

HACKATHON

Background information on track 2 «PPP in VET»

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I. PUBLIC PRIVATE PARTNERSHIPS IN VET, by Alexis Hoyaux

Context

Aligning VET systems to the needs of the labour market is a major challenge: globally and nationally. Upscaling demand-driven VET programs on the basis of quality and equity is key. To achieve this national governments are seeking close alliances with the private sector to collaborate on macro and micro level. This should lead to existing public vocational training centres (VTC) playing a crucial role by offering labour market-oriented training programs and helping VET students to develop skills that are specific to a trade or job role. Such programs improve the employment prospects of the learners and increase the reputation and effectiveness of VET centres. Thus allowing them to compete with the private VTC.

However, national governments are witnessing a decline in national and regional public funding for vocational education. For instance, there is at macro-level a lack of funds to reform and improve VET policies, whilst at micro level, VTC face budgetary constraints and lack autonomy to improve the management and quality provision the VET programs they offer.

Yet, there are possible solutions to these challenges:

At macro level, multiple-source and alternative financing through e.g. national or sector training levies (besides other incentives) can be mobilized for the sound and sustainable functioning of VET systems. At the micro level looking at public VTCs, income generating activities through services and products are needed to diversify funding options but also tuition fees paid by students. The collaboration with the local private sector is needed both on macro and micro level.

At the first **regional workshop PEFOP-IFEF-LuxDev on PPP in VET in Dakar** (March 2018) -supported by the VET Toolbox, reaching 18 West-African countries and 130 participants, the following conclusion was drawn:

Forming PPPs has significant added value for all parties involved.



“... inclusive governance with participation of all actors like Line Ministries, NGO’s, Sector Ministries, employers organisations, trade unions, formal and informal enterprises, local governments ; employability and competences to be developed including soft skills; real dedication to job insertion through

results-based management through Key Performance Indicators KPI’s including the essential satisfaction of entreprises; integration of initial and continuous VT including technical, pedagogical and social dimensions leading to job insertion ; improved daily management of VTC leading to job insertion and stronger competitive enterprises ; a wider variety of multiple financial sources at macro and micro level.”

Changing legislation or the political course is not enough. A paradigm shift is needed, accompanied by a culture of change management leading to a conviction that both the public and private sector must invest on both quality improvement and financial resources. Enterprise involvement needs to be transversal and maintained at all levels: organisational and legal, training engineering in delivery training, evaluation and improved competence-based training of students and teachers.

The existing experiences of partnerships, public-private, public-public, public-civil society and bi-partite and tripartite are numerous and promising. In the near future, there is no doubt that they will be more intensified and diversified.

Evidence shows that partnerships between business and government create sustainable economic development leading to a win-wins based on more mutual trust, profit and less risk for the private sector. National governments may offer grants or loans to the private sector.

To do so, there is a need of understanding the main differences between the public and private sector, in order to strike partnerships, whether it is in developed or developing countries.

There is a need for additional private capital and private sector know-how for the existing public VTC if jobs are to be created and training opportunities to be provided. Where the state's scope for action is limited, businesses can bridge gaps and make a targeted contribution on inadequate existing public VET programs.

Although apparently first of all focused on economic collaboration and partnership, at the same time, basic principles like liberty of individuals, democracy and the rule of law is ensured between all involved parties. Good governance, developing and protecting the private sector, supporting microfinance systems are therefore other key elements if PPP are to be established for a "bonne entente". This public and private collaboration is not easy to be established. Partnership for success aiming at sustainable development requires entrepreneurial commitment. Companies create jobs, secure incomes, transfer technical knowledge and introduce forward-looking technologies.

All the same, companies face specific challenges in developing countries: promising business prospects might be upset by a lack of legal certainty, scarce training facilities, ineffective administrative structures and poor infrastructures. This leads to the need of understanding and knowing the main differences between both worlds, being quite opposite. In the next box, main differences/drivers are highlighted between the rationale/key elements of the private sector compared to the public sector on VET.

Interest private business	Interest public sector
Main focus on turn-over and profit: commercial	Education is a public service (for all): non – profit
Time span: short (to medium) term	Time span: medium to long term
Training on the basis of company job (profiles)	Broad occupational profiles as basis
Training is costing money: return on investment	Education will always cost money: public funds
Fast results: tomorrow rather than next week	Good results take time
Desire for high flexibility: no red tape (bureaucratic procedures)	Regulations and procedures to guarantee fair access, and opportunities for all (education is a right)
Benchmarking against other businesses	Benchmarking against other countries, international bodies (e.g. EU)
Very selective in admission and enrolment	Rules and regulations guarantee quality and continuity

To overcome these differences in private and public interests, establishing PPP between the two parties can be an excellent tool to learn to understand each other while working together. A private business could be a private international/national vocational training centre.

The coming together must be able to tackle and achieve a common goal and mission. It must look at bringing together different set of values and norms. It must overcome different cultures, different ways of working and work ethos.

KEY CONSIDERATIONS FOR FINANCIAL SUSTAINABILITY IN VET THROUGH PPP ON THE LEVEL OF VTC

A PPP is an arrangement between the private and the public sector, which aims to deliver public services in a more efficient/effective manner and to generate public sector asset by making use of the private sector's resources and expertise.

It is a way of delivering and funding public services with wider development impact. The investment, risks, responsibilities and rewards are shared between the public and the private sector.

PPP is not an objective unto itself, but a possible additional tool to be used for the objectives of a results- based project on job insertion or VET strengthening.

On-going exclusive public operating VTC and exclusive private operating VTC can be part of a local VET providers market (without any PPP connection) and part of any VET program. In a PPP, the investment, risks, responsibilities and rewards are shared between the public sector and the private sector.

A PPP is not:

- a contract between public and private sector without any investment of the private sector based on an exclusive budget from the public sector (or donor)
- a mechanism of information exchange
- a CSP (Corporate Social Responsibility) or philanthropic rationale of the private sector in the execution of a public service
- the developing of the private sector through public funds

THE DEVELOPMENT PARTNERS OR DONORS ROLE IN PPP

The PPP approach, which is based on the assumption that certain public goods can be delivered by the private sector, is not new. This said, adding a third party like a donor, based on the Sustainable Development Goal 17 is a new fact. Foreseen the difficulties in understanding and overcoming the main obstacles between the public sector and national/international private sector, a PPP can become a DPPP, meaning Development of Public Private Partnerships.

Cooperation agencies and development partners like LuxDev, AFD, etc consider it an urgent matter to develop the capacity and to enable the use of private sector's capital and management capabilities to eventually enhance the delivery of public services in the partner countries. This is always on request for support of the local national or regional partner towards the donor. Equity reasons are always defended through the intervention of donors, applying the principle of "leaving no one behind" guaranteeing equity. DPPP can be used in the context of skills development through the strengthened vocational training centres.

Typically, the private sector brings in equipment and know-how. The public sector contributes buildings and staff time. While the development partners provide funding for the development objectives and linkages to the local government. Moreover, the development partners act as a neutral body bringing the different parties together. Do mind that the donor financing the part of the private sector is not establishing a PPP.

As an example, LuxDev has both educational PPP (Senegal, Kosovo) and operational PPP (Cape Verde, Senegal), with a legal division on the end-responsibility being, subsequently, the State or the private sector. In all cases, the private sector tops up budgets and support in-kind to the existing public and donor support.

The common goal in VET projects is to create a highly skilled workforce that matches market demand, because this improves opportunities for businesses on one hand, and reduces unemployment and poverty on the other hand. Seen the low levels of education of both trainers and trainees as one of the shortcomings of traditional VET, it is a duty to overcome these problems by giving a new weight by establishing competent and delivering Vocational Training Centres in response to the industry's demands and needs.

It is of crucial importance to strike a good balance between the rights and obligations, including budgetary support from all parties (public, private sector, donor) as from the beginning of the PPP. Wrong arrangements like a financial sustainability, only

being guaranteed by the donor can lead to non-sustainable interventions. Frequently financial planning for the period after the intended project completion often remains an afterthought. Shortly before the project formally comes to an end and is handed over to a local authority, the question of how to fund the training sessions and other operational expenses of the VTC comes up. Sometimes, it is implicitly assumed that the host government will pay for the VTC, but this is often not the case due to budgetary or other pressures.

Therefore the need that public and private contributions should complement each other for achieving common objectives. A public contribution will only be provided if the private partner would not carry out the measure without the public partner. Some donors like GIZ demands the companies to make a considerable financial contribution and/or provide staff to the project, leading to a private sector contribution of at least 50% of overall costs. The interventions therefore must continue beyond the duration of the project. The enterprise must have a clear commercial discernible interest in the project, exceeding the project life circle.

II. INDUSTRY 4.0, by Ms Virpi Stucki

1. Future of Skills – Global Perspective

The Fourth Industrial Revolution (sometimes called Industry 4.0) forces a fundamental rethink of the content and delivery of VET skills. Quality skills provision is a key driver of economic growth, as it trains workers for technical and skilled jobs in growing fields such as healthcare, construction and advanced manufacturing.

1.1. Challenges

On a global scale, the transition to Industry 4.0 entails several significant challenges that require systemic adaptation. Most notably, the following issues will require feasible new solutions:

- The **high risk of reduced employment opportunities for humans due to automatization and digitization**, with classical middle-class jobs at risk of being replaced by industrial robots or software;
- **New ways of human-machine-interaction**, as humans will have to follow decisions of machines they cannot fully comprehend anymore, which could likely lead to frustration;

- **Increased resource demand**, as every digital device is based on hardware that requires raw materials for its original production, with lithium and rare earths being particularly important;
- **Data security issues** are greatly increased by integrating new systems and more access to those systems. Additionally, proprietary production knowledge becomes an IT security problem;
- **Overstraining of governments** with the creation of suitable policy frameworks, as the pace of change exceeds the speed at which policies and regulations can be formulated to govern digital and technology developments;
- **Potentially vast first-mover advantages** for the countries and companies who are faster to adapt to Industry 4.0, leading to large economic influence and the power to lever out social and environmental standards as well as deepening global inequalities^{1,2,3}.

1.2. Opportunities

Industry 4.0 has the potential to improve productivity and competitiveness, increase energy and resource efficiency and effectiveness and hence to protect the environment. It could further enable the transition to a circular economy in which end of life products are reused, remanufactured and recycled. Taken together, these developments would lead to the emergence of more sustainable production and consumption patterns, and could thus provide opportunities for developed and developing countries to achieve economic growth and sustainable development in line with the 2030 Agenda for Sustainable Development⁴.

For companies across the globe, Industry 4.0 can be linked to opportunities for faster, more transparent, and more efficient decision-making and operations as well as new business models and cheaper manufacturing:

1. <https://www.forbes.com/sites/bernardmarr/2016/06/20/what-everyone-must-know-about-industry-4-0>
 2. World Economic Forum (2017): Realizing Human Potential in the Fourth Industrial Revolution. An Agenda for Leaders to Shape the Future of Education, Gender and Work. URL: http://www3.weforum.org/docs/WEF_EGW_Whitepaper.pdf
 3. UNIDO (2017): Accelerating Clean Energy Through Industry 4.0. Manufacturing the Next Revolution.
 4. UNIDO (2016): Industry 4.0. Opportunities and Challenges of the New Industrial Revolution for Developing Countries and Economies in Transition. URL: https://www.unido.org/fileadmin/user_media_upgrade/Resources/Publications/Unido_industry-4_NEW.pdf

- **Interoperability**, as machines, devices, sensors and people will connect and communicate with one another. Companies will have the opportunity to apply innovative solutions, including through the “Internet of Things” (IoT), cloud computing, miniaturization, and 3D printing that will enable more interoperability and flexible industrial processes and autonomous and intelligent manufacturing;
- **Information transparency**, as increased interoperability will allow for a new level of information transparency, as systems will create a virtual copy of the physical world through sensor data in order to contextualize information;
- **Technical assistance**, meaning the ability of cyber-physical systems (CPS) to support humans in making decisions and solving problems and the ability to assist humans with tasks that are too difficult or unsafe for humans, both caused by the cyber-physical system’s ability make simple decisions on their own and become as autonomous as possible;
- **Decentralized decision-making**, since physical components of industrial production are being transformed by smart, digital networking into cyber-physical systems, allowing for the management of production processes in real time across great distances and customized products;
- **Big data**, allowing companies to develop completely new business models based on the huge amount of data generated along the entire life cycle, starting from production, usage phase (including customer feedback), up to the end of life phase (e.g. recycling);
- **Customized products**, since the higher degree of flexibility allows companies to cost-effectively produce customized products, with the cost of production being not significantly higher than mass production in the current manufacturing scenario.

2. Future of Skills - Country Perspective

2.1. Challenges

2.1.1. Low Income Country

The challenges of Industry 4.0 for low income countries are related to employment and migration as well as investment and a possibly widening technology gap:

5. *ibid*

6. <https://www.forbes.com/sites/bernardmarr/2016/06/20/what-everyone-must-know-about-industry-4-0>

- **Low-skilled jobs will become redundant, possibly impacting inequality and causing migratory flows.** Increasing automation of production processes and the displacement of workers by machines is likely to eliminate routine types of jobs, decrease demand for cheap labour in low-end manufacturing, increase inequality, and cause migration. Studies show a strikingly negative correlation between a country's income level and the share of jobs that are feasible to automate. A global net decrease in jobs could be especially challenging for developing countries where, unlike developed economies, millions of young people are entering the job market every year⁷.

- **Faster implementation of Industry 4.0 in developed countries could reverse foreign direct investment (FDI) flows and increase the technological gap.** Apart from dealing with the implementation of Industry 4.0, developing countries must prepare to face the consequences of its implementation in advanced economies. Some of these consequences relate to reversed flows of FDI and a further manifestation of an already widening technology gap, which also has ramifications on global inequalities⁸.

2.1.2. Middle Income Country

The challenges of Industry 4.0 for middle income countries are similar to those for low income countries – losing many low-skilled jobs will cause higher unemployment and, in certain cases, fuel civil unrest and migratory flows. In addition, the expanding scope of automation might pose additional challenges for emerging industrial economies:

- **Industry 4.0 could accelerate premature deindustrialization, leading to significant job losses.** A defining feature of the development path of today's industrialized countries was a sizable manufacturing sector that offered well-paid jobs for a large share of the population. As emerging economies are undergoing that same process of structural transformation, however, the ability of the manufacturing sector to absorb workers is much more limited. Whereas manufacturing typically employed more than a third of the population at its peak in developed countries, this share peaked well below half that in many emerging industrial economies, which has become known as "premature deindustrialization": countries substituting away from manufacturing before fully industrializing⁹.

7. UNIDO (2016): Industry 4.0. Opportunities and Challenges of the New Industrial Revolution for Developing Countries and Economies in Transition. URL: https://www.unido.org/fileadmin/user_media_upgrade/Resources/Publications/Unido_industry-4_NEW.pdf

8. *ibid.*

9. UNIDO (2017): Accelerating Clean Energy Through Industry 4.0. Manufacturing the Next Revolution.

- **Low income countries will have low cost production capabilities due to easier transfer of knowledge and increased abilities of machines.** As a result, middle income countries face a high risk of companies moving to cheaper sites of production that were previously not considered due to a lack of a skilled workforce and/or the need for expensive machinery that could not be maintained¹⁰.

2.1.3. High Income Country

The challenges of Industry 4.0 for high income countries are revolving around readiness, big data, and a significant workforce transformation:

- **Companies will need to demonstrate awareness and readiness to cope with uncertainty.** Uncertainty is a key factor - there is a need for experimentation and learning - and even unlearning. Companies must challenge their own business assumptions¹¹.

- **The workforce transformation towards digital labour will be gradual but profound.** Digital labour, such as the use of smart drones, robots and intelligent assistance will enter the workforce. New industry sectors will emerge, such as digital medicine, precision agriculture and new jobs, medical robot designers, and grid modernization managers. There will also be a transformation in existing jobs. For example, virtual reality and augmented reality will assist workers to become more productive and make their work environment safer. At the same time, a reform of the education system and a skills upgrade in the workplace will become necessary. Policy incentives are needed to encourage businesses to do this reskilling, and we must learn to collaborate and coexist with intelligent machines¹².

10. <https://www.weforum.org/agenda/2017/05/how-can-asean-nations-unlock-the-benefits-of-the-fourth-industrial-revolution>

11. UNIDO (2016): Industry 4.0. Opportunities and Challenges of the New Industrial Revolution for Developing Countries and Economies in Transition. URL: https://www.unido.org/fileadmin/user_media_upgrade/Resources/Publications/Unido_industry-4_NEW.pdf

12. UNIDO (2016): Industry 4.0. Opportunities and Challenges of the New Industrial Revolution for Developing Countries and Economies in Transition. URL: https://www.unido.org/fileadmin/user_media_upgrade/Resources/Publications/Unido_industry-4_NEW.pdf