpaid and includes a diversity of arrangements” (Kis 2016, p. 7). Work-based learning also comes in various forms such as structured work-based learning schemes ³ , work placements ⁴ , and informal and non-formal work-based learning ⁵ .
Brown, Green and Lauder, 2001; Crouch, Finegold and Sako, 1999 as cited in Green et al 2009	“Work-based initial vocational training ⁶ refers mainly to apprentice training where young people are employed in recognized training contracts which include the provision of specified forms of occupational training and a trainee wage. This will often be on a Dual System basis, as in Austria, Germany and Switzerland, where trainees combine supervised on-the-job and off-the-job training in the workplace with periods of study

³ Structured work-based learning schemes are “forms of work-based learning that combine on-the-job and off-the-job components, with equal importance, and typically lead to a formal qualification. Duration, learning outcomes, funding and compensation arrangements are determined through a regulatory framework and there is typically a contract between the learner and the firm. Apprenticeships or dual programmes are a classical example of such schemes, but other terms are also used across countries to refer to such schemes” (Kis 2016, p.7).

⁴ Meanwhile, work placements are “forms of work-based learning that usually complement formal education and training programmes, are shorter and less regulated than formal structured work-based learning schemes. Examples include internships, work shadowing opportunities and other work placements used as part of school-based VET programmes” (Kis 2016, p.7).

⁵ Informal and non-formal work-based learning are “forms of work-based learning that do not lead to a qualification and typically lack explicit targeted learning outcomes. This includes, for example, learning-by- doing or learning from managers or co-workers” (Kis 2016, p.7).

⁶ UNESCO-UNEVOC defined work-based training as “Training provided by an organization primarily for its own employees using the employer’s own staff or consultants. Work-based training can be conducted either onsite or at an off-site location” (NCVER (Australia), VOCEDplus as cited in UNESCO-UNEVOC n.d.-b)

	in public vocational colleges or apprentice centers organized on a day release or block release basis” (Green et al., p. 16)
Sweet 2018	“Work-based learning refers to learning that occurs when people do real work. This work can be paid or unpaid, but it must be real work that leads to the production of real goods and services” (Sweet 2018 p 5).

Sources: Billet 2021; Cedefop 2015; Kis 2016; European Training Foundation 2013; Green et al 2009; Sweet 2018

2.1.2. Characteristics of EBT

Sweet (2018) created a matrix on the various ways apprenticeship is implemented in other countries. The variation is described across multiple dimensions, which include duration, mix of workplace and classroom-based learning, eligibility and age limits, contractual arrangements, and occupations and qualification levels covered. Most apprenticeship programs in other countries (e.g., Fiji, Germany, Ireland, Singapore, Sri Lanka, and Turkey) lasts for more than a year up to four or five years, depending on the specific program. This is stark contrast with the apprenticeship program in the Philippines, where the program only runs for a period of more than three, but less than 6 months. This duration is comparable to the Dual Training System (DTS) program in the Philippines which sets no limits on the training program duration and dependent on the terms of the agreement and partnership between the training provider and the firm/enterprise.

Meanwhile, most apprenticeship programs involve more time spent by the trainee in a workplace setting relative to its classroom setting component. The ratio between this time allocation significantly varies depending on the country and the nature of the program. This is also the case in terms of eligibility and age limits of apprenticeship programs. Most are open to young people (e.g., Algeria, Tunisia, and France), while some are targeted to various groups, such as school leavers (e.g., Singapore) and those with limited educational attainment (e.g., Turkey and Tunisia). In Australia, there are no age limits for entry to apprenticeships, but the relatively lower practice wage rates may have deterred adults in participating in the program. In terms of contractual arrangements, contracts are typically signed by the apprentice or the apprentice’s legal guardian and the employer, with cases of additional approval by the skills and training authority in the country (e.g., Fiji) or the chamber the employer is affiliated with (e.g., Turkey) (Sweet 2018).

The same study finds that most apprenticeship programs are targeted towards eventual employment in high-skilled occupations. For instance, in Algeria, three-quarters of all apprenticeships are at the skilled worker level, while the rest will lead to highly skilled occupations, with roughly one-third can be found in information technology, management and administration. This is also the case for Malaysia which implements a modernized apprenticeship system includes apprenticeships in areas such as ICT, retail management, mechatronics and industrial automation, as well as many traditional trades, and in Germany for occupations in banking and insurance industry. Meanwhile, there is significant variation across types of apprenticeships in India and Sri Lanka which covers occupations across skill levels, from traditional blue-collar trades to those in the information technology, among others (Sweet 2018).

Cedefop (2015) discussed patterns in training based on its location. The three modalities offered include on-the-job, off-the-job, and a combination of the two. On-the-job training uses

mentoring for training systematically, while off-the-job training utilizes simulated work-environments to prepare the trainee. Finally, the combination of the two mixes practical activities at the workplace with theoretical classes.

2.1.3. Measures of EBT

To better understand and promote EBT, this study also looks into the various measurement indicators used and adopted by various countries to monitor EBT. Table A1 outlines the EBT-specific indicators used by multiple organizations to track and compare the progress of EBT of different countries. These organizations include the World Bank, through their enterprise surveys, and the Inter-Agency Working Group on TVET Indicators, which comprises of ETF, European Commission, ILO, OECD, UNESCO, and World Bank.

Some indicators measure the participation of firms and enterprises in conducting training (e.g., firms offering formal training (% of firms); work-based learning participation rate; share of apprentices completing registered programmes as a percentage of all apprentices starting registered programmes), while some have disaggregation by firm or company size (e.g., proportion of companies providing apprenticeships and other work-based types of pre-employment training (by company size)). There is also an indicator on completion of training with disaggregation across demographic and work characteristics (e.g., proportion of apprentices completing registered programmes (by trade, age and gender)). Finally, there are cost-related indicators, which compare the cost of apprenticeship to overall labor cost of the firm/enterprise (e.g., spending on apprenticeships and other types of training as a proportion of labor costs (by company size)). The same table also provides a brief description of each indicator, including the intended policy objectives, how it is calculated, its potential sources and concerns, and other considerations.

2.2. *Competitive advantage of EBT*

Work-based learning or EBT is regarded as an effective modality for skills development (OECD & ILO 2017). It has been associated with better labor market and skills outcomes of trainees; greater productivity, profitability, and innovation among participating firms and enterprises; and relatively higher levels of overall labor productivity and competitiveness.

2.2.1. Trainees

Based on a review of studies, Hansson (2009) finds that participants of job-related training registered increased internal employability, job-security, higher labor participation rates, lower unemployment, and shorter unemployment periods for participants of job-related training. Also, training in workplace settings provides greater opportunities to learn the latest technologies (ADB 2009; ADB 2021). Along with industry-specific skills, work attitudes are also developed in DTS programs and trainees' chances for career mobility are improved (TESDA, n.d.-b).

2.2.2. Employers/firms/businesses

Aside from job-skill matching, Flake (2017) identifies several motivations for private companies to carry out dual training: (1) developing a pool of skilled workers for the long-term where there is a scarcity vocational workers; (2) an extended screening period with on-the-job assessment instead of hiring based only on certifications and third-party feedback; (3) specific training in line with company and market competency needs; and (4) contribution to company

productivity during the apprenticeship period. Companies with work-based learning programs are also inclined to greater productivity, profitability, and innovation (Sweet 2018). Tan and Batra (1995) also observe that EBT has been associated with boosting firm level productivity in various economies across several countries such as Indonesia, Malaysia, and China.

Meanwhile, in the Philippines, Mapa et. al. (2016) estimate the benefits received by firms who participate in the dual training system (DTS), which can be either monetary or non-monetary and short-term and long-term in nature. The short-term benefits to the firm include higher productivity and seasonal benefits, while the long-term benefits are equivalent to the savings of the participating company in terms of the search process for new employees. The savings in the latter can be in the form of “recruitment costs (e.g. cost in advertising), cost in hiring manpower that will process the application of the new employees (e.g. human resources personnel), both internal and external; (c) costs in the orientation of the new employees covering both manpower used in the orientation and materials (e.g. DTS trainees need minimum if not zero orientation); and (d) the benefit the firms gains because of productivity differences between the DTS-trained workers and externally recruited workers (externally recruited workers will experience adjustment period in the early months with the firm and they may not be able to achieve the productivity level of DTS-trained workers who have already spend months with the firm)” (Mapa et al. 2016, p. 32). There are also non-monetary benefits identified by firms, which include the positive image for the firm as contributing to the promotion of productive young population and the potential increase in the welfare of the trainees (e.g. higher salary in the future, higher probability of being employed). The study finds that these benefits outweigh the costs associated with the DTS program, which covers the personal costs for the trainees, costs for the trainers, and physical costs.

2.2.3. Economic development

In general, vocational education and training has been crucial for economic development, particularly in developing and emerging countries (Flake 2017). Alignment of skills development priorities with economic and industrial policies also has the potential to increase the industry sector’s competitiveness and exports by attracting more investments in high value-added industries and moving up the value chain (Jagannathan 2012). Specifically, strategic EBT has been instrumental in building up the labor force of advanced industrial Asian countries, such as Japan, Republic of Korea, and Singapore (ADB 2009). Hence, it is also deemed to have a fundamental role for the economic development of emerging countries (Flake 2017) as the most demand-driven training modality (ADB 2021).

2.3. *Financing mechanisms of EBT*

Mechanisms to finance training provision, specifically EBT, can be grouped based on where the fund or benefits will be accrued: national/sectoral; firms/enterprises; and individuals. This subsection focuses on the first two: national/sectoral and enterprise levels. It is common practice in developing countries to implement cost-sharing modalities to fund TVET programs by government agencies, employers, and learners/trainees (Aryal 2020). It is also good to note that most countries offer a variety of financing mechanisms rather than adopting a single strategy (Cedefop 2009).

2.3.1. Training funds or payroll levies

These are financing strategies that consolidate budgets at the national or sectoral level before being distributed to establishments or offered to individuals.

2.3.1.1. *National*

Initially introduced in 1940s in Brazil and prevalent among countries in Latin America and Caribbean, payroll levy or training funds is considered one of the common cost-sharing strategies in financing training programs (Ziderman 2018). In this mechanism, companies contribute a percentage of their total wage bills to the national public training funds, which will eventually finance state-sponsored training institutions, as well as intercompany trainings, other company subsidies that provide trainings. This is usually implemented by setting a fixed rate based on the number of employees per company and compulsory by nature. Other sources of funding of national public training funds include earmarked budget from development partners, NGOs, and private sector donors.

The contribution of firms and enterprises to the training funds significantly varies across countries, with the percentage to their total wage bills ranging from as low as 0.05 percent to as high as 2 percent. In Brazil and other countries in Latin America and Caribbean, companies contribute 1 to 2 percent of the total wages bill to the national public training funds (Ziderman 2018). In Turkey, 1 percent of the employers' income tax are pooled in the Apprenticeship, Vocational and Technical Education Development and Promotion Fund (Sweet 2018). The 20 percent of the annual training budget of Turkish Labor Union of Handicrafts and other Commerce Chambers will also be lodged into that fund and another 20 percent of the collected fund will be transferred to Ministry of Education that will be used to equipment and materials for VET, and VET teachers wages/honoraria of advisory boards. Although considered as the least popular among 12 European Union (EU) member states, the highest levies equate to 2.5 per cent, wherein 2 percent is paid by the employee while the firms contribute the 0.5 percent) and lowest is covered by the firms at 0.25 percent of their total payroll (Cedefop 2009). In Southeast Asia, Indonesia implemented the Social Development Fund (SDF) to address unemployment and to prepare their workforce to meet the demands of their industries (Sujito & Bahagijo 2022). Emulating Singapore's levy system (Box 1), the SDF provides funds for quality improvement, educational curricula that are in line with industry needs, and industrial employment absorption.

Box 1. Singapore's levy system

The Singaporean government collects 1 percent of the total salary or USD 2.00 per month as obligatory industry fee. What makes the Skills Development Fund (SDF) of Singapore one of the best was the systematic and comprehensive monitoring and evaluation mechanism that also promotes accountability across all levels of the SDF organizers. For example, in order for the firms to avail the tax exemption, their training program must be approved by the Department of Skills Development (DSD) with the following criteria: relevant to the service/product offered by the company; at least 6 hours training duration for upskilling or at least 18 hours for changing-job training; with maximum of 50 trainees per training batch and 25 for practical training; and training attendance of at least 80 percent of the training session (Gonclaves 2019). If the companies cannot provide these, they have to pay the obligatory industry fee for the employees that were not trained. The tax collected goes to the SDF which is managed by the Skill Development Promotion Committee (SDPC) which can be used for loans for training purposes, trainers, skill standard assessors, and even TVIs. Companies are also exempted to contribute to the SDF if they have students coming from TVIs, universities, and postsecondary educational institutions working receiving trainings in their companies or operations.

2.3.1.2. *Sectoral*

Some countries make important distinctions on who contributes to the fund and the corresponding percentage to total wage bill, based on firm size and sector. In England, all firms with annual payroll over GBP 3,000,000.00 are required to allot 0.5 percent to their own training fund while the government will contribute 10 percent of the total funds that needs to be spent within 24 months (Sweet 2018). The firms can use this fund to pay registered training organizations to provide training and assessment for their apprentices. Small companies that do not fall in the earlier category will have to cover the 10 percent of the total training and assessment cost of their apprentices, while the remaining cost will be cover by the levy funding. Another example was the model in Tunisia (1956) wherein they set 2 percent of the salary bill of industrial firms and only 1 percent for service enterprises (Sweet 2018).

Aside from national training funds, other countries implement sector-specific training funds. Some of the identified best practices in the kind of financing strategy include the German and Danish models. The former has industry-specific solidarity contributions wherein all construction companies pay a percentage of their payroll costs to this fund that pays companies' expenses related to intercompany training and share for trainees' salary, while companies in Denmark contribute to a consolidated training fund managed by a foundation (Euler 2013). Denmark's Dual apprenticeship system requires all public and private employers contribute a fix amount depending on the number of employees to Employers' Reimbursement Fund where they can charge apprentices' wages during off-the-job training (Sweet 2018).

Another mode that was mentioned by the same author was the creation of solidarity fund managed by chambers of commerce per industry/sector. In Netherlands, they established around 100 voluntary training levies by industry sectors (Sweet 2018). Employers pay an agreed percentage into their industry specific training fund (regardless of company size). The funds can be used for training and research. In Switzerland, they set up a vocational training fund per sector/industry or to the regional training fund (Euler 2013, Sweet 2018). All companies are required to contribute to the vocational and professional education and training fund regardless of whether the companies conduct training or not. The fund can be accessed to finance development training programs, organize courses and qualification procedures, and promote specific occupations. In France, apprenticeship tax was imposed as early as 1925 to private firms and enterprises if they do not train apprentices (Gonclaves 2019). Their rate in 2017 was at 0.68 percent of total payroll on top of an 'additional contribution to apprenticeship' (contribution supplémentaire à l'apprentissage) that ranged from 0.05 to 0.60 percent of their total payroll, to companies with more than 250 employees and employ less than 3 per cent of apprentices, alternance trainees, and volunteers combined. The taxes are collected by assigned tax collectors that in return forward the funds to TVIs that offer apprenticeship training.

2.3.2. Training subsidies

2.3.2.1. *Private TVIs*

Public subsidies to training institutions is another typical way to finance training programs. This can be further disaggregated into various types, such as performance-based, contracted training, one-off, tuition fees, and targeted public procurement, and through intermediary organizations. Typically targeted towards specific cohorts (e.g., women, or those disadvantaged) (ADB 2014), the scale of performance-based funding of private TVIs, is dictated by various indicators, including output indicators, such as their graduates' passing and placement rates, and other input indicators (e.g., teacher competence and staff development)

(Gonclaves 2019). However, this has a risk of long disbursement procedures, which have discouraged TVIs to participate in.

Another output-based funding model is contracted training, wherein the state funds a TVI based on their expertise or the training programs they have that public TVIs do not offer (Gonclaves 2019; ADB 2014). This is usually disbursed thru a voucher system distributed among private TVIs and availed by individuals. The advantage of this model is it is demand-led. However, it can lead to the monopolization of competitive TVIs and the funding from the government is not secured or provided on a regular basis (Gonclaves 2019). For this to work, public should be aware of high caliber TVIs and transparency on the number of graduates that landed jobs (ADB 2014). Some are considered one-off public funding to increase capacity, while responding to priority training needs or reducing the risk of launching new and innovative training offer. Other public subsidy mechanisms include subsidy to tuition fees (Ziderman 2018), targeted public procurement, and funding to intermediary organizations. Targeted public procurement involves awarding of public contracts to enterprises, conditional on the provision of a designated type of training.

2.3.2.2. *Firms/enterprises*

Firms and enterprises can also receive training subsidies, with targeted implementation and close monitoring. Some examples include salary subsidies, such as the wage subsidies of trainees in Algeria, Australia, and Netherlands, and other company subsidies, such as those implemented in Norway, and Sweden. However, some key issues related to direct training subsidies to firms and enterprises include the engagement in apprenticeship not to train but reduce production costs; biased against relatively smaller firms, and effective monitoring of the quality of training (Sweet 2018).

2.3.3. Tax incentives to firms/enterprises

This can be in form of reduced taxes (payroll or company) or reduction of payments for compulsory contributions on workers' compensation and social contributions (Sweet 2018). Some examples include payroll tax rebates and reductions to workers' compensation insurance premiums in Australia, payroll tax deductions based on support to apprentices in Belgium and in Canada, and exemptions in medical and social security payments and other social and vocational training tax, respectively. This is conditional on them accepting apprentices in their operations. Meanwhile, tax allowances were more popular than tax credits⁷ in the context of 12 EU states, which were availed by firms instead of individual trainees. (Cedefop 2009).

In Malaysia, they implemented the Double Deduction Incentive for Training (DDIT) tax incentive coupled with their Human Resource Development Fund (HRDF) levy-rebate system to entice companies to increase their training efforts (Ziderman 2016). In DDIT, firms can deduct twice the amount of their approved training expenditures from their gross income for computing tax obligations. However, this scheme favored the large companies in Malaysia, which are usually involved in exporting business and electronics sector. The relatively low uptake by smaller firms is mainly because large companies conduct trainings even without the subsidy, while small firms are focused in domestic market.

⁷ Tax allowances are the total amount deducted to the gross income to arrive to the taxable income while tax credit is the amount deducted to the tax due. This is applicable for both individual or corporate taxes.

2.3.4. Payback clauses to firms/enterprises.

Payback clauses are sets of legal provisions that dictate the allocation of training costs between employers and employees especially when the latter decides to leave the employer that supported the training (Cedefop 2009). Trained staff that decided to pursue employment elsewhere will be penalized by reimbursing all or part of the training costs that firm invested in their training or employers may have to pay the other firm where their new employee came from. In some EU states like Romania, Czech Republic, and Hungary, these are regulated through their respective labor codes, while other states like Estonia, Malta, and Poland, these are incorporated in the individual or collective employment agreements (Cedefop 2009).

2.3.5. Levy grant schemes to firms/enterprises⁸.

Levy-grant schemes are intended to entice firms to invest on their respective training programs which can be in-form of in-training or sponsorship of trainees outside the companies (Ziderman 2016). Levies can also be used as a strategy to address the freeloaders/companies that do not participate in training programs and eventually poach trained workers. Rates can be set in a uniformed rate (easier to implement) and rated as per company characteristics (Sweet 2018). Increased participation of enterprises in levy schemes will come down to the transparency on how the funds will be used and disbursed (ADB 2014). Levies that are used for administrative purposes, for example, highly discouraged private companies' participation in levy system. However, training levies have some issues, such as the inability of uniform rates of levy to capture differences in industries' size and needs of the sectors, lack of work-based learning targeting of training levy, and the burden of collection mechanisms and administration of grants (ADB 2014).⁹

Training levies can be in various forms, including cost reimbursements, cost redistribution, levy exemption, alternative training subsidies, and subsidizing apprenticeship training. Imposed in countries like Netherlands, Malaysia, and Nigeria, reimbursements on the cost incurred by the trainee can be received by firms but has been adopted with a cap to avoid abuse. Meanwhile, in New Zealand and Ireland, cost redistribution addresses issues on poaching of skilled workers by non-training firms by redistributing the training expenditures to the companies that conducts trainings and while disincentivized those who do not conduct training. Aside from that, firms are incentivized to conduct training because they may receive grants in excess of the levies paid. On the other hand, levy-exemption incentivizes companies who are meeting the training targets set by freeing them from the administrative burden of claiming levy-grants claims and assessments. This scheme worked well in industrialized countries like France and in developing countries like Cot d'Ivoire. Other alternative training subsidies can be direct subsidies from government funds or indirect subsidies like concessions on company taxes (e.g., Chile use company tax credits). Finally, in subsidizing apprenticeship training, apprentices can also share in the overall costs of training through receiving a lower salary rate or the state may cover the wages. In France and Algeria, they introduced the concept of apprenticeship training levy to fund their apprenticeship training system. But the common model of apprenticeship training is in subsidizing allowances of the apprentices (Ziderman 2016).

⁸ For a more systematic discussion of levy financing, see Johanson (1996) as cited in ADB (2009).

⁹ For a more elaborate discussion of the issues of each levy financing mechanism, see Ziderman (2018) and Sweet (2018).

2.4. Role of private sector in skills development

Increasing private sector involvement in co-developing and offering upskilling and reskilling programs is one of the common recommendations in skills development literature. The value of engaging industry actors in TVET has been demonstrated across countries with different socio-economic and demographic contexts. Industries can actively engage through various forms, such as in the planning and design of programs, building partnerships and direct training provision, and even in advocating for TVET policy reforms.

2.4.1. Planning and design of training programs

Private sector involvement is crucial in developing TVET programs that are responsive to labor market needs and emerging industries (UNESCO-UNEVOC n.d.-a; Jagannathan 2012). As primary end-users of trained human resources, they are at the forefront of determining the most relevant skills and competency requirements amid fast-changing local and global market trends (Legaspi 2012). Relative to the public sector, they have been relatively quicker in responding to rapid industry advancements and market demands with their flexibility in developing and modifying training programs (Kumar & Ngangom 2017). For instance, to keep up with the rapidly evolving technologies, Servicio Nacional de Adiestramiento en Trabajo Industrial (SENATI) established Centres of Excellence (Box 2).

Box 2. Peru's Servicio Nacional de Adiestramiento en Trabajo Industrial (SENATI): Centres of Excellence

SENATI is a TVET institution created by the National Society of Industries of Peru. It is the widest-reaching technical training institution in the country with national coverage of operations (UNESCO-UNEVOC n.d.-a). Among the training courses offered by SENATI are on hydraulics, pneumatics, automation, mechatronics, cold packaging, industrial control systems, electrical engineering, mechanics, and industrial application software. Technologies in such industries rapidly evolve, thus keeping up with the costs of maintaining updated facilities and equipment can be difficult for technical training institutions. To address this challenge, SENATI put up Centres of Excellence with support from its global partner companies (UNESCO-UNEVOC 2023b).

SENATI's Centres of Excellence are equipped with the most recent tools, machinery, and trade information necessary for effective training provision and updating of curricula. To date, SENATI has established at least 18 Centres of Excellence in Peru. Companies benefit from this initiative through obtaining a skilled workforce and reduced costs of recruitment and onboard training. Aside from new trainees, company personnel may receive further training for upskilling. Meanwhile, capacities of SENATI instructors are continuously upgraded through obtaining certifications on the companies' technologies (UNESCO-UNEVOC 2023b).

In developing training curricula that supplements theory with practice, collaboration with professionals and specialists in industry sectors is deemed indispensable (Valles 2012). For instance, some large corporations craft qualification standards at par with global industry trends (Brings 2017), which can serve as guideposts for creating and updating national competency standards. A key example of this type of partnership is Huawei ICT Academy in Poland (Box 3). [OBJ]

Box 3. Huawei ICT Academy in Poland

Zespol Szkol Lacznosci (ZSL), a technical school providing ICT and related programs, is the first accredited provider of the Huawei ICT Academy in Poland (UNESCO-UNEVOC 2023a). The Academy provides training on technologies specific to Huawei and the broader ICT industry. It brings the latest technology to the school setting through well-resourced laboratories, providing more effective learning experiences to students. Participation in the Huawei ICT Academy resulted in better preparation of students for the state professional ICT exams in Poland. Graduates are also encouraged to obtain Huawei certification.

Meager funding of public educational institutions and small schools limits students' access to state-of-the-art facilities, equipment, and technologies. ZSL's partnership with Huawei enabled access to wide area networks, 5G technology, and network security (UNESCO-UNEVOC 2023a). More technical schools in Poland are working towards becoming a Huawei ICT Academy.

A global program, Huawei ICT Academy has reached the Philippines. Marinduque State College, Tarlac State University, University of the East, and STI College are some of the state universities and colleges (SUCs) and private school that have been appointed as Huawei Authorized Information Network Academy (HAINA) (Calayag 2023; Huawei Philippines 2021; BusinessWorld 2021; University of the East 2021). This gives them access to Huawei's training resources and authorization to offer Huawei certification courses.

Notably, Huawei ICT Academy in the Philippines is currently offered by higher education institutions. As ICT is among the priority sectors in the Philippines with high demand for skilled workers, TVIs with assistance from TESDA may explore opportunities for Huawei ICT Academy accreditation or other similar programs of large corporations in the ICT industry.

2.4.2. Direct training provision.

Enterprise-based training is generally regarded as effective, since skills are honed on-the-job (OECD & ILO 2017; Legaspi 2012). Employers as direct training providers also facilitates the alignment of skills development interventions with priorities and principles of potential employers (McMaster 2020). The rich pool of experts in industry networks can also be tapped as resource persons in the conduct of training especially for emerging industries and up-to-date occupational standards (McMaster 2020; Jagannathan 2012). A good example of involving private companies in direct training provision with inputs on curriculum development is Bridging Benin's Skills Gap project (Box 4).

Box 4. Bridging Benin's Skills Gap project: Partnerships with Private Enterprises for Agricultural TVET

Mismatch between training and labor market demand is one the areas of concern in agricultural TVET (ATVET) in Benin. Involving private enterprises in agricultural training delivery and curriculum development through the Bridging Benin's Skills Gap project is the country's strategy to tackle this issue. UNESCO-UNEVOC (2021) features this initiative which is led by the African Union Development Agency (AUDA-NEPAD) with support from the German development agency GIZ. The project focuses on facilitating collaboration between private enterprises and Agricultural Training Centers (ATCs), involving businesses in curriculum design, and supporting internships.

Through the partnerships fostered, ATCs are influenced to veer away from purely theory-based learning to incorporate in-plant learning modalities. Moreover, interns are trained not only on

industry-specific skill requirements; desirable workplace attitudes are also honed. Trainees' exposure to successful agripreneurs is deemed to boost the appeal of agriculture-related jobs among Benin's youth. The ATVET framework, which operates in six participating countries, identified income-generating value chains for prioritization of training and skills development. For Benin, value chains for rice and meat were identified for their economic potential and the priorities of the country's labor market.

The integration of private companies into ATVET and the identification of priority value chains opened up opportunities for pooling inputs from entrepreneurs, agricultural practitioners, and value chain experts for curricular development. Together with ATCs, these efforts brought forth the creation of new short training courses.

Overall, the ATVET framework was found to be adaptable to diverse contexts, providing guidance for tailored responses in collaboration, curricular enhancement, and financing strategies. Further direction on national integration and strategies for increased financing for ATVET institutions and the ATVET framework was viewed as an ongoing process, subject to continuous review and updates.

2.4.3. Policy reform.

Building sustainable partnerships and strengthening collaborations among TVET stakeholders, including TVIs, the industry, and the government, are critical in increasing private sector engagement in skills development. Encouraging active participation of the private sector at the policy level can strengthen their sense of ownership towards a more effective skill development strategy at the national and local contexts (Kumar & Ngangom 2017; Legaspi 2012; Martinez-Fernandez & Choi 2012). This can be done by ensuring private sector representation in regional and national boards for policy development and involvement in decision-making (Tamrat 2022). One example of this good practice is the establishment of Industrial Leading Bodies (ILBs) in Malaysia (Box 5). Another successful example of this collaboration is the development project for at-risk youth in Nicaragua, where a national network was created to advocate for strengthened TVET and as a platform for discourse between the private sector and other organizations implementing TVET (McMaster 2020).

Box 5. Malaysia's Industrial Leading Bodies (ILBs)

The Malaysian TVET system underwent significant restructuring, aiming for greater industrial orientation. Hussain et al. (2021) discussed the country's efforts in strengthening the involvement of industries in TVET. A primary strategy was the introduction of ILBs which played a crucial role in fostering public-private partnerships, engaging various business sectors to provide feedback and guidance on the TVET system considering market trends.

The ILBs, consisting of representatives from diverse business sectors, focused on key aspects such as the establishment of occupational frameworks, occupational skills standards, upskilling and skill certification, and research (Hussain et al. 2021). This measure commissioned industries to take part in building up Malaysia's skilled workforce. Through the combined efforts and collaboration of ILBs and the Malaysian Department of Skills and Development, the National Occupational Framework (NOF) and National Occupational Skills Standards (NOSS) were developed based on current industrial needs. These served as guidelines for curriculum development in TVET programs. NOSS, comprising 1,819 standards, serves as a blueprint for curricular content, offering instructions for training and examination requirements for employees, aligning them with industry standards.

The productive collaboration of the Malaysian government with the private sector through industry boards (IBs) demonstrates the merits of creating and investing in such bodies and framework of cooperation.

3. Data and methodology

To identify the barriers and (dis)incentives to industry involvement in co-developing and offering upskilling programs, this study uses insights gathered from respondents of key informant interviews (KIIs), site visits of and industry consultations with strategic partners. These are supported by findings from quantitative data collection and processing of EBT-related data and information from various official sources (e.g., TESDA, PSA, BIR, etc.). Finally, the issues identified from these methods are complemented by a desk review of policy and legal framework governing EBT which include TESDA policy issuances (e.g., Memorandum Circulars), laws (e.g., Labor Code of the Philippines, Dual Training System Act of 1996), and bills (e.g., SBN 363 or the “Enterprise-Based Education and Training to Employment Act”; HBN 6523 or the “Revised National Apprenticeship Program Act”), among others. These are then complemented with key issues identified from existing EBT literature in the Philippines.

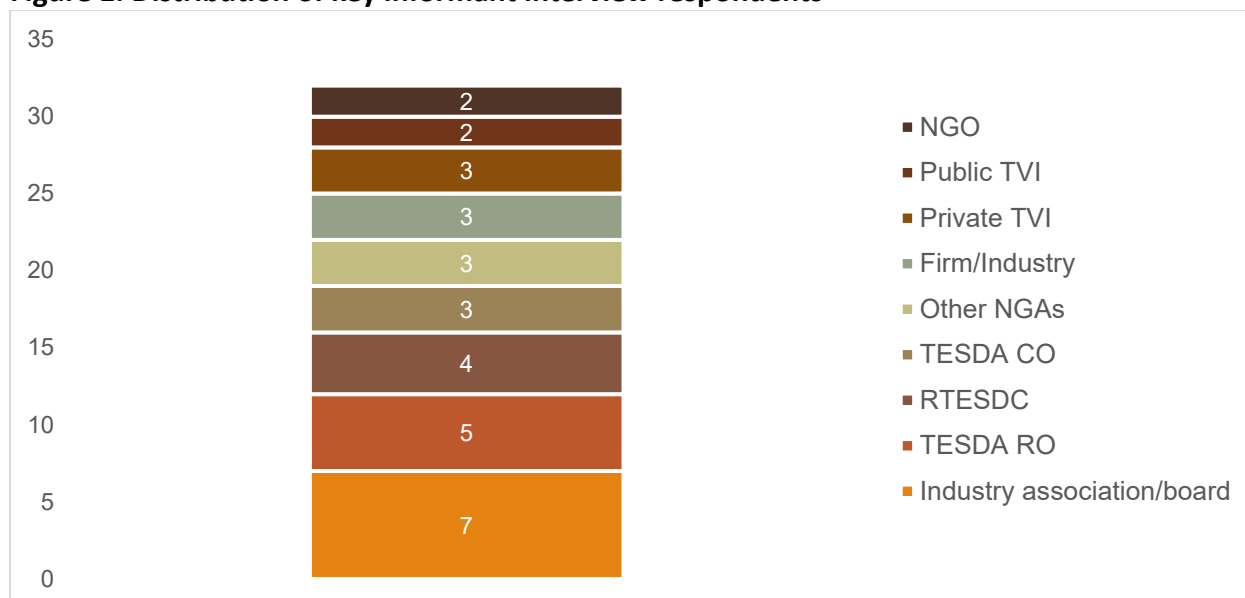
The study team conducted virtual KIIs with representatives from 32 offices, institutions, and organizations last September 2023 and January to February 2024. Out of these, 15 are from the government, 10 from the private sector, 5 from the education and training sector, and 2 from non-government organizations (NGOs). Figure 1 shows a more disaggregated distribution of the KII respondents. The majority of respondents are from industry boards and associations (7), followed by TESDA Regional Offices (5), and RTESDCs (4). Table A2 lists the KII respondents of this study. Each KII lasted for an average of 1.5 to 2 hours.

The data collection instrument used in the virtual KII include questions on the following:

- How they define and identify the scope of EBT
- Their organization/institution’s role in implementing and/or promoting EBT
- Perception on the effectiveness of the various forms of EBT (e.g., DTS, Apprenticeship) as a training modality
- Awareness of existing tax incentives related to EBT participation
- Awareness of other financial and non-financial incentives related to EBT participation
- Barriers to entry of industry involvement in EBT, upskilling, and reskilling
- Factors that enable successful involvement of industry in EBT, upskilling, and reskilling (e.g., sharing of best practices, specific support needed, etc.)

These questions are then tailored depending on the representation of the respondent. Meanwhile, Table A3 outlines the schedule, venue, and participating institutions involved in the site visits of and industry consultations with strategic partners spearheaded by EDCOM 2. These activities were conducted in the second half of 2023.

Figure 1. Distribution of key informant interview respondents



Source: Authors' illustration based on KII respondents' profiles

4. Official definition, scope, and incentives of enterprise-based training (EBT)

Divided into three subsections, this section elaborates the official definition of EBT in the Philippines and the various characteristics of each EBT program. Also, the associated incentives for EBT implementers, including firms/enterprises and private TVIs, by EBT program are outlined and highlighted in this section.

4.1. Definition

In the Philippines, programs under the EBT modality refers to those “delivered in the enterprise which maybe in-plant or stand-alone, or maybe linked with a training provider. These programs are offered to an industry group or to enterprises employees and individuals” (TESDA Circular 2020-345, p.1). It is one of the four training modalities, the others being institution-based, community-based, and monitored training programs.

Institution-based training (IBT) can either be school-based or center-based. The former is provided by TESDA-Administered schools, State Universities and Colleges (SUCs), local Universities and Colleges (LUCs), and private higher education institutions (HEIs) and TVIs, while the latter to those “being undertaken in the TESDA Regional and Provincial Training Centers, local government unit (LGU)-run and private Training Centers and NGO-run training centers in the different regions and provinces in the country” (TESDA Circular 2019-131, p.2). Community-based training (CBT), on the other hand, refers to TVET programs “conducted by Non- Government Organizations (NGO), LGU's, training centers and other TVET providers which are intended to address the specific needs of a community which may be delivered in an informal and formal setting in the community. This includes the Mobile Training Program and extension programs of public and private TVIs. These are programs implemented with TESDA assistance” (Memorandum No. 181 s. 2019 as cited in TESDA Circular No. 2021-18, p.1). Finally, monitored training programs refer to skills training programs conducted by other national government agencies (Orbeta & Paqueo 2022).

Based on the results of the KIIs, EBT stakeholders have more or less the same definition of EBT, while the scope or their understanding of its various form significantly vary. Specifically, the common theme that arises in their definition of EBT was the role of the enterprises in providing the hands-on learning experience for the trainees. Meanwhile, there are variations in the scope of EBT, specifically on the typologies of EBT implemented in the country. Table A4 summarizes the responses of the KII respondents in terms of their understanding of EBT and its various form.

4.2. Scope

There are multiple programs under the enterprise-based modality in the Philippines. In 2022, TESDA launched a campaign called “EBT to the Max” to promote these EBT programs (TESDA 2022a). These include Learnership Program, Apprenticeship Program, Dual Training System, Dualized Training Program, Supervised Industry Learning (SIL), Program on Accelerating Farm School Establishment (PAFSE). In this report, we include industry-based or in-company training as part of the umbrella of EBT programs, primarily because it has been included under EBT based on TESDA official statistics and in previous policy issuances and press releases of TESDA.

4.2.1. Learnership Program

Learners are enrolled in practical training in a learnable occupation, whether with or without theoretical instruction (TESDA Circular 2020-120). Learnership program is characterized by its short duration since the program only runs for a maximum of three months. In one of the KIIs, TESDA explained that easy to acquire skills fall under the learnership program. The minimum age to train is 15 years old, and individuals under the age of 18 are only permitted to be engaged in non-hazardous jobs¹⁰. Furthermore, learners are also entitled to receive at least 75 percent of the minimum wage. In the absence of a regular worker, learners who are over 18 years old may render overtime. Tasks performed from 10 in the evening to 6 in the morning shall be paid with night shift differential of not less than 10 percent of the minimum wage in the region. The time spent on overtime shall also be credited to the learners’ training hours. Moreover, provision of other cash or in-kind benefits to the learner shall depend on the enterprise's capability.

4.2.2. Apprenticeship Program

By virtue of Technical Education and Skills Development Authority (TESDA) Act of 1994, the apprenticeship program was transferred from the Department of Labor and Employment (DOLE) Bureau of Local Employment to TESDA (RA 7796). In essence, apprenticeship aims to provide “greater emphasis and importance to skills acquisition of the apprentices and learners towards employment” (TESDA Circular 2020-120, p.1). The same Circular defines apprentices as people undergoing trainings for apprenticeable occupation¹¹ that last no more

¹⁰ Hazardous Workplace “refers to an authorized venue for apprenticeship which relatively exposes the apprentice to dangerous environmental elements, contaminants or in other highly vulnerable working conditions such as construction manufacturing or handling of explosives, or that which requires engagement with too-heavy or power-driven equipment, tools or machineries” (TESDA Circular 2020-120, p.5). For more information, look into RA 9231 and the list of hazardous occupations and industries in DOLE Department Order 2016-149 and 2017-149-A.

¹¹ There are two apprenticeable and learnable occupations and work processes under TESDA Circular 2020-120–Promulgated Training Regulations from TESDA and apprenticeable and learnable occupations from DOLE List with training regulations. Section 7.3.1 states that “the List of DOLE Apprenticeable and Learnable Occupations or Work Processes uploaded in the website with no equivalent or existing TRs shall be registered as NTR until such time a TR is developed and delisted from the registry of

than six months. Moreover, the theoretical lectures in the apprenticeship program should be accompanied with practical training. In one of the interviews, TESDA explained that the delivery of apprenticeship must be initiated by the enterprises. Indeed, TESDA Circular 2020-120 states that “any enterprise with 10 or more regular workers and is duly registered with the appropriate government authority/ies shall be allowed to apply for apprenticeship or learnership program registration. Only employers in the highly technical industries¹² may employ apprentices and only in apprenticeable occupations/qualifications approved by TESDA” (Section 4.1.1 and 4.1.2). Furthermore, the same Circular allows for the industry players to partner with other institutions if they do not possess the capability to provide the theoretical aspect of the training (Section 5.1.4, TESDA Circular 2020-120).

Much like the learnership program, apprentices are entitled to 75 percent of the minimum wage. Moreover, apprentices who are above 18 years of age may render overtime if there are no regular employees available. Their services will be then counted towards their training hours. If the overtime is performed from 10 in the evening to 6 in the morning, apprentices will be paid a night differential of not less than 10 percent of the prevailing minimum wage in their area. Lastly, apprentices are given disability insurance policy, but other cash or in-kind benefits shall depend on the enterprise's capability.

4.2.3. Dual Training System

The Dual Training System (DTS) was introduced in the Philippines in 1980s through “the joint project of the Southeast Asian Science Foundation and the Hanns Seidel Foundation in the pioneer school–Dualtech Training Center” (TESDA 2010). This German model was promulgated in 1991 by the then Bureau of Technical and Vocational Education. After three years, the Dual Training System Act of 1994 (RA 7686) was legislated giving way to the institutional delivery of the program. In essence, the law seeks to supply the country with skilled and educated labor force by enhancing training cooperation between businesses, educational institutions, and local government units in terms of the design and implementation of pertinent training programs.

Prior to the commencement of the DTS, several documentary requirements must be prepared by the TVET institution and the enterprise, such as the Memorandum of Agreement (MOA) and training plan. Before the program begins, the establishment and partner institution must sign a MOA. Both parties have the responsibility to ensure that the contents of the agreement will be properly implemented like the commencement date, training hours, allowance, and insurance coverage, among others. For instance, DTS requires at least 60 percent of the total program duration be allotted to in-plant training or practical engagement while the remaining time must be spent in-school or the theoretical instruction (TESDA Circular 2019-54). The trainees should also receive at least 75 percent of the minimum wage, paid every 15 days of the month. Apart from the MOA, a training plan must be jointly prepared by the establishment and the institutions. It could be delivered either through Day Release Scheme or Block Release Scheme subject to the concurrence of the parties involved. The Day Release Scheme refers to alternating delivery of theoretical lectures on certain competencies and in-plant training.

apprenticeable and learnable occupations.” It may be noted that prior to the transfer of Apprenticeship and Learnership to TESDA, the Labor Code of the Philippines, Article 60 noted that “only employers in the highly technical industries may employ apprentices and only in apprenticeable occupations approved by the Minister of Labor and Employment.”

¹² “Highly Technical Industries refers to trade, business, enterprise, industry, or other activity, which is engaged in the application of advanced technology. (Sec. 2, letter j, Rule VI, Book II, Omnibus Guidelines Implementing the Labor Code as cited in TESDA Circular 2020-120)

Additionally, the term "Block Release Scheme" describes the continual delivery of in-class activities followed by practical training.

Under TESDA Circular 2012-31 (p.2), Dualized Training Program (DTP) is defined as “a TVET program that combines in-plant and in-school training based on a training plan collaboratively designed and implemented by a TVI and its partner establishment that have DTS Accreditation. The duration of the in-school and in-plant training under this system shall not be more than the duration of the registered program of the TVI. The program meets all the requirements provided for under the DTS Law, except for the prescribed payment of the training allowance to the student/trainee.” Meanwhile, under the Dualized Training Program, allowance may come in the form of allowances such as shuttle service, uniform, food stub, or other in-kind compensation.

4.2.4. Supervised Industry Learning (SIL)¹³

Two other forms of enterprise-based training may have been bolstered under TESDA’s “EBT to the Max” or the agency’s campaign to strengthen the collaboration and partnerships with the industries (TESDA 2022a). These two other training programs are SIL and PAFSE. Overall, SIL is synonymous with On-the-Job training (OJT) and Supervised Industry Training (SIT). It aims to complement the competencies that learners have acquired in the TVET institutions with sufficient industry experience (TESDA Circular 2023-18). The trainees of SIL must be at least 15 years of age following the provisions of the labor code in the Philippines (TESDA 2023-18). Upon executing a MOA, the batch of SIL learners are deployed either in groups or individually to the enterprises upon the completion of the Institution-based learning.

SIL applies to With Training Regulations (WTR)¹⁴ Programs on NC levels III and IV and PQF Level 5 (Diploma) program. SIL is not required for NC levels I and II graduates, but TVET institutions must expose them to job shadowing or the observation of regular employees as they perform their task on-site. Generally, if the training regulations are performed in hazardous environments, the SIL is no longer applicable.¹⁵

4.2.5. Program on Accelerating Farm School Establishment (PAFSE) and Training Conducted in Farm Schools (TCFS)

4.2.5.1. PAFSE

Aligned with TESDA’s NTESDP 2023-2028 which prioritizes the agriculture sector, the agency, in coordination with the Department of Agriculture – Agricultural Training Institute (DA-ATI) and Department of Agrarian Reform (DAR), implements the Program on Accelerating Farm School Establishment (PAFSE). The program aims to accelerate the establishment of farm schools in localities around the country through the enhancement of the knowledge and skills of farmers, fisherfolks, their families, relatives, and community through “learning by doing.” Also, it intends to improve the lives of farm workers, fishers, and their families by integrating technological updates and entrepreneurial skills in various training programs (TESDA Circular 2016-56 as cited in SEARCA (2022)).

¹³ Please note that by virtue of TESDA Circular 018-2023, SIL will no longer be classified under the EBT modality. It will now be under the IBT modality.

¹⁴ WTR “refers to the programs registered under the UTPRAS with corresponding Training Regulations as a basis for their registration” (TESDA Circular No. 99 s. 2019, p.3). The curriculum design and implementation of TVET programs leading to a work qualification, as well as the procedures for competency evaluation and certification of those pursuing the qualification, are governed by Training Regulations (TRs) (Orbeta and Corpuz 2021).

¹⁵ See TESDA Circular 2023-18 for the full list of exempted TVET programs under SIL.

KII respondents from TESDA, as supported by other TESDA policy issuances (e.g., TESDA Memorandum 345, 2020), explained that PAFSE falls under the EBT modality¹⁶ because farm schools are treated as enterprises. Under Memorandum No. 345, s. 2020, PAFSE training outputs shall be reported as EBT.

DA-ATI promotes the establishment of Learning Sites for Agriculture (LSA), Schools for Practical Agriculture (SPA), and Extension Services Providers (ESP) through accreditation as part of the Rice Extension Services Program (RESP) of RCEF. Along with LSAs, SPAs, and ESPs, DAR-identified Farm Business Schools (FBS), LinkFarm Sites and other farm schools must obtain a Certificate of TVET Program Registration (CTPR) to qualify for availment of scholarship grants. Under RESP, LSAs/SPAs/ESP may deliver the following programs: RCEF Farmers' Field School (FFS) Production of High-Quality Inbred Rice, Seed Certification, and Farm Mechanization; and skills upgrading programs that will complement the delivery of the RCEF FFS and other programs to support the value chain.

Typically, the farm field schools are composed of around 20 to 25 farmers. They are taught with agricultural skills and management capabilities fit to their current farming operations. Moreover, farm field schools are using “farmer to farmer” and “learning by doing” approach to ensure the appropriateness of the program as well as the fit to the farming seasons.

PAFSE is primarily funded through the Training for Work Scholarship Program (TWSP). Specifically, the provision of technical assistance through the program is financed through TWSP (TESDA Circular 2016-56 as cited in SEARCA (2022)). It also benefits from other funding sources, such as TESDA scholarship programs, such as the Special Training for Employment Program (STEP), and Private Education Student Financial Assistance (PESFA), and the Rice Competitiveness Enhancement Fund (RCEF) and Coco Levy Fund (SEARCA 2022).

Scholarships are provided to farmers, and fisherfolks, their families and community members of the farms schools which may be accredited Learning Sites, School for Practical Agriculture, Extension Service Providers of the Department of Agriculture–Agricultural Training Institute (DA-ATI). Identified Farm Business Schools and Linkfarm Sites of the Department of Agrarian Reform (DAR), albeit not as widely known among local program implementers (SEARCA 2022), are also covered by these scholarships. Although these cases appear to be uncommon, even trainees in farm schools neither accredited nor identified by DAR and DA-ATI are also eligible to avail PAFSE.

4.2.5.2. TCFS

All other training programs conducted in farm schools/enterprises fall under “Training Programs Conducted in Farm Schools/Enterprises” (TCFS). These farm schools/enterprises offer programs which are not registered through PAFSE but through the typical program registration system of UTPRAS. These include trainings conducted in farm schools using courses developed by PhilRice, ATI, PhilMech utilizing Rice Competitiveness Enhancement Fund (RCEF). Examples of these training programs are Pest and Nutrient Management; Digital Agriculture Course; and Farm Field School (FFS) on Production of High-Quality In-bred Rice, Seed Certification, and Farm mechanization.

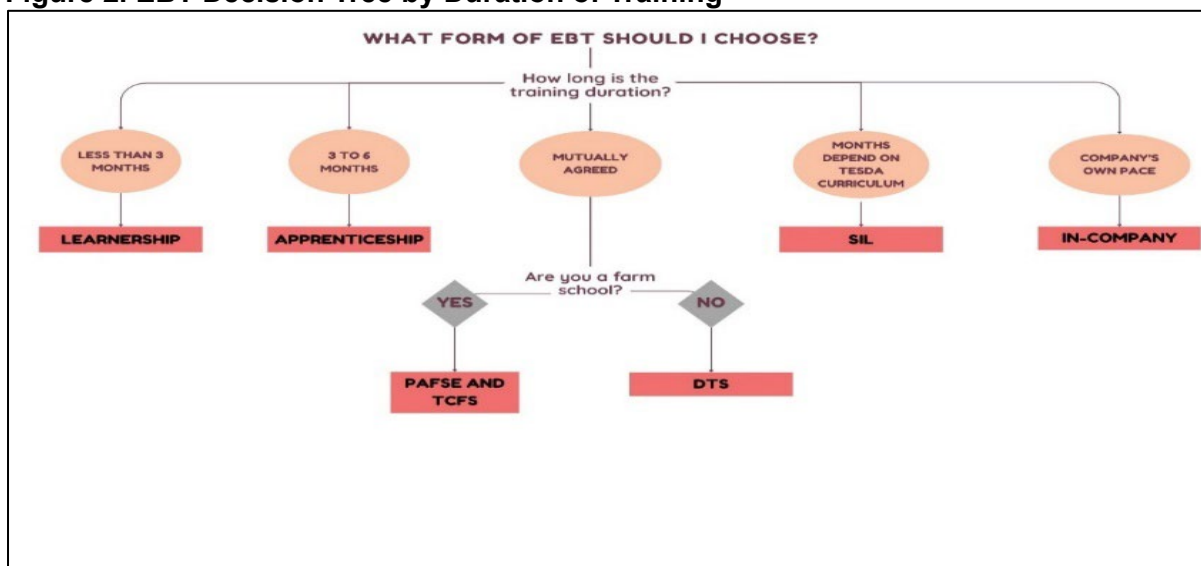
¹⁶ It must be noted however, that the inclusion of PAFSE and TCFS in EBT statistics only started in 2021 by virtue of TESDA Circular 345, series of 2020, which sets the guidelines on the reporting of training outputs (TESDA, 2020).

4.2.6. Industry-based or in-company trainings

TESDA also recognize that industry players are providing in-house training and upskilling program for their employees. The in-company or in-house trainings are customized by the companies based on their actual needs. There are four typologies of in-company training, namely: pre-employment, basic, upgrading, and supervisory (TESDA Circular 2021-73). Pre-employment training is provided by the establishments to determine the fitness of applicants to the available vacancies. On the other hand, basic training is given to the new hires of the organization. Upgrading training refers to the new skills provided to existing employees to improve their productivity and performance. This training also addresses any deficiencies in the competence of their existing employees. Finally, supervisory training refers to developing the people management skills of middle managers. Companies employing 10 or more workers are encouraged to report their in-house training to TESDA (TESDA Circular 2021-73).

Table A6 summarizes various information of each EBT form, which include, but are not limited to its legal basis, year of introduction and/or implementation, definition, skill type, duration, allowances and other benefits, and qualification of trainees, as well as the list of incentives. Meanwhile, Figures 2 and 3 illustrate the potential decision-making process of firms/enterprises in terms of participating in each type of EBT by duration of training and skills and occupational needs, respectively. Figure 2 shows that the duration of the training will depend on the specific EBT program implemented by the firm/enterprise. Relatively short-term in nature are programs under the Learnership program, which only last for less than three months, while those which run from three to six months are training programs under the Apprenticeship program. Meanwhile, training programs under DTS, PAFSE and TCFS are more flexible in duration. It depends on what was mutually agreed upon by the participating firm/enterprise and the partner TVI provider. On the other hand, the duration of SIL programs is set based on the curriculum of the training program with training regulations (WTR), either NC 3, 4, or Diploma course. Finally, there is no set duration for in-company trainings since these are set internally within the firm/enterprise.

Figure 2. EBT Decision Tree by Duration of Training

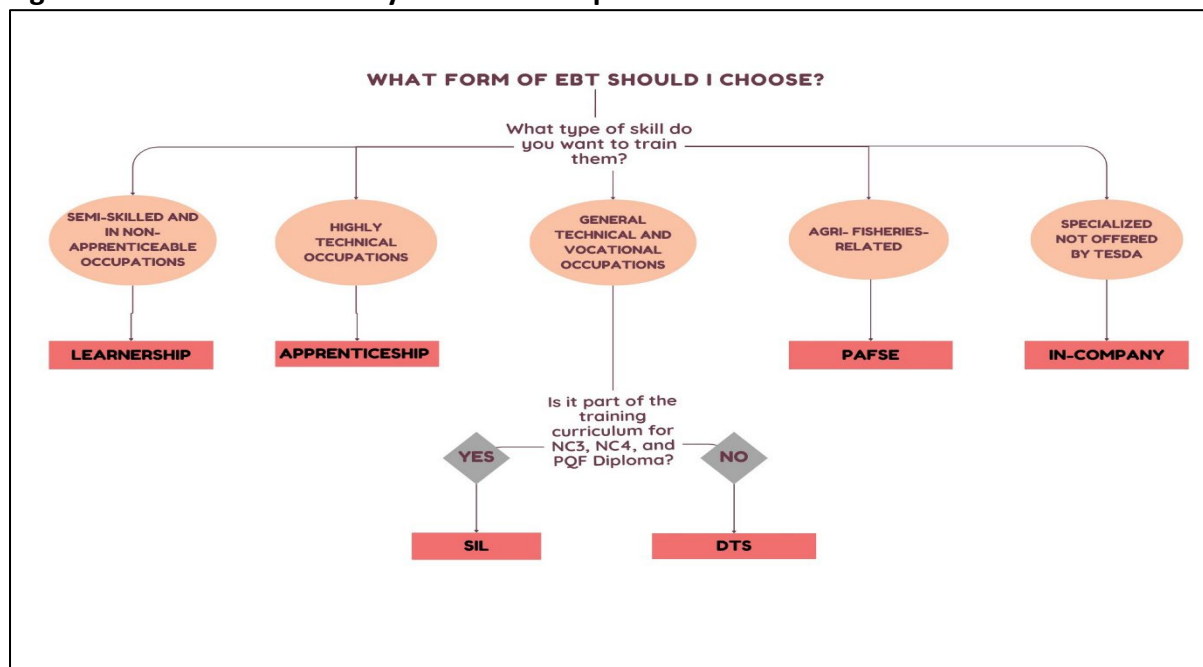


Source: Authors' illustration based on various sources¹⁷

¹⁷ Mapa et al 2016; TESDA Circular 2023-18; TESDA Circular 2021-89; TESDA Circular 2021-73; TESDA Circular 2020-120; TESDA Circular 2020-133; TESDA Circular 2019-54; TESDA Circular 2018-03; TESDA Circular 2016-56 as cited in SEARCA 2022; TESDA Circular 2012-31; RA 10869

is also the case in terms of what specific skills and occupational needs the participating firm/enterprise demands (Figure 2). If it is considered semi-skilled, then training programs under the Learnership Program can be considered. On the other hand, demand for highly technical occupations will likely be satisfied by programs under the Apprenticeship program. Agriculture-specific skills can be equipped to potential trainees through training initiatives under PAFSE and TCFS. DTS, on the other hand, offers more flexibility in terms of the program offerings, including the duration and contents of the training, and will require partnership with a TVI provider to cover the theoretical instruction component of the program.

Figure 3. EBT Decision Tree by Skill and Occupational Needs



Source: Authors' illustration of based on various sources¹⁸

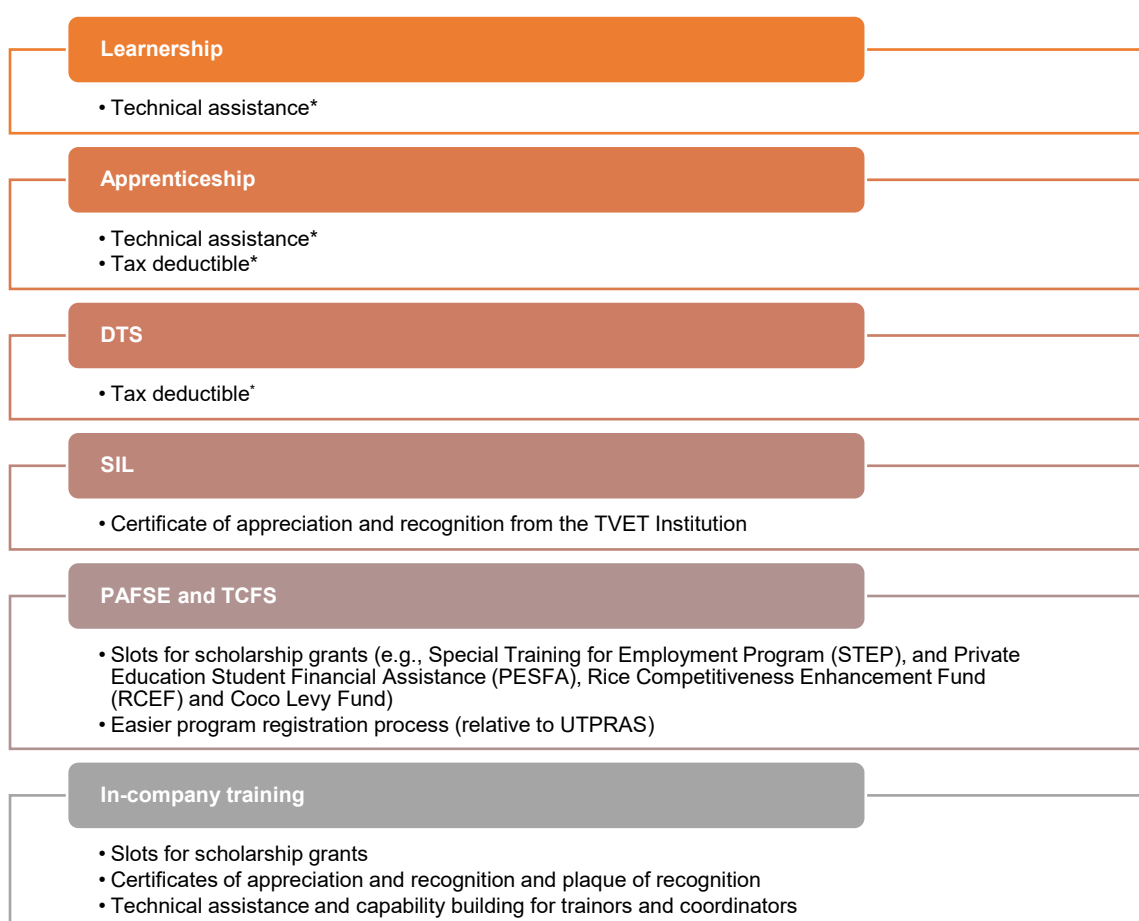
4.3. Incentives

4.3.1. For firms and enterprises

Figure 4 summarizes the various incentives available to participating firm/enterprise across various programs.

¹⁸ Ibid.

Figure 4. Incentives for firms/enterprises by EBT program



Note. * See main text for elaboration

Source: Authors' illustration of based on various sources¹⁹

4.3.1.1. *Learnership and Apprenticeship*

Participating establishments involved in conducting training under the Learnership and Apprenticeship programs can receive technical assistance from TESDA to improve their training delivery. These include expert advice on specialized topics, technical assistance in program registration, and information dissemination, among others.²⁰ The key difference between the two is the opportunity to avail tax-deductibles equivalent to one-half of the value of labor training expenses but not more than 10 percent of the direct labor expense (Articles 57-65 of the Labor Code). However, there are no guidelines on how firms/enterprises which implement the apprenticeship program can avail themselves of these tax deductibles.

4.3.1.2. *DTS*

Meanwhile, DTS accredited establishments can benefit from the following (RA 7686):

1. Additional deduction of 50% of the actual expenses paid to Accredited Dual Training System Educational Institutions (Sec. 9)
2. Allowed deduction of donations made for the operation of the system (Sec. 9 and 18)
3. Exemption from donor's tax (Sec. 18)

¹⁹ Ibid.

²⁰ See Table A5 for some specific examples.

Item #1 must be actual expenses paid to the Accredited Dual Training System Educational Institution for the establishment's trainees. It also has two limitations in terms of maximum value, that is, it must not exceed five percent (5%) of their total direct labor expenses; and not exceed Twenty-Five Million Pesos (P25,000,000.00) a year.

Deductions to tax due can also increase should the firm/enterprise also make donations (e.g., training equipment, etc.) to its partner TVI for the operation and implementation of DTS. This value will depend on whether DTS is included in the National Priority Programs (NPP) of the National Economic and Development Authority (NEDA). If it is not included, then it must not exceed 3% of the taxable business income of the establishment without benefit of deduction and donations for the operations of the System shall be deductible from taxable income of the donors. However, if DTS is part of NEDA's NPP, then the amount deductible from its business income for the taxable period when actually made is in full.²¹

DTS accredited firms/enterprises who donated to their partner TVIs can also benefit from exemption from donor's tax (Sec. 18). This amount is capped to not more than thirty per centum (30%) of said gifts shall be used by the System.²²

All three tax incentives can be availed automatically in the income tax return by attaching the documents listed in Section 5(1)(A) of Revenue Regulation 10-2006 to support and substantiate the claim.

For a sample computation of expected tax savings for DTS-accredited and implementing establishments, refer to one scenario in Box 6. Two other unique scenarios on the potential tax savings of a DTS accredited establishment who provided DTS training are elaborated in the Annex section of BIR Revenue Regulation 10-96.

Box 6. Potential tax savings for DTS-accredited and implementing establishments

Case: DTS is listed under NEDA's National Priority Programs (NPP)

The Finance Officers of Company A have computed its net income for the taxable year 1996 to be PhP 2,000,000.00. As a DTS accredited establishment, the Company contributed / donated to its partner school a total amount of PhP 180,000.00 for six (6) trainees at PhP 2,500 per month per trainee across 12 months, Direct labor cost for the year reached PhP 1,500,000.00. Assuming that DTS is not listed under NEDA's National Priority Programs and PhP 3,150.00 was determined to be the tax due for Company A's donations, the final taxable income, corresponding tax due, and tax savings are computed as follows:

Initial taxable income: Php 2,000,000

Less tax incentives under RA 7686:

A or B -> A = **PhP 90,000**

50% of total DTS expenses paid to partner school..... 90,000 [Php 180,000 x 50%]

or

5% of total direct labor cost..... 125,000 [Php 2.5 million x 5%]

²¹ This is subject to conditions under BIR-NEDA Regulations No. 1-81, as amended by 29(H) of BP 45 (now Sec. 34(h), NIRC).

²² This is for the administration purposes pursuant to Section 94(a)(3) of the NIRC, as amended.

Y or Z -> Y = **Php 100,000**

100% of book value of donated equipment for DTS...100,000 [Php 100,000 x 100%]

or

3% of taxable income prior the deduction 60,000 [Php 2 million x 3%]

Total tax deductible = A (since it should be capped at 5% of direct labor cost) + Y (since DTS is listed under NEDA's NPP, otherwise, Z) = **Php 190,000**

Equals

Final taxable income = Php 1,810,000 [Php 2 million (initial taxable income) – 190,000 (total tax deductible)]

COMPUTATION OF TAX SAVINGS

Tax due (without DTS) = Php 2 million (x 35%) = Php 700,000

Tax due (with DTS) = Php 1.81 million (x 35%) = Php 633,500

Tax savingsPhp 66,500

Donor's tax exemption = 10% of DTS donation (No blood relation between donor and donee)
.....**Php 10,000** (Php 100,000 x 10%)

TOTAL TAX SAVINGS = Tax due savings (from I and II) + III = **Php 76,500**

At least two more scenarios on the potential tax savings of a DTS accredited establishment who provided DTS training can be calculated and elaborated in the Annex section of BIR Revenue Regulation 10-96. These cover scenarios where the DTS program is included/excluded in the list of NPP of NEDA and those with varying levels of direct labor cost.

4.3.1.3. PAFSE and TCFS

Implementers of training programs under PAFSE can benefit from multiple sources of funding. These include TWSP, TTSP, STEP, PESFA, RCEF, and Coco Levy Fund (SEARCA 2022). The multiple funding sources for scholarships encourages the provision and promotion of more agriculture-related courses. The grantee may avail several scholarship programs from TESDA, but they are not allowed to enjoy these benefits simultaneously. The guidelines notes that the second scholarship program must have value adding to the first one that has already been taken. To avail themselves of the scholarship opportunity, the farm school administrator or owner will prepare a PAFSE Scholarship Grant Qualification Map (QM) to determine their current skills needs. The document can be prepared with assistance from regional or provincial TESDA offices based on an approved schedule of costs. Upon approval, the farm school shall implement the training program followed by a competency assessment of graduates depending on the Cluster of Competencies/Qualifications for With Training Regulations (WTR) programs enrolled by the beneficiaries. As applicable, assessment of graduates as pre-requisite to the payment of training fees to farm schools depend on the beneficiaries' enrolled programs.

Program registration through PAFSE is a less stringent process than UTPRAS. Specifically, it has been reported that program registration requirements of PAFSE are easier to comply with and that farm inspection may be more clement (SEARCA 2022). This "leniency" was particularly observed in terms of facility requirements and trainers.

4.3.1.4. SIL

Establishments who implement the SIL program can receive certificates of appreciation and recognition. They, including other EBT implementers, can also benefit from other non-financial incentives, specifically through recognition platforms and mechanisms, such as the annual TESDA Kabalikat Awards (Box 7).

Box 7. TESDA Kabalikat Awards

The Kabalikat Awards is one of TESDA's primary reward mechanisms to partners with outstanding contribution in the promotion, development, and implementation of TVET. Partners may be from the public or private sectors¹. It is deemed that through public-private partnerships, the effectiveness and efficiency of delivering TESDA programs and services can be improved. Partners contribute through provision of infrastructure, machine and equipment, supplies and materials, experts/expertise, and/or financing through scholarships and advocacy programs.

One of the two allocated slots for nominees per Executive/Regional Office must come from the industry sector. As the Kabalikat Awards is not a competition, all nominees that will meet the minimum required qualifications will receive the Award which will be conferred during the annual celebration of TESDA's anniversary. A Special Kabalikat Award may also be given by the Secretary/Director General to a maximum of five (5) TESDA advocates whose contributions to TVET are highly remarkable and cannot be measured using the existing KA Forms.

To qualify for the Kabalikat Awards, the nominee¹ must have at least three (3) years of active, ongoing partnership with TESDA prior to the year of granting the award; and have met the minimum score of 75 points after evaluation based on the criteria in the regional and national levels. All nominees are evaluated based on a uniform set of criteria, but allocation of points and benchmarks vary per partner category (Industry, LGU, Legislative, Development, NGA). For industry partners, the criteria include the number of persons benefitted, investment to TVET, number of TVET graduates provided employment facilitation services, continuous support to TVET, performance based on employment rate, provision of employment opportunities in the locality/area, compliance with TESDA requirements, and scope/coverage of funding support. It can be noted that some of the selection criteria, such as the number of persons benefitted and investment in TVET is biased against MSMEs due to lack of financial and technical capacity.

The selection process involves two phases, wherein the first phase is at the executive/regional level, and the second at the national level. An analysis of recent data reveals that not all executive/regional offices have consistently one industry sector awardee and only less than half of the awardees for the past years are from the industry sector despite the policy guidelines. Also, industry awardees include large corporations, private TVIs, cooperatives, farms. Finally, Coca-Cola Philippines (2018, 2023), ASTEC Power Phil., Inc. (2021, 2023), and Filminera Resources Corporation (FRC) and PhilGold Processing and Refining Corporation (PGPRC) (2021, 2023) are the only repeat awardees for the past 5 years (2018 and 2023). Although industry awardees increased in 2021, it is alarming that there are no industry awardees for the past five years in regions III, VII, XII, BARMM.

¹These include Local Government Units (LGUs), Legislative, National Government Agencies (NGAs), Government-Owned and Controlled Corporations (GOCCs), Non-Government Organizations (NGOs), private business companies/organizations, and international organizations

²Kabalikat Awardees may be nominated again after four (4) years of continuous and sustainable partnership from the year the organization was awarded.

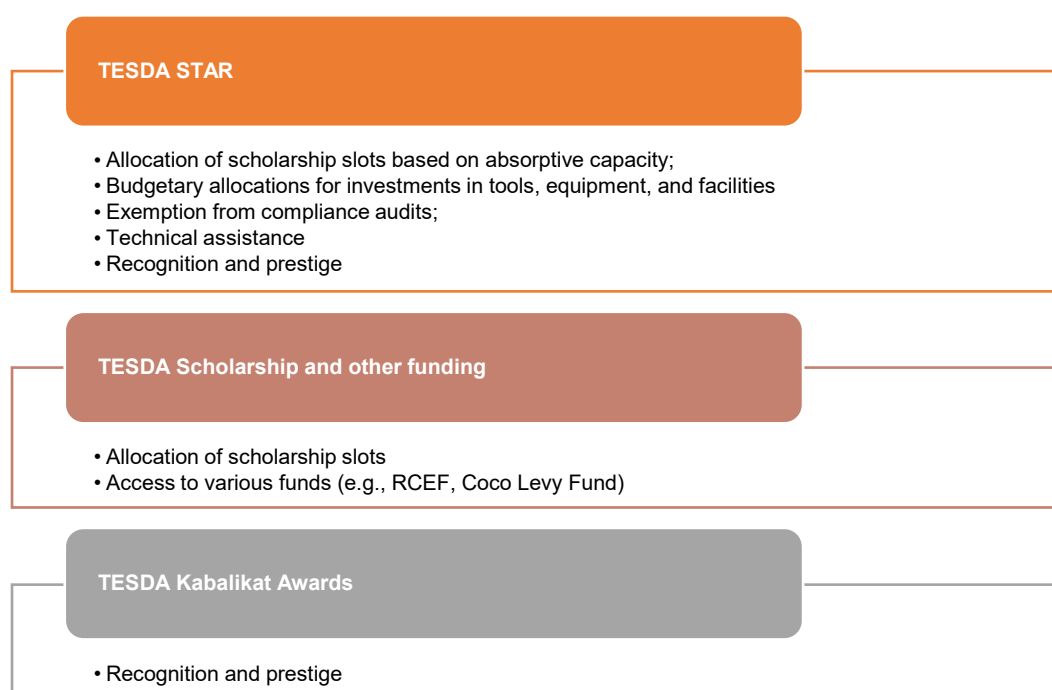
4.3.1.5. In-company training

Companies that employ 10 or more workers are encouraged to report their respective in-house training to TESDA through various incentives (TESDA Circular 2021-73). For example, when the enterprises submit their first monitoring report, TESDA awards certificates of appreciation as one of the incentives. Meanwhile, a plaque of recognition is awarded to companies with the highest number of training outputs per year. Certificates of recognition are then distributed to companies providing reports in a consistent manner. Apart from this, TESDA also offers technical assistance for trainers, training coordinators, and other employees involved in the delivery of in-house training. This incentive could be helpful since TESDA also regulates the skills of in-company trainers through TESDA Circular 2021-89. Moreover, the workers of the reporting company shall scholarship slots under the Tulong Trabaho Scholarship Program²³. Finally, companies with best practices are featured on TESDA's social media sites and wall of success. Similar to SIL, best practices of firms and enterprises in conducting reported in-company training are also recognized through TESDA's Kabalikat Awards.

4.3.2. For private TVIs

Private TVIs can also benefit from participating in any of the EBT programs. These include tax exemption of imported equipment through the DTS Act, scholarship slots for TVIs, and other non-financial incentives through TESDA's STAR Program and Kabalikat Award (Figure 5).

Figure 5. Incentives for EBT-participating private TVIs



Source: Authors' compilation based on various sources

²³ "Access to the Tulong-Trabaho Fund shall be made available to (a) any person at least 15 years of age who are not employed, not in education and not in training (NEET), and (b) employed workers who intend to develop and expand their current skills and trainings: Provided, That existing workers in enterprise-based companies or industries currently trained by their employers shall be excluded from the coverage of this Act" (RA 11230, Section 9).

4.3.2.1. *Duty-free imported essential equipment, apparatus and materials*

Essential equipment, apparatus and materials imported by public and private (for profit and non-profit) TVIs is one of the incentives available for DTS participating TVIs. They must apply with the DOF Revenue Office and submit the documentary requirements under Sec. 5(ii), RR 10-96. These are:

- Completely filled-out DOF-RO Form No. 91;
- Notarized Affidavit of End-Use/Ownership;
- Authorization letter, if authorized representative;
- Signed and dated Bill of Lading/Air Waybill;
- Commercial Invoice (Packing List, if applicable);
- TESDA recommendation;
- BOI Certification of non-availability; and,
- Copy of Charter or SEC Registration.

4.3.2.2. *STAR program*

The TESDA's STAR Program aims to recognize TVIs that promote and implement programs that have surpassed the minimum requirements for program registration established by TESDA (Box 8). These TVIs can then benefit from a wide array of financial and non-financial incentives, including allocation of scholarship slots based on absorptive capacity; budgetary allocations for investments in tools, equipment, and facilities; exemption from compliance audits; technical assistance; recognition and prestige. The higher STAR rated the TVI is, the larger and more attractive the available incentives that can be offered for them.

Box 8. System for TVET Accreditation and Recognition (STAR) Program

The STAR program reflects the agency's ongoing commitment to acknowledge the achievements and advancements of TVIs that go beyond the minimum standards outlined in the Unified TVET Program Registration and Accreditation System (UTPRAS) (TESDA Circular 2022-68). It is aligned with the East Asia Summit TVET Quality Assurance Framework (EAS TVET QAF) and the Asia Pacific Accreditation and Certification Commission. It evaluates TVI programs based on a set of success indicators and categorizes them into different STAR Levels, namely One Star, Two Star, and Three Star, each with varying total weighted scores and corresponding award validity periods. The evaluation criteria encompass aspects such as Governance and Management, Curriculum and Program Delivery, Support Services, and Program Performance Measures (TESDA Circular 2022-68). Among the items included in the evaluation criteria are the vision, mission, goals, and objectives of the TVI, quality management system implementation, green TVET practices, curriculum, program delivery, gender sensitivity and persons with disability-related activities, entrepreneurial activities, among others. The STAR-rated programs of TVIs serve as exemplary models for other institutions to emulate and benchmark against, highlighting best practices and areas of excellence within the TVET sector.

Recipients of the award will be entitled to various incentives, including exemption from compliance audits throughout the duration of the award's validity, with exceptions made only in cases where complaints have been lodged. Additionally, they will receive allocations for scholarship grants based on their capacity to absorb during the period of validity, thereby fostering the further development of their respective programs. Furthermore, recipients will garner recognition and prestige, thereby enhancing the appeal of their STAR-rated programs and potentially attracting increased enrollment. The program also offers capacity-building initiatives aimed at enhancing both institutional and TVET program quality assurance capabilities, while also providing budgetary allocations to facilitate

program and institutional enhancements, such as investments in tools, equipment, and facilities, subject to compliance with relevant regulations and guidelines (TESDA Circular 2022-68).

Based on the data from TESDA, there are 164 STAR awardee TVIs. Region 11 has the most number of STAR rated TVIs, while Region 3 has the least number of STAR rated TVIs. The majority (95%) of the STAR rated TVIs are public TVIs, while the rest are private TVIs. In 2023, there are 149 STAR awardee TVIs. Region 10 has the most number of STAR rated programs, while Regions 9 and 12 have the least number of STAR rated programs.

One of the notable strengths identified in TESDA's internal assessment of TVIs and providers is their adherence to the STAR Program (TESDA 2023a). The program assesses various facets of quality, including trainer readiness, innovative practices, and infrastructure and facility standards (TESDA Circular 2022-68). As observed by Afable et al. (2021), only 2.26% of 4,387 TVET institutions participated in the STAR program, which is considered too low. Among their recommendations are to make the program mandatory for all TVET institutions, each having at least one STAR-rated program, to utilize online orientation delivery, to collaborate with TVET bodies experienced in ISO certification, to abolish the one-year orientation validity, to simplify the 1-STAR rating criteria by emphasizing core management system requirements, and to increase the staff reviewing STAR program applications.

4.3.2.3. TESDA scholarship slots

Also, private TVIs can be granted slots under various TESDA scholarship programs for certain programs they offer. For instance, if the training qualification they offer falls under TESDA's priority sectors and considered key employment generators²⁴ and included in selected target qualifications²⁵, they can receive funding through the Training for Work Scholarship Program (TWSP). Training qualifications involving new and emerging competencies can also benefit from TWSP if these competencies are determined by industry bodies/associations and the application includes project proposals. For TWSP, there is a 65% employment requirement for TVIs within one year completion to be selected (TESDA 2022b).

Meanwhile, private TVI can also benefit from the Tulong Trabaho Scholarship Program (TTSP), should they offer Selected Training Programs (STPs)²⁶. STPs can be offered by specific module/s or unit/s of competencies and packaged as modularized programs from supermarket of competencies to align with worker needs. TTSP appears to cover similar programs in TWSP, except for attached special programs.

5. Mechanisms to industry involvement in EBT

In the Philippines, employers and industries participate in policymaking, specifically in terms of the promotion and implementation of the EBT modality, across various levels. These include the TESDA Board, Regional and Provincial Technical Education and Skills Development Committees (R/PTESDCs), industry TVET boards (ITBs), and Technology Training Institutions (TTI) Advisory Council.

²⁴ These sectors include agri-fishery/agri-business/agro-industrial, tourism, information technology-business process management, semi-conductor and electronics, automotive, other priority manufacturing industries, logistics, general infrastructure, new and emerging sectors such as the green economy.

²⁵ These include Trainers Methodology Level I and Level II, language programs.

²⁶ Similar to TWSP, these include those under priority sectors with existing training regulation, new and emerging skills with no training regulation, and industry-specific and area-based skills requirements with no training regulation which shall be proposed by industries.

5.1. TESDA Board

At the national level, employers and industries are represented in the TESDA Board, which is the governing body of TESDA (ASEAN Secretariat n.d.)²⁷. The TESDA Board is chaired by the Secretary of the Department of Labor and Employment (DOLE) with co-chairs from Department of Education (DEPED) and Department of Trade and Industry (DTI), with other national government agencies as members.²⁸ The TESDA Law of 1994 also allocates two representatives from industry, three representatives from the labor sector and two representatives of the national associations of private technical-vocational education and training institutions.²⁹

In terms of responsibilities, the TESDA Board has the authority to create and enforce national TVET policies, plans, programs, priorities, and guidelines subject to consultation with stakeholders (RA 7796). They are also empowered to endorse skills and trade tests and establish accreditation standards for private and public TVET institutions. More importantly, the board should support and encourage the utilization of the dual training system.

5.2. Regional and Provincial Technical Education and Skills Development Committees (R/PTESDCs)

The Board has its counterpart at the regional and provincial level in the entity of Regional and Provincial Technical Education and Skills Development Committees (R/PTESDCs) (ASEAN-ROK Technical and Vocational Education and Training Mobility (TEAM) Programme 2022). Apart from the R/PTESDCs, highly urbanized cities may establish their own Committee (TESDA Circular 2020-48). In terms of structure, RA 7796 mandates that the Committees should be composed of representatives from both the public and private sectors to encourage their participation in TVET development opportunities. Table 2 shows the composition of the two Committees. It shows the main role of industry in RTESDC as its representative chairs the committee. This is unlike in PTESDCs where the public sector, specifically the provincial governor steers the committee.

Table 2. Composition of Regional and Provincial Technical Education and Skills Development Committees (R/PTESDCs)

Position	Regional Technical Education and Skills Development Committees	Provincial Technical Education and Skills Development Committees
Chair	One from industry sector representative	Provincial Governor
Co-Chair	TESDA Regional Director	TESDA Provincial Director
	Regional Directors from DA, DEPED, DILG, DOLE, DOST, DTI, CHED, TESDA	Provincial Governor, DTI Provincial Director, TESDA Provincial Director

²⁷ On the other hand, the TESDA Secretariat serves as its implementing arm.

²⁸ These include the include the Department of Agriculture (DA), Department of the Interior and Local Government (DILG), TESDA, Department of Science and Technology (DOST), and Commission on Higher Education (CHED) (TESDA, 2023c).

²⁹ Each stakeholder group must ensure that at least one representative is a woman. The appointment of stakeholder representatives shall last for three (3) years. It is also worth noting that the membership of the TESDA Board may change depending on the President's pleasure.

Position	Regional Technical Education and Skills Development Committees	Provincial Technical Education and Skills Development Committees
Members	Private sector representatives from labor sector (two), employers or industry representative (two), TVET sector or academe (two), critical sector or the predominant economic activity in the area (one).	Private sector representatives from labor sector (one), employers or industry representative (one), TVET sector or academe (one), critical sector or the predominant economic activity in the area (one).

Sources: RA 7796 and TESDA Circular 2020-48

Note: For both Committees, two of the seats must automatically be occupied by a female representative.

As the review and advisory body of the Boards, these Committees consolidate the local issues and concerns related to TVET. Both Committees have critical roles in EBT implementation and promotion, specifically in updating the list of apprenticeable and learnable occupations. Specifically, the RTESDC shall deliberate on the PTESDC Resolution and shall issue a resolution either approving or disapproving the qualification/occupation in the list of apprenticeable or learnable occupations. The TESDA Regional Office shall facilitate the approval of new apprenticeable and learnable occupations by the RTESDC (TESDA Circular 2020-120). This is affirmed by some KII respondents from TESDA offices and members of R/PTESDCs. They typically do these through their interactions with TESDA Regional and Provincial Offices and employers on what are considered in-demand and emerging skills needed within their respective jurisdictions. Then, competency standards and eventually training regulations are created for approval at the national level.

5.3. TESDA Technology Institution (TTI) Advisory Council

The TTI Advisory Council is a body represented by government, industry and academe, responsible in providing policy advice, guidance and build networks of TESDA Technology Institutions (TTIs), which include TESDA Administered Schools (TAS) and Regional Training Centers (RTC), under the administrative management of TESDA and which programs offered are registered under the Unified TVET Program Registration and Accreditation System (UTPRAS). The institutionalization of a TTI Advisory Council stems from the “need for a more focused and area-based TVET planning, delivery and implementation to avoid skills mismatch and contribute to local development” (TESDA Circular 2019-49).

The TTI Advisory Council shall meet once every quarter or whenever special meetings are needed to address urgent issues and concerns (TESDA Circular No. 2019-49). The Chair will come from the economic sector to ensure that TVET planning is industry-led. Three out of the eight members of both TAS and RTC will come from employer/chambers/industry association. The set of responsibilities of the Council is like that of ITBs but is focused on policymaking in the context of TVET in TTIs.³⁰

The industry appears to be well represented and engaged in policy-making bodies of the TVET system, as reflected by the compositions of the TESDA Board and R/PTESDCs. However, this can only be inferred from a process perspective. Whether this level of engagement translates at the outcome level remains to be seen (Orbeta & Paqueo 2022).

³⁰ See TESDA Circular No. 2019-049 for the full list of responsibilities of a TTI Advisory Council.

5.4. Industry TVET boards (ITBs)

5.4.1. Overview

Another structure mandated by RA 7796 is the creation of industry boards. It is an independent body established in priority industries “to provide direct participation of employers and workers in the design and implementation of skills development schemes, trade skills standardization and certification and such other functions in the fulfillment of the Authority's objectives” (Section 26, RA 7796).

Formed to replace Recognition of Industry Bodies (RIBs)³¹, industry TVET boards or ITBs adopt the sectoral skills council concept, which makes use of “an independent, industry-led board that helps workers, employers, educators and government identify needed skills, improve skills gap and training standards in a particular sector” (TESDA Circular 2021-17, p.1). The industry boards may opt to invite representatives from government, employers or industry groups, workers organizations, learning institutions, and other key stakeholders. TESDA is a permanent representative of the government to the industry board (TESDA Circular 2021-17).

5.4.2. Responsibilities³²

ITBs have multiple responsibilities, including to:

- Provide the necessary labor market information to TESDA in aid of policy and program decisions;
- Provide inputs/signals in the development of the area-based skill map;
- Lead in the conduct of industry consultations;
- Lead and provide experts in analyzing and forecasting skills needs for skill development;
- Lead and recommend industry experts in the development and regular review of Competency Standards, Competency-based Curriculum, Assessments Tools, and Assessment Fees
- Conduct capability building interventions for trainers and assessors;
- Provide inputs to the learning contents;
- Lead in the promotion and implementation of various TVET activities towards quality skills development, to include enterprise-based programs and skills competition;
- Conduct enterprise-based assessment and certification; and
- Recommend financing mechanisms to the TESDA Board.

These responsibilities clearly show the critical role of the private sector in offering and developing upskilling and reskilling programs and its alignment to the central strategy of Area-Based and Demand-Driven (ABDD) TVET. Specifically, it underscores not only in training provision, but also in curriculum development, labor market information, capacity building, and quality assurance mechanisms.

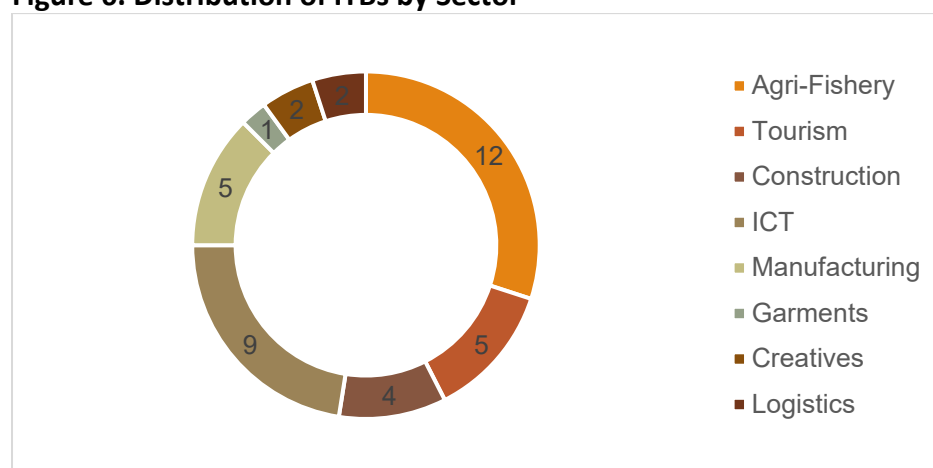
³¹ The Recognition of Industry Bodies (RIBs) Program was launched on 26 March 2019, where RIBs serve as partners in the delivery of TVET programs or services. However, there were notable gaps in RIBs, characterized by lack of adequate representations from various key stakeholders (workers and learning institutions) which can translate failure to link labour market information to curricular/learning contents and exacerbate skills mismatch (TESDA Circular 2021-17).

³² The responsibilities of TESDA, in relation to industry boards, are outlined in TESDA Circular 2021-17 (p.4).

5.4.3. Trends and characteristics of ITBs

The pilot industries under the TESDA Circular 2021-17 are as follows: Agri-Fishery; Construction; Information and Communication Technology; Health; and Logistics. As of December 2023, there are 40 ITBs. Of which 20 are provincial, 14 are regional, and 6 are at the national level. Among the 6 national ITBs, two are in ICT, while one is for Construction, Tourism, Agriculture-Cacao, and Manufacturing – Semiconductor and Electronics. Most ITBs (30 per cent) are in the Agri-Fishery sectors (Figure 6). In terms of regional distribution, Regions IX, XII, CAR have no ITBs, and there is only 1 in Regions I, III, VI, X, XI, CARAGA. However, regions with at least three ITBs are NCR (8); VII (5); IV-A (4); II (2); V (3).

Figure 6. Distribution of ITBs by Sector



Source: Authors' calculations based on data from TESDA

Multiple KII respondents emphasized that the rapid creation of ITBs over the past few years can be primarily attributed to the directive from the TESDA Central Office. Also, it must be noted that the creation of ITBs is only a necessary, but not a sufficient condition to enhance the role of the industry in skills development and in effect in the promotion of EBT. Whether or not these ITBs are functioning and well-represented is a separate issue altogether.

6. EBT trends and characteristics

This section presents recent trends associated with EBT and its various characteristics. It is divided into six subsections. The first one provides an overview of EBT-related indicators outlined and captured in national plans and strategies. The second one contextualizes the training output of EBT relative to other training modalities. Meanwhile, the third and fourth subsections elaborate on the correlates of EBT graduates and implementers using data from official sources. This section concludes with a discussion of the various costs vis-à-vis benefits of EBT based on literature and recent data.

6.1. EBT-related indicators in national plans and strategies

Increasing the share of EBT in terms of enrollment is the only EBT-specific baseline and target indicator in the National Technical Education and Skills Development Plan (NTESDP) 2018-2022 of TESDA. With a baseline of 4 per cent in 2016 and 2017, it set a target of 40 per cent in 2022. However, recent estimates show that they were far off in achieving this target, with only an 8.7 per cent share of total enrollees in 2022 (TESDA 2022b).

The NTESDP 2023-2028, the latest national plan, outlines five EBT-related target indicators (Table 3). It includes indicators related to apprenticeship and increasing the number of graduates and offered EBT programs. It contains one indicator from the World Bank, which is the percentage of firms offering formal training relative to the total number of firms. The same table also outlines the baseline indicators from 2019 to 2022 and the target levels from 2023 to 2028.

Table 3. List of EBT baseline and target indicators, NTESDP 2023-2028

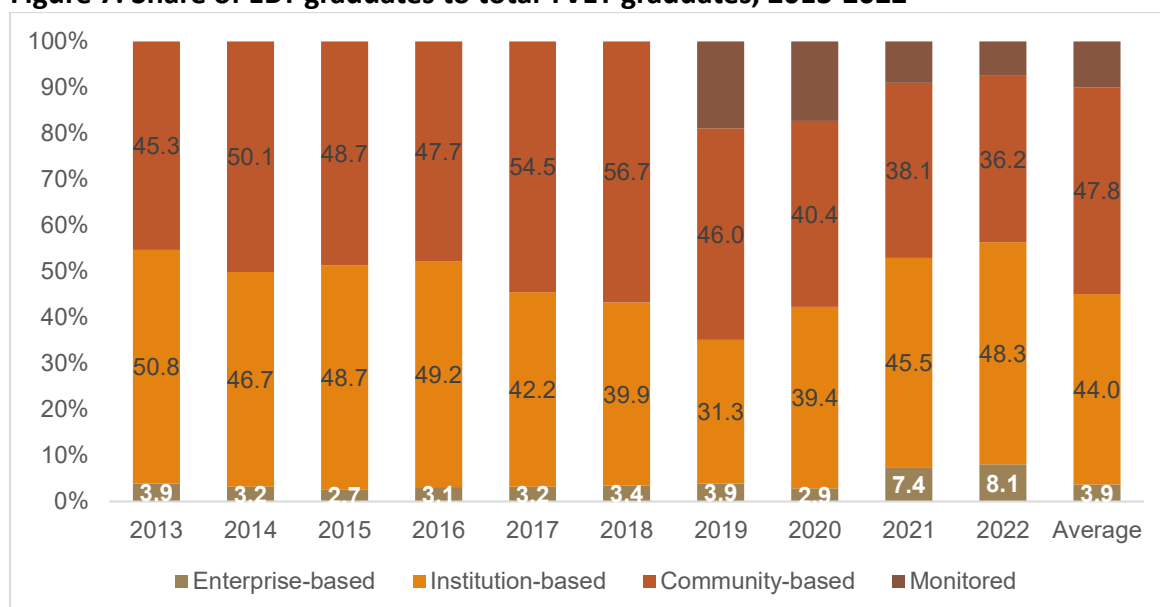
Indicator	ACCOMPLISHMENT				TARGET (NTESDP 2023 - 2028)					
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Number of graduates from Enterprise-Based Training programs increased	86,842	20582	86,004	79,100 (baseline net of SIL & Others -99,396-20296)	5% increase	20% increase	5% increase	5% increase	5% increase	5% increase
Number of EBT programs offered	1,687	567	1,267	1067 (baseline net of SIL & others-1,505-438)	5% increase	20% increase	5% increase	5% increase	5% increase	5% increase
Number of enrollees in apprenticeship program increased	48,809	9,790	10,866	9,785	10,274 (5% increase)	12,329 (20% increase)	12,946 (5% increase)	13,593 (5% increase)	14,272 (5% increase)	14,986 (5% increase)
Number of establishments with apprenticeship program increased	315	101	57	65	Large - 10 per region Medium - 7 Small - 5	Large - 10 per region Medium - 7 Small - 5	Large - 10 per region Medium - 7 Small - 5	Large - 10 per region Medium - 7 Small - 5	Large - 10 per region Medium - 7 Small - 5	Large - 10 per region Medium - 7 Small - 5
Firms offering formal training relative to the total number of firms increased (%)				59.8	62	64	67	70	72	75

Source: NTESDP 2023-2028; TESDA PLO

6.2. EBT vs. other training modalities

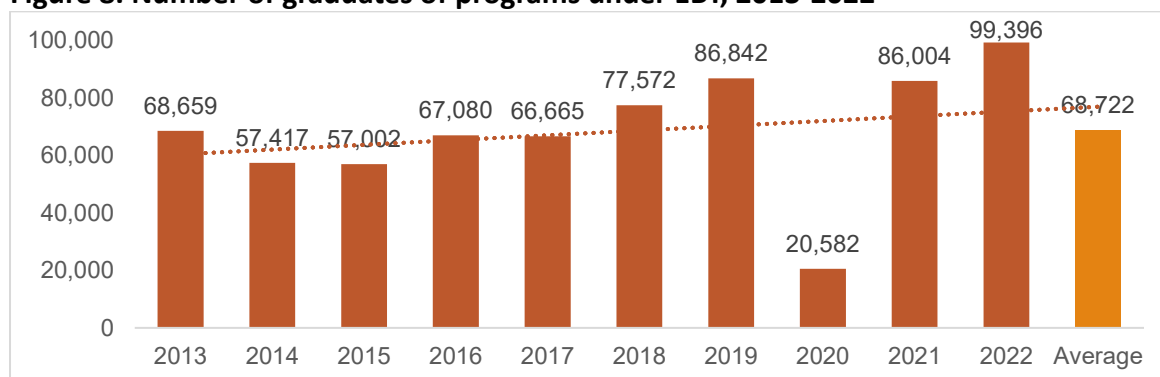
EBT graduates only account for an average of 3.9 per cent of total graduates across all other training modalities (Figure 7). From 2013 to 2022, an average of 70,000 individuals graduated from training programs under the EBT modality (Figure 8). In terms of growth rate, EBT graduates grew by 4.4 per cent pre-pandemic (2013-19). This pace is slower than community-based training (CBT) (5.1 per cent), but faster than IBT (-2.9 per cent). In 2022, the number of EBT graduates has increased above pre-pandemic levels.

Figure 7. Share of EBT graduates to total TVET graduates, 2013-2022



Source: Authors' calculations using basic data from TESDA

Figure 8. Number of graduates of programs under EBT, 2013-2022



Source: Authors' calculations using basic data from TESDA

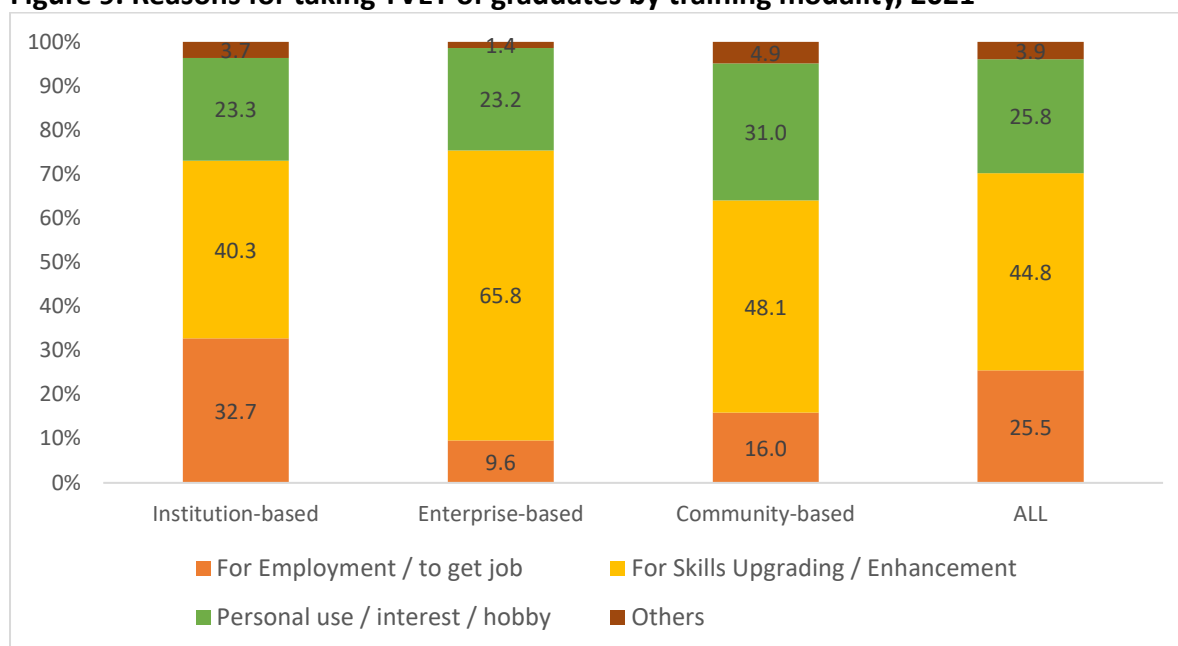
6.3. Characteristics of EBT graduates

6.3.1. Motivation

The educational profile and motivation of TVET graduates for taking TVET has shifted over the years (Epetia & Villena 2023). Comparing the findings of previous studies with recent data, Epetia and Villena (2023) find the changing educational profile composition with nearly a third of TVET graduates being college graduates, followed by high school graduates and college undergraduates. The primary reasons of graduates for taking TVET also significantly changed from employment in 2012 (Orbeta and Esguerra 2016) to skills expansion, with higher proportions citing upgrading/enhancing skills and for personal use/interest/hobby, as some key reasons behind taking TVET (Figure 9). However, this can also be attributed to the increased awareness of graduates on the persistent skills gaps identified in multiple skills assessments

(Acosta et al. 2017; Jaymalin 2018; Campos 2017; ADB 2021), as well as cited by employers as a key reason for the persistence of hard-to-fill vacancies in the labor market³³.

Figure 9. Reasons for taking TVET of graduates by training modality, 2021



Source: Authors' calculations based on 2022 SETG

Note: Others include reasons, such as for promotion, to increase income, popularity of the TVET qualification, among others.

Figure 9 shows that skills upgrading/enhancement is relatively more important among TVET graduates of programs under EBT than in other training modalities. On the contrary, a higher share of TVET graduates of institution-based training (IBT) are more motivated to train to get a job, than in any other training modalities. Finally, it is apparent from the same figure that the prominence of taking TVET for personal use/interest/hobby is driven by those who take programs under community-based training (CBT).

6.3.2. Location

In 2022, the share of EBT graduates to total graduates is highest in Regions X, VI, CARAGA, and VIII (Table 4). It is relatively least prominent in ARMM, NCR, CAR, and Region IX (less than 5 per cent). The greatest number of EBT graduates come from Regions X, III, and CARAGA, while the lowest are from ARMM, NCR, and CAR. Some KII respondents argue that the more industrialized regions will likely be more engaged in EBT. However, correlation analyses done between the share of industry to regional Gross Domestic Product (RGDP) and various EBT-related indicators (e.g., number of EBT graduates, share within the region and to national training output) disproves this (Table A7). That is, the exercise reveals that there is no clear positive relationship between the importance of industry to overall regional output and training output of EBT.³⁴

³³ Recent data from PSA's 2019/2020 Integrated Survey on Labor and Employment (ISLE) show that a third of the commonly-cited reasons for the existence of hard-to-fill vacancies is the lack of needed competency/skill of the applicant (28.5 percent) and professional license/TESDA certification (5.4 percent).

³⁴ The estimated correlation coefficient between EBT graduates share (%) within the region and the share (%) of industry to RGDP is only 0.27, which only suggests weak positive correlation between the two variables.

Table 4. Distribution and share of EBT graduates by region, 2023

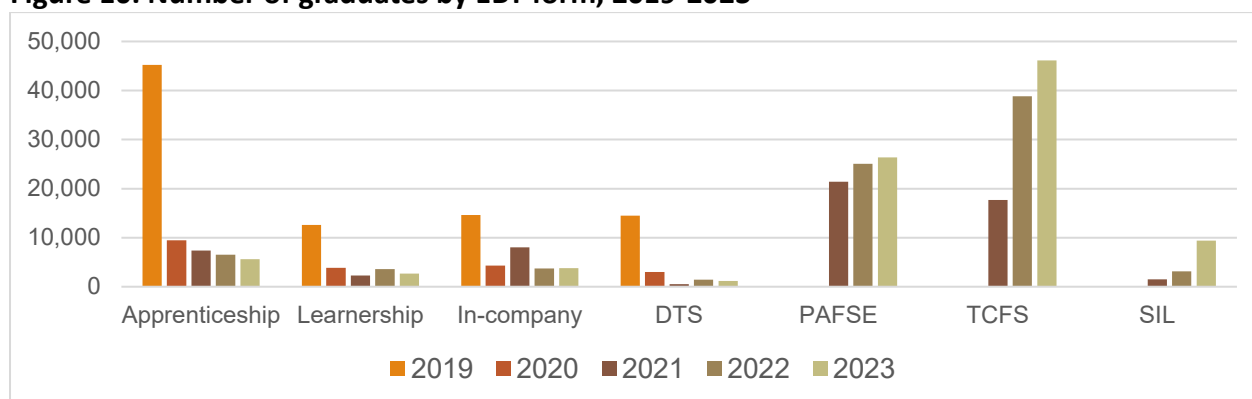
Region	Share (%) within the region	Share (%) to national	Number of graduates
X	16.7	11.6	11,564
VI	13.4	7.1	7,012
CARAGA	13.2	8.2	8,190
VIII	11.1	7.9	7,888
IV-A	9.0	6.5	6,462
III	9.0	10.2	10,124
IV-B	8.8	5.2	5,123
V	8.8	6.7	6,651
II	8.3	5.8	5,733
VII	8.0	7.4	7,404
XI	6.7	5.3	5,292
I	6.4	4.8	4,785
XII	5.6	4.6	4,544
IX	4.9	3.8	3,760
CAR	4.6	2.4	2,356
NCR	2.0	2.3	2,309
BARMM	1.0	0.2	199

Source: Authors' calculation using basic data from TESDA

6.3.3. EBT programs

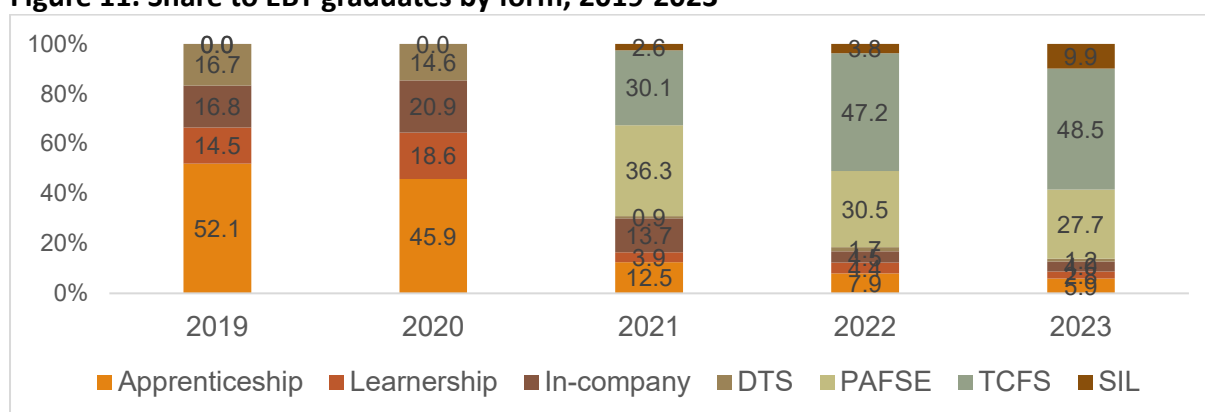
Pre-crisis, Apprenticeship accounts for majority (~50 per cent) of total EBT enrollees and graduates but was severely affected by the COVID-19 (Figures 10 and 11). Learnership and DTS continued to dwindle and remains way off from its pre-pandemic levels until 2023. PAFSE and TCFS became the more resilient EBT form during the COVID-19 crisis until present. It is important to note that the inclusion of PAFSE, TCFS, and SIL under EBT only started in 2021 by virtue of TESDA Memorandum 345, series of 2020, which sets the guidelines on the reporting of training outputs (TESDA 2020a).

Figure 10. Number of graduates by EBT form, 2019-2023



Source: Authors' calculations based on TESDA PLO data

Figure 11. Share to EBT graduates by form, 2019-2023



Source: Authors' calculations based on TESDA PLO data

Table 5 maps EBT graduates by program across regions in 2023. There are no graduates of DTS in the regions of BARMM, NCR, I, II, IVB, VI, VIII, XII, XIII. There are also no TVET graduates under the Learnership program in the regions of BARMM, IVB, VIII, XII, XIII, V, IX, IVA. It is interesting to note that there are no graduates in programs under PAFSE and TCFS. There were also no recorded graduates of in-company training in Region IVB.

Table 5. EBT graduates by program and by region, 2023

Region	DTS	Learnership	Apprenticeship	SIL	PAFSE	TCFS	In-company	TOTAL
BARMM	0	0	0	344	0	1,672	25	2,041
National Capital Region (NCR)	0	186	889	5,240	0	0	46	6,361
Region I - Ilocos	0	60	375	1,147	52	2,381	182	4,197
Region II - Cagayan Valley	0	422	82	0	2,499	2,248	22	5,273
Region IVB - MIMAROPA	0	0	0	0	2,338	954	0	3,292
Region VI - Western Visayas	0	274	62	441	0	5,318	50	6,145
Region VIII - Eastern Visayas	0	0	0	0	6,435	1,015	24	7,474

Region	DTS	Learnership	Apprenticeship	SIL	PAFSE	TCFS	In-company	TOTAL
Region XII - SOCCSKSARGEN	0	0	0	105	795	4,182	401	5,483
Region XIII - CARAGA	0	0	396	182	1,600	1,983	258	4,419
CAR	21	382	0	469	354	984	241	2,451
Region VII - Central Visayas	21	245	69	61	2,074	2,390	49	4,909
Region XI - Davao	25	476	0	48	0	2,371	1,275	4,195
Region V - Bicol	34	0	0	0	647	3,408	33	4,122
Region IX - Zamboanga Peninsula	73	0	122	265	102	2,977	15	3,554
Region IVA - CALABARZON	257	0	3,571	0	100	1,172	98	5,198
Region X - Northern Mindanao	316	458	20	47	9,107	6,026	793	16,767
Region III - Central Luzon	414	163	30	1,036	274	7,022	297	9,236
TOTAL	1,161	2,666	5,616	9,385	26,377	46,103	3,809	95,117

Source: Authors' calculations based on TESDA PLO data

Meanwhile, Table 6 shows the distribution of EBT graduates by form and by sector. It shows that on the aggregate, more than two-thirds of EBT graduates of TVET qualifications classified under Agriculture and Fishery sector. This can be attributed to the dominance of PAFSE and TCFS relative to other EBT programs in terms of training output (Figures 10 and 11). The same table also shows that multiple sectors have less than 1 per cent share in total EBT graduates. These include Footwear and Leathergoods; Furniture and Fixtures; Garments; Heating, Ventilation, Airconditioning and Refrigeration; Human Health / Health Care; Logistics; Maritime; Processed Food & Beverages; Tourism (Hotel and Restaurant); Utilities (Water Supply, Sewerage, Waste Management, etc.); and Wholesale and Retail Trading. Two of these, Tourism (Hotel and Restaurant) and Human Health / Health Care, are considered priority sectors of TESDA, as outlined in NTESDP 2018-2022.

Table 6. EBT graduates by program and by sector, 2023

Sector	DTS	Learnership	Apprenticeship	SIL	PAFSE	TCFS	In-company	TOTAL	% share
Footwear and Leathergoods	0	24	0	0	0	0	0	24	0.0
Furniture and Fixtures	0	0	0	0	0	0	25	25	0.0
Garments	0	102	50	16	0	0	10	178	0.2
Heating, Ventilation, Airconditioning and Refrigeration	0	0	0	15	0	0	0	15	0.0
Human Health / Health Care	0	95	19	1,481	0	25	119	1,739	1.8
Logistics	0	1	0	0	0	24	0	25	0.0
Maritime	0	0	0	1,389	0	0	0	1,389	1.5
Processed Food & Beverages	0	51	0	259	45	232	54	641	0.7
Tourism (Hotel and Restaurant)	0	27	761	1,606	0	256	898	3,548	3.7

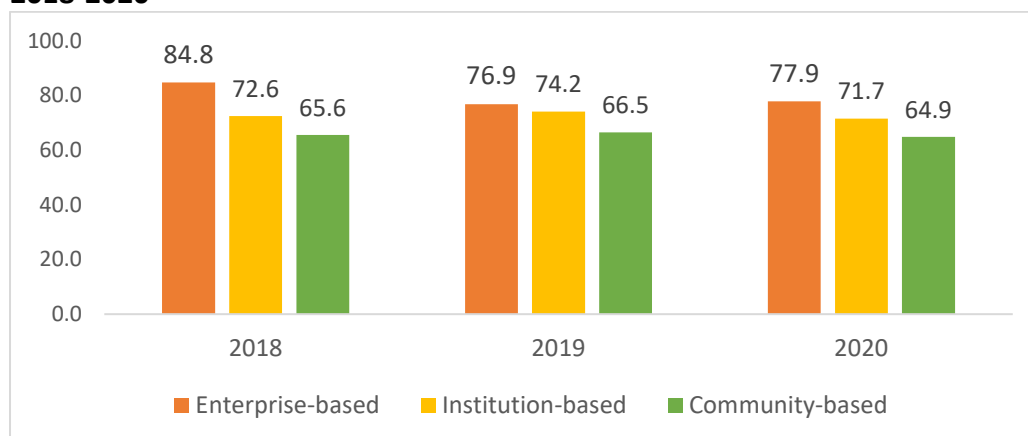
Sector	DTS	Learnership	Apprenticeship	SIL	PAFSE	TCFS	In-company	TOTAL	% share
Utilities (Water Supply, Sewerage, Waste Management, etc)	0	0	144	0	0	0	24	168	0.2
Wholesale and Retail Trading	0	293	88	0	0	72	0	453	0.5
Social, Community Development and Other Services	6	3	512	2,048	128	3,274	482	6,453	6.8
TVET	10	0	0	80	0	0	222	312	0.3
Others	28	669	488	36	2,408	2,959	367	6,955	7.3
Information and Communication Technology	46	26	25	430	0	0	13	540	0.6
Construction	47	339	51	111	0	52	431	1,031	1.1
Metals and Engineering	97	100	187	156	0	50	46	636	0.7
Agriculture, Forestry and Fishery	163	38	171	1,167	23,796	39,135	883	65,353	68.7
Electrical and Electronics	275	917	53	346	0	24	47	1,662	1.7
Automotive and Land Transportation	489	2,931	117	245	0	0	188	3,970	4.2
TOTAL	1,161	5,616	2,666	9,385	26,377	46,103	3,809	95,117	100.0

Source: Authors' calculations based on TESDA PLO data

6.3.4. Labor market outcomes

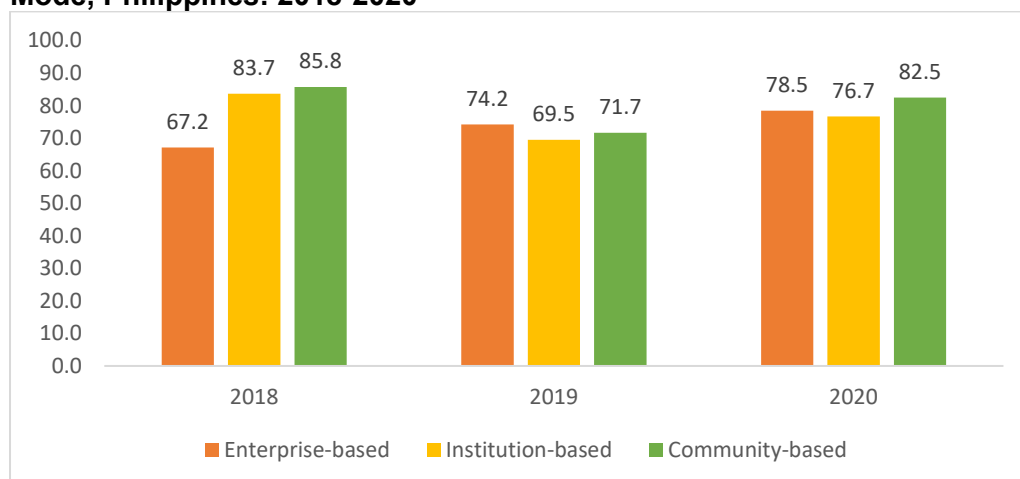
Although it is widely considered as the ideal mode due to its demand-driven nature, there have been mixed evidence in the literature on the advantage of EBT in terms of employment outcomes. Using 2017 SETG data and employing regression techniques, EBT graduates were found to have higher probabilities of being economically active and employed than CBT graduates. On the contrary, EBT is not showing clear superiority in employment rates as expected relative to other training modalities (e.g., community- and institution-based) based on TESDA's published statistics from 2014 to 2018 (Orbeta & Paqueo 2022). More recent data covering 2018 to 2020 graduates reflects the same pattern, with EBT graduates recording the highest employment rates only in 2019 (Figure 12). Still, EBT graduates registered the highest percentage of labor force participation rate from 2018 to 2020 (Figure 13).

Figure 12. Estimated Employment Rate of TVET Graduates by Delivery Mode, Philippines, 2018-2020



Source: Authors' depiction based on data from multiple rounds of SETG

Figure 13. Labor Force Participation Rate of TVET Graduates, by Delivery Mode, Philippines: 2018-2020



Source: Authors' depiction based on data from multiple rounds of SETG

6.3.5. Scholarship

In 2022, TWSP scholarship only benefitted around 11,000 EBT graduates or equivalent to 6% of total TWSP scholars. This is lower than its share of 8.1% of total EBT graduates. Among EBT graduates, 11.6% are considered TWSP scholars, which is lower than IBT graduates (Table 7).

Table 7. TWSP scholars by training modality, 2022

Training modality	Number			Percentage		
	Graduates	Scholars	Scholar ratio	Graduates	Scholars	Difference (in p.p.)
Institution-based	594,500	159,608	26.8	48.3	83.5	-35.2
Community-based	445,805	19,306	4.3	36.2	10.1	26.1
Enterprise-based	99,396	11,545	11.6	8.1	6.0	2.0
Monitored	91,583	676	0.7	7.4	0.4	7.1
Total	1,231,284	191,135	15.5	100.0	100	

Source: Authors' calculations based on 2022 List of TWSP graduates and 2022 Annual TVET statistics

6.4. TVET qualifications

6.4.1. Most common

The discussion on EBT programs complemented with recent study in the preceding subsections sheds some light on what the most popular TVET qualifications under EBT will likely be. Unsurprisingly, the dominance of agriculture-related programs is supported by the list of top 10 qualifications under the EBT modality (Table 8). Most of the TVET qualifications with the highest number of graduates under EBT are related to agriculture, with a few exceptions, such as Wire Harness Assembler, Entrepreneurship Development Training, and Supervised Industry Learning (Ship's Catering Services NC I).

Table 8. Top 10 most common TVET qualifications under EBT

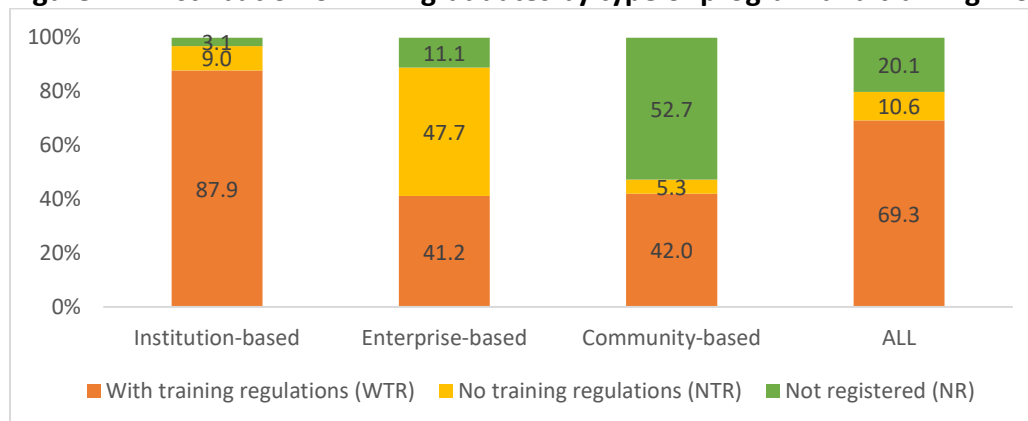
Qualification	Number of graduates
Organic Agriculture Production II	9,787
Wire Harness Assembler	2,869
Entrepreneurship Development Training	2,428
Agricultural Crops Production II	1,862
Animal Production (Poultry-Chicken) II	1,164
Digital Agriculture Course	1,089
Farmers Entrepreneurship	1,030
Animal Production (Swine) II	939
Supervised Industry Learning (Ship's Catering Services NC I)	919
Rice Machinery Operations II	886

Source: Authors' calculations using TESDA data

6.4.2. Type of program registration

On the other hand, Figure 14 presents the proportion of graduates by type of program and across various training modalities. It clearly shows that the majority (47.7 percent) of EBT graduates (NTR) are of programs with no training regulations (NTR)³⁵. This is the highest percentage across all training modalities, with only 9.3 and 5.3 percent for IBT and CBT, respectively. This exercise and findings are somewhat similar to Orbeta and Paqueo (2022) which estimated that 39 percent of EBT graduates are in WTR programs in 2017.

What is alarming is the proportion of TVET graduates of unregistered programs. About a tenth of EBT graduates also completed programs that are not registered.³⁶ The same figure also shows that programs not registered are prevalent in programs under CBT, with more than half (52.7 percent) considered graduates of unregistered programs.

Figure 14. Distribution of TVET graduates by type of program and training modality, 2021

Source: Authors' calculations using 2022 SETG

³⁵ No training regulations (NTR) refers to "the programs registered under UTPRAS not covered by any Training Regulations" (TESDA Circular No. 089, s. 2018, p.2)

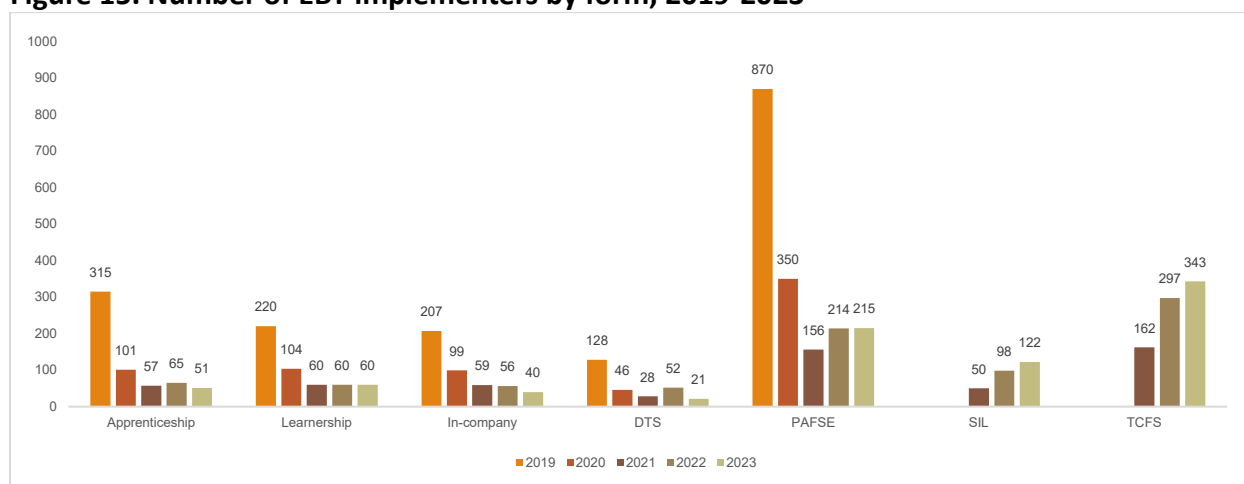
³⁶ Programs not registered (NR) are those which have yet to be registered in UTPRAS of TESDA. Graduates from these programs cannot be issued with corresponding Special Order, with their credentials not eligible for certification, authentication, or verification by TESDA. Also, they cannot apply for the Apostille of their training records or credentials with the Department of Foreign Affairs (DFA), which will be required should the graduate apply for a job abroad.

6.5. EBT implementers

6.5.1. EBT program

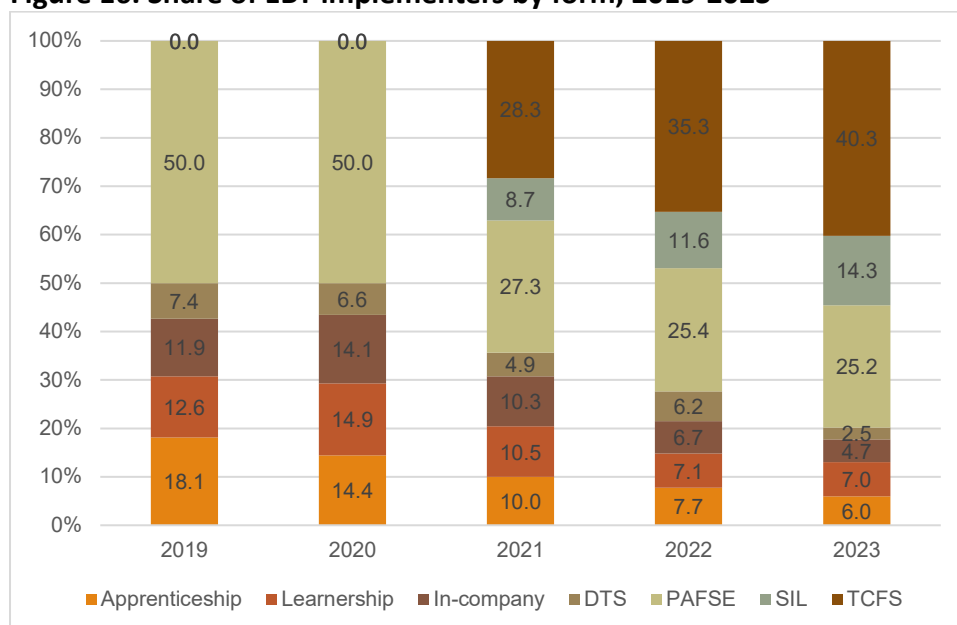
Figure 15 shows that there has been a continuous decrease in the number of EBT implementers over time. This is true across most EBT forms, which was partially neutralized by inclusion of SIL and TCFS in 2021. PAFSE implementers account for the most number of implementers (Figure 16).

Figure 15. Number of EBT implementers by form, 2019-2023



Source: Authors' calculations based on TESDA PLO data

Figure 16. Share of EBT implementers by form, 2019-2023



Source: Authors' calculations based on TESDA PLO data

6.5.2. Location

Table 9 shows the distribution of EBT implementers across regions. There are no DTS implementers in ARMM, NCR, Regions I, II, IV-B, VI, VIII, XII, and XIII. There are no implementers of the Learnership program in Region IX, but it has at least one for the rest of the EBT forms.

Table 9. EBT implementers by form and by region, 2023

Region	DTS	Apprenticeship	Learnership	In-company	PAFSE	SIL	TCFS	Total (Excluding others)
ARMM				1		1	3	5
NCR		12	3	2		58		75
I		2	6	3	1	6	26	44
II		4	9	1	32		13	59
IV-B					26		22	48
VI		2	1	1		8	22	34
VIII		1	11	1	61		22	96
XII		1		8	6	2	22	39
XIII		6		2	22	3	20	53
CAR	1	1	10	2	4	14	14	46
VII	1	4	1	3	12	3	13	37
XI	1		6	3		3	16	29
V	2			2	7		35	46
IV-A	3	7	1	3	1		19	34
IX	3	4		1	2	2	16	28
III	5	2	6	2	3	20	44	82
X	5	5	6	5	38	2	36	97
ALL REGIONS	21	51	60	40	215	122	343	852

Source: Authors' calculations based on TESDA PLO data

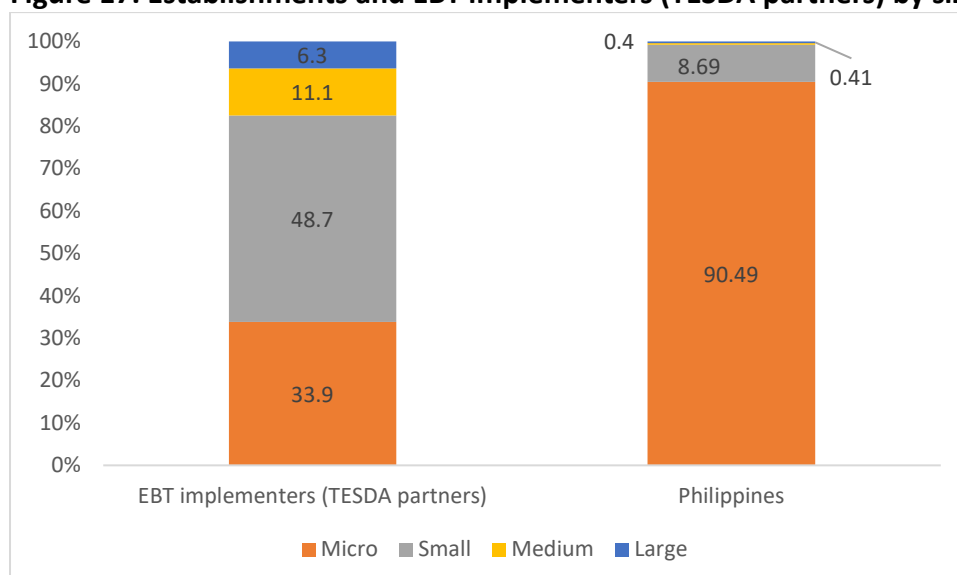
6.5.3. Firm size

Many KII respondents argue that micro-, small-, and medium-sized enterprises (MSMEs) will find it more difficult to implement EBT for various reasons, than large enterprises or companies. Recent data from TESDA's PLO underscore a more nuanced discussion on this matter. The 2022 List of Establishments (LE) of PSA shows that 99.59 percent of establishments are considered MSMEs.³⁷ In comparison, among EBT implementers who partnered with TESDA offices³⁸ in 2023, only 93.7 percent are classified as MSMEs. Figure 17 compares the size profile of EBT implementers, who are also TESDA partners, and all establishments nationwide. From a quick glance, it is clear from the graph that the proportion of relatively bigger enterprises who are EBT implementers is higher than the national average. For instance, large establishments only account for 0.4 percent of the total establishments in the country, but they account for 6.3 percent among EBT implementers.

³⁷ This is based on the 2022 MSME statistics of the Department of Trade and Industry (DTI).

³⁸ These include Central, Regional, Provincial Offices and TESDA Training Institutions (COROPOTI) (TESDA Circular No. 119, s. 2019).

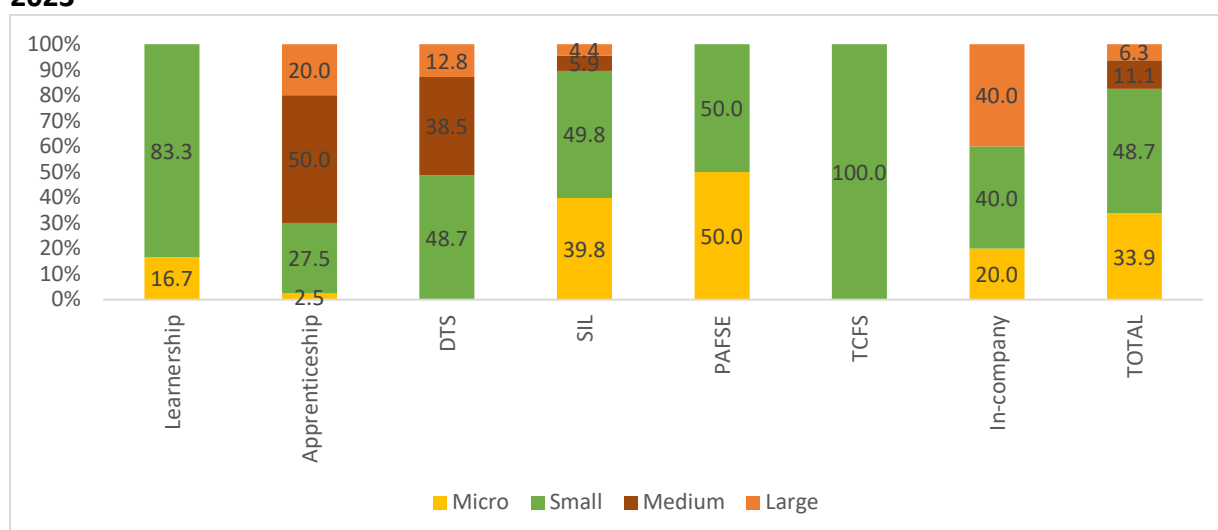
Figure 17. Establishments and EBT implementers (TESDA partners) by size



Source: Authors' calculations using TESDA PLO data and PSA 2022 List of Establishments (LE) Notes. EBT implementers (TESDA partners) is derived from TESDA PLO data in 2023

Also, the observation of multiple KII respondents holds true for in-company training, Apprenticeship, and DTS, where there are significantly higher proportions of large enterprises, which are 40, 20, and 12.8 percent, respectively, all way above the national average of 6.3 percent (Figure 18). Implementers of Learnership, TCFS, and PAFSE are all considered MSME. These patterns are also consistent when using TESDA PLO data on partnerships forged.

Figure 18. Size profile of EBT implementers who partnered with TESDA by EBT program, 2023



Source: Authors' calculations based on TESDA PLO data

6.5.4. Scholarship

Most (87.4%) EBT implementers (either firms/enterprises or TVIs) who received TWSP scholars offered training programs under the Agriculture, Forestry and Fishery sector. This is the top priority sector of TESDA based on its national plans and strategies (e.g., NTESDP). The rest of the sectors only have less than five EBT implementers who also received funding

from TWSP. Some sectors which do not have EBT implementers who received TWSP scholarships include Wholesale and Retail Trading, Garments and Textiles, Language and Culture, and TVET. Contrary to the Agriculture, Forestry and Fishery sector, there are no EBT implementers who benefitted from TWSP in food production and retail, another national skill priority sector.

Table 10. EBT implementers who are TWSP beneficiaries by sector, 2022

Sector	Number of EBT implementers with TWSP scholarship*	% of total EBT-Firm/TVIs
Agriculture, Forestry and Fishery	160	87.4%
Human Health/Health Care	4	2.2%
Tourism (Hotel and Restaurant)	4	2.2%
Construction	3	1.6%
Metals and Engineering	3	1.6%
Social, Community Development and Other Services	3	1.6%
Automotive and Land Transportation	2	1.1%
Electrical and Electronics	2	1.1%
Heating, Ventilation, Airconditioning and Refrigeration	1	0.5%
Information and Communication Technology	1	0.5%
Processed Food and Beverage	0	0
Wholesale and Retail Trading	0	0
Garments and Textiles	0	0
Language and Culture	0	0
TVET	0	0
Total	183	100%

Note: * These are either firms/enterprises or TVIs with observation for both region and sector.

Source: Authors' calculations based on 2022 List of TWSP graduates and 2022 Annual TVET statistics

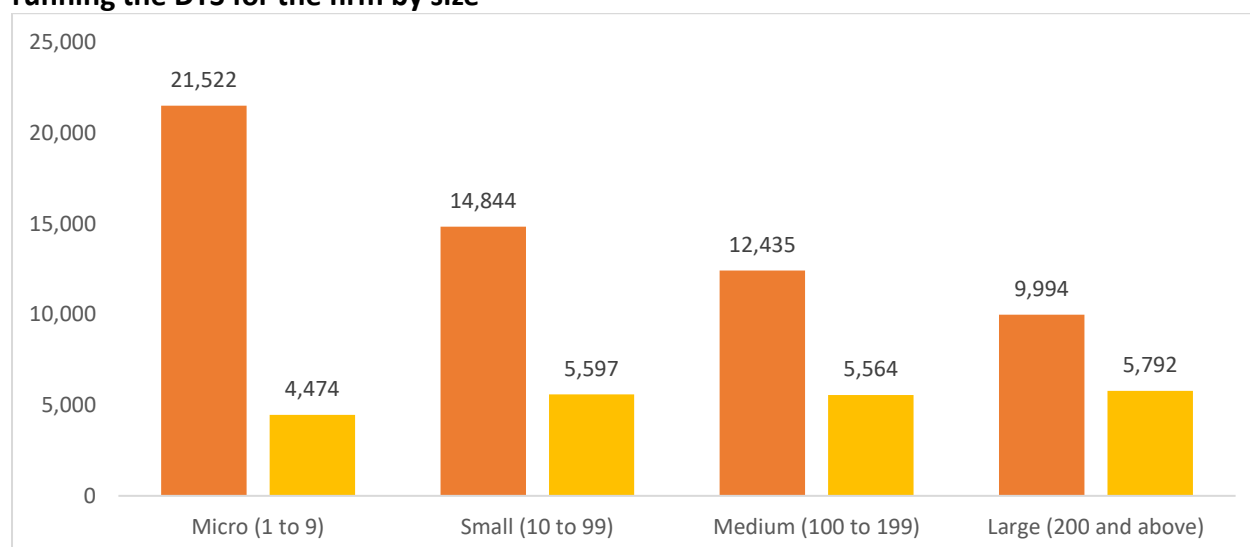
6.6. Costs and benefits of EBT

6.6.1. Costs

Firms and enterprises incur various costs in their implementation of EBT programs. Mapa et al. (2016) estimate the costs associated with the implementation of DTS in the Philippines. They categorize the overall costs into three: 1) cost of trainees (e.g., allowances, health insurance, clothing, transportation and meal and lodging allowances); 2) cost of trainers (e.g., salary), and 3) physical costs (e.g., tools, equipment and consumable materials, rental of company training workshop, teaching and learning materials, and administrative fees). The average overall monthly cost of DTS training per trainee is about Php12,800, depending on the region and industry. Cost of trainees account for the largest share in total training cost (44 percent), followed by physical cost (30 percent), and physical costs (26 percent). An interesting finding of the study is the existence of economies of scale in DTS implementation. Specifically,

the larger (smaller) the firm, the lower (higher) the average cost of training. Micro-sized enterprises shoulder an average of around Php 21,500, which is more than double (115 percent) of the cost per trainee for large enterprises (Figure 19). The same study also estimates the average cost per trainee per month by industry, training duration, and across regions.

Figure 19. Average cost and average short-term benefit per trainee per month (in Php) in running the DTS for the firm by size



Source: Authors' depiction based on Table 9 of Mapa et al. (2016)

6.6.2. Benefits

Mapa et al. (2016) also estimate the average benefit of conducting EBT, which can be grouped into short-term benefits (e.g., productive contribution of trainees and seasonal benefits derived from the trainees), long-term benefits (e.g., saving in recruitment ads, savings in manpower during the hiring process and orientation, long-run productivity differences between DTS trained and externally-recruited workers), and other monetary benefits (e.g., positive image for the firm, attractiveness for potential employees and clients, increase welfare of the trainees through higher wages after training and higher probability of being employed). Average short-term benefits per trainee per month totaled Php 5,487, mostly attributed to the firm's increased productivity (93 percent). These short-term benefits differ across firm sizes. That is, the larger the firm, the higher the expected short-term benefit compared to smaller firms (Figure 19).

On the other hand, long-term benefits significantly vary per element,³⁹ but range from Php 16.5 (cost of orientation materials) to Php 11,488 (cost of manpower (internal) in hiring). Another key long-term benefit associated with DTS implementation is the long-run productivity difference between DTS trained worker and an externally hired (non-DTS) worker, equivalent to about Php 2,032 or around 16 percent of the average overall cost per person.

6.6.3. Costs vis-a-vis benefits

Figure 19 presents a quick comparison of the associated costs and short-term benefits with DTS across firm sizes. The highest average short-term benefits are recorded for large firms, which

³⁹ Mapa et al. (2016) cited that "the averages are not computed on the same number of firms since some firms only report specific type of cost associated with the computation of the long-term benefits." (footnote 12, p.49)

can already cover 58 percent of the associated overall cost of DTS implementation. This is followed by medium- (48 percent) and small-sized firms (38 percent). The short-term benefits accrued by microenterprises will only cover around 21 percent of total costs. Thus, to cover the high costs of conducting training under the DTS program, there is a need for targeted support in the short run towards relatively smaller DTS implementers. Regardless of size, however, DTS remains a practical and attractive option for firms and enterprises when accounting for the associated long-term benefits of DTS. Ultimately, the overall benefits of DTS to participating firms far outweigh the costs of conducting training under the DTS program.

The comprehensive study of Mapa et al. (2016) only covers the estimation and comparison of the associated costs vis-à-vis benefits of implementing DTS in 2016. It can be updated to make it more relevant today and be replicated by expanding its scope to include other EBT programs, such as Apprenticeship and Learnership. Also, the average costs can also include not only training provision but also costs related to assessment and certification, should TESDA conduct a more detailed cost-benefit analysis of EBT or TVET in general.

One missing element in the cost-benefit study is the inclusion of monetary benefits derived from the tax incentives firms can avail themselves of once they participate in the DTS program (see Section 4.3). The amount of tax deductibles, equivalent to 50 percent of expenses, paid to the Accredited Dual Training System Educational Institution but not exceeding 25 million a year or 5 percent of direct labor expense, will significantly increase the associated benefit with regards to DTS implementation.

7. Barriers and disincentives to EBT

Based on the results of KIIs, a comprehensive desk review of literature and existing and proposed policies and laws, complemented by EBT-related data and statistics, this section outlines six sets of barriers and disincentives to industry's involvement in EBT implementation. The specific issues and concerns under each barrier and disincentive are elaborated and unpacked within each subsection.

7.1. Scope and measure of EBT

7.1.1. Lack of common understanding on the definition, scope, and coverage of various forms of EBT among TVET stakeholders

The results of the KIIs with various stakeholders reveal the lack of consistency regarding their understanding of the definition and various forms of EBT (Table A4). Some interviewees exclude agriculture-related EBT programs, such as PAFSE and TCFS, while some are unaware of the existence of SIL. Apart from the limited awareness of EBT among industries, one insight from one of the KIIs with TESDA is that EBT Programs are not marketed properly on the ground. Not all TESDA personnel are knowledgeable or familiar with the various forms of EBTs. This is despite the recent campaign of TESDA in 2022, "EBT to the Max", which aims to promote the various EBT programs. This can be attributed to the many changes in the overall scope of EBT with certain inclusions and exclusions. For instance, the release of TESDA Circular 345-2020 marks the inclusion of PAFSE, TCFS, and SIL under the EBT modality. Then, SIL was reclassified to IBT modality by virtue of TESDA Circular 018-2023. These have important consequences on the consistent reporting of outputs by EBT program. This is

apparent in the preceding section with some missing data of certain EBT programs for certain years.

The lack of clarity in terms of the scope of EBT is also affirmed by the filing of SBN 363 or the “Enterprise-Based Education and Training to Employment Act”. To consolidate and align the definition and scope of EBT under one umbrella, the current version of the bill appears to include any training initiated by any government agency (e.g., CHED, DOLE, etc.) if there is participation of the employer (e.g., CHED’s internship, etc.). Having a common understanding of the definition and scope of EBT is an important prerequisite before one can promote and market it to key stakeholders of the TVET sector.

7.1.2. Underestimation of EBT in terms of in-company training

A review of existing survey instruments and its manual of operations, specifically nationally representative household surveys (e.g., labor force survey (LFS)) reveals that the current instruments do not necessarily capture labour market and training output of EBT. Current discussions between PSA and TESDA necessitate further review and alignment of TVET-specific concepts and definitions before its integration in existing data collection instruments.

There is also the possibility of under-reporting of in-house/industry-based training. The PSA’s Integrated Survey of Labor and Employment (ISLE), specifically the module on Training of Workers, measures the number of employees provided by employers (establishments employing 20 or more workers) with job-related training. Defined as training conducted by the employer and those which were offered by other institutions but are financed by the employer, job related training seems to be part of the EBT programs. In 2019, there are close to 2.5 million employees who received job-related training or equivalent to 42.6 percent of total employees. This number is astronomical compared to the estimate of only around 100,000 EBT graduates in 2022. This can be associated with several factors. According to the TESDA Planning Office (PO), it is likely that these training programs are unregistered (NR) or with NTRs. This is plausible given the high share of EBT graduates of unregistered or NTR programs (see discussion in Section 6.4). Another reason is the lack of incentives to report these company-initiated trainings to TESDA. The available incentives for in-company training are only non-pecuniary, which include technical assistance and recognition mechanisms (refer to Section 4.3).

7.1.3. Potential inaccurate estimation of PAFSE and TCFS

TESDA stated that the training output of farm schools should be included under EBT, given that they are considered enterprises. However, a review of published and obtained data from TESDA reveals that the training output of training providers which are not necessarily firms/enterprises and private TVIs are included under PAFSE and TCFS. These include trainings delivered by local government units (LGUs), TTIs, and higher education institutions (HEIs), among others. Graduates of training programs delivered in TTIs and HEIs should fall under institution-based training (IBT) modality by definition but are currently recorded under EBT. This can be a case of misclassification of training output. Also, these can lead to potential double-counting if the same enrollee and graduate will be considered under IBT and EBT.

7.2. *Financial and non-financial incentive mechanisms*

Neither BIR nor TESDA has a record of establishments which availed of tax deductibles offered by DTS and Apprenticeship. Meanwhile, there have been anecdotal pieces of evidence

on certain private TVIs which were able to benefit from duty-free imported training equipment and apparatus. Also, there are no clear guidelines on the definition of essential equipment to avail of duty-free benefits, as mentioned by both BIR and TESDA in various incentives meetings. The crafting of a Memorandum of Agreement (MOA) and a revenue issuance between the BIR and TESDA on sharing, collection, and transmission of relevant data and information are still pending. This subsection lists and elaborates on the four main reasons behind this finding.

7.2.1. Lack of awareness on the available incentives

The majority of TVET stakeholders are unaware of the existence of incentives, both financial and non-financial. This pattern is consistent among multiple KII respondents, representing firms/enterprises, industry associations and boards, TESDA offices, among others. This raises multiple concerns not about the lack of incentives, but about the promotion and marketing of these incentives.

7.2.2. Difficulty in availing the incentives

The administrative burden of participating in any of the EBT programs outweighs the potential benefits offered by EBT programs. This has been affirmed by many KII respondents, especially those representing employers. The tedious processes and multiple requirements discourage both firms/enterprises and TVET in participating in any of the EBT forms. These include the tedious and long processes for DTS and Apprenticeship registration (Figure A1) and requirements difficult to comply with (Table A9). The requirements include eight documents for firms/enterprises and six for TVIs. This is not a new issue as it has been pointed out by previous assessments of TVET, and specifically EBT, in the Philippines (Mapa et al. 2016; Orbeta & Paqueo 2022; Orbeta & Corpus 2021). In effect, EBT implementers applying for tax incentives of EBT implementers remains rare even after three decades of DTS implementation.

7.2.3. Lack of transparency and evidence-based scholarship allocation process

Many KII respondents, particularly private TVIs, pointed out the lack of transparency in terms of the regular allocation of scholarship slots. These include, but are not limited to scholarship slots (e.g., TTSP, TWSP). They argue that there are no clear guidelines on target indicators and criteria (e.g., employment and employability, profile of scholarship beneficiaries (marginalized)) they need to take into careful consideration to achieve a sustainable supply of benefits from TESDA.

7.2.4. Incentive gaps

Incentive gaps are also identified based on a review of the existing policy and legal framework governing incentive mechanisms related to EBT. For instance, unlike in DTS, there are no clear policy guidelines on how Apprenticeship-accredited establishments can avail themselves of the tax incentives. Also, the CREATE law provides guidance on the tax incentives available to firms with apprenticeship agreements only with public TVIs. The maximum incentives available for DTS and Apprenticeship also have different limits which tends to confuse EBT stakeholders. For DTS, it is capped at 5 percent of labor expenses, while it is 10 percent for Apprenticeship.

Certain elements in various non-financial incentive mechanisms require a thorough review to ensure that they function effectively. For instance, some criteria in TESDA's Kabalikat Awards,

like the number of persons benefitted and investment in TVET, are favorable to relatively large private companies (Box 7).

7.3. Operational and technical capacity

This subsection outlines four key thematic areas that relate to the operational and technical capacity of EBT stakeholders.

7.3.1. Financial constraints of firms/enterprises and TVIs

7.3.1.1. Firms/enterprises

Multiple KII respondents cite financial constraints as one of the primary reasons behind the low engagement in EBT. Establishments, especially MSMEs, find it difficult to meet the allowance requirement for some EBT programs like DTS and apprenticeship. This is consistent with the discussion in Section 6.6., which highlights the economies of scale associated with DTS implementation. The 75% minimum wage is perceived to be constricting companies from participating because some small firms have inconsistent income. Apart from the allowances, the expensive cost of equipment needed for training served as a roadblock. Finally, other costs like the income of the training supervisor are shouldered by the establishment.

Particularly for the case of PAFSE, SEARCA (2022) noted in their evaluation that farm managers face financial challenges in building the required training facilities and acquiring the necessary tools and machinery. Not only that, but farm schools also shoulder costs related to fuel and fertilizers for programs like Agricultural Crop Production and Farmers Field School (ibid). SEARCA (2022) also noted that they shoulder the lunch and snacks for both the trainers and speakers since TESDA only provides a limited budget.

Moreover, the reported scholarship-dependence of almost all farm schools interviewed in the evaluation of PAFSE (SEARCA 2022) and its supply-driven nature are potential threats to the sustainability of this mode of training provision. A moratorium, suspension, or termination of any or all the various fund streams might diminish enrollment and consequently, the operational capacity and sustainability of the farm schools and other training providers.

Also, the increasing number of new farm schools and expanding absorptive capacities of existing ones, if not accompanied by a parallel increase in scholarship allocations, can disincentivize expansion of programs offered. According to provincial-level implementers interviewed by SEARCA (2022), additional farm schools and programs offerings have resulted in less scholarship allocation per farm school given that the total number of slots remained the same.

7.3.1.2. Private TVIs

Private TVIs, on the other hand, also face financial constraints in their attempt to participate in EBT programs. For instance, they lobby for the review of the Revised Implementing Rules and Regulations (IRR) of the DTS law to clarify the allocation of the training allowance of the trainee. Specifically, the revised IRR essentially gives 100 percent of this amount directly to the trainee unlike in the original IRR of the law, of only 30 percent. Thus, they argue that funding operational costs of the training can no longer be derived from this amount. Also, the high cost of equipment and tools hinder TVIs from offering in-demand but costly training

programs, such as backhoe and forklift operations. According to TESDA officials, the contentious revised IRR is undergoing review.

7.3.2. Manpower capacity of firms and TESDA offices

KII respondents representing firms and enterprises allude to the additional tasks associated with conducting EBT, which ultimately discourages them from conducting training. Establishments are discouraged from engaging in EBT because of the added responsibility to their supervisors. KII with TESDA revealed that supervisors must be identified as the coordinator who will serve as a focal person in certain EBT modalities. A percentage of the supervisor's time will be allotted to the supervision of EBT trainees, so they need to be pulled out of operations. It is also possible that an enterprise lacks the personnel needed to supervise the trainees. KIIs also noted that it also leads to loss of productivity because enterprises may need to allocate space, time, and equipment dedicated for training purposes.

In addition, TESDA's human resource complement on the ground may be lacking (ADB 2021). KII respondents from TESDA cite the high turnover rates of EBT-assigned personnel and the multiplicity of tasks given to TESDA staff. Based on the briefer prepared by the EDCOM Secretariat (2023), it was mentioned that there are instances where regional staff are detailed from another division or one education program specialist in the field office is handling multiple programs. Job order personnel or COS hired to augment the manpower needs at the region. On average, 46.7 per cent of TESDA staff are job orders, which is at least the case in six regions (VII, IVA, NCR, 3, 9, 1) (Table A8). This limited capacity prevents them from increasing the training output associated with EBT, including those related to its promotion and monitoring.

7.3.3. Quantity and quality of trainers and assessors for EBT qualifications

Multiple KII respondents associate the scarcity of TVET trainers and assessors as a deterrent to firms and enterprises in offering EBT programs. They argue that this constraint has further delayed the development of training programs and the assessment of EBT graduates. This is an important issue to EBT implementers primarily because up-to-date, relevant, and industry-immersive training programs are critical for these initiatives to be useful. This issue calls into question the practicality and quality of EBT programs if there is no sustainable pool of trainers who will conduct the training and who will assess the competencies of EBT graduates.

Data from TESDA's 2022 Annual TVET Statistics report show that there are 38,337 qualified trainers nationwide in 2022, but only 56.1 per cent are active. Looking at the regional distribution, there are less than a thousand trainers available in CARAGA, CAR, BARMM, IX, and IV-B and more than 2,000 trainers in III, IV-A, and NCR. Meanwhile, there are opportunities for untapped trainers in Regions XII, I, CAR, and IV-B due to their relatively low warm body ratios.⁴⁰ There are also some sectors with less than 50 trainers (e.g., Logistics and Storing Sector; Footwear and Leathergoods; Furniture and Fixtures; Utilities; Visual Arts) nationwide.

There are also shortages of assessors in certain regions. Of the 13,535 assessors, only 54.7 per cent are active (warm body) assessors. Across regions, there are less than 350 accredited assessors in Regions II, IV-B, V, IX, CARAGA and BARMM, with untapped potential in CAR and Regions XII and VI. Meanwhile, it is important to note that there are no available assessors

⁴⁰ This is simply the ratio between the number of active NTTC holders and the total number of NTTC holders.

for TVET qualifications in the logistics sector, less than five in Footwear and Leathergoods, Furniture, and less than 30 in Visual Arts, Wholesale and Retail Trade, and Utilities. ADB (2021) identified potential explanations for the declining number of qualified assessors. One reason the study offered is the transfer of assessors from TESDA to the Department of Education for higher salaries and regularization of employment. This is triggered by the K to 12 reform which created the technical–vocational and livelihood (TVL) track in senior high school.

Aside from the limited quantity of TVET trainers and assessors, many KII respondents argue that the existing supply are not necessarily considered industry experts or in other words, have limited industry experience. Thus, both trainers and assessors need to satisfy the industry immersion/experience⁴¹. However, the tight schedule of the individual who acts as an assessor and trainer prevents him/her from acquiring the necessary industry experience. In fact, multiple studies (Orbeta & Paqueo 2022; Orbeta & Corpus 2021; ADB 2021) have noted the limited incentives available for those with industry experience to work full-time in developing training content and curriculum. Multiple KII respondents also pointed out the unclear criteria in the selection of industry experts tasked to design and develop training programs.

7.3.4. Availability of TVIs

In the KIIs, it was also revealed that establishments face difficulty in finding a partner establishment/TVI, especially for DTS. First, the mismatch in the location of establishment and TVET institutions makes it difficult to find an industry partner who will provide the in-plant component of the DTS. If the TVI is present, the problem could then be the available program offerings. Some local areas do not have TVIs offering the certain qualifications needed by the industry. Indeed, based on the number of TVET Providers by region, it appears that there is an overall concentration of TVET providers in NCR and Regions IV-A, III, VII, and X. The same observation holds true when the data is disaggregated by type of TVET Provider. The highest concentration of private TVIs is in NCR (619) followed by Regions V-A (481), III (457), VII (308), and X (272). Moreover, public TVIs are found in X (49), III (41), V (34), VI (31), and NCR (30).

7.4. Design and the development of training programs

The lengthy processes to develop standards and assessment tools run the risk of making existing training programs obsolete in the context of new and emerging technology. Although applicable to all training modalities, it can be argued that this is most critical in the context of EBT in which firms/enterprises need globally competitive workforce to effectively adapt to the rapidly changing world of work. The usefulness of existing training regulations will be put into question if its design and content do not respond to best practices in the industry.

The updating of TRs varies but is typically done every three years or earlier depending on changes in skills demand in the labor market (Orbeta & Corpus, 2021; Orbeta & Esguerra 2016). A recent study finds that the actual process for updating standards can take up to eight months (ADB 2021). Meanwhile, KII respondents mentioned that competency standards

⁴¹ This refers to Industry Work Experience Required or IWER or “the number of years of industry work experience required for trainers to teach in a qualification as prescribed in the Training Regulation” (TESDA Circular No. 071 s. 2019, p.1) or “the number of years of industry work experience required for competency assessors to assess in a qualification as prescribed in the Training Regulation and/or Implementing Guidelines” (TESDA Circular No. 075 s., 2020, p.2).

(CS)⁴² can be usually developed in as fast as three months up to six months, while full-blown TRs⁴³ can take as long as two years to develop. One example raised by one of the KII respondents is the development of Medical Auxiliary Specialized Service (MASS) program of SKILLS. It took SKILLS approximately 1 year to secure a No Training Regulation (NTR) for the program. Meanwhile, about two years have already elapsed in their application for the same program to become a promulgated Training Regulation (TR), but it still remains in progress at the time of writing.

The development of training regulations is largely dependent on the level of industry engagement in standards development and assessment, with a key role in the creation of an expert panel. Resource and capacity constraints caused by the administrative burden, especially in TESDA field offices hamper the program registration process, overseeing the assessment procedures, while simultaneously enforcing policies and attending to clients' concerns (ADB 2021). The slow approval process by the Central Office was also cited by KII respondents as one of bottlenecks in the development of TR and CS.

One of the adverse implications of a long and tedious process of TR and CS development is the inability of the existing TVET system to quickly respond to the evolving demands of the labor market. For instance, one key insight from a KII respondent is the lack of training programs that are relevant to the fast-food industry. He/she argues that this is an untapped sub-sector of the food and beverage industry, in which the existing training programs are only limited in the context of hotels and restaurants. Another example is forklift operation. The existing related training programs are only applicable in the context of construction and do not fit their needs for warehousing operations. Some respondents also refer to outdated equipment and tools in existing TRs. Some also argue that existing TRs focus on singular set of skills that translate to a very specific occupation and therefore lacks flexibility with the multiplicity of skills needed in the workplace. There are also issues raised in terms of the ease of accreditation of internationally accredited training programs. They posit that these training and certification programs are already at par with international standards and should be easily integrated in the training programs offered domestically.

7.5. Mechanisms on industry involvement

7.5.1. Functioning of ITBs and R/PTESDCs

KII respondents also raised issues regarding existing mechanisms involving industry participation in policymaking. For instance, they argue that the effective functioning of industry boards is affected by the lack of clearly set indicators for monitoring. This is apparent in the early stages of partnership between TESDA and industry boards and in multiple KIIs. This forms part of concerns regarding how these newly formed industry boards will function and the level and nature of support TESDA will provide them. Some argue that this uncertainty discourages them from forming industry boards in the first place. This is further affirmed by the existing incentives available to industry boards, given the voluntary nature of participation

⁴² Unlike TRs, competency standards are programs that have no training regulations (NTR) yet and therefore it has no clear assessment and certification arrangements and cannot lead to a national certification. This may or may not translate to a full-blown TR, which have a dedicated section on assessment and certification arrangements. It is technically defined as "made up of units of competency, which are themselves made up of elements of competency, together with performance criteria, a range of variables, and an evidence guide." (TESDA Circular No. 119, s. 2019, p.3).

⁴³ Each TR has four sections, which cover 1) the definition of the qualification, 2) competencies and performance criteria for the qualification, 3) the training arrangements and standards to achieve the competencies, and 4) the assessment and certification arrangements. Essentially, it outlines the rules on the registration and delivery of the program, the development of the curriculum and assessment instruments, and competency assessment and certification. For a more detailed discussion of how TRs are promulgated, refer to Orbeta (2022).

of their members. How national, regional, and provincial ITBs will or can function and work together remains to be a concern.

Another issue identified in one of the KIIs is the representation in R/PTESDCs. It is headed by the provincial governor, unlike the RTESDC, which is chaired by an industry representative. Also, the absence of uniform guidelines on the definition of critical sector representative for both R/PTESDCs was also noted.

7.5.2. Interagency coordination

It can be gleaned from multiple KIIs the lack of and poor coordination among national government agencies. For instance, one of the primary reasons behind the firms/enterprises and TVI's non-availment of financial incentives related to EBT is the lack of a policy framework. Only recently did BIR and TESDA closely coordinate to craft policy issues, such as Memorandum of Agreement (MOA) and a revenue issuance, to facilitate the availment of the tax incentives. It is also alarming how the labor market information divisions of DOLE and TESDA have not properly linked up in terms of data collection and sharing of TVET-related, and even EBT-specific data and information.

Meanwhile, the KIIs also reveal how limited the interaction between RTESDCs and PTESDCs have been, which may have translated to limited discussions pertinent to the promotion of EBT, including the updating of apprenticeable and learnable occupations. There are also some instances where an updated (real-time) list of TVET programs (WTR and NTR) and TVIs not readily available in certain offices, which have further delayed the action towards TR and CS development. There are also observed bottlenecks with the decision-making process at the Central Office, once TESDA Regional Offices have submitted a proposed list of new CS and TRs for promulgation. Finally, this can also be observed in LGUs, specifically through the public employment service offices (PESOs) and TESDA, which limits their marketing efforts to promote EBT programs.

7.6. Policy environment and direction

Multiple TVET stakeholders who actively participated in the KIIs and other strategic site visits and meetings underscore the need to shift to a more enabling policy environment to effectively promote EBT. They argue that the existing policy and legal framework restricts the industry's active involvement in direct EBT provision and in the development of training programs. This is evident in the long list of requirements and steps they need to comply and undertake, which have increased the overall cost of EBT participation, and ultimately making it impractical for private actors to be involved with EBT.

KII respondents also highlighted how policymakers see EBT as a threat to regularization of employment. This translated to the rigidity in the design of most EBT programs (e.g., Learnership, Apprenticeship) in the Philippines, except for DTS, as they cannot run for no more than six months. In fact, the Philippines has one of the shortest apprenticeship programs compared to other countries which typically exceed a year up to even five years (Section 2.1.2). Some KII respondents affirmed the prevalence of the participation of firms/enterprises to the Dualized Training Program (DTP) (Section 4.2.3). They mentioned that its purpose is to entice industries for them to get a sense of how DTS will benefit their establishment without the monetary requirements mandated by the law. Others have pointed out that DTP should have only run in the first years of the implementation of DTS. How TESDA monitors DTP will

influence how the private sector may navigate across the various programs under EBT, specifically DTS.

8. Policy recommendations

Like the previous section, this section has six parts, which elaborates actionable policy recommendations to address the various barriers and disincentives identified from the desk review and KIIs, supported by recent EBT-related data and statistics. Each of the six thematic areas of recommendations includes more specific items for policy considerations.

8.1. *Deepen understanding and appreciation of EBT, as well as improve its measurement*

8.1.1. Improve the definition and classification of EBT

An assessment of the EBT modality requires a clear and complete understanding of its definition, scope, and its characteristics. More broadly, TESDA, as the national skills and training authority, can develop a concise report or reference which clearly defines EBT and differentiates its various programs, with clear emphasis on the associated benefits (financial and non-financial) with each program. Also, the same document should clearly outline the incentives, as well as the necessary processes a firm/enterprise or a private TVI will undergo once they participate in one or multiple EBT programs.

This will better equip EBT stakeholders with the relevant information and inform their decision-making processes. Policymakers can build on the discussion in Section 4 of this study, including the summary in Table A6. The resulting policy guide can also be used as a key reference in the pending bill, SBN 363 or the “Enterprise-Based Education and Training to Employment Act” which aims to consolidate and align the definition and scope of EBT under one umbrella.

Specifically, TESDA should consider reviewing the guidelines covering PAFSE and TCFS, focusing on whether the list of training providers under each program falls under the definition of EBT. Based on a review of the training output of both programs, some, like HEIs and TTIs, can be considered as IBT-implementers. This has some important ramifications for the accurate reporting of EBT statistics, which are currently facing issues of potential double-counting or inaccurate estimation.

8.1.2. Improve the collection of EBT-related data and statistics

Improving the labor market information system can aid in resolving the potential underestimation of EBT’s training output. TESDA can integrate more EBT-specific target indicators in its NTESDPs starting with the list in Table A1. This initiative can start with a closer coordination among national government agencies (NGAs), especially between DOLE and TESDA, in terms of sharing EBT-specific data and information. As briefly mentioned in the preceding section (Section 7.1.2), an ongoing review of existing survey instruments identified certain gaps in capturing EBT training output and the labor market information of its graduates. Thus, building and strengthening partnerships and collaborations between PSA and TESDA are necessary to effectively review and align TVET- (and EBT-) specific concepts and definitions and integrate these in existing regular data collection instruments. This will enable

better analyses of the impacts of TVET, specifically EBT, with labor market outcomes, such as employment-related indicators and returns to TVET. The results of these assessments can guide policymakers in terms of the allocation of public funds to support certain training modalities, specific programs, and cohort groups.

8.1.3. Implement innovative marketing initiatives to promote EBT

Another strategy to promote EBT is to scale efforts in conducting marketing initiatives to promote EBT. This can be done using online platforms (e.g., social media and websites) and physical events (e.g., roadshows) (UNESCO et al., 2023). A good example of this initiative is Australia's Apprenticeships Ambassadors Program which harnesses media coverage and public relations to promote the benefits of EBT to students, parents, and businesses (Box 9). TESDA can consider putting up a similar program that capitalizes on the rise of "influencers" and trace those with TVET backgrounds who may promote apprenticeships, enterprise-based training or TVET in general.

Box 9. Australia's Apprenticeships Ambassadors Program

Australia's apprenticeship system, although well-established, struggled to attract the youth's interest due to the perception that vocational education is inferior to obtaining university degrees (Misko et al. 2007). Small enterprises which employ almost 50 percent of the private sector workforce (DISTRE 2012) also tend to be reluctant about taking in apprentices (UNESCO-UNEVOC 2017). Following the recommendation of an expert panel, the Government of Australia launched the Apprenticeships Ambassadors program in 2013 to revive the interest in apprenticeships as a viable and reputable career path. According to the report of UNESCO-UNEVOC (2017), the program appoints public figures and former apprentices as advocates to promote the benefits of the apprenticeship system to students, parents, and businesses. With over 200 ambassadors as of 2017, the program actively participates in various events, reaching nearly 6 million people through media coverage and public relations efforts. Ambassadors also play a crucial role in encouraging employers, especially small businesses, to engage in the apprenticeship system, addressing apprehensions and promoting diversity in hiring.

To expand outreach, the program maintains a website, complementing physical events and providing accessible online content and an interactive map to connect with ambassadors. While the program's impact on national perceptions is yet to be measured, positive responses from participants suggest its value. Australia's Department of Education and Training is further developing tools to assess changes in attitudes and perceptions, aiming to evaluate the program's effectiveness.

8.2. *Strengthen existing and introduce additional incentive mechanisms*

8.2.1. Promote the new set of guidelines and streamline the existing processes on availment of incentives

Although TESDA and BIR have limited records of any TVI or firm/enterprise who availed of tax incentives, there have been anecdotal evidence from KIIs and meetings with TVET stakeholders on cases of receiving tax availment. For example, the Monark Foundation Inc. cited three instances where they successfully availed of tax incentives (Box 10).

Box 10. Monark Foundation, Inc.

The establishment of Monark Foundation Inc. was a product of industry engagement in TVET. The vision of creating an enterprise-based TVI began when an expert from Monark Equipment Corporation participated in consultations organized by the Technical Education and Skills Development Authority (TESDA). In 1997, the Foundation began to operate as the first heavy equipment school in the country. To date, Monark Foundation Inc. regularly offers training courses on Industrial Office Management and Heavy Equipment Servicing (Mechanical) with National Certification Level II (NC II) in partnership with firms under the Dual Training System (DTS).

Network-backed demand-driven training

The Foundation's demand-driven skills development programs benefit greatly from Monark Equipment Corporation's industry network. This enables the identification of other labor market needs in the industry such as Forklift Operation, Excavation Operation, and Articulated Dump Truck Operation for which Monark Foundation Inc. can provide training upon request of partner firms and institutions. The supply of graduates meets not only the labor demands of the Foundation's mother company, Monark Equipment Corp., but also even of competing companies in the industry. The two regular training programs of Monark Foundation Inc. consistently register a 90% employment rate. Continual monitoring and surveying of labor requirement needs of DTS partners keeps Monark Foundation's course offerings relevant and designed to maximize graduates' employability.

Availment of tax incentives

While tax incentives are in place to make DTS appealing for the private sector, its availment has been challenging for TVIs and industry partners. Monark Foundation is one of the TVIs that has successfully availed of such benefits. With support from TESDA, the Foundation was able to receive tax-deductible grants and donations from the German government and Caterpillar Inc. in Singapore. This requires complete documentary requirements of the TVI, including accreditation from the Philippine Council for NGO Certification (PCNC), which Monark Foundation Inc. is a holder of.

Once the ongoing collaboration between BIR and TESDA is done, the resulting BIR Revenue Memorandum Order (RMO) and policy issuances can be properly marketed through various means by TESDA and its strategic partners, including industry boards, LGUs, development partners, and civic society, among others. These may include the Procedural Guidelines on the Availment of Tax Incentives under the DTS Act, as well as other EBT forms. These include the lack of IRR on how they can avail the incentives available under the Apprenticeship program. Also, existing incentives need to be clarified and aligned with each other. For instance, the passage of the CREATE law is only applicable to apprenticeship agreements with public TVIs. To avoid confusion, the maximum incentives can be made similar across all EBT forms, which appears to be one of the objectives of SBN 363 or the "Enterprise-Based Education and Training to Employment Act".

A review of existing requirements to avail the incentives is also important to eliminate redundancies. One can also consider omitting the proof of the nature of the institution (e.g., non-profit) by simply referring to the public list provided by the Philippine Council of NGO Certification (PCNC). Also, other requirements (Table A9) that take time to comply can temporarily be replaced with a submission of an affidavit of undertaking, which is a legally binding document among government agencies done in good faith to only produce and check these requirements once requested. Also, it is necessary to continue the ongoing review of the

Revised IRR of DTS law in 2019, and specifically resolve the issues on training vs. daily allowance allocated to private TVIs.

8.2.2. Review and revise the allocation of scholarship slots and other non-financial mechanisms

The lack of clear guidelines on scholarship slot allocation can be resolved by clearly defining and setting measurable indicators for them to achieve to ensure a sustainable supply of scholarship slots. These can include performance-based indicators, such as employment and employability of graduates, profile of scholarship beneficiaries (e.g., marginalized), etc. and not only training outputs (e.g., enrollees, graduates).

Also, a careful examination of the potential adverse and unintended consequences of the proliferation of farm schools is important given the fixed supply of scholarship allocations. The rapid increases in the number of new farm schools, as well as expanding the capacity of existing ones, should be accompanied by a corresponding increase in scholarship allocations, to sustain the operations of scholarship-dependent farm schools. However, this must still be accompanied by well-defined performance-based indicators, to ensure the quality of the training provision and ensure adequate returns to the scholarship.

Meanwhile, there is a need to revisit the criteria for some non-financial incentive mechanisms, such as the TESDA's Kabalikat Awards (Box 7), to effectively level the playing field by establishing more balanced and more relevant recognition programs. For instance, a review of the criteria of the former shows that there is a tendency for relatively larger enterprises to be awarded due to the selection criteria dependent on financial and technical capacity (e.g., number of persons benefitted and investment in TVET).

8.2.3. Market EBT incentives

Construct an EBT incentives calculator similar to the design of the tax savings calculator of Department of Finance (DOF) (Figure A2). The EBT incentives calculator can be used by either a participating or a prospective firm/enterprise or a private TVI who intends to participate in a specific EBT program, which can be Learnership, Apprenticeship, DTS, among many others. The updated benefits of implementing DTS, both long- and short-term in nature, following Mapa et al. (2016), can be integrated as part of the "savings" a particular firm/enterprise, or in this case, including a private TVI. The incentives calculator can then be easily marketed as part of the initiatives outlined in Section 8.1.2.

8.2.4. Consider alternative financing mechanisms to support firms and enterprises

Aside from smoothening out the process of tax incentive availment (Section 8.2) and the continuous implementation of scholarship funds anchored on performance-based principles, TESDA can review and implement other alternative financing mechanisms (Section 2.3) with comprehensive consultations among all stakeholders. The design can be formulated by building on the good features of each financing mechanism. The Philippine TVET system can consider one or a combination of the following financing modalities:

8.2.4.1. *Sectoral training levy system via ITBs*

The training levy system will be designed to finance the training expenses of firms/enterprises belonging to a specific sector. The fund will be sourced from the contributions of

firms/enterprises equivalent to a proportional or progressive (i.e., higher percentage for larger firms) percentage⁴⁴ of their payroll. Micro- and small-sized enterprises may be exempted from the contribution, depending on the arrangement and nature of their membership in the ITB. The pooled funds will be handled by ITBs and will benefit its members through the financing of ITB- and/or member-initiated training initiatives. Some of the key features of Singapore's levy system (Box 1) can be adopted in this context. These include the systematic and comprehensive monitoring and evaluation mechanism that also promotes accountability across all levels. The training program to be carried out must satisfy a list of criteria that ensures its relevance and scale. The national government can support this by integrating performance-based target indicators with associated funding⁴⁵, like the best principles adopted in the allocation of scholarship slots. The implementation of this system can start with ITBs which are mature enough and best positioned to adapt such a financing scheme. The early stages of its implementation should be supported by the national government by topping up public funds to finance a portion of the training expenses conducted by the ITB.

8.2.4.2. Targeted public procurement

This is also one of the financing mechanisms identified in the review of literature. Also, this was suggested by one of the KII respondents as a response to the lack of TVI providers that provide capital-intensive programs, specifically those that require heavy equipment (e.g., forklift, backhoe, etc.). This scheme essentially awards public contracts to enterprises, conditional on specific training provision. For instance, awarding a public contract which involves the purchase of a set of backhoes will only be granted to a particular firm or TVI if the company conducts training beyond maintenance of the equipment and includes how to operate it. The company can then partner with TVIs to provide the theoretical component of the training, while they will provide the practical or hands-on segment.

8.2.4.3. Payback clauses

One commonly raised concern of firms and enterprises is the risk of losing their investment if the trainee does not opt for employment in their company post-training, but in other companies domestically and even abroad. This ultimately discourages them from conducting training in the first place. This can be resolved by including payback clauses in the training arrangements to reimburse a portion of expenses should the trainee leave after training for a period. Flexibility in including such clauses in training arrangements is instrumental for this financing mechanism to be effective.

8.3. Build the technical and manpower capacity of EBT implementers

8.3.1. Create a sustainable pool of trainers, assessors, and training curriculum developers

An assessment of human resource capacity of TESDA's training centers and assessment centers is critical to identify the shortages in manpower directly involved in the development of training programs, focusing on EBT. These shortages can be filled in by professionalizing industry experts. As suggested by one of the KII respondents, this starts with the establishment of a national framework⁴⁶ outlining the criteria and selection process of industry experts. This

⁴⁴ This will be determined based on consultations with all stakeholders.

⁴⁵ This can be in a form of shared contribution by the government and the private sector, subject to extensive consultations.

⁴⁶ An ongoing development of this framework was affirmed by TESDA officials.

will be similar to CHED’s Technical Panels⁴⁷ across 100 discipline areas, which are composed of renowned experts tasked to guide the Commission in “providing technical expertise, particularly in the development of disciplinal and degree program roadmaps; review, revision and updating of PSGs based on the policy direction set by the Commission and consistent with local, regional, and international needs and industry trends; develop or revise Policies and Guidelines on Centers of Excellence and Centers of Development (COE/COD) for the various disciplines and in the crafting of monitoring and evaluation instruments and systems, as well as orientation of technical evaluators, among others” throughout their four-year term (CHED n.d.)

Aside from a creation of a panel of industry experts and institutionalization of a national framework for industry experts, multiple KII respondents agree that financial incentives are needed to attract industry experts to continuously work full-time as a trainer, assessor, and curriculum developers. These can be in a form of higher remuneration, and other financial and non-financial benefits. These can be initially targeted and offered to inactive trainers and assessors in the repository of TESDA. Another potential source of trainers and assessors as suggested by a KII respondent is returning OFWs (Box 11). TESDA already implements the “TESDA Abot Lahat ang OFWs” program, which focuses on the upskilling and retooling of OFWs and their dependents.

Box 11. Overseas Filipino Workers (OFWs) as trainers and assessors

Numerous government and stakeholder initiatives aim to support the successful reintegration of Overseas Filipino Workers (OFWs) into their home communities following their return from their overseas employment. The Overseas Workers Welfare Administration (OWWA), an agency under the Department of Migrant Workers (DMW), implements several reintegration programs, including Balik Pinas! Balik Hapabuhay! Program, Tulong Puso, and OFW Enterprise Development and Loan Program. These initiatives offer various forms of livelihood assistance, such as grants or financial support, to assist OFWs in establishing startups or funding livelihood projects (OWWA n.d.).

Additionally, the Technical Education and Skills Development Authority (TESDA) operates the “TESDA Abot Lahat ang OFWs” program, launched in 2020, which focuses on the upskilling and retooling of OFWs and their dependents. As of 2022, the TESDA Online Program recorded 84,509 registrations, with 74,735 individuals completing the program. Among returning or repatriated clients, 11,395 have graduated from TESDA trainings (TESDA 2022c).

In 2020, then-Secretary Isidro Lapen introduced a new initiative with the goal of engaging OFWs as trainers and assessors. These individuals would undergo the Trainers’ Methodology course and undergo competency assessments. OFW trainers and assessors would receive honoraria for their services. Secretary Lapena instructed regional and provincial offices to establish OFW desks and appoint focal persons to address OFWs’ inquiries (Arayata 2020). However, TESDA has yet to issue a circular order providing detailed guidelines for this initiative.

Scaling the implementation of TESDA’s Competency Assessment and Certification for Workers (CACW) Program is another mechanism to increase assessment capacity in the TVET system (Box 12). It provides free assessment and certification services to employed industry workers, thereby increasing the potential number of trainers and assessors. Meanwhile, the

⁴⁷ This was recently reconstituted by virtue of CHED Administrative Order No. 3, s. 2019 entitled, “Revised Policies and Guidelines in the Reconstitution of Technical Panels for Various Disciplines/Program Areas of the Commission on Higher Education.” (CHED, n.d.)

existing pool of trainers and assessors can also benefit from the service by upgrading their qualifications. It also aims to increase industry involvement in skills development by encouraging on-site assessment or assessment in the workplace and applications for accreditation to be assessment centers. These can effectively increase the number of assessment centers, thereby expanding TESDA infrastructure.

Box 12. Competency Assessment and Certification for Workers (CACW) Program: Expanding Assessment Capacity

Designed to promote its Competency Assessment and Certification System, the Competency Assessment and Certification of Workers (CACW) program provides free assessment and certification services to industry workers, who are currently employed or engaged in livelihood jobs and those without the need for formal training. These services are applied to full qualifications identified in Training for Work Scholarship Program (TWSP), with a few exceptions*. This free assessment and certification program also extends to persons with disabilities, public utility vehicle drivers, trainers of private and public training institutions and overseas Filipino workers. The free service may only be availed once in one (1) qualification by workers who are not yet certified. This indirectly increases the potential number of trainers and assessors. Also, existing trainers and assessors can benefit from the service by upgrading their qualifications (TESDA Circular No. 33 2022).

Currently, the program receives 2% of TWSP yearly fund allocation, while availability of slots will depend on skill priorities of region under TWSP. From 2018-2023, 92% of around 230,000 assessed under CACW were certified. In 2023, Region 7, NCR and Region 4a received the highest number of slots (> 2,500) while Region 9 and BARMM in the lowest, with only 1 assessed in BARMM. Popular qualifications and sectors were driving including passenger bus/straight truck (Automotive and Land Transportation), welding (Metals and Engineering), electrical installation and maintenance (Electrical and Electronics) and heavy equipment operation using forklift (Construction). However, 207 of 322 qualifications under CACW had no takers, including in-demand occupations in heavy equipment operations (13 qualifications), food production and animation (TESDA 2023b).

The program also can expand assessment capacity of the TVET system by allowing assessments in workplace, such as construction. TESDA also encourages industry partners to apply for accreditation as an Assessment Center to expand its assessment and certification infrastructure. Private assessment centers may also be authorized. This program may be leveraged to encourage skills upgrading in industries.

* These include training programs related to automotive and targeted to groups, such as OFWs.

8.3.2. Build the capacity of TESDA to promote and market EBT

Aside from trainers, assessors, and curriculum developers, a comprehensive organizational assessment of TESDA will be instrumental in determining the existing and anticipating the needed absorptive capacity of Central, Regional, Provincial Offices and TESDA Training Institutions (COROPOTI) in delivering its mandate. Once industry-led TVET, and thus EBT, becomes a top priority, TESDA can create a dedicated team (increase regular employee ratio) to promote, monitor, and implement EBT-specific tasks and initiatives, at the provincial and regional levels. This can be started by increasing the regular employee to total employee ratio within TESDA COROPOTI.

Aside from manpower, TESDA also needs to boost its capital outlay to develop the infrastructure needed for the effective delivery of training services and upgrading TVET program offerings. They can achieve this by building partnerships with development partners to seek financial and technical assistance. For instance, through the Supporting Innovation in

the Philippine Technical and Vocational Education and Training System Project, ADB has recently approved a \$100 million loan to upgrade and modernize the Philippines' TVET ecosystem, by improving training facilities and equipment in 17 selected technology institutions nationwide and transform them into industry-responsive innovation centers (ADB, 2022). The loan is also designed to assist in developing new training courses, reskilling and upskilling trainers, and strengthening the institutional capacity of TESDA. TESDA can also investigate how one-stop shop innovation centers, such as that of SKILLS, can be effectively replicated and scaled (Box 13).

Box 13. School of Knowledge for Industrial Labor, Leadership, and Service (SKILLS)

Primary Structures Educational Foundation, Inc. (PSEFI) was organized in 2008 as the corporate Foundation of the Cebu-based Primary Group of Builders (PGB). The Foundation provides grants for training, assessment, and certification services through its technical vocational institute (TVI) School of Knowledge for Industrial Labor, Leadership, and Service (SKILLS), which specializes in construction and heavy equipment operation, health and social services, hospitality, maritime, and English as Second Language industries.

As a non-profit organization, PSEFI – SKILLS provides free trainings and job-matching support to disadvantaged members of society, such as out-of-school youth, women, and differently-abled individuals. They exist and operate for the broader purpose of poverty alleviation by addressing unemployment in partnership with industry networks. With the unceasing demand for workers in the construction sector yet insufficient skilled manpower in the labor force, PSEFI – SKILLS realizes the opportunity to create shared value between the needs of society and the business process of the construction sector. PSEFI's model of corporate social responsibility is made sustainable by being embedded in the value chain of the business.

Adaptive curriculum development

Many of the training programs offered by SKILLS were initiated by partner companies, hence they can capitalize on accessible industry expertise. Nevertheless, it is recognized that not all technical experts have the aptitude to develop training designs and modules; as a TVI, SKILLS devises the training curricula.

The unencumbered autonomy of SKILLS in rapidly developing and testing training curricula to address pressing societal needs is noteworthy as in the case of the Market Auxiliary and Specialized Services (MASS) program. In response to the nurse shortage at the height of the COVID-19 pandemic, SKILLS with its partner hospital created this six-month program that is more advanced than nursing assistance and caregiving. Graduates are equipped to operate medical equipment, perform charting, and take vital signs, among other things. Proven to be relevant and successful, the MASS program has already been implemented for at least five batches of trainees.

Industry-immersed training

SKILLS is particular in having industry practitioners as trainers to ensure that the latest streams and technologies are incorporated in lectures and hands-on training. Moreover, trainees are deployed for on-the-job training with partner companies for about seventy to eighty percent of the training duration. Even senior high school (SHS) students under the Technical-Vocational-Livelihood (TVL) track in SKILLS manage to obtain National Certificates (NC) per semester—NC in carpentry on the first semester, NC in tile-setting on the second, and NC in plumbing or masonry on the third, for instance. This entails many hours of industry immersion much beyond the standard 80-hour SHS internship requirement that equips students for the world of work.

Elevating the prestige of skilled workers through industry certification

A shortage of skilled workers remains to be a challenge in the Philippines due to the negative perceptions associated with construction work. By initiating the establishment of the Assessment, Certification and Accreditation System (ACAS), the first industry certification program in the country, PSEFI – SKILLS promotes upskilling towards sustainable employment, better compensation, and more career growth opportunities. Through the ACAS, the industry defines the strengths, competencies, and skills that are needed from the workforce and takes the lead in assessment, certification, and accreditation.

One of the certifications awarded by ACAS is on building assistance. To be a certified Builder Assistant, the individual must be at least a high school graduate, have a minimum of three NC II in carpentry, masonry, plumbing, or tile-setting, and pass the assessment of experts from the academe and industry through various modalities, i.e. demonstration, portfolio, and interview. Once certified, individuals are acclaimed to possess multiple skills and more well-rounded capabilities which are sought-after in today's fast-evolving industrial landscape.

Source: KII with PSEFI – SKILLS representatives

8.4. *Assess and revamp the development of training programs*

The newly created and augmented pool of industry experts (Section 8.3) should be regularly tapped for advice and technical assistance in designing new and updating existing training programs that respond to changes in the labour market. In effect, mismatches in the design and content of TRs and CS with industry practices will be minimized. These include the training equipment and tools needed for training, certification, and assessment. Although there have also been strong claims that the existing TRs are outdated, a more comprehensive analysis of existing and in-demand and emerging occupations and skills is warranted. Policymakers can learn from the good practice of SKILLS in terms of tapping industry experts in developing training programs (Box 13). A policy transition towards more modularization of training programs, as well as improving and scaling the micro-credential system of TESDA can be a response to the labour demand of multiplicity of skills. This will allow for more effective transferability of certain skills and competencies acquired from modularized training programs towards its applications to occupations that require multiple set of skills. An example of this is the need for an individual in the construction sector who is competent in tasks related to carpentry, masonry, plumbing, and tile-setting. This was done by SKILLS through its certification of a Builder Assistant (Box 13).

Finally, to improve the adaptation of internationally accredited training programs, TESDA can scale the implementation of its Adapt-Adopt policy (Box 14). The policy can streamline and shorten the process cycle time (PCT) in the development of CS and TRs. The active participation of other stakeholders, such as various industry boards, academic institutions, and labor representatives is needed for the policy to be effective.

Box 14. TESDA's Adapt and Adopt Policy

One of TESDA's key programs, consistent with the Department of Budget and Management's Program Expenditure Classification (PREXC), is the TESD Regulator Program. This initiative encompasses activities aimed at regulating TVET processes and systems, establishing competency standards for quality assurance in TVET provision, and conducting competency assessment and

certification to ensure the competence and competitiveness of TVET graduates and workers (TESDA 2018).

The planning guideline also includes general parameters designed to ensure responsiveness to the needs of key stakeholders, including industries and employers. Among these parameters is the "Adapt and Adopt" policy outlined in Section B.1 of the Training Regulations/Competency Standards Development under the TESD Regulatory Program. This policy mandates the incorporation of existing off-the-shelf competency standards developed by industries, multilateral agencies, and international development partners, particularly for advanced technologies and higher-level qualifications, into the development of competency standards and training regulations (TESDA 2018).

The "Adapt and Adopt" policy serves as the legal basis for various implementing guidelines related to competency standards. The policy serves as a benchmarking strategy for TESDA in adopting specific tools utilized by its counterparts in other countries to enhance the delivery of robust and competitive TVET programs. For instance, the Test of Practical Competency in Information and Communications Technologies (TOPCIT), an assessment tool developed by the South Korean government, presents a viable option that can be localized for implementation within the Philippine context (TESDA, 2019). Furthermore, this policy has facilitated the streamlining of the process cycle time (PCT) in the development of Competency Standards (CS) and Training Regulations (TRs) by the TESDA Qualifications and Standards Office (QSO). This improvement is achieved through extensive consultation and collaboration with various industry boards, academic institutions, and labor representatives (TESDA 2020).

8.5. *Improve existing mechanisms on industry involvement*

8.5.1. Ensure the efficient and effective functioning of ITBs and R/PTESDCs

The establishment of measurable indicators that relate to the functioning of ITBs must be done to ensure its effective monitoring of TESDA and promote accountability in the fulfillment of their duties and responsibilities. Like NTESDPs, target and actual indicators set by the ITB and TESDA will guide both parties on what needs to be monitored and achieved throughout the agreed duration of the partnership. The overall benefits to be received by the ITB must also be clearly defined once these targets are achieved. These indicators can include an increased number of EBT implementers, conducted EBT training programs, partnerships forged, number of employed graduates. In the process, the roles of TESDA related to ITB operations will also be clearly defined based on continuous multi-partite dialogues among stakeholders.

Meanwhile, policy issuances guiding the representation of R/PTESDCs need careful review to ensure better representation of the industry in their respective committees. For one, the head of PTESDC can be changed from provincial governor to industry sector representative, like RTESDC. The definition of a critical sector representative must also be clearly defined to avoid confusion among R/PTESDC members on who to nominate within their respective areas.

8.5.2. Adapt best practices of other countries, as well as in the local context, in engaging industry in skills development

The country's TVET sector can learn from good practices of other countries in involving the private sector in skills development, specifically in the planning and design of training programs (Box 3), direct training provision (Box 4), and policy reform (Box 5). Aside from

these, aspiring ITBs in the Philippines can also learn from local examples of existing national ITBs in the Philippines. For instance, representing the construction sector, the Philippine Construction Association (PCA), in collaboration with TESDA, launched the Construction Supervisors Training Program (CSTP) with technical assistance from People1st in developing the curriculum and mapping competency standards for the program (Box 15).

Box 15. Philippine Construction Association Inc. (PCA)

The Philippine Construction Association (PCA), as part of its roadmap agenda, launched the Construction Supervisors Training Program (CSTP) in support of the Duterte administration's Build Build Program in 2018. Developed in collaboration with the Technical Education and Skills Development Authority (TESDA), the program aims to train 2,000 construction supervisors and assistant supervisors, supported by a budget of Php 30 million or 2,000 scholarship vouchers under the Training for Work Scholarship Program (TWSP) and the Special Training for Employment Program (STEP).

Drawing upon professional standards from the United Kingdom, which has one of the best TVET practices and standards (NSDC 2020), PCA engaged People1st, a leading UK-based international training and consultancy group, to develop the curriculum and map competency standards for the program. Its primary objectives include enhancing the soft skills of current team leaders, prospective supervisors, foremen, and site managers, focusing on leadership, communication, and management principles. By elevating participants' skills and occupational competence, the CSTP aims to contribute to the advancement of stakeholders within the construction industry, fostering long-term benefits for companies and the country.

Commencing in June 2018 with the signing of a Memorandum of Agreement between TESDA and PCA, the program has seen six graduating cohorts as of March 2024, totaling 856 CSTP graduates. Implementation has been localized to areas where PCA local chapters operate, including National Capital Region, Pampanga, Rizal, Cebu, Negros Oriental, and Davao.

In 2021, PCA was honored with the Kabalikatan Award from TESDA, recognizing its outstanding contribution as an active partner in developing and enhancing training programs that enhance the employability of Filipino skilled workers.

Box 3 showcases an example of a partnership between an ICT company and a TVI equipping trainees with relevant ICT skills. This initiative started in Poland but has expanded globally. In the country, the IT and Business Process Association of the Philippines (IBPAP), the national ITB for the ICT sector, also collaborated with TESDA on multiple occasions to formulate ICT-related TRs to meet the sector's skill demands, conduct trainings, and jointly manage the scholarship fund allocated for pre-employment training of near-hires and re-tooling of incoming workers in the sector, among others (Box 16).

Box 16. IT and Business Process Association of the Philippines (IBPAP)

The Information Technology and Business Process Management (IT-BPM) industry has played a crucial role in the Philippine economy, contributing significantly to revenue generation over the years. Among the key stakeholder in the industry is the IT-Business Processing Association of the Philippines (IBPAP), it has more than 400 members and six partner associations which includes the Animation council of the Philippines, Inc. (ACPI), Global In-House Center Council (GICC) Philippines, Contact Center Association of the Philippines (CCAP), Game Developers Association of the

Philippines (GDAP), Healthcare Information Management Association of the Philippines, and the Philippine Software Industry Association (PSIA) (IBPAP n.d.).

In 2006, IBPAP and TESDA collaborated on the Training for Scholarship Programme (TWSP) as a reaction to the enduring structural unemployment. The government allocated Php 500 billion for remedial training, resulting to 40, 000 call center agents and 30, 000 graduates with additional skills required by the ICT sector, such as animation, medical transcription, and computer hardware servicing. Acting as a facilitator for the training, IBPAP coordinated with various entities within the sector. TESDA and IBPAP partnered in formulating the Training Regulations for these courses to meet the sector's skill demands. As reported by IBPAP, the overall employment rate for these graduates reached 70% (OECD & ILO 2017).

In 2011, recognizing the growing demand for skilled workers in the industry, the IBPAP entered into two Memoranda of Agreement (MOAs) with the Technical Education and Skills Development Authority (TESDA) to implement a Php 420 million Industry-Based Training for Work Scholarship Program (I-TWSP). This program aimed to expedite employment in the IT-BPM sector by creating a pool of qualified, globally competitive, and job-ready workforce within a two-year period (January 2011-December 2012) (IBPAP 2013).

TESDA and IBPAP jointly managed the scholarship fund allocated for pre-employment training of near-hires and re-tooling of incoming workers in the IT-BPM industry. TESDA provided scholarship vouchers worth up to Php 400 million throughout the program's duration, while IBPAP was tasked with allocating these vouchers and engaging its various Industry Associations (IAs). The IAs, in turn, played a vital role in the implementation process, which included identifying, qualifying, and endorsing industry partners, such as participating member firms and eligible Technical Vocational Institutions (TVIs), and monitoring voucher usage to ensure the program's target employment rate of 70% was met. TVIs were primarily responsible for delivering the training programs and managing the voucher transactions directly with TESDA offices (IBPAP 2013). Additionally, there was a Trainers Methodology (TM) Plus component, which served as the IT-BPM industry's equivalent of TESDA's trainer course, enabling trainers to acquire the necessary competencies to deliver training up to industry standards. The I-TWSP encompassed industry immersion in IT companies. In 2013, an additional 310 million was allocated for the I-TWSP program (OECD & ILO 2017).

Regarding the program's actual outputs and outcomes, a total of 2,121 vouchers were utilized by 24 TVIs affiliated with different associations in 2011. Of these vouchers, 1,919 (90.8%) recipients successfully graduated or completed the training, with 1,531 (79.8%) subsequently gaining employment. In 2012, a total of 66,689 vouchers valued at Php 393 million were allocated, with 99.5% utilization and a graduation rate of 98%. Out of these graduates, 45,961 (70.7%) secured employment (IBPAP 2013).

Overall, the program exceeded its voucher output (utilized 99.5% of the total voucher) and outcome targets (98% of the consumed vouchers completed the course and 70.9% of them were employed) within the original timelines (2011-2012) (IBPAP 2013). It was deemed successful as it addressed the government's manpower program needs effectively, bridged the IT-BPM talent gap, and demonstrated an efficient, transparent, and replicable business model for delivery. This assessment was also found by the Asian Development Bank in a 2016 report. The study noted how the I-TWSP was successful in bridging the talent gap within the IT-BPM industry. Moreover, the program demonstrated an efficient, transparent, and replicable business model for delivery.

Meanwhile, one of the country's key employment generating sectors is the semiconductor and electronics industry. TESDA's partnership with Semiconductor and Electronics Industry in the

Philippines Foundation, Inc. (SEIPI) demonstrates the advantages and potentials of engaging Industry Associations (IAs) for demand-driven TVET and high employability outcomes (Box 17).

Box 17. Semiconductor and Electronics Industry in the Philippines Foundation, Inc. (SEIPI)

SEIPI is the largest organization of electronics companies in the country with domestic and international members. As part of a key employment generating industry, SEIPI member companies have urgent demand for operators who formerly had to undergo a six-month cadetship program. Partnership between SEIPI and TESDA produced a new curriculum with only five classroom and five hands-on training days held at the companies' premises. From the 3,400 operators trained in 2014, a ninety-five percent employment rate was reported.

Furthermore, five priority training regulations (TRs) were identified and subsequently approved by TESDA in consultation with industry representatives. SEIPI then received 7,000 scholarship grants on these five new TRs in 2015. To coordinate efforts on the industry's trajectory, SEIPI developed a Road Map which specified how TESDA can support the skills development needs of the sector.

Over the years, SEIPI remained to be an active industry partner and recipient of scholarship grants from TESDA. This partnership continued to evolve until SEIPI was recognized as a National Industry Board (NIB) for technical-vocational education and training (TVET) in 2023. As a national industry TVET Board, SEIPI is now charged to ensure responsiveness and relevance of skills being developed in the industry and shall now lead the development and regular review of Training Regulations (TRs), Competency Standards (CS), and Competency-Based Curriculums (CBCs). This milestone is reckoned to better calibrate TVET programs and priorities with industry requisites.

8.5.3. Bridge gaps in coordinating mechanisms among EBT stakeholders

One way to foster better and regular coordination among RTESDCs and PTESDCs is to conduct regular RTESDC meetings by province. This is one of the good practices shared by one of the KII respondents. They cited that this will not only encourage the development of policy resolutions, but also engage PTESDCs in performing their respective duties.

Another is to harness technologies and apply it to key elements of the TVET system. For instance, investing in the digitalization of an updated (real-time) list of TVET programs (WTR and NTR) and TVIs can bridge information gaps by providing real-time information to TESDA Regional and Provincial Offices, and other TVET stakeholders. Finally, an organizational assessment is needed to identify bottlenecks in the CS and TR development, specifically aimed to effectively reduce the turnover time between the ROs and Central Office (e.g., CS development).

8.6. *Promote an enabling policy environment with clear direction*

Before conducting a comprehensive assessment of EBT, TESDA should take the lead in establishing the uniform and consistent definition and overall scope of EBT. Whether or not some monitored training programs with direct involvement of firms and enterprises will be included under EBT will have important implications on the promotion, monitoring, and quality assurance mechanisms of TESDA. This is particularly critical in the ongoing discussions of SBN 363 or the "Enterprise-Based Education and Training to Employment Act" which attempts to consolidate and align the definition and scope of EBT under one umbrella.

The position of TESDA in terms of the implementation of DTP as a training modality also needs to be clarified. KII respondents affirmed its prevalence although it was only intended to be run in the early stages of DTS in 1990s. How TESDA responds to these practices will set a precedent on how the private sector can circumvent certain provisions of DTS.

Finally, the policy shift towards more modularized TRs and CS needs to be carefully analyzed since it has key implications on the development process of training programs, as well as the allocation of money tied to certain types of programs (i.e., no scholarship allocation to NTR programs).

Finally, it is high time to have a comprehensive review and revision of existing labor policies and laws on various forms of EBT, including learnership, apprenticeship and dual training system, among others. These have been already underway, with the ongoing review of EBT as a training modality (e.g., SBN 363) and the apprenticeship program poised to be revamped by HBN 6523 or the “Revised National Apprenticeship Program Act”. Nevertheless, the daunting requirements not only for accreditation to an EBT program, but also in the availment of tax incentives, have discouraged firms/enterprises and TVIs in pursuing EBT. This reflects the restrictive policies which have strictly guarded against potential abuses in employment and other labor laws. Thus, there is a need to revisit and reevaluate the overall posture and attitude towards the crafting of EBT policies and laws.

9. Conclusions and Ways Forward

The EBT modality has persistently been the poorest performer in terms of training output relative to other modalities. This is despite its promising potential to lead to better labor market and skills outcomes of trainees; greater productivity, profitability, and innovation among participating firms and enterprises; and relatively higher levels of overall labor productivity and competitiveness. Its importance has also grown as external factors, including the COVID-19 crisis and the continuous rapid changes in production technologies, threaten to exacerbate the persistent skills mismatches among the Filipino workforce.

The alarmingly dismal contribution of EBT to training provision necessitates an assessment of existing financial and non-financial incentive mechanisms designed to entice private actors to actively participate in various forms of EBT. Thus, this study identifies the persistent barriers and disincentives that have discouraged firms/enterprises and private TVIs from engaging in any of the EBT programs using key insights from a series of KIIs. What was clear from the exercise is that the underlying issues behind the poor performance of EBT are multidimensional and interconnected in nature.

It starts with the lack of a clear definition, scope, and measure of EBT as indicated by KII respondents and reflected by a review of policy issuances and official data and instruments. Despite the abundance of financial and non-financial incentives, incentive mechanisms have been found to be ineffective in attracting firms/enterprises and private TVIs to implement EBT. In fact, there is no record of a firm/enterprise which benefitted from the available tax incentives under DTS and Apprenticeship program. Meanwhile, there are only anecdotal pieces of evidence of private TVIs who were able to avail of the duty-free imported essential equipment and apparatus for training, which have been far and in between over the past three decades of DTS implementation. These have been attributed to the lack of clear policy guidelines and administrative burden associated with program registration and tax availment.

Aside from these two root causes, other factors that deter industry involvement in skills involvement have also been identified. These include the limited operational and technical capacity of EBT implementers, flawed design and arduous development of training programs, prevailing issues within and across interagency and intersectoral bodies, and the restrictive policy and legal framework.

Many actionable policy recommendations, designed to resolve the prevailing issues, are expounded in the study. These include boosting efforts to define and market EBT and revamp existing and introducing new financial and non-financial incentive mechanisms. The latter can include the implementation of alternative financing mechanisms, such as sectoral training levy system, targeted public procurement, and payback clauses, among others, to support the implementation and promotion of EBT, subject to extensive consultations among all stakeholders. The availment and allocation processes of these EBT incentives need to be more efficient and transparent. Other barriers and disincentives can be addressed by unlocking the potential of industry experts in training provision, assessment and development, and improving mechanisms to increase industry involvement. Finally, an enabling policy environment with clear policy direction is paramount to the effective implementation and promotion of EBT.

Moving forward, this study can jumpstart the discussion towards a more in-depth and broader review of the policy and legal framework governing EBT. Also, EBT implementers can closely review and eventually adapt the best practices underscored throughout the study, albeit in various contexts, in the Philippine context. Policymakers can then select and implement the concrete policy recommendations formulated and presented in the study. Several studies and future research can be conducted to contribute to the assessment of the EBT modality. This can include a more rigorous and detailed evaluation of the impact of EBT on labor market outcomes, including employment outcomes, employability, and wages. Also, a comprehensive study comparing the existing list of training programs with in-demand and emerging occupations and skills, is warranted to provide supporting evidence on strong claims that the existing TRs are outdated. Lastly, an assessment on how effective ITBs have been in fulfilling its extensive duties and responsibilities, not only in training provision, but also in curriculum development, labor market information, capacity building, and quality assurance mechanisms, can be undertaken. This is not yet feasible given that the partnerships and collaborations being built and strengthened between industry and TESDA through ITBs are in its early stages. Nevertheless, the growing critical role of the private sector in offering and developing upskilling and reskilling programs and through ITBs is aligned with TESDA's central strategy of Area-Based and Demand-Driven (ABDD) TVET.

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11. Annex

Table A1. Various EBT-specific indicators

EBT-specific indicator	Description	Source/Reference
Firms offering formal training (% of firms)	Firms offering formal training are the percentage of firms offering formal training programs for their permanent, full-time employees	World Bank, Enterprise Surveys
Share of companies providing apprenticeship and other types of training (by size of the company)	<p><u>Policy objectives:</u> The indicator shows the proportion of enterprises financing training through apprenticeship.</p> <p><u>Indicator:</u> It is calculated as the percentage of companies that allocate financial resources for apprenticeship purposes in the total number of companies registered in the economy.</p> <p><u>Sources and concerns with the indicator or source:</u> Surveys. Ideally, the indicator should be disaggregated by small, medium, and large enterprises.</p> <p><u>Considerations:</u> Often data can only be had for formal apprenticeship.</p>	Inter-Agency Working Group on TVET Indicators (ETF, ILO, and UNESCO)
Share of apprenticeship and other types of training spending in labour cost (by size of the company)	<p><u>Policy objectives:</u> The indicator expresses the relative cost of financing apprenticeship and other types of training at company level.</p> <p><u>Indicator:</u> It is calculated as the percentage of apprenticeship and other types of training cost in total cost of labour.</p> <p><u>Sources and concerns with the indicator or source:</u> Surveys. Ideally, the indicator should be disaggregated by small, medium, and large enterprises.</p>	

EBT-specific indicator	Description	Source/Reference
Work-based learning participation rate	<p><u>Policy objectives:</u> To demonstrate the extent of work-based learning in TVET and within overall education system.</p> <p><u>Indicator:</u> Formal apprenticeship as share of all formal secondary TVET. Formal apprenticeship as share of all secondary.</p> <p><u>Sources and concerns with the indicator or source:</u> National TVET Agency; National Departments of Education; Chambers registers. To the extent data are available on nonformal apprenticeships, these should also be made available.</p> <p><u>Alternatives and interpretation:</u> Guidelines on methods for data collection: analyse available literature on work-based learning.</p>	
Share of apprentices completing registered programmes as a percentage of all apprentices starting registered programmes	<p><u>Policy objectives:</u> The indicator shows the proportion of enterprises financing training through apprenticeship.</p> <p><u>Indicator:</u> It is calculated as the percentage of companies that allocate financial resources for apprenticeship purposes in the total number of companies registered in the economy.</p> <p><u>Sources and concerns with the indicator or source:</u> Surveys. Ideally, the indicator should be disaggregated by small, medium, and large enterprises.</p> <p><u>Alternatives and interpretation:</u> It gives an indication of the effectiveness of the apprenticeship programmes to guide students successfully through the programmes.</p> <p><u>Considerations:</u> The indicator is only reliable where apprentices are registered. Apprentices in the informal sector are not registered,</p>	

EBT-specific indicator	Description	Source/Reference
	so countries with significant informal sectors should use this kind of indicator with caution.	
Proportion of companies providing apprenticeships and other work based types of pre-employment training (by company size)	<p><u>Policy objectives:</u> Shows the proportion of companies that finance apprenticeships and other training.</p> <p><u>Indicator:</u> Calculated as the number of companies that allocate financial resources to apprenticeships as a percentage of the total number of companies registered in the economy.</p> <p><u>Sources and concerns with the indicator or source:</u> Surveys, administrative data. Ideally, the indicator should be disaggregated by small, medium and large enterprises.</p> <p><u>Considerations:</u> Data is often available only for formal apprenticeships.</p>	Inter-Agency Working Group on TVET Indicators (ETF, European Commission, ILO, OECD, UNESCO, and World Bank)
Spending on apprenticeships and other types of training as a proportion of labour costs (by company size)	<p><u>Policy objectives:</u> Expresses the relative cost of financing apprenticeships and other types of training at company level.</p> <p><u>Indicator:</u> Calculated as the cost of apprenticeships and other types of training as a percentage of total labour costs.</p> <p><u>Sources and concerns with the indicator or source:</u> Surveys. Ideally, the indicator should be disaggregated by small, medium and large enterprises.</p>	

EBT-specific indicator	Description	Source/Reference
Work-based learning participation rate	<p><u>Policy objectives:</u> Demonstrates the extent of work-based learning in TVET and in the overall education system.</p> <p><u>Indicator:</u> Calculated as the number of formal apprenticeships as a percentage of the number of individuals enrolled in:</p> <ul style="list-style-type: none"> - all formal secondary TVET - all secondary education <p><u>Sources and concerns with the indicator or source:</u> national TVET agency; national departments of education; chambers of commerce registers. Data on non-formal apprenticeships should also be presented, where these are available.</p> <p><u>Alternatives and interpretation:</u> It will be useful to consult guidelines on methods of data collection and to analyse available literature on work-based learning.</p>	
Proportion of apprentices completing registered programmes (by trade, age and gender)	<p><u>Policy objectives:</u> Measures the extent to which apprentices complete their programmes.</p> <p><u>Indicator:</u> Calculated as number of apprentices who have completed an apprentice programme as a percentage of those who start that programme, by trade, age and gender.</p> <p><u>Sources and concerns with the indicator or source:</u> administrative records in TVET institutions</p> <p><u>Alternatives and interpretation:</u> This gives an indication of the effectiveness of the apprenticeship programmes in guiding students successfully through the programmes.</p> <p><u>Considerations:</u> The indicator is only reliable where apprentices</p>	

EBT-specific indicator	Description	Source/Reference
	are registered. Apprentices in the informal sector are not registered, so countries with significant informal sectors should use this type of indicator with caution.	

Source: Authors' compilation based on multiple sources

Table A2. List of Key Informant Interview (KII) respondents

Classification	Institution/Office/Organization
TESDA Central Office	Planning Office (PO)
	Partnerships and Linkages Office (PLO)
	Scholarship Management Division- Regional Operations Management Office (SMD-ROMO)
TESDA Regional Offices	Region VI
	Region III
	Region VIII
	NCR
	Region VII
RTESDCs	Region VII
	Region VIII
	Region III
	Region VI
NGAs	Department of Labor and Employment - Bureau of Labor and Employment (DOLE-BLE)
	Bureau of Internal Revenue (BIR)
	Bureau of Customs (BOC)
Firm/Industry	Primary Structures Educational Foundation, Inc. (PSEFI)
	FAST Logistics Group
	Acuatico Beach Resort
Industry association/board	Organikong Magsasaka at Mangangisda ng Rehiyon Otso (OMMRO)
	Employers Confederation of the Philippines (ECOP)
	Cebu Chamber of Commerce & Industry (CCCI)

Classification	Institution/Office/Organization
	Information Technology and Business Process Association of the Philippines (IBPAP)
	Philippine Constructors Association (PCA) Inc.
	Basey Association of Native Industry Growth (BANIG Inc.)
	Cebu IT-BPM Organization (CIB.O)
Private TVI	Monark Foundation, Inc.
	FAST Logistics Learning & Development Center
	School of Knowledge for Industrial Labor, Leadership and Service (SKILLS)
Public TVI	Provincial Training Center (Davao de Oro)
	TTI (Region XI)
NGO	International Labour Organization (ILO)
	Philippine Business for Education (PBE)

Source: Authors' compilation

Table A3. Site visits and industry consultations with EDCOM 2, 2023

Schedule	Venue	Participating institutions/industries
July 3, 2023	Don Bosco Youth Center, Tondo, Manila	<ul style="list-style-type: none"> • Don Bosco Youth Center – Tondo • Philippine Contractor Association • Acuatco Beach Resort • Manuel S. Enverga University Foundation • Ateneo Center for Continuing Education • Philippine Chamber of Commerce and Industry Human Resources Development Foundation • MFI Polytechnic Training Institute • Association of Hotel and Resort Organization • Monark Foundation Institute • IT & Business Process Association of the Philippines • People Management Association of the Philippines • Department of Education Bureau of Alternative Education • Agricultural Training Institute
July 4, 2023	Laguna	<ul style="list-style-type: none"> • TESDA Provincial Office • FAST Logistics

		<ul style="list-style-type: none"> • Toyota Motor Philippines School of Technology
August 3, 2023	Cebu Provincial Capitol Social Hall, Cebu City, Cebu	<ul style="list-style-type: none"> • Center for Industrial Technology and Entrepreneurship Technical Institute • Talisay City Livelihood Training and Assessment Center • Cebu IT-BPM Organization • Isuzu Training Center • KEITECH Institute of Technology • Provincial Government of Cebu – TVET scholarships and programs • International Labor Organization (ILO) Skills for Prosperity Project • Banig Weavers Association • Municipality of Tubungan, Iloilo • Cebu Contractors Association • Cebu Chamber of Commerce and Industry • Balamban Community Training Center
August 4, 2023	Cebu	<ul style="list-style-type: none"> • Golden Resource Academy for Career Enhancement • School of Knowledge for Industrial Labor, Leadership and Service • Banilad Center for Professional Development • Sisters of Mary Technical Educational Institute, Cebu, Inc. (Giristown)
September 20, 2023	Regional Training Center Korea-Philippines Davao	<ul style="list-style-type: none"> • Mindanao TVET Association
September 21, 2023	Davao	<ul style="list-style-type: none"> • Casuga Integrated Farm School • EMAR Human and Environmental College

Source: Authors' compilation

Table A4. Definitions of Enterprise-Based Training from KII respondents

Code	How do you define enterprise-based training?
Female, TESDA official handling the monitoring and building of collaborations with other stakeholders	It is one of the training modalities in TESDA. A kind of modality with engagement with industry in the implementation of the programs.
Male, TESDA official handling training administration at the regional level	Training approach conducted in with the industry. It could be purely industry-based for those with TESDA registration. The specific industry can conduct training for a specific qualification. It could be through industry and institution partnership depending on their agreement.

Code	How do you define enterprise-based training?
Female, TESDA official handling training administration at the regional level	A mode of delivery both in-school and industry. Some forms include Supervised Industry Learning (SIL), Apprenticeship and DTS. The implementation also differs based on location.
Female, TESDA official handling matters related to scholarships	These are the trainings conducted in the workplace area (within the company or within the industry).
Male, TESDA official handling regional operations	These are the programs in partnership with the industry. Any partnership with the industry is considered as EBT. This could also include the trainings conducted in-house.
Male, TESDA official handling regional operations	Training programs implemented by firms and companies, mostly business enterprises. Business enterprises are organized groups from various industries working towards their purpose of being profit-driven. There are enterprises controlled by the government (GOCC) but their purpose is for public service.
Female, ILO senior specialist handling TVET and labor and employment matters	<p>Training that is done in the workplaces. ILO has its official definition, but its forms vary depending on the country context. You have a specific qualification that you want to nurture in a person within a defined structure, timeframe and plan for the level of competency.</p> <p>If there is a union, the training in the enterprise is tabled by the union and management. But if the organization has no union then it is unilaterally decided by the enterprise.</p>
Female, company executive representing the tourism industry	Specifically in the hotel industry, EBT is the transfer of knowledge and skills to trainees from prospective employees within a company. One important consideration is the ability to train the students effectively so they can perform the tasks in the industry.
Male, Non-government organization Head	This is TVET or skills training where industry should have a stake. A certain portion of the actual training happens in the industry where the trainees experience the real world of work.
Male, company executive representing the ITBPM industry	The industry is implementing TVET programs based on the need and demand of the industry.
Female senior researcher of an employers' association that represents employers in tripartite system of DOLE.	Technical vocational training that involves industries and other training providers/institution. This definition is consistent with ILO.

Code	How do you define enterprise-based training?
Male, Director of DOLE BLE	EBT is any training done by the company. In the proposed bills, it is defined as any training/developmental intervention done by the employers for employees to address the skills gap for specific position.
Female Critical Sector and IT representative of the RTSDC Region VIII	Training provisions with huge private company tie-ups.
Male President of business organization based in Cebu	Training developed and administered by companies and training institutions/academe. The theoretical part of the training will be done in the training institution/academe while the practicum will be done with the partner companies. This is done to address industry job mismatch.
Representatives from TESDA Planning Office	Mother term for training programs with in-plant/OJT in company.
Male regional director of TESDA RO VI	<p>Industry-driven, and with industry investment training programs. Their organizational goal is to encourage industries to be engaged and investment in the training programs of TESDA. Industries are the users of TVET, but they need to invest in it. But there is difficulty in mainstreaming this.</p> <p>Even if the training is done by TVI, industry is still involved, particularly in the identification of skill sets they need to improve business and provide employment opportunities for those who availed the training programs of TESDA.</p>
Male regional director of TESDA RO III	Training programs that require active participation and full cooperation of the enterprise. The success of EBT can be further enhanced by adopting an area-based paradigm.
Male representative of the TESDA	Training delivery modes that involve companies or firms. Some types of EBT include apprenticeship, learnership, and DTS.
Female, representative of the TESDA RTSDC Region III	Training conducted together with companies. The types of EBT are DTS, apprenticeship, learnership/OJT, in-company training, and farms schools.
Male president of a foundation and training center that conducts TESDA accredited programs	EBT are training that are conducted together with companies. They usually run training courses between 1-6 months delivered via lectures, laboratories, and hands-on work immersion. Approximately, the trainees spend 75% of their training in the industry.

Code	How do you define enterprise-based training?
Male, president of a logistics company and training center	No idea about EBT and its typologies.
Female, representative of IT and business process association	<p>EBT are the trainings that combine institution-based instruction and company/work-based training at the expense of the firms/companies. Association members are already investing in training, particularly in on-boarding programs. They are interested in learning more about EBT to maximize the opportunities like access TESDA trainings, among others.</p> <p>They participated in the consultation of the EBT Law as an association. They are familiar with the terms, but they do not usually use it.</p>
Female executive director of a foundation/training institution that provides TESDA accredited training programs on heavy equipment use and maintenance	These are training programs that are driven by industry demands. In their case, they require a lot of employees that are trained in heavy equipment use and servicing. As the sole distributor of CAT heavy equipment in the country, their clients are also requesting after sale servicing and maintenance, hence they opted to create a foundation and training institute to address this demand. The types of EBT that they know are: DTS, in-company training, apprenticeship, and supervised training.
Male representative from TESDA RTSDC Region VI	Symbiotic Relationship between employer and trainee in relation to training provision. TESDA support on EBT can be in the form of scholarship grants, technical support of curriculum development and policymaking, labor market assessment, and establishment of qualification standards.
Female president of association of enterprises that produce native products	<p>Type of activity that purposely capacitates trainees with competencies, knowledge, skills, and attitude for a certain industry with the intent of eventual employment.</p> <p>They already have partnership with TESDA and training institutions and state university in the delivery of the TESDA accredited training programs related to production of native products in their area.</p>
Male President of association of individual organic farmers/enterprises.	Training that is focused on what the enterprises do. For organic farming, it is the production process to post-production and marketing. The KI is not aware of other forms of EBT.

Source: Authors' summary based on KII recordings

Note: Paraphrased for brevity

Table A5. Selected Examples of Technical Assistance Provided by TESDA

Type	Description
Expert Advice on specialized topics	<p>Expert advice in specialized topic (e.g., transportation and cargo safety⁴⁸, heavy equipment machine operations and safety in the construction industry)⁴⁹</p> <p>Technical assistance in the development of training standards⁵⁰</p>
Technical assistance in program registration	<p>Technical assistance to applicants in the registration of their programs based on set guidelines and implement competency assessment and skills certification of industry-based professionals⁵¹</p> <p>Assistance to technical vocational schools and institutions that are failing to pass the Unified TVET Program and Accreditation System (UTPRAS)⁵²</p> <p>Assistance to the schools and help them correct their mistakes or put in order their system⁵³</p>
Information dissemination	<p>This includes the orientation on program registration requirements/documents, fundamental and detailed activities and other related TESDA Policies and Guidelines; referral to concerned TESDA Regional/Provincial Office/s; and preparation of appropriate correspondences⁵⁴</p>

Note: This is not an exhaustive listing and is based on the review of several sources (e.g., TESDA press releases, etc.)

⁴⁸ <https://www.tesda.gov.ph/Media/NewsDetail/75> (accessed on November 15, 2023).

⁴⁹ <https://www.tesda.gov.ph/Media/NewsDetail/2448> (accessed on November 15, 2023).

⁵⁰ <https://www.tesda.gov.ph/Media/NewsDetail/1437> (accessed on November 15, 2023).

⁵¹ <https://www.tesda.gov.ph/Media/NewsDetail/20016> (accessed on November 15, 2023).

⁵² <https://www.tesda.gov.ph/Media/NewsDetail/66> (accessed on November 15, 2023).

⁵³ <https://www.tesda.gov.ph/Media/NewsDetail/66> (accessed on November 15, 2023).

⁵⁴

<https://www.tesda.gov.ph/Uploads/File/GOOD%20GOVERNANCE/Citizens%20Charter%202020/FINAL%20CITIZENS%20CHARTER%20COROPOTCTAS.pdf> (accessed on November 15, 2023).

Table A6. Summary of the Various Forms of Enterprise-Based Training

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
Legal Basis	Arts. 73-76 of the Labor Code TESDA Circular 2004-16 as revised by TESDA Circular 2020-120	Articles 57-65 of the Labor Code TESDA Circular 2004-16 as revised by TESDA Circular 2020-120	Dual Training Act or RA 7686 TESDA Circular 2012-31 as revised by TESDA Circular 2019-54 and 2020-133	TESDA Circular 2019-54 and TESDA Circular 2012-31	TESDA Circular 2016-56 and TESDA Circular 2018-03	TESDA Circular 2019-89 as revised by TESDA Circular 2023-18	TESDA Circular 2021-89 and TESDA Circular 2021-73
Year Introduced / Implemented or Legislated	1994 when transferred to TESDA from DOLE (RA 7796)	1994 when transferred to TESDA from DOLE (RA 7796)	Passed into law in 1994	-	2016 (SEARCA 2022)	-	-
Definition	Refers to any practical training on a learnable occupation which may or may not be supplemented by related theoretical instructions for a period not exceeding three months (TESDA Circular 2020-120).	Refers to training within employment with compulsory related theoretical instructions involving a contract between an apprentice and an employer on an approved apprenticeable occupation for a	A learning modality that provides In-school and In-plant training interventions following a mutually-designed competency-based curriculum and outcome-based training plan with prior notice	A TVET program that utilizes a curriculum/ training plan that provides for in-school and in-plant training and specifies DTS as its instructional delivery based on strict standards set	The project accelerates the establishment of farm schools in all municipalities nationwide. This ensures that poor farmers and fisherfolks, their families and relatives gained appropriate	Refers to an approach in learning designed to complement the training gained in the institution to enhance the knowledge and skills of a Learner through the actual application of	Refers to technical vocational skills training programs customized and conducted by a company for its own workforce who can be new hires or existing workers. This also includes preemployment

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
		duration not exceeding six months (TESDA Circular 2020-120).	and advice to the local government unit concerned (TESDA Circular 2019-54).	forth by R.A. No. 7686 and carried out only in qualifications to be determined by the TESDA Board in consultation with Industry Partners, concerned TVIs and the concerned offices of the TESDA Secretariat (TESDA Circular 2019-54). The program meets all the requirements provided for under the DTS Law, except for the prescribed payment of the training allowance to	knowledge, skills, and attitude in increasing the farm productivity thru technology updates and entrepreneurial activities, this improving their economic status in life (TESDA Circular 2016-56).	critical competencies in the workplace as identified in the Training Regulations. It is commonly used as synonymous for OJT and Supervised Industry Training (SIT); henceforth, for TVET, the term OJT and SIT will be replaced with SIL to focus on the Learner's enhancement of critical competency in a workplace setting (TESDA	t training programs conducted to determine the fitness of a job applicant to the available positions in the company. The training can be done within the company or in partnership with a TVET institution. This definition does not cover training programs under the Apprenticeship Program, Learnership Program, Dual Training System and Supervised Industry Learning (TESDA

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
				the student/trainee (TESDA Circular 2012-31).		Circular 2023-18).	Circular 2021-73).
Type of Skill Required for the Trainee	Semi-skilled and in non-apprenticeable occupations (Mapa et al 2016)	Highly technical occupations (Executive Order 1986-111 as cited in Article 60 of the Labor Code of the Philippines) (Mapa et al 2016)	General technical and vocational occupations (Mapa et al 2016)	General technical and vocational occupations	Agri-fisheries related	With Training Regulation programs with NC levels III and IV and PQF Level 5 (Diploma) program	Pre-employment, basic, upgrading, and supervisory trainings
Duration of Training	Maximum of three months	More than three months to six months	Depends on Agreement of the parties and approved by TESDA. However, the maximum daily training hours is eight and shall be observed	Depends on Agreement of the parties and approved by TESDA.	No mention	Depends on the TVET Program where the learners are enrolled under. The equivalent hours can be found in Section VII of TESDA Circular 2023-18 ranging from 80 hours to a	Depends on the enterprise

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
Should training be accompanied by theoretical instruction?	No, but it can have theoretical instruction	Yes. The normal ratio of theoretical instruction and on-the-job training is 1 hour of theoretical instructions for every 20 hours of practical or on-the-job training.	Yes. The 40 percent of the total duration of the DTS program.	Yes	Farmer to farmer and learning by doing methodology	maximum of 320 hours Yes	Depends on the enterprise
Are the trainees considered employees?	No. There is a provision in TESDA Circular 2020-120 Sec. 11 that a learner who has been allowed or suffered to work during the first two (2) months shall be deemed a regular employee if training is terminated by the employer before the end of the stipulated period	No. However, if the employer is found to be guilty of hiring apprentices to prevent regularization to cut on labor costs, the apprentice may be considered as regular employee (Atlanta vs. Sebolino, G.R. No. 187320,	No. There is an express provision in Sec. 8 of RA 7686 that the trainee is not an employee of the business or establishment. TESDA Circular 2019-54 specifically mentions that the union or the workers have been duly informed in	No	No mention	No	The training could be provided to applicants or existing employees

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
	through no fault of the learner.	January 26, 2011)	advance of such an agreement.				
Wages and other benefits	<p>Not less than 75 percent of the minimum wage.</p> <p>Night shift differential of not less than 10 percent of the minimum wage in the region.</p> <p>Entitled to overtime pay, if applicable.</p> <p>Other benefits like accident or disability insurance policy shall depend on the enterprise's capability</p>	<p>Not less than 75 percent of the minimum wage.</p> <p>Night shift differential of not less than 10 percent of the minimum wage in the region.</p> <p>Entitled to overtime pay, if applicable.</p> <p>Provision of accident or disability insurance policy</p>	Not less than 75 percent of the minimum wage	Could be in-kind	No mention	Benefits are agreed upon in the MOA	Depends on the enterprise but some of the trainees are existing employees who are already enjoying at least the minimum wage and other benefits provided under the Labor Code
Minimum age of Trainee	15	15	15	15	No mention	15	The training could be provided to applicants or existing employees.

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
							The minimum employable age according to the labor code is 15.
Primary Government Regulating Authority	DOLE for labor standards and TESDA for training component	DOLE for labor standards and TESDA for training component	TESDA	TESDA	TESDA, Department of Agriculture– Agricultural Training Institute (DA-ATI), Department of Agrarian Reform (DAR)	DOLE for labor standards and TESDA for training component	TESDA for monitoring purposes only
Need for an agreement approved by TESDA?	Yes	Yes	Yes	Yes	Yes	Yes	No but reporting is encouraged
Is the company obliged to hire the trainee?	No. Only when the enterprise desires so.	No but the enterprise has the option to hire the apprentices based on their job performance even prior to the completion of the	No but companies may hire Dual Training System graduates	No	No mention	No	The training could be provided to applicants or existing employees.

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
		apprenticeship period.					
What are the Incentives received by enterprise?	Technical assistance on the delivery of the training.	Deduction from taxable income of one-half of the value of labor training expenses but not more than 10 percent of the direct labor expense. Technical assistance on the delivery of the training.	Tax incentive of 50 percent of expenses paid to the Accredited Dual Training System Educational Institution but not exceeding 25 million a year or 5 percent of direct labor expense.	Not provided	No mention	Certificate of appreciation and recognition from the TVET Institution	Certificates of appreciation and recognition and plaque of recognition based on their level of commitment for submitting reports to TESDA. Technical assistance and capability building for trainers and training coordinators. Slots for Tulong Trabaho Scholarship Program Advertisement of best practices

Enterprise-Based Training	Learnership	Apprenticeship	Dual Training System	Dualized Training Program	PAFSE	SIL	In-Company
							online and in the wall of success

Sources: (Mapa et al 2016; TESDA Circular 2023-18; TESDA Circular 2021-89; TESDA Circular 2021-73; TESDA Circular 2020-120; TESDA Circular 2020-133; TESDA Circular 2019-54; TESDA Circular 2018-03; TESDA Circular 2016-56 as cited in SEARCA 2022; TESDA Circular 2012-31; RA 10869)

Table A7. EBT-related indicators and share of industry to RGDP by region, 2022

Region	Share (%) within the region	Share (%) to national	Number	Share (%) of industry to RGDP
Region X - Northern Mindanao	16.7	11.6	11,564	23.9
Region VI - Western Visayas	13.4	7.1	7,012	20.9
Region XIII - CARAGA	13.2	8.2	8,190	36.8
Region VIII - Eastern Visayas	11.1	7.9	7,888	39.3
Region IVA - CALABARZON	9	6.5	6,462	50.3
Region III - Central Luzon	9	10.2	10,124	40.6
Region IVB - MIMAROPA	8.8	5.2	5,123	34.5
Region V - Bicol	8.8	6.7	6,651	34.1
Region II - Cagayan Valley	8.3	5.8	5,733	27.0
Region VII - Central Visayas	8	7.4	7,404	27.0
Region XI - Davao	6.7	5.3	5,292	23.6
Region I - Ilocos	6.4	4.8	4,785	27.9
Region XII - SOCCSKSARGEN	5.6	4.6	4,544	24.0
Region IX - Zamboanga Peninsula	4.9	3.8	3,760	28.1
Cordillera Administrative Region (CAR)	4.6	2.4	2,356	26.8
National Capital Region (NCR)	2	2.3	2,309	20.3
Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)	1	0.2	199	23.9
Average	13.4	7.1	7,012	29.9

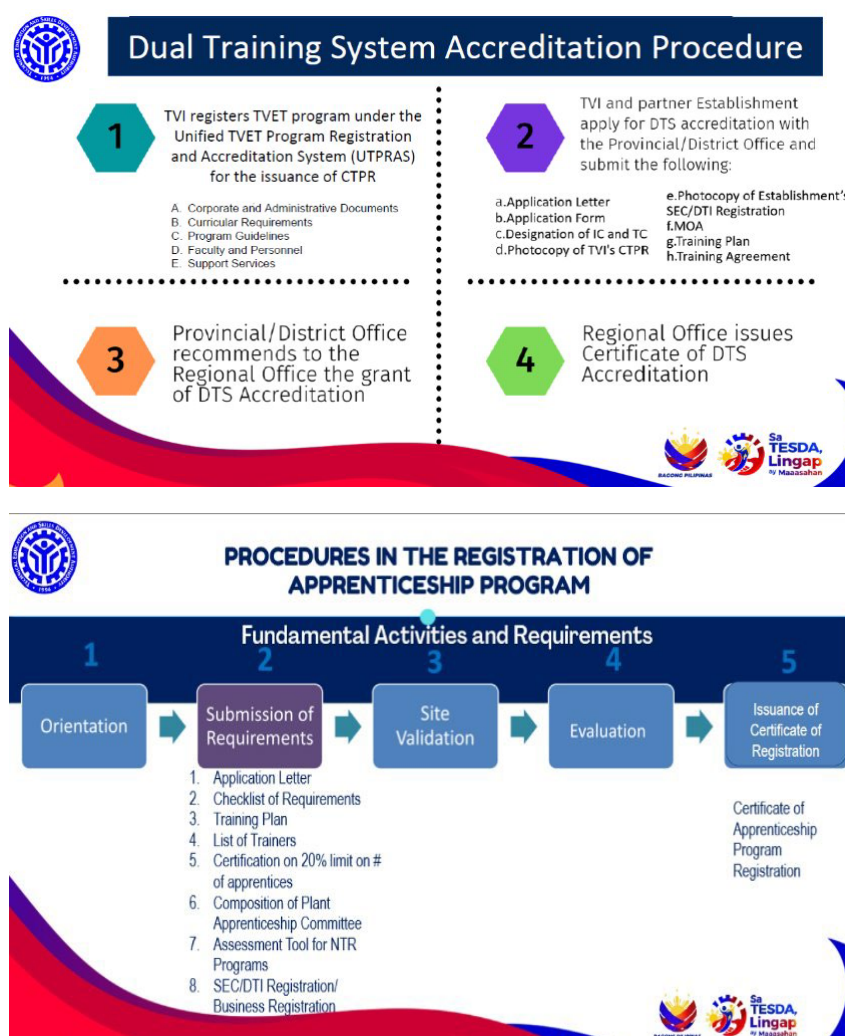
Sources: Authors' calculations using basic data from TESDA (EBT-related indicators) and PSA National Accounts for the industry share

Table A8. TESDA staff distribution by type of job across regions, as of August 2023

Region	Total Plantilla	Job Order (Trainer, Admin, Technical)	Ratio of job order to total staff
Region 7	39	72	64.9
Region 4A	52	70	57.4
NCR	60	73	54.9
Region 3	64	77	54.6
Region 9	35	40	53.3
Region 1	36	36	50
Region 11	52	51	49.5
Region 10	46	41	47.1
Region 6	58	49	45.8
Region 12	39	24	38.1
CAR	51	30	37
Region 8	51	29	36.3
CARAGA	42	23	35.4
Region 5	52	27	34.2
Region 2	48	21	30.4
Region 4B	42	10	19.2
Total	767	673	46.7

Source: Authors' calculations using data from TESDA

Figure A1. Registration processes of DTS (top) and Apprenticeship Programs



Source: TESDA presentation at the Incentives for Enterprise based Training (EBT) EDCOM 2 Standing Committee on TVET and Lifelong Learning Meeting 21 February 2024, UP BGC, Taguig City

Table A9. List of requirements needed to comply by firms/enterprises (first column) and TVIs (second column) to avail of tax incentives

Firms/enterprises	TVIs
A letter of application duly signed by the appropriate authority of the concerned establishment;	<p>Application for exemption shall be filed with the revenue office. Department of Finance, Manila, duly signed by the Head of the accredited dual training educational institution or his authorized representative, together with the following documents:</p> <ul style="list-style-type: none"> • Bill of lading, airway bill, parcel post/notice and other shipping documents;

	<ul style="list-style-type: none"> • Commercial invoice and packing list; and • Other relevant documents concerning the shipment
Memorandum of Agreement duly executed and signed by the accredited DTS establishment, the accredited DTS institution/training center, and the trainee;	Certification from the appropriate authority - TESDA - that the importer is and accredited DTS educational institution, together with a recommendation that the importation/s is/are necessary in connection with DTS.
Accreditation of the DTS educational institution by the appropriate authority;	Affidavit/Statement under oath executed by the Applicant stating, among others, that the imported articles are essential and will be used actually, directly, and exclusively in connection with DTS.
Affidavit or statement under oath by the participating educational institution as to the actual amount received for the establishment's trainee/s on an annual basis; and the corresponding official receipts acknowledging the contributions/donations made by the participating establishment;	Copy of Charter, or Certificate of Registration of the educational institution with the SEC or other evidence of the character of the institution;
Affidavit or statement under oath by the participating establishment as to the actual amount donated/contributed to the accredited DTS institution for the operation of the DTS, on an annual basis, and the corresponding official receipts issued by the participating educational institution;	Certification from the Department of Trade and Industry or appropriate government agency that the articles to be imported are not available locally in sufficient quantity and of comparable quality at reasonable prices; and
Financial statements of the participating establishment for the year when the tax exemption/incentive is being claimed;	Affidavit or statement under oath that the imported articles which shall be marked "TAX AND DUTY FREE UNDER RA NO. 7686" in a conspicuous place as the nature of the importation will permit, will not be sold, transferred or otherwise disposed
SEC/DTI Registration Certificate/s of the participating establishment; and	
Articles of Incorporation and By-laws, or other documents showing the nature of business of the concerned establishment.	

Sources: BIR - RR 10-96, RMC 15-2020

Figure A2. Tax savings calculator of the Department of Finance (DOF)

tax CALCULATOR

Magkano ang matitipid ko sa bagong tax reform?

Itas lang ba sa mga katutungan nanghihi sa tax reform.

Ang Tax Reform for Acceleration and Inclusion (TRAIN) ay nagbabayad sa kailangan ng current tax system para gawin hanggang mas simpleng, patas at masaya.

Itas sa mga proposal ng TRAIN ay karamihan ang personal income tax.

Ang tax calculator sa ita ay para buktin hanggang kung magkano ang matitipid ng karamihan ng mga bayad sa tax sa magpapalit ng kailang hanggang magpapalit ng TRAIN.

Gusto na hanggang madama hanggang kung magkano ang kailang kailang na hanggang babayaran? I-disk hanggang kailang sa ita.

START

Results

Monthly Salary
P 25,000.00

Number of Dependents
Single with 0 dependents

NGAYON P 3,501.04
ang kailang sa 'yo.

SA TAX REFORM P 300.83*
na lang ang babayaran mo!
(Ye-heeees!)

*Bawas na rito ang kailang para sa GSIS, SSS, Pag-IBIG, at PhilHealth.

Kailang sa GSIS: P 2,250.00
Kailang sa Pag-IBIG: P 100.00
Kailang sa PhilHealth: P 312.50

MAGIGING P 24,699.17
na ang maluuwi mo!

Monthly Income:
50000

Compute

Old Tax System (2017)		New Tax System (2018)	
Deductions:		Deductions:	
SSS	581.30	SSS	581.30
Pag-Ibig	100.00	Pag-Ibig	100.00
PhilHealth	437.50	PhilHealth	550.00
Monthly Tax Due:	11,391.99	Monthly Tax Due:	6,358.84
Monthly Take-Home Pay:	37,489.21	Monthly Take-Home Pay:	42,409.88
Annual Tax Due:	136,703.88	Monthly Savings in TRAIN Law:	4,920.65
Annual Take-Home Pay:	449,870.52	Annual Tax Due:	76,306.08
		Annual Take-Home Pay:	508,918.32
		Annual Savings in TRAIN Law:	59,047.80

Sources: Government PH. <https://governmentph.com/calculate-tax-now-using-dof-tax-calculator/>; Rappler. 2018. Tax calculator: Compute your new income tax. <https://www.rappler.com/newsbreak/iq/193496-tax-calculator-compute-new-income-tax-train-law/>