



اسم المقال: التعليم والتدريب التقني والمهني من أجل إنعاش وإعادة إعمار سورية "دراسة حالة من المنظور السوري"

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## **Technical and Vocational Education and Training for the Recovery and Rebuild of Syria "A Case Study of the Syrian Perspective"**

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### **Abstract**

**Rebuilding the social and human capital of Syria is considered even more difficult than the bricks and mortar in the post crisis Syria (Salmon et al, 2018). This study aims to shed the light on the importance of the Technical and Vocational Education and Training (TVET) as a weapon of mass construction for post conflict recovery of Syria. It investigates the necessity to activate and modernize TVET system in Syria in order to address the devastating implications of the 9 years crisis in the country, in addition to accommodating the needs of skilled manpower for the rebuild era.**

**The study proposes TVET as an effective instrument to adapt the dramatic change in the local labor market and social structure. The proposal is built upon lessons learnt from other nations of similar situations, which multi international specialized organizations endorse. It is being tested through a quantitative study using survey exploration on MBA students of the Syrian Virtual University representing the Syrian society and also as being participants of professional non- academic educational programme. The sample of the study consists of 80 respondents**

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selected randomly.

The key finding of the study is that TVET can be utilized as an effective developmental instrument to sustain and promote peace in Syria. It emphasizes the urgent need of designing a national TVET strategy, with further reviewing of its governing government structure and seeking of innovative financing too.

**KEYWORDS:** Technical and Vocational Education and Training, sustainable development, post conflict recovery, labor market, rebuild era.

## التعليم والتدريب التقني والمهني من أجل إنعاش وإعادة إعمار سورية "دراسة حالة من المنظور السوري"

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### الملخص

تعد إعادة بناء رأس المال الاجتماعي والبشري في سورية في مرحلة ما بعد الأزمة أكثر صعوبة من إعادة بناء الطوب والمباني الاسمنتية (Salmon et al, 2018). وتهدف هذه الدراسة إلى إلقاء الضوء على أهمية التعليم والتدريب التقني والمهني (TVET) كسلاح من أسلحة البناء الجماعي للتعافي بعد الأزمة في سورية. وتبحث في ضرورة تفعيل وتحديث نظام التعليم والتدريب التقني والمهني في سورية من أجل معالجة الآثار المدمرة لأزمة السنوات التسع في البلاد، إضافة إلى تلبية احتياجات القوى العاملة الماهرة لمرحلة إعادة البناء. وتقتصر الدراسة على التعليم والتدريب التقني والمهني أداة فعالة للتكيف مع التغيير الجذري في سوق العمل المحلي، وكذلك البنية الاجتماعية. ويبنى هذا الاقتراح على الدروس المستفادة من الدول الأخرى ذات التجارب المماثلة التي تؤيدها المنظمات

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الدولية المتخصصة المتعددة. وأختبر الاقتراح من خلال دراسة كمية عن طريق استخدام الاستكشاف الاستقصائي على طلاب الماجستير المهني في إدارة الأعمال MBA في الجامعة الافتراضية السورية الذين يمثلون المجتمع السوري، كما أنهم يعدون مشاركين في برنامج تعليم مهني غير أكاديمي، وتتألف عينة الدراسة من 80 مفردة اختيرت بشكل عشوائي.

وتتمثل النتيجة الرئيسية للدراسة في أنه يمكن استخدام التعليم والتدريب التقني والمهني أداة تنمية فعالة للحفاظ على السلام وتعزيزه في سورية. وتؤكد على الحاجة الملحة لتصميم استراتيجية وطنية للتعليم والتدريب التقني والمهني، مع مزيد من المراجعة للهيكل الحكومي الحاكم والبحث عن تمويل مبتكر أيضاً.

الكلمات المفتاحية: التعليم والتدريب التقني والمهني - التطوير المستدام - الاستعادة بعد الحرب - سوق العمل - مرحلة إعادة الإعمار.

## Introduction

Technical and Vocational Education and Training (TVET) meets the aim of developing both individuals and societies, as the United Nations Educational, Scientific and Cultural Organization (UNESCO) reconfirms in its 2015 Recommendation. It is considered as an integral part for the development of the low, middle and high-level skills required for sustainable human development. (Marope et al, 2015). Equally important it supports lifelong learning (Sauffie, 2015) for both young people and adults (Sellin, 2002). It is also important for the development of human resources so to support national and individual economic growth. Additionally, continuous workplace training and lifelong learning enable workers and enterprises to adjust to an increasingly rapid pace of change (ILO, 2011).

The benefits of TVET can be grouped into two main categories: **Economic** benefits and **Social** benefits, and both can be analyzed on three different levels: The *micro level* (benefits for individuals), the *meso level* (benefits for enterprises/groups); and the *macro level* (benefits for society as a whole), with some benefits that may occur at the intersection of these different levels (CEDEFOP, 2011).

TVET proves effective as a means of securing economic opportunities for unemployed internally displaced youth, and ex-combatants in post-conflict affected areas (Shakespeare- 2012). Skills development of rural women through TVET leads for poverty reduction (Hartl, 2009). Disabled persons benefit from vocational training, and countries and their communities benefit from their contributions (ILO-2004). TVET should be accessible to all disadvantaged and vulnerable groups, including marginalized rural and remote populations with disabilities, indigenous people, nomadic populations, ethnic minority groups, socially-excluded groups, migrants, refugees, stateless people and populations affected by conflict or disaster, as well as to unemployed people and vulnerable workers as it contributes to social cohesion (UNESCO- 2015).

Malamud Pop-Eleches (2010) suggests considering TVET during the transition to a market economy. Billett (2006) recommends building the community through social partnerships around vocational education and training. Meli (2015) investigated the efficacy of vocational skills training provided to orphans. Whereas with effective vocational guidance and counseling programmes, Nweze (2015) observed opportunities for

harnessing potentials of street beggars for earning livelihoods and contribute to economic growth.

Back to the Syrian crisis, where the developmental challenges have been doubled with sever destruction in the national infrastructures together with critical change in the Syrian workforce and social structure with 6.5 million internally displaced, 2.8 million persons with disabilities, and 10 million people in need of livelihoods or emergency employment, sustainable income- generating activities. The unemployment rate is 57% (UNDP, 2016). On the other hand, UNICEF (2018) estimates 1.75 million school aged children in Syria drop out of school with the start of the crisis. There is an urgent need to adopt innovative comprehensive national strategy- TVET fits in quite well- seeking quick healthy recovery and mass re-construction.

## **1. Research Methodology.**

### **1.1. Previous Studies**

Countless are the studies that focused on TVET, its role in social and economical development and its advantages at the personal level too. This study reviewed specially those related to the post- conflict and crisis recovery.

#### **- (Ogbaekirigwe, et al, 2017), "Relevance of Entrepreneurship in TVET"**

The study refers to the dynamic and complex nature of societies all over the world, with the evident failure of various levels of government and the private sector to completely solve the nagging problems of man, especially the down trodden and less privileged, as a result of insufficient fund caused by inadequate or poor resource management and corruption. The study recommends TVET as an opportunity for citizens to create their own wealth and attempt solving their problems. It highlights the importance of entrepreneurship programme in TVET as a means of equipping our youths to be self-reliant, capable of solving their problems and contribute to economic growth and development of their countries.

#### **- (Shaista et al, 2015), "Designing a Model of Vocational Training Programmes for Disables through ODL"**

This study was conducted to design a model of vocational training programmes for people with disability. For this purpose, desk review was carried out on the vocational training models/programmes of U.K., Vietnam, Japan and Thailand while considering at the same time the local conditions/requirements of such model. The model recommended the

vocational training of three levels of disability: mild, moderate and severe. It consists of details of structure, objectives, professional support involved, vocational training plan and syllabus/activities, evaluation and on job training etc. International practices regarding TVET mixed with the national existing situations were critically analyzed during desk review to finally form a plan of TVET for people with disability.

- **(Meli, 2015), "Provision of Vocational Skills Education to Orphans: Lessons from Orphanage Centres in Dares Salaam City, Tanzania"**

The paper utilizes data from a previous study which investigated the efficacy of vocational skills training provided to orphans from three orphanages in Temeke District, Dares Salaam. The data collected involved the vocational skills training provided to orphans, type of vocational skills training and the effectiveness of such vocational skills training. Despite the fact that many orphans in the selected orphanages had attended the vocational skills training, it was revealed that the knowledge acquired was of no immediate use. Most of the orphans could not use the acquired skills to assess jobs or to self-employ themselves. The major bottlenecks that tend to affect the quality of vocational skills offered are limited capacities of the orphanage centres in terms of qualified personnel, inadequate equipment and funds.

- **(Nweze, 2015), "Effective Vocational Guidance and Counselling Programmes: Creating Opportunities for Harnessing Potentials of Street Beggars"**

The paper aims at discussing possible ways of harnessing potentials of beggars through vocational guidance and counselling programmes in Nigeria. It intends to provide innovative strategies for giving the targeted population opportunities to develop skills, confidence, awareness and understanding to become workforce of tomorrow instead of begging on the streets. The paper suggests TVET to create self-reliant out of beggars, build their skills for earning livelihoods and even contributing to economic growth. Such TVET innovative strategies should be employed for building skills of the beggars who have lost hopes of survivals; and at the same time providing the governments and the policy makers with the best approaches to harnessing potentials of the hopeless unemployed handicapped people by making them relevant in the society.

- **(Olumide, 2015), "World-Wide Comparism of Technical and Vocational Education: Lessons for the Nigerian Technical and Vocational Sector"**

The paper compared technical/vocational education in Germany, Australia, Finland, Hong Kong, Hungary, India, Japan, South Korea, Mexico, and Nigeria. It found that technical/vocational education was given proper attention in the countries considered except Nigeria, where it was handled with laissez-faire attitude. Set-Up of Technical/Vocational Schooling, Curriculum, Mode of Training Examination, Financing and Motivating Factor were the basis for comparism. Amongst the lessons for Nigeria, the study concluded, is to have its technical/ vocational education sector to be dual and that students should be appropriately motivated. The paper recommended to held national conference on the status of technical/vocational education in Nigeria, so that necessary solutions could be proffered to the problems facing this part of the education sector. Finally, manufacturing organizations should be involved in the drafting of curriculum of the technical/vocational education in the country.

- **(Sauffieet. et al, 2015), "Technical and Vocational Education Transformation in Malaysia: Shaping the Future Leaders"**

The study tackled the concept of lifelong education, and stressed that technical and vocational education (TVET) is known as a system whose role is to develop individuals with high technical skills as desired by the industry nowadays. Changing times and technology development require changes to the TVET system to form a generation capable of leadership. This paper discussed the need for transformation of the TVET, to shape future leaders. To achieve this goal, efforts and modifications in the implementation of TVET should be a priority.

- **(Halabi, 2012), "The Status of Technical and Vocational Education and Training in Arab World; case study: Syrian Arab Republic"**

The study discussed the problems that the educational sector in the Arab World suffers from, by making a field study of the vocational schools in Syria. The major findings were that most students who chose TVET do not do this because they like it. On the contrary, they feel embarrassed because of the compulsory separation between the academic (general) educations. The study revealed the ignorance if the concept of TVET and its role in community building by both student and the community itself as a result of absence of guidance and career

counseling. Finally, there is no close link between the curriculum and the practical reality of the profession, the study concluded.

- **(Vaidya, 2012), "Implementation of International Vocational Best Practices for Improved Employment Opportunities to Youth in Post Conflict Environment in Northern Uganda"**

The scholar refers to vocational training programmes as a means of securing economic opportunities for unemployed internally displaced youth, and ex-combatants in post- conflict affected areas. He also suggests vocational education as skills development to increase productivity of individuals, profitability of employers and expansion of economic opportunities in post conflict economy. The innovative TVET also produces a 'knowledgeable' workforce, and such human capital is most required for the development of a conflict-affected economy.

- **(Malamud & Eleches, 2010), "General Education versus Vocational Training: Evidence from An Economy in Transition"**

The scholars examine the relative benefits of general education versus vocational training during Romania's transition to a market economy. As in 1973 with educational reform, a large proportion of students from vocational training were shifted to general education. The study analyzes the effect of this policy and finds that men affected by the policy are significantly less likely to work in manual or craft-related occupations but have similar levels of labor market participation and earnings compared to their counterparts unaffected by the policy.

- **(Hartl, 2009), "Technical and Vocational Education and Training (TVET) and Skills Development for Poverty Reduction – Do Rural Women Benefit?"**

This paper discusses technical and vocational education and training (TVET) as well as skills development in rural areas, mainly pertaining to agriculture and related activities, with special interest on gender issue. TVET, argues the study, has direct impact on skills development and thus sustains microfinance for poverty reduction and enterprise development, which lead to sustainable growth. The paper shows that current training does not cater for the specific needs of women who are under-represented in formal training programmes and often directed towards typical female occupations. It encourages TVET programmes to target the poor and most vulnerable women.

- **(Billett, 2006), "Building Community through Social Partnerships around Vocational Education and Training"**

The study paves for 'new' social partnerships based on relationships between government, social agencies and communities or any combination of these to be built through TVET. Such social partnerships provide an enhanced local capacity for addressing some of the difficult and often intractable problems, which countries currently face- problems relating to community breakdown, unemployment and social exclusion. These problems can be addressed through TVET. The study concludes that TVET supports industry, individuals and communities, in addition to the development of skills and attitudes necessary for work.

#### **1.1.1 Comment on previous studies**

The above-mentioned studies clearly show the great deal of services TVET can provide at the personal, social, and economic levels. Each pointed out that TVET can serve addressing and accommodating specific challenges and concerns towards the sustainable development of nations. Many of them, on the other hand, stress the need to reform TVET programmes and its components to be able to deliver such outputs specially.

On the other hand, little research has been done regarding TVET in Syria as a strategic instrument in the hand of the government in achieving peace, social and economic development once smartly utilized. Thus, this study is of quite importance.

#### **1.2. Research Problem**

In spite of the growing governmental attention in Syria to the technical and vocational education and training (TVET), there is always a space for more attention, especially with the rapid change of knowledge, know how, technologies and skills- the focus of the TVET- and emerging trends too.

On the other hand, the 9 years of the Syrian crisis negatively affected the local economic and social environment as whole. Poverty and unemployment rates rocketed high as many service and industrial facilities were forced to close releasing staff into street. A large number of skilled Syrian manpower also chose to seek career abroad, while rebuilding processes need those desperately, in addition to the emerging social issues such as the need for the inclusion of ex-military forces into workforce and social life to maintain peace and society. There are also the handicapped and war injuries together with other disadvantaged groups such as orphans and unknown parentage who are in urgent need to have decent jobs and respectful life. Empowering Syrian women especially in rural areas as being the sole breadwinner for their families,

children being out of school during the crisis and at the same time support their families prompt attention and governmental intervention through TVET. Not of less importance is to improve the livelihoods and self-reliance opportunities of unemployed youth.

On the other hand, TVET meets the goals of reintegration, economic stimulation, physical reconstruction and recovery from trauma and many other symptoms associated with conflict areas as priorities in post conflict and for recovery.

In short, the war- affected population usually faces these types of challenges: Psychological/Physical, Social and Economic, which TVET can accommodate very well.

### **1.3. Research Questions**

Suggesting TVET as developmental tool and a weapon of mass construction for Syria's recovery and rebuild, this study tries to investigate the potential role of vocational education in the socio-economical development in post conflict Syria. The study aims to raise the following questions:

1. To what extent may TVET contribute to the development of Syria?
2. What main areas can TVET contribute well?
3. How to make TVET a successful investment?

### **1.4. Research Importance**

The study focuses on important issues namely education and having a job which are human rights. TVET is a developmental tool and a means for self-employment and even a peace contributor.

Governments all over the world generously finance educational sector including TVET. It pays off very well in developed countries, while for developing countries, further investigations are needed to figure out reasons of the poor outcomes. The study is important in order to address such challenges.

### 1.5. Research Objective

The main objective of this paper is to review success stories of other nations regarding TVET as an effective developmental instrument for local inspiration. Evidence of the benefits of TVET during the transition to market economy of Eastern countries, post conflict and recovery, and the skills development for poverty reduction are core concepts this study wishes to praise.

In addition to that, the paper calls upon all national stakeholders to consider TVET as a strategic tool for rebuilding Syria and toward healthy quiche recovery.

### 1.6. Research Methodology

The research is descriptive as to dig out the TVET international literature and reports, and presents the most relevant norms and concepts applicable to Syria in the rebuild era. The research methodology is, nevertheless, a mixture of quantitative and qualitative analysis. It collects data on the existing technical and vocational education and training system in Syria and its governing rules and practices (secondary information from publications and documents available mainly in the internet); during 2020. Then, a survey is conducted by developing an electronic questionnaire for the purposes to analyze the Syrian TVET system and any further improvement needed. The questionnaire was circulated to MBA students of Syrian Virtual University representing the Syrian society, and as participants of professional non- academic educational programme, the sample of 80 respondents selected by random.

### 1.7. Research Hypotheses

The main hypothesis of the study would be as follows:

**“Effective TVET is profitable for Syria post-crisis and recovery”.**

It would be tested through examining sub- hypotheses as follows:

H 1: Effective TVET is *Profitable* as far as personal improvement.

H 2: Effective TVET is *Profitable* as far as society improvement.

H 3: Effective TVET is *Profitable* as far as economy improvement.

While the three hypotheses together prove the truthfulness/falsehood of the main hypothesis, each of them would be tested alone via suitable procedures and analysis as will be shown latter on.

## 2 . Literature Review

### 2.1. TVET Scope & Forms

According to the Convention on Technical and Vocational Education (1989), TVET is “all forms and levels of the educational process involving, in addition to general knowledge, the study of technologies and related sciences and the acquisition of practical skills, know-how, attitudes and understanding relating to occupations in the various sectors of economic and social life”. UNESCO-UNEVOC (2007) defines TVET is a learning system in which both soft and hard skills are developed within a joined-up, integrated development and delivery framework that seeks to improve livelihoods, promote inclusion into the world of work and that supports community and individual agency. Nowadays the TVET emphasis has been shifted towards providing students with generic development competencies to cope more effectively with their continuing development as students, workers and citizens (Dyankov, 1996). According to Campbell (2015) TVET has the power and potential to transform lives, and contribute to enhancing people’s employability and accessibility to jobs, enabling labour market progression and promoting decent work. It should reduce exclusion from the job market and drive the economy through higher productivity and employers (Alqadi, 2015).

TVET can be delivered either by educational institutions or through co-operative programmes organized jointly by educational institutions, on the one hand, and industrial, agricultural, commercial or any other undertaking related to the world of work, on the other (Paulson, 2009). It can be delivered as vocational training addressed for young people in secondary and post secondary levels, or on job training and career development for the youth and adults. E- Learning is a current trend of TVET (Convention,1989), and information and communication technologies (ICT) facilitate education and learning, and TVET videos and teaching materials are easily accessible via internet (UNESCO, 2003).

TVET is meant to be a lifelong education which results in improving knowledge, know-how, skills, competences and or qualifications for personal, social and professional reasons (ILO, 2010). Sellin (2002) emphasized that technical and vocational education should be designed to operate within a framework of open-ended and flexible structures in the context of lifelong education. TVET should be labour market-oriented (Recommendation, 2015), therefore, measures should be taken to ensure youth and adults have equal opportunities to learn, develop and enhance

their knowledge, skills and competencies by transforming and expanding TVET in all its forms to address the great diversity of learning and training needs.

## **2.2. TVET for Social and Economic Development**

Demonstrating the economic and social returns of TVET, it can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development (UNESCO-UNEVOC, 2013). TVET contributes to developing knowledge, skills and competencies that promote responsible citizenship and democratic participation (Recommendation, 2015). It also contributes to individuals' career, employability and social inclusion as well as to economic growth and productivity (CEDEFOP, 2014). States should therefore pay attention to the special needs of the handicapped and other disadvantaged groups, to take appropriate measures and adopt policies to enable them to benefit from technical and vocational education (ILO, 2013), as evidence of rewarding and well pay off out of such policies (ILO, 2004). Shaista (2015) proposed designing a model of TVET programmes for disables. Meli (2015) investigated the provision of vocational skills education for orphans. TVET provides innovative strategies for giving the targeted population opportunities to develop skills, confidence, awareness and understanding so they become workforce of tomorrow instead of begging on the streets according to Nweze (2015).

A European research review of the benefits of TVET (2011) recognized that investment in human resources by education, training and other forms of learning is essential to achieving smart, sustainable and inclusive growth. TVET will continue, according to the review, to play an important role in the shift towards more knowledge-intensive societies. The review estimated that around half of all jobs in 2020 would require a medium-level qualification, which often be achieved by some form of TVET. The European review recalled also that TVET had a great deal with growth and swift recovery from the economic crisis for Europe.

The major challenges facing Arab States, including Syria, in the next decade are creating jobs for the millions of people entering the labour market and making sure that job-seekers have both the qualifications and the appropriate skills and competences, which they are currently lacking (UNESCO-UNEVOC, 2012). Finally, Naef (2009) concluded that for Arab states to keep pace with development, they have to recreate their

TVET education focusing on the skillful human resources with special attention to the added value of such education in the field.

### **2.3. TVET and Conflict Affected Countries**

Many studies debated recently on the potential and innovative approach of TVET during conflict and recovery phase. The most recognized one is "Education for Livelihoods and Civic Participation in Post-Conflict Countries Conceptualizing; a Holistic Approach to TVET Planning and Programming in Sub-Saharan Africa" of UNESCO-UNEVOC, 2007. According to this study, TVET programming is linked to goals of reintegration, economic stimulation, physical reconstruction and recovery from trauma and many other symptoms associated to conflict areas. Post-traumatic stress disorder (shown in depression, nightmares, panic attacks, and low-self-esteem) usually affects war victims. Such sufferings are doubled with health care institutions break down, or simply their becoming inaccessible in times of war. TVET and livelihoods skills training programmes provide a psychosocial element to aid reintegration by give people a purpose, and a reason to believe that they have a future. They provide a means of reducing the psychosocial impact of trauma and displacement and allow people to begin to re-establish some sense of normalcy and security after being forced to leave their homes. Without such aid they are at the risk becoming caught in a cycle of dependency, delinquency, aggression and/or depression and hopelessness. They may turn to, or be forced into, military activities or prostitution either because they are in search of basic sustenance, or because they lack sufficient protection to avoid being pressed into such activities.

The ex-combatants especially in prolonged conflict is another serious issue TVET can address effectively. TVET create livelihoods and provide meaningful skills that contribute directly to employability so to be able to survive outside the military structure. Without the requisite skills to earn an income or to generate an alternate livelihood, there is little incentive for youth to demobilize and give up their arms (UNESCO-UNEVOC, 2007).

Education has been considered as the fourth pillar of humanitarian response (the three others are nourishment, shelter and health services) in emergency situations (Machel, 1996). Lack of prior education for children born in time of war or drop out of school forms a "lost generation". On the other hand, the lack of marketable skills as a result of the conflict and limits of opportunity to develop such skills, again TVET

is a profitable investment addressing that by allowing those children and youth to return to school and to acquire such skills in the post-conflict context. This sustains peace, as citizens of post-conflict countries are involved in the reconstruction of their own country. In addition, this creates human capital locally thus reducing reliance on imports of external experts (UNESCO-UNEVOC, 2007).

As one would expect, prolonged conflict slows or halts the economic productivity of under-developed nations. Sectors of the economy slow or halt during conflict, investments are low due to insecurity, markets close and prices can rise dramatically as consumables become scarce. Once the reconstruction process is underway, skills training becomes a “development” intervention that leads into development programming away from the “handouts” that perpetuate dependency. The theory is that, through skills acquisition, a given population will have the capacity to support itself (through agriculture and/or income-generating activities), paving the way for more robust socio-economic development programming. Therefore, TVET suits post-conflict economies, confirms UNESCO (2015).

Pompa (2014) argues that de-functioning the framework of conflict and set proper post-conflict settings is crucial to aid recovery and to avoid relapse. Yet the lack of viable livelihoods or inequitable access to resources is a primary factor motivating violence, while offering livelihood support can avert conflict. Pompa views TVET as a necessary component in order to ensure the sustainable development of whole communities. For him TVET allows students access to vocational and professional training, as well as apprenticeship programmes to help them acquire entry-level jobs and adjust to changes in labour demand. So that TVET is a critical step in obtaining the necessary skills to help secure wage employment, gain self-esteem and become active citizens.

A key action for prompt recovery and reconstruction is national ownership and leadership (UNESCO-UNEVOC, 2012), and TVET programmes with concrete and immediate returns not only provide regions in reconstruction with a skilled and informed workforce—they can also instill the learner with a sense of security and bring hope for a better future. Such short skills development programmes introduced through TVET after conflict or disaster are a long-term, sustainable investment, a ‘peace dividend’.

#### **2.4. TVET Delivery Mechanisms**

According to (UNESCO-UNEVOC, 2007) TVET is divided into three main categories: public or national training programmes financed by governments, training offered in private institutions, and training funded by non-governmental organizations (NGOs) or international organizations. Government funded and/or operated training programmes tend to vary not only across countries but also depending on context, i.e., urban and rural. Public TVET programmes may or may not charge fees, which are nominal when extant; however, even minimal fees can limit accessibility to the most vulnerable. Public TVET programmes often require completion of basic primary education, which could also prevent enrolment, especially of those adversely affected by conflict. On the other hand, private skills training institutions usually charge fees. It usually takes on the role of filling the gap between the supply and demand for TVET programming. Training programmes funded by local NGOs and international agencies usually do not charge any fees and often target vulnerable groups, such as the disabled.

UNESCO, in its recommendation (2015), emphasized that the governmental/national institutes delivering TVET should be properly established, managed, manpowered and equipped with regular and adequate enhancement and development as appropriate. TVET national institutions, including at the secondary, post-secondary and tertiary levels, should have adequate funding for their operations, including infrastructure, equipment and their maintenance. The private TVET institutions, on the other hand, need to be carefully regulated and licensed with constant governance of the national concerned authorities. Shared responsibility and accountability should be the case while partnering with private sector as far as TVET is concerned. The NOGs should be encouraged to deliver TVET. Short and long-term TVET strategies should be prepared for all above categories, anticipating and meeting the work market needs and the social labour trends.

#### **2.5. TVET Financing**

Generally, the provision of technical and vocational skills and especially formal TVET is expensive, since facilities, material, equipment and maintenance costs are high (Kingombe, 2011). Hoeckel (2008) believes that TVET costs can be divided into direct costs including apprentice wages, salaries for training personnel, teaching material, equipment, building infrastructure etc, and indirect costs such as tax

expenditures or subsidies and also opportunity costs (forgone earnings as unskilled workers) and drop out costs.

Various financing strategies are practiced in different parts of the world. Some of the well-known mechanisms for financing VET have been categorized in the following four types (UNESCO- UNEVOC, 1996):

- Public Financing
- Enterprise Financing
- Private and Public Sponsored Financing
- International Donor Assistance

Public financing is provided through public revenue (government funds). When the State finances vocational training through public funds it is on the assumption that the ultimate responsibility for development of human resources for national development lies with the State. In most countries the budget for VET from public sources is relatively small, ranging from 1 to 12 % of the current expenditure on education (UNEVOC- UNESCO,1996). While enterprise finances the vocational training of its labour force and bears the entire costs of training. Often enterprises finance a major part of the training but actual training occurs in specialized vocational training institutions.

Governments sometimes face with a shortage of resources thus would like individuals, enterprises and non-government organisations (NGOs) to share the financial responsibility for VET, and this is known as Private and public sponsored financing. States should set up measures aiming at diversifying sources of TVET funding and involving all stakeholders through a variety of partnerships, including public-private partnerships.

The German TVET Dual System is called so because there are two places of learning - the vocational schools and the companies. The training is governed by training regulations of the Vocational Training Act, 1969. Expenditure on training is met by the state and the enterprise. School costs are provided by the State whereas the participating enterprise bears the cost of practical training or in-plant training.

Diversification should be considered while considering TVET funding by engaging enterprises, local authorities and individuals. Innovative funding mechanisms such as partnerships and cost sharing, tax deduction and loans, can be explored to increase efficiency and accountability and to stimulate demand for TVET, recommends the 2015 UNESCO Recommendation on TVET.

The future availability of TVET finance should be a national priority for states, since TVET has a reputation for being very expensive (owing to the necessary consumable materials, expensive equipment, equipment and facility maintenance, and perceived low pupil-teacher ratios) (UNESCO-UNEVOC, 2006)

### 3. Empirical Study

#### 3.1. TVET in Syrian Arab Republic

Syria joined the United Nations International Center for Technical and Vocational Education and Training (UNEVOC) on 1995, and Ministry of Education/Directorate of Vocational and Technical Education is the focal point. Little information is available on Syrian TVET system, thus we resolve to non-governmental source (SYRIA: Educational Profile - A Guide to Grade Equivalencies Between Canada and Syria, World Education Services- 2016).

##### - Education System

Syria follows a 12-year system of basic and secondary education, consisting of nine years of basic education and three years of secondary education. Basic education (grades 1-9) is mandatory and is divided into two cycles. The first cycle is four years; the second is five. Secondary education is offered in three-year general secondary schools and in three-year technical/vocational schools.

All students who pass the national exam at the end of basic education qualify for secondary education. However, students' test results determine whether they qualify for general/academic secondary schools or vocational/technical secondary schools. The former requires more grads than the latter.

##### - Technical/Vocational Branch

Students pursuing the technical/vocational branch choose between the following specializations:

- **Commercial:** Accounting, administration, advertising, book-keeping, commercial law, computing, economics, financial math, secretarial skills, statistics, and tax

- **Feminine Arts:** Carpet-making, childcare, clothing and textiles, dressmaking, embroidery, and home economics

- **Industrial:** Computing, circuitry, electronics, television and radio, satellite maintenance (TV), and video recorders

Graduates of technical/vocational secondary schools can choose to start employment immediately or to continue onto two-year technical

institutes (also referred to as intermediate institutes) where they can work towards an associate degree.

The Ministry of Education is the primary governing body for secondary schools.

- TVET as High Education

Higher education in Syria is offered at the following types of institutions and in the following numbers See tables (1) and (2):

- 201 technical/intermediate institutes
- 20 private universities
- 7 public universities

• 6 higher institutes (Higher institutes are public institutions that are supervised by the Ministry of Higher Education. Several are also under the supervision of the Damascus University. The institutes are considered by the Ministry to be centres of excellence. They offer diplomas and degrees up to Doctoral Degree level. Entry requirements are higher than for public universities).

**Table (1): Number of TVET Institutes in Syria**

| University/Governmental Entity               | No of affiliated TVET College | University/Governmental Entity | No of affiliated TVET College |
|--|-------------------------------|--------------------------------|-------------------------------|
| <b>Damascus University</b>                   | <b>14</b>                     | <b>Ministry of Education</b>   | <b>99</b>                     |
| <b>Aleppo University</b>                     | <b>12</b>                     | <b>Ministry of Electricity</b> | <b>3</b>                      |
| <b>Tishreen University</b>                   | <b>7</b>                      | <b>Ministry of Finance</b>     | <b>1</b>                      |
| <b>Tartous University</b>                    | <b>3</b>                      | <b>Ministry of Awqaf</b>       | <b>1</b>                      |
| <b>Al-Baath University</b>                   | <b>3</b>                      | <b>Ministry of Tourism</b>     | <b>7</b>                      |
| <b>Hama University</b>                       | <b>5</b>                      | <b>Ministry of Justice</b>     | <b>1</b>                      |
| <b>Al-Furat University</b>                   | <b>4</b>                      | <b>Ministry of Culture</b>     | <b>2</b>                      |
| <b>The Central Bureau of Statistics</b>      | <b>2</b>                      | <b>Ministry of Information</b> | <b>1</b>                      |
| <b>Ministry of Labour and Social Affairs</b> | <b>1</b>                      | <b>Ministry of Transport</b>   | <b>1</b>                      |
| <b>Ministry of Public Works</b>              | <b>8</b>                      | <b>Ministry of Health</b>      | <b>6</b>                      |
| <b>Ministry of Oil and Natural Resources</b> | <b>3</b>                      | <b>Ministry of Industry</b>    | <b>5</b>                      |

Source: Ministry of Higher Education, Technical Education Department, 2017.

**Table (2): TVET Colleges of Damascus University 2016-2017**

| TVET College   | New Registered Students 2017-2018 | No of Students according to academic year |                      | Total No | No of Graduate Students 2017-2018 |
|--|-----------------------------------|---|----------------------|----------|-----------------------------------|
|  |                                   | 1 <sup>st</sup> Year                      | 2 <sup>nd</sup> Year |          |                                   |
| Technical Computer Institute- Damascus                         | 723                               | 1187                                      | 629                  | 1816     | 204                               |
| Health Institute- Damascus                                     | 371                               | 534                                       | 757                  | 1291     |                                   |
| The Institute of Business Management and Marketing- Damascus   | 594                               | 2209                                      | 1015                 | 3224     | 237                               |
| Technical Institute of Banking and Financial Science- Damascus | 830                               | 1065                                      | 1383                 | 2448     | 564                               |
| Institute of Mechanical and Electrical Engineering- Damascus   | 458                               | 565                                       | 359                  | 924      | 134                               |
| Engineering Technical Institute- Damascus                      | 382                               | 625                                       | 732                  | 1357     | 239                               |
| Faculty of Agriculture- Damascus                               | 64                                | 96  | 69                   | 165      | 20                                |
| Dental Technician Institute- Damascus                          | 637                               | 717                                       | 796                  | 1513     | 246                               |
| Faculty of Agriculture-Sweida                                  | 29                                | 50  | 65                   | 115      | 28                                |
| Faculty of Agriculture- Qunaitra                               | 5                                 | 87  | 42                   | 129      | 17                                |
| Technical Computer Institute- Daraa                            | 71                                | 183                                       | 128                  | 311      | 11                                |
| Technical Institute of Banking and Financial Science- Daraa    | 160                               | 14  | 30                   | 44       | 62                                |
| Faculty of Agriculture- Daraa                                  | 4                                 | 286                                       | 220                  | 506      | 14                                |
| Health Institute- Nabk   | 221                               | 120                                       | 61                   | 181      | 107                               |

Source: Ministry of Higher Education, Technical Education Department, 2017.

#### - TVET Governance and Financing

The Directorate of Technical and Vocational Education is a Directorate in the Ministry of Education. Its role is to supervise and follow up all technical and vocational education institutes in the ministerial schools and institutions. Additionally, it supervises all Technical and Vocational Education sections of other governmental ministries regarding curricula.

In 2013, a decree (no. 47) for reforming TVET system in Syria was issued. By its virtue the Supreme Council for Technical Education was established with objectives of reviewing and updating the

available programmes and specialties in TVET; reviewing academic and administrative structure of TVET; providing and developing human, physical and financial resources; and finally strengthening partnerships and cooperation in the field of TVET.

Almost all TVET institutions in Syria are governmental type, and student fees in secondary TVET education are generally free of charge. Whereas in high TVET level fees are nominal and minimal.

Recently there is an increasing NGOs sponsor and organize TVET activities such as Syrian Women Union and Commercial and Industrial Chambers. International organizations such as UNWRA are also active in TVET in Syria.

- Quality assurance

According to article 3 of the decree (no. 47) of 2013, the Supreme Council for Technical Education is to build a quality assurance system and proper certification of institutions or programmes offering in either private or public TVET sectors. The procedures for accreditation or licensing private TVET providers are purely administrative and require modernization. The same applies to the quality control of the public TVET system. The only real quality assurance mechanism in place is the national examination for each qualification.

TVET system, established long ago in Syria, yet has a little contribution to the overall development; some blame the quality of TVET. It even faces substantial threats as a result of the destructive implications of 7 years of crisis. Yet, a bright opportunity is shinning by making use of the learnt lessons of other nations' experiences and with the assistance of the international concerned organizations available. TVET may serve as unique tool towards paving the way towards development in Syria and sustaining it too.

### **3.2. Questionnaire**

An internet-based questionnaire\* was developed to identify the potential role of TVET in the development and rebuild of Syria. The questionnaire items, format, and procedures were constructed based on research studies and literature related to vocational education and training.

The survey consists of introductory section and 3 main sections. In the introductory section, questions were generated to figure out mainly the respondent's personal view on the familiarity of TVET and personal attitude towards it. The second section is designed to collect data on the possible impact of TVET on individuals. The third section is indented to investigate the respondents' points of view related to TVET serving society. The fourth section addresses questions on the potential impact of TVET on national economy, while the last section deals with TVET system components.

Most questions throughout the questionnaire are formed on Likert-scale (range from Strongly Agree 5 to Strongly Disagree 1), with few yes/no questions.

### **3.3. Population and Sample**

The target population in this study is the MBA students of the Syrian Virtual University, as they are, in a way or another, participants in TVET programmes. A random sample of the society was selected taking into careful consideration the gender equality.

The sample of the study consists of 80 respondents selected by random, 35% of it are female.

### **3.4. Data Analysis**

The current study used SPSS (Statistical Package for Social Science), software V.19 to analyze the data obtained via the questionnaire. It uses different types of analyses and techniques

such as T Test, coloration analysis and others to examine the hypothesis.

Differences between the attitude towards TVET on the personal level, the social level and economical level were tested among others points. To start with data analysis, a descriptive data analysis was conducted as follows:

#### **3.4.1. Descriptive data analysis**

62 % of the respondents believe that the scientific value of TVET is week, whereas 24% picture it as very poor scientifically speaking, and only 3% believe it is a strong validated program.

Most of the respondents (96%) agree that the main reason for joining TVET is the inability to join general education (lower marks), only 3% of the joining was because of personal determination (Personal talent and hobbies). Significantly, 69% believe TVET is a strong assistant to self- employment, with 72% positive attitude of TVET as livelihoods provider. The respondents are scattered between TVET workers as better to execute job on field with 38%, and non- TVET worker being skilled with 36%.

The respondents have positive attitudes for TVET affecting poverty reduction, widening women empowerment, and assisting disabilities empowerment with 87%, 92% and 72% successively. The most frequent reply for the reason not to join TVET as inferior image was “properly yes”.

The respondents adopted negative views of TVET system components and being updated, modern and sufficient. (very poor- poor- poor respectively). Doing so, the respondents sense the challenges and threats (ranked by them as high in both), thus raises the red flag of negative influence on seeking funding.

Finally, TVET was believed by the respondents as effective instrument towards building peace (72% reply probably yes), severing development (93% reply definitely yes) and

reconstruction needs (94% reply definitely yes). Thus, TVET is profitable investment (89 % reply definitely yes).

### 3.4.2. Quantitative data analysis

In this section, we will test the hypothesis that states: “Effective TVET is profitable for Syria during the recovery and rebuild era” by testing the sub- hypotheses of TVET as profitable at 3 levels of personal, social and economical.

***H1: “Effective TVET is Profitable as far as personal improvement.”***

By one sample t test on each of the dependent variables *TVET assisting self-employment*, and *TVET providing livelihoods* to figure out if there is a significant difference between the mean and constant value ( $\mu > \mu_0$ ). The null hypotheses for both variables would be:

H0:  $\mu > 50\%$  for **TVET assisting self-employment** variable (50= m).

H0:  $\mu > 3$  for **TVET providing livelihoods** variable (3= m)

The results affirm that TVET assists self-employment and provides livelihoods ( $\alpha < 0.5$ )

**Table (3): One-Sample test of research variables TVET self-employment.**

| One-Sample Test                        |                 |    |                     |                    |  |       |
|--|-----------------|----|---------------------|--------------------|--|-------|
| TVET_<br>assisting self-<br>employment | Test Value = 50 |    |                     |                    |  |       |
|  | T               | df | Sig. (2-<br>tailed) | Mean<br>Difference | 95% Confidence Interval<br>of the Difference |       |
|  |                 |    |                     |                    | Lower  | Upper |
|  | 11.478          | 49 | .000                | 27.500             | 22.69  | 32.31 |

**Table (4): One-Sample test of research variables TVET livelihoods.**

|                            | Test Value = 3 |    |                 |                 |   |        |
|----------------------------|----------------|----|-----------------|-----------------|---|--------|
|                            | T              | df | Sig. (2-tailed) | Mean Difference | 95% Confidence Interval of the Difference |        |
|                            |                |    |                 |                 | Lower                                     | Upper  |
| TVET providing livelihoods | 16.080         | 49 | .000            | 1.46000         | 1.2775                                    | 1.6425 |

With paired samples t test for the above-mentioned variables, the results show that a significant difference between the attitude of the respondents of TVET assisting self-employment, and that of TVET providing livelihoods ( $\text{sig} > \alpha$ ), TVET providing livelihoods comes first.

**H2: “Effective TVET is Profitable as far as society improvement.”**

Running correlation analysis on TVET producing skilled manpower variable and TVET meeting Reconstruction needs variable, results show strong positive relation ( $p < \alpha$ ) with Pearson correlation coefficient  $P = 0.935$ .

**Table (5): Correlation Test of the research variables TVET manpower.**

| Correlations           |                     |                       |                      |
|------------------------|---------------------|-----------------------|----------------------|
|                        |                     | TVET skilled manpower | Reconstruction needs |
| TVET skilled _manpower | Pearson Correlation | 1                     | .935*                |
|                        | Sig. (2-tailed)     |                       | .019                 |
|                        | N                   | 80                    | 80                   |
| Reconstruct ion needs  | Pearson Correlation | .935*                 | 1                    |
|                        | Sig. (2-tailed)     | .000                  |                      |
|                        | N                   | 80                    | 80                   |

\*. Correlation is significant at the 0.05 level (2-tailed).

Running Multiple Linear Regression analysis where TVET acting as peace instrument is dependent variable and TVET assisting women empowerment, and TVET assisting disabilities empowerment are independent variables. Results show there is a linkage between both ( $\text{sig} < \alpha$ ). As  $F=244.929 > 1$ , the test is validated, and both independent variables explain 94% of the changing in the dependent variable ( $R^2 = 94\%$ ).

**H3: “Effective TVET is Profitable as far as economy improvement.”**

Running correlation analysis on TVET poverty reduction variable and TVET serving Development variable, then the latter with TVET market oriented variable, results show strong positive relations for both statements ( $p < \alpha$ ) with Pearson correlation coefficient  $P = 0.952, 0.931$  respectively.

Running Multiple Linear Regression analysis where TVET serving Development is dependent variable and TVET poverty reduction, and TVET market oriented are independent variables. Results show there is a linkage ( $\text{sig} < \alpha$ ). As  $F=244.929 > 1$ , the test is validated, and both independent variables explain 89% of the changing in the dependent variable.

Examining the linkage between increasing the public awareness of TVET variable and more TVET orientation variable (both are nominal variables) through chi-square technique, whereas in increasing the public awareness society would be more dependent/oriented towards TVET. The result approved such linkage ( $P < \alpha$ ) as strong positive ( $\text{Phi} = 89$ ).

### 3.5. Results and Discussion

The quantitative data analysis performed above clearly show that TVET is to play effective role in assisting self-employment, and in providing livelihoods ( $p < \alpha$ ). Tests show that respondents' attitude towards TVET assisting self-employment are clearer. In addition to that, strong positive relationship joins TVET as producer of skilled manpower and being a good servant to the Reconstruction needs ( $P= 0.935$ ), which is quiet understood as TVET programmes make available the skilled manpower needed for the forthcoming reconstruction process. This is of keen importance with skills shortage specially due to travelling abroad during the crisis.

While assisting women empowerment and disabilities empowerment, TVET can also act as peace instrument. The analysis concluded that TVET can pave for peace through inclusion of ex troops in work and social life. 94% of the respondents' rate TVET as instrument for peace due to these two unique social functions of TVET programmes.

A meaningful relation is traced between TVET as poverty reduction instrument and TVET serving development. Addressing market needs of manpower is addressing at the same time the development needs, examination results show in regard to TVET programmes. TVET is to serve development through dealing with poverty problem and fulfilling the market needs of skilled manpower. Doing so TVET is seen a developmental force.

Finally, the respondents view strong relationship between positive public attitude/awareness in one hand and increasing dependency on TVET as profitable investment and as developmental force on the other. This opens the door to another important issue of how to increase public awareness and improve social image of TVET as profitable education at the personal, social and economical levels, and change the current image as inferior education and less important to the society.

#### 4. Conclusion and Recommendations

- TVET can be an effective tool for providing people with the skills they require to establish nonviolent livelihoods and to protect them from exclusion (Ogbaekirigwe et al, 2017). The provision of skills training to vulnerable groups such as ex-combatants, youth, women, internally-displaced persons, ethnic and traditional groups and the disabled, can lead to reintegration, economic stimulation, physical reconstruction and, particularly, to their recovery from trauma (UNESCO-UNEVOC, 2012). Therefore, the Syrian government should make it as point of duty to high profile TVET in Syria and reform all relevant components, provide adequate fund and attention to its facilities and equipment.

- The TVET can play two crucial roles at the national sustainable development (social, economical& environmental development). The first role is to provide training opportunities and career advancement avenues especially for the increased school leavers. The second role is to provide skilled manpower that is needed at all levels of the economy. The skills so developed should be able to lead to self-reliance in the absence of salaried employment and enhance the industrialization process (Wahba, 2010). Therefore, the Syrian government should establish more TVET colleges to meet the needs of the community and individuals, and also to ensure TVET is more related and market driven with proper quality control.

- TVET inspires young people a positive attitude to innovation, enable them to help shape change and prepare them for self-reliance and citizenship (Quisumbing, 2001). Therefore, the status and prestige of TVE must be enhanced in the eyes of the community and the media. This includes raising the status of teachers in TVET systems through developing their own skills and competences. It will also require strong marketing of the capabilities and profits of TVET to its stakeholders (UNESCO-

UNEVOC, TVET strategy for the period 2016-2021). The Syrian government should increase TVET public positive awareness and thus enhances its social image, and the blue collars should be publically rewarded and acknowledged.

- TVET programmes, both formal and non-formal, must be made available in varying modes of accessible delivery to the unemployed, early school leavers, out of school youth, those disadvantaged by distance and location, rural populations, indigenous people, those in the midst of urban despair, populations engaged in informal labour markets with poor working and living circumstances, children working under hazardous conditions, refugees, migrants and demobilized soldiers in post-conflict situations (Power & Maclean 2011). Toward that end, reaching out for external assistance especially from the international concerned organizations is very helpful in the process of TVET reform. We recommend signing the UN TVET Convention of 1989 as a start, and joining any regional/international initiatives as appropriate.

- Equal access of girls and women should be assured to TVET courses, thereof more effective forms of TVET and rules to be introduced (Hartl-2009). On the other hand, TVET programmes should also serve and help disabilities to realize their potential and optimize their participation in society and the workforce (Shaista et al- 2015). Therefore, the Syrian government should take the issue the needed regulations and rules towards that end. It is quiet useful in this regard to review the other nations- especially developed countries- practices and experience as far as TVET is concerned, and make use of the learnt lessons too.

- TVET can be an effective and necessary tool for providing people with the skills they require to establish livelihoods and to protect them from exclusion. People with technical and vocational skills are crucial in rebuilding an infrastructure damaged by war, in helping to restore the economic basis of their family and

community and to increase their active participation in society (Vaidya -2012). Saying so, the government should seek partnership with private sector, international organizations and NGOs as appropriate. Innovative funding is much welcomed such as the well-known dual system mechanism of Germany, decrease in taxation and granting investment facilities to encourage companies to participate in TVET programmes.

- Finally, the major finding of this study is that TVET is one of the most powerful instruments for enabling all members of the community to face new challenges and to find and play their roles as productive members of society, as it is an effective tool for achieving social cohesion, integration, self-esteem, and even better sustainable development as a whole (UNESCO-UNEVOC, 2012). Based on that the Syrian government may think to organize a national conference to launch TVET reform process and invite all stakeholders to share responsibility and profitable TVET.

## **5. Avenue for Further Researches**

We recommend for future research investigating methods and strategies to reform TVET in Syria in a way to increase its profitability on personal, social and economical levels, and also to identify the major challenges of TVET in Syria and to suggest proper solutions.

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