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### **The link between secondary technical /vocational education and the labour market in Cyprus**

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# Η σχέση μεταξύ τεχνικής εκπαίδευσης και αγοράς εργασίας στην Κύπρο

Μαρία Ηλιοφώτου και Ηλίας Μαρκάτζης

## ΠΕΡΙΛΗΨΗ

Η μελέτη στοχεύει στη διερεύνηση της σχέσης μεταξύ της τεχνικής εκπαίδευσης και της αγοράς εργασίας στην Κύπρο. Συγκεκριμένα, μελετούμε τα ακόλουθα: τα κύρια προβλήματα που αντιμετωπίζουν απόφοιτοι τεχνικής εκπαίδευσης κατά τη μετάβασή τους από την εκπαίδευση στην αγορά εργασίας, τη σχέση μεταξύ των γνώσεων και δεξιοτήτων που αποκτήθηκαν στο σχολείο και των γνώσεων και δεξιοτήτων που είναι απαραίτητες στο χώρο της εργασίας, το βαθμό στον οποίο η τεχνική εκπαίδευση επιτυγχάνει στο έργο της προετοιμασίας των αποφοίτων για την αγορά εργασίας και αλλαγές που μπορούν να διευκολύνουν την εργοδότηση των αποφοίτων τεχνικής εκπαίδευσης και την επιτυχία τους στην αγορά εργασίας. Έγινε συλλογή δεδομένων από αξιωματούχους και απόφοιτους τεχνικής εκπαίδευσης μέσω ποιοτικής έρευνας. Οι αξιωματούχοι ήταν ειδικοί που εργάζονται στο Τμήμα Τεχνικής και Επαγγελματικής Εκπαίδευσης του Υπουργείου Παιδείας και Πολιτισμού και σε άλλους οργανισμούς που εμπλέκονται στο θέμα. Έγινε επιλογή αποφοίτων της τεχνικής εκπαίδευσης στη βάση συγκεκριμένων κριτηρίων όπως είναι η ειδικότητα και τα χρόνια εμπειρίας στην αγορά εργασίας. Η έρευνα έδειξε ότι οι απόφοιτοι τεχνικής εκπαίδευσης έχουν μια σχετικά γρήγορη και ομαλή είσοδο στην αγορά εργασίας, με μικρές περιόδους ανεργίας, υποαπασχόλησης και ετεροαπασχόλησης. Τα προβλήματα που αντιμετωπίζουν οι απόφοιτοι μετά την εργοδότησή τους περιλαμβάνουν την μη επαρκή προετοιμασία τους λόγω περιορισμών που σχετίζονται με το αναλυτικό πρόγραμμα και τον ανταγωνισμό από ξένο εργατικό δυναμικό. Το αναλυτικό πρόγραμμα επικρίθηκε για υπερβολική έμφαση στη θεωρία σε σχέση με την πρακτική και για την έλλειψη αναθεώρησης για να συνάδει με σύγχρονες τάσεις. Σύμφωνα με τους ερωτηθέντες, η σχέση μεταξύ γνώσεων και δεξιοτήτων που αποκτήθηκαν στην εκπαίδευση και γνώσεων και δεξιοτήτων που κρίνονται σημαντικές για την εργασία ήταν ικανοποιητική παρά τις αδυναμίες του αναλυτικού προγράμματος. Τόσο οι αξιωματούχοι όσο και οι απόφοιτοι αξιολόγησαν θετικά την τεχνική εκπαίδευση στην Κύπρο. Παρόλα αυτά, εντόπισαν αδυναμίες και έκαναν εισηγήσεις για την ενδυνάμωση της σχέσης μεταξύ της τεχνικής εκπαίδευσης και της αγοράς εργασίας που περιλαμβάνουν την κατάρτιση των αποφοίτων μετά την είσοδο τους στην αγορά εργασίας, την αναθεώρηση του αναλυτικού προγράμματος

και των υποδομών, και τη μεγαλύτερη εστίαση στις προτιμήσεις των μαθητών. Τα πορίσματα αποτελούν τη βάση για εισηγήσεις που αφορούν σε μέτρα πολιτικής σε σχέση με την τεχνική εκπαίδευση στην Κύπρο.

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# **The link between secondary technical /vocational education and the labour market in Cyprus**

Maria Eliophotou\* and Elias Margadjis\*\*

## ***Abstract***

The paper aims at investigating the link between secondary technical/vocational education and the labour market in Cyprus. Specifically, we examine the following: the main problems faced by graduates of technical/vocational education in their transition from education to the labour market; the link between knowledge and skills acquired at school, and knowledge and skills required at the workplace; the degree to which technical/vocational education succeeds in preparing graduates for the labour market; changes that can enhance the employment of technical/vocational education graduates and their success in the labour market. Data were collected from both experts and technical education graduates through qualitative research. Experts included key personnel of the Department of Technical and Vocational Education at the Ministry of Education and Culture and other officials in the area of technical/vocational education. Graduates of technical/vocational education were selected through criterion sampling based on their specialisations and their years of labour market experience. According to the findings, technical/vocational education graduates enjoy a relatively smooth transition from education to the labour market, with short periods of unemployment, underemployment or employment in non-related fields of study. Problems faced by technical/vocational education graduates after their employment included the lack of adequate preparation due to curriculum deficiencies and, to some extent, competition from foreign workers. The link between skills and knowledge acquired at school, and skills and knowledge required at the workplace was considered to be satisfactory even though the role of curriculum weaknesses was again highlighted. Respondents believed that the curriculum emphasised theory at the expense of practice and was not informed by recent developments to the greatest possible extent. Both officials and graduates were positive in their evaluation of technical/vocational education in Cyprus. However, they identified several weaknesses and provided suggestions for enhancing the link between technical/vocational education and the labour market. These included more training for graduates after labour market entry, changes in the curriculum and

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available infrastructure, and greater focus on student preferences. The findings are used as the basis for policy recommendations in the area of technical/vocational education in Cyprus.

**Keywords:** technical/vocational education, labour market, employment, educational policy

## **1. Introduction**

In several studies, technical/vocational education has been linked to a smoother transition to the labour market in comparison to general/academic tracks. This has been attributed to the fact that after graduation, technical/vocational education graduates are able to utilise acquired skills and benefit from previous internships and/or work experience (Rözer and Bol 2019). Countries with strong vocational education systems such as Austria, Germany and Switzerland are considered to achieve better matching of training to labour market demand (Ryan 2001).

However, the initial advantage of vocational education over general education does not appear to persist over the life cycle (Brunello and Rocco, 2017; Foster and Bol 2018; Hanushek et al. 2017). Thus, individuals with a general degree have been found to have better labour market prospects over their life cycle with higher returns. In the case of technical/vocational education graduates, this points to a trade-off between short-term benefits and long-term costs. The initial advantage associated with vocational education can eventually turn into a disadvantage not only for the individual but for the economy as a whole. Krueger and Kumar (2004) suggest that the relative diffusion of vocational education is partly responsible for the fact that Europe lags behind the US in the adoption of new technologies.

Rözer and Bol (2019) point to the following in an attempt to explain the long-term disadvantages of a vocational degree: First, vocational educational programmes prepare graduates for specific jobs which are closely linked to manual skills. In this context, technological innovation and company growth rates are limited, which, in turn, limits the growth potential and opportunities of vocational graduates. Second, vocational education graduates require less initial work training than their general education counterparts because of their focus on specific skills during their education. In contrast, general education graduates need more initial on-the-job training but have more opportunities for lifelong learning, which is necessary to ensure that their skills and knowledge are updated. The provision of more on-the-job training enhances the ability of workers to adapt to technological and organisational training, thus resulting in more and better employment opportunities at the later stages of an individual's career. Third, it is believed that the specialised skills of vocational education graduates depreciate faster in comparison to those of their general education counterparts. The latter possess broader and more abstract skills that can be of considerable value later in their career. These are also more transferable skills in that they can be used in a variety of jobs and enable their holders to adapt more easily to changes in the labour market. It is thus more likely

that a vocational education graduate faces unemployment at the later stages of his/her career because his/her skills have become obsolete. Hanushek et al. (2017) find that general education graduates are more likely to be employed by age 50 than vocational education graduates. Finally, general skills such as numeracy, literacy and interpersonal skills can serve as the basis for the learning and acquisition of new skills. This again favours general education graduates in that vocational education graduates lack these skills or possess them to a lesser extent.

In Cyprus, upper secondary technical and vocational education prepares graduates for labour market entry in an attempt to meet the needs of the economy for skilled labour. However, several factors have limited the extent to which vocational education is successful in accomplishing its goals. The enrollment in technical/vocational secondary education is relatively low in the country, partly because it is considered a destination for low ability students. Based on Eurostat (2021) data, in 2018, about half (48.4 %) of all upper secondary school pupils in the EU-28 followed vocational programmes. The corresponding figure for Cyprus was exceptionally low (16.7 %). Low participation in technical/vocational education can be used to explain the shortage of skilled labour in the country. Moreover, the fact that high ability students do not opt for technical/vocational education is associated not only with the shortage but also with the quality of skills offered. However, there is very little research on technical/vocational education in Cyprus, especially in relation to its link to the labour market.

In an international context, the link between education and the labour market has been investigated in many countries. It is the focal point of many policy initiatives aiming to enhance the employability skills of graduates. Relevant research points to employability deficiencies and mismatches between graduates' educational credentials and the requirements of jobs (e.g. Allen and de Weert 2007; Kashefpakdel et al. 2019). The European Union has expressed both concern and determination in relation to the employment of young people in Europe: "Quality education and training, successful labour market integration and more mobility of young people are key to unleashing all young people's potential and achieving the Europe 2020 objectives." (Eurostat 2019).

The present study investigates the link between secondary technical/vocational education and the labour market in Cyprus. Specifically, we examine the following:

1. The employment of technical/vocational education graduates after graduation. An attempt is made to identify problems faced by graduates in their transition

from secondary school to the labour market, with emphasis on their employability and the degree to which the skills they acquired at school were useful and/or sufficient in relation to their employment.

2. Ways of enhancing the link between technical/vocational education and the labour market. Based on data collected from both experts and technical education graduates, we arrive at an evaluation of technical/vocational education in Cyprus and propose measures that can enhance the link between technical/vocational education and the labour market and improve the effectiveness of technical/vocational education in general.

The rest of the paper is organised as follows: Section 2 provides a review of the literature on the link between vocational education and the labour market. Section 3 describes the data and the methodology used to collect information on the topic in Cyprus. Section 4 presents the findings of the research while Section 5 provides the main conclusions and their policy implications.

## **2. Literature review**

Research on the labour market outcomes of vocational education graduates over the life cycle is limited (Brunello and Rocco 2015). However, in recent decades, research has addressed the impact of different types of education on labour market performance. Early studies provide mixed evidence on vocational education outcomes. For instance, on the one hand, Ryan (2001) in a study of the school to work transition based on cross-country evidence, found that vocational education graduates are more likely to enter the labour market early, especially if their programmes included apprenticeships. On the other hand, Hotchkiss (1993) in a US study did not find significant effects of vocational education on employment and wages. In contrast, Bishop and Mane (2004) reported that students whose secondary education included vocational subjects were more likely to find employment and earn higher wages in comparison to students with a more general education background. In the same country, Meer (2007) found positive wage effects linked to vocational education even though the effects reported in this study were smaller than those reported by Bishop and Mane.

In the UK, Robinson (1997) compared the returns to vocational and general schooling and found lower returns associated with the former. Dearden et al. (2002) also provided evidence in support of lower returns for vocational education graduates. It must be noted that the wage premium reported in this study is reduced when they control for the time required to complete a qualification (given the shorter duration of vocational courses).

It is important to note that the evidence on the alleged trade-off between the early advantages of vocational education and its long-term disadvantages is restricted to a relatively small number of studies. Hanushek et al. (2017) use cross-country and cross-cohort data to investigate this trade-off and report the following: an initial employment advantage for individuals with vocational skills; and better employment prospects for older individuals with academic education. These findings are in agreement with the findings of a study in Sweden (Golsteyn and Stenberg 2015). In this case, the initial relative earnings advantage becomes a disadvantage after 10 years in the labour market for males, while the corresponding change for females takes place earlier. In a UK study, Brunello and Rocco (2015) used two UK cohort studies in order to follow individuals for at least 16 years in the labour market. They found that the initial employment advantage of vocational education applied at the higher education level. At lower levels, this advantage did not exist or was not statistically significant. Moreover, it did decline over time but did not turn into a disadvantage at older ages. Thus, the authors concluded that no trade-off existed between short-term employment advantages and long-term employment disadvantages. However, in relation to wages, the younger cohort in this study was found to be worse off with vocational education due to a real net earnings disadvantage in comparison to academic education.

Using data from the 2009 EU labour force survey, CEDEFOP (2013) investigated the labour market outcomes for young people with vocational education. Several indicators were used to measure labour market outcomes, with emphasis on two dimensions. The first concerned the transition from education to work (e.g. the speed and type of transition, the duration of the first job and the characteristics of the first job such as full-time versus part-time, temporary versus permanent). The second related to the characteristics of current employment such as income and employment status. Additional indicators included the skill content of the job and the presence of qualification mismatches for the first and current job. According to the findings, vocational education was able to speed up the transition from education to the labour market. Moreover, vocational education graduates were more likely to have a permanent first job and less likely to find a first job with a qualification mismatch. In this study, significant cross-country differences were found in the returns to vocational education. On the one hand, young adults in countries with strong vocational education systems (with a close link between school and work), were more likely to be employed and benefit from a fast transition to the labour market compared to their general education peers. On the other hand, young people in

countries with less developed vocational education systems benefited from a lower (but still present) vocational employment premium and faced greater difficulties in labour market integration.

In a study of survey data from the Netherlands, Rözer and Bol (2019) examined the labour market effects of general and vocational education over the life cycle and across time, taking into account age, period and cohort effects. Their findings show that as reported in earlier research, vocational education graduates enjoy a smoother transition to the labour market even through their jobs are of lower occupational status than those of their general education counterparts. In addition, they also find evidence of a trade-off between early career benefits and late career disadvantages of vocational qualifications. The catch-up age in this study is around the age of 55-60, which is later than the findings of a previous study by Hanushek et al. (2017). Moreover, the life cycle effects associated with vocational degrees were not found to change over time, which is not in line with the observation that general education has an advantage at times of labour market change (e.g. technological change). Overall, differences between general and vocational graduates over the life cycle did not change significantly.

The review of the literature points to the importance of investigating the employment and career paths of vocational and general education graduates. This investigation can serve as the basis for labour market and education policy measures that will facilitate the transition from education to the labour market and minimise problems such as qualification mismatches and underemployment. Available research on the topic is limited to quantitative analysis and models which do not provide information on the perspectives of different actors including vocational education officials and graduates. In the present study, we adopt a qualitative methodological approach in an attempt to address this gap.

### **3. Data**

Data on the perceptions of technical/vocational education officials and technical/vocational education graduates were collected through qualitative research. Specifically, in-depth semi-structured interviews were conducted with six officials and 12 graduates in Cyprus. The sample was selected through criterion sampling since the individuals included in the sample were chosen based on their positions, experience or vocational graduate status. The six officials were linked to positions and organisations which have an important role in the formulation and implementation of education policy in Cyprus. A brief description of the profiles of the

six officials is provided below to the extent that this is possible without compromising the anonymity of respondents.

- RO1: Male, high ranking official at the Ministry of Education and Culture (Department of Technical/Vocational Education)
- RO2: Male, school inspector (Department of Technical/Vocational Education)
- RO3: Male, high ranking official at the Cyprus Human Resources Development Authority (HRDA)
- RO4: Male, school inspector (Department of Technical/Vocational Education)
- RO5: Male, high ranking official at the Foundation for the Management of European Lifelong Learning Programmes
- RO6: Male, high ranking official at the Ministry of Education and Culture

The 12 graduates were all graduate students of technical/vocational education in Cyprus. An attempt was made to include graduates with different periods of work experience, with emphasis on graduates with at least five years of experience. Table 1 provides the main characteristics of each graduate.

**TABLE 1**  
**Characteristics of technical/vocational education graduates**

Respondent graduation	Gender	Specialisation	Year of
RG1	Male	Carpentry	2010
RG2	Male	Carpentry	2001
RG3	Male	Carpentry	2008
RG4	Male	Carpentry	2010
RG5	Male	Electrical work (appliances)	2010
RG6	Male	Electrical work	2010
RG7	Female	Graphic design	2015
RG8	Female	Hotel and food	2015
RG9	Female	Hotel and food	2015
RG10	Male	Electrical work (installations)	2017
RG11	Male	Graphic design	2019
RG12	Male	Hotel and food	2018

The questions for the interviews were formulated based on the aims of the study. Two interview guides were designed, one for officials and one for graduates. The main research questions were the following:

- Research Question 1: What are the main problems faced by graduates of technical/vocational education in their transition from education to the labour market, with reference to unemployment, underemployment, adjustment to the workplace and problems faced at the workplace?
- Research Question 2: What is the link between knowledge and skills acquired at school and knowledge and skills required at the workplace, with reference to possible curriculum deficiencies?
- Research Question 3: How successful is technical/vocational educational in preparing graduates for the labour market, with reference to possible changes that can enhance the employment of graduates and their success in the labour market?

The three research questions provided the framework for the formulation of the interview protocol. An attempt was made to formulate the protocol in a way that would address all three questions to the greatest possible extent. Thus, several questions were addressed to respondents in order to cover each research question, resulting in a total of 11 main questions for graduates and 12 for officials. The main questions included sub-questions where necessary. In the case of officials, the questions concerned their own perceptions and evaluations as they related to the research questions while for graduates the focus was on the individual's experience.

The interviews were conducted face-to-face and were audio recorded. The time of the interviews was agreed after prior contact with respondents. Ethical principles were adopted in the collection of data from respondents, both in relation to the protection of individual autonomy and the respect of privacy (Howe and Moses 1999). Respondents were provided with information on the purpose of the research and were informed that they could choose not to participate in the interviews. Moreover, prior to the interview, the researchers provided an introduction, in which they highlighted the anonymity aspect of data collection.

The interview protocols provided the raw material for the analysis. The protocols were divided into text fragments. Keywords and themes were assigned to each text based on the aims and research questions of the study. In order to ensure the trustworthiness of the analytical approach, we adopted a six-phase process, similar to that proposed by Nowell et al. (2017). The main phases included in the analysis were the following: familiarisation of the researcher with the data, generation of initial codes, search for themes, review of themes, definition and naming of themes, and report production. In adopting this methodological approach, we recognise that the

collected data do not allow for the testing and generalisation of the findings, which can be achieved through quantitative analysis of larger data sets.

#### **4. Findings**

##### **4.1 Technical/vocational education officials**

All officials who participated in the research had extensive experience and knowledge regarding technical/vocational education in Cyprus. In relation to the first research question, there was agreement among officials that technical/vocational education graduates faced either very little or no unemployment. However, some officials made reference to the conditions of employment, as seen below:

I would not say that they face unemployment, at least not in most specialisations but they must be willing to work for some time either with lower wages or under suboptimal conditions until they gain the appropriate experience in the labour market. (RO1)

According to respondents, underemployment was also limited even though some noted that it was possible for some graduates to have a job in a technical/vocational field but also have a second job which was non-related to one's field of study. As regards employment not related to their specialisations, this was considered to be less common than in other fields of study.

A small percentage, yes, in non-related areas, as is the case with other graduates. For instance, you find law graduates working as administrators in a firm. This is a general problem but at the level of technical education, we probably face this problem at the lowest possible extent because our graduates are prepared for very specific occupations, so there is demand for technical education graduates because no one can do the job of the electrician while the job of the administrator can be done by a teacher, a lawyer and even an accountant. (RO6)

In relation to the adjustment of technical/vocational education graduates to the labour market, several officials considered the process to be smooth, without major problems. According to respondents, the main reason for this was the fact that practical training had been included in the curriculum and this resulted in better preparation for employment. In some cases, the responsibility of employers and/or individual workers in ensuring a smooth transition was highlighted.

As regards problems faced by technical/vocational education graduates after their employment, an important area of concern was the fact that the link between

education and the labour market was not always satisfactory in that the curricula were not perfectly aligned with the needs of employers.

I believe that in this area we need to do more work, i.e., in linking technical education to the needs of the industry. The better this programme works, the easier it will be for technical education to adjust its curricula in a way that will meet the needs of the labour market...the faster we get the information, the information about labour market needs, the faster we can adjust our own programmes so that the education of our graduates is as close as possible to the needs of employers. (RO2)

One sub-question concerned the effect of the influx of foreign workers in the labour market and the extent to which this was considered a problem for the employability of technical/vocational education graduates. In general, respondents did not consider this to be a problem because in most cases, foreign workers were believed to lack the training and expertise required for employment in specific occupations.

It is not possible for an unskilled worker without adequate knowledge to accomplish what is expected of him/her. Of course, there is an issue in the labour market in general, but I think that our graduates are in a position to deal with this issue. (RO6)

However, officials were not unanimous on this issue in that references were made to negative effects from the influx of foreign workers. One respondent (RO2) mentioned that the influx of foreign workers was at the expense of the country's economy while another (RO3) referred to an increase in competition in the labour market, which made it more difficult for technical/vocational education graduates to find employment. In another case, one official (RO4) noted that the influx of foreign workers was the natural consequence of Cypriots avoiding difficult and/or blue-collar jobs. Finally, one official highlighted the need for regulation and professional standards so as to improve the quality of services offered, as seen below.

There should be initiatives in order to establish a stricter legal framework for each occupation. We must have professional standards so as to have an occupational license, if you like, some form of qualification. Today one can say that he is a painter, one can say that he is a carpenter...there are no strict controls and thus foreign workers may not necessarily be well-qualified professionals. (RO5)

When asked about the link between the skills and knowledge acquired at technical/vocational education, and the requirements of the workplace, most

respondents pointed to a satisfactory link. One respondent (RO2) mentioned that the skills and knowledge acquired through technical education were sufficient for employers, who were willing to pay starting salaries to technical/vocational graduates which were often equivalent to those offered to university graduates. The same respondent pointed to the responsibility of the employer to build upon existing skills and knowledge so that the graduate can reach the standards desired. Another respondent (RO1) pointed to curriculum revisions and updates, which take place after consultation with employer organisations. This was helpful in maintaining a strong link between the skills and knowledge acquired at technical/vocational education, and the requirements of the workplace. However, problem areas were discussed, the most important of which included the lack of adequate networking among stakeholders and cases of dissatisfaction among employers with the skills and knowledge of graduates.

As regards useful knowledge and skills not acquired through technical/vocational education, the knowledge component was generally considered adequate, with the exception of technological developments, where, in some cases, technical/vocational education was considered to lag behind. Several respondents pointed to the importance of soft skills. The main problem was the fact that such skills were not acquired to a satisfactory extent.

I believe that they must acquire additional knowledge and skills. Let me give some examples of such skills. We must promote analytical thinking, innovation, i.e., firms require workers that will help them become innovative, we must have creativity, initiative so that graduates can develop their own initiatives and can use critical thinking to solve problems at the workplace...Thus, it is not only technical knowledge...(RO3)

I would say that for all specialisations and fields, the area where there is a greater deficiency is the acquisition of the so-called soft skills, i.e., communication with clients, team work etc...here I believe that there is room for improvement. (RO1)

In relation to the successful preparation of graduates for the labour market, all officials were positive, citing the employment opportunities for graduates. One respondent referred to the multitude of opportunities and to the fact that the bias against blue-collar jobs in Cyprus resulted in decisions which were not rational and could not be justified on a cost-benefit analysis basis.

There are a lot of opportunities and our graduate is a very suitable worker for companies...we in Cyprus have learned to expect white-collar jobs and we stay away from dirt and we say, for example, will I manage a machine and get my hands dirty? We prefer higher education and we invest a lot of money to become something or other...and a student of technical/vocational education graduates and enters the labour market immediately. You will say that the university graduate has more advancement prospects, I do not disagree. But I do disagree regarding what you give and what you take. (RO2)

Despite their positive evaluation of technical/vocational education in Cyprus, all respondents provided suggestions for improvement and recommended specific changes. These included the following: greater contact with employers and better utilisation of European funds; more training for graduates after labour market entry; more state support and funding for employers; changes in the curriculum and the available infrastructure at technical/vocational schools. Overall, officials emphasised the need for enhancing the link between technical/vocational education and the labour market, as seen below.

Yes, we could create a more solid bridge of communication with the industry. Education should be as close to the industry as possible. The industry should have a voice regarding the standard and content of education. Teachers could spend some time at the industry so that they improve and contribute to the creation of links with the industry. And in general, a formulation of standards for different jobs, which would be accepted by the industry. This would ensure that the graduates who reach these standards will be the first preference for employment. And finally technical education in collaboration with the industry...could create a centre...A centre where one could go and see both theory and practice and realise that technical education is not getting your hands dirty, it is not degrading. (RO5)

#### ***4.2 Technical/vocational education graduates***

In agreement with the views of officials, technical education graduates reported either very little or no unemployment. However, some graduates were unemployed for a short period of time which did not exceed one year. Part-time employment was also limited even though a few graduates mentioned that they had worked in areas non-related to their field of study. Employment in a non-related area was usually limited to a few years. Thus, despite the limitations associated with the financial crisis and the pandemic which were mentioned by a few respondents, the emerging picture is that

of a relatively smooth transition to the labour market. Almost all graduates reported high levels of satisfaction with this transition with the exception of RG11, who was a recent graduate (2019) not satisfied with the terms of employment. Those graduates who were self-employed, often as a result of involvement with a family business, were more satisfied.

As regards the adjustment of technical/vocational education graduates to the labour market, the views expressed were again largely in agreement with the perceptions of officials in that most graduates did not face major adjustment difficulties. However, some respondents did refer to problems which included the lack of experience and technical training, and the lack of skills in certain areas. A few respondents (RG4 and RG5) believed that their education had not prepared them adequately for the labour market, pointing to outdated school curricula and not sufficient school equipment. Moreover, the fact that the work culture was in some cases not welcoming to new entrants was also considered a problem, as seen below.

The employer and the colleagues... when you start working and they work in a certain way and you change something, there you face the greatest problem because they do not want to change something they are used to and start doing something different which will become easier at a later point. (RG 4)

One could start working in a company which employs 50-year old people; it is difficult for them to accept a person aged 18, 19, 20. (RG 12)

Respondents were divided on the extent to which the influx of foreign workers was a threat to their employment. Several respondents did not consider it a major problem, based on the fact that foreign workers usually lacked the expertise required for employment in their area. One respondent (RG 6) said that at the end of the day customers ended up working with Cypriot providers, probably as a result of better product/service quality and/or value for money. However, in some cases, problems were mentioned with the fact that foreigners arrived in great numbers and were willing to work for less as seen below.

The Cypriot worker...if the employer tells him your starting salary is 850 euro, he will react negatively. And I think this is the major reason we lose jobs which go to foreigners...Thus, the employer will hire the foreign workers who will work for less and do what the employer tells them to do while the Cypriot who knows stuff, will not agree to this. (RG 8)

At this point, in all jobs you find foreign workers and in my area we have many foreigners who come and they are desperate to find work; they lie about knowing the job, for instance, one is a truck driver and tells you he is a carpenter and you hire him. (RG 4)

As regards the link between the skills and knowledge acquired at technical/vocational education and the requirements of the workplace, most respondents identified areas of concern in relation to their education and training prior to employment. Many references were made to the fact that the knowledge acquired was not sufficient to address the specialised needs of employers. Thus, the need for more practical and specific knowledge was highlighted. The curriculum was considered to suffer from two major shortcomings: emphasis on theory at the expense of practice and an inability to take into account new developments. In this context, the need for lifelong learning emerged as important. Some respondents considered technical/vocational education to be the basis for the acquisition for more skills and knowledge in the future as seen below.

Our work develops gradually. So whatever it is that you learn at school, there is five times as much that they do not even know themselves. With the passage of time, you learn; in order to improve, you learn. When you do not learn, you do not improve. (RG 3)

I am still learning things but I do not think that I have gaps because of my education or because of the fact that the teachers did not do their job well ... These are new things that have now appeared in Cyprus. (RG 8)

In general, there was satisfaction among graduates in relation to the preparation of technical education graduates for the labour market. Even though graduates were satisfied, they pointed to the fact that additional factors contributed to success in the labour market which include personal drive and effort. Many respondents mentioned that there was a demand in the labour market for skilled workers. However, success in the labour market did require compromises as suggested below.

There is always demand in our field...but you have to let go of your ego and not want to be the director immediately, for instance master technician with an assistant and so on...then you can do very well and everyone will want you. (RG 6)

The positive evaluation of technical/vocational education in Cyprus by graduates was in agreement with the corresponding views of officials. However, like officials, graduates provided several suggestions for improvement and recommended specific

changes. These included the following: curriculum revisions and more practical focus in the curriculum; changes in technology and equipment in order to keep up with recent developments; greater focus on student preferences in technical/vocational education; enhancing the performance of teachers and the motivation of students. As previously noted, it was considered important that the curriculum be revised to provide more practical training. In addition, respondents referred to specific skills and knowledge that should be incorporated in the curriculum. One respondent, for instance, considered the acquisition of financial literacy skills important.

One part, which I consider to be the most important, is the financial part, so that the student can make a budget for a job he is going to undertake so that it gives him the return he should have and not suffer a loss because it is quite complicated with the materials and the time required. The financial aspect in general...a course should be introduced because the financial part is the part that will keep the young graduate in business. (RG2)

In addition to the introduction of new courses, the need for greater depth in existing courses was recognised by some respondents. One respondent (RG7) pointed to the need for more elective courses in the curriculum. Another respondent who had specialised in Hotel and Food studies said the following.

I believe that they taught us what they could teach us...What I would have liked was to tell us more about different cuisines, the cultures of different cuisines, we have so many cultures, they could have covered a different cuisine and culture in each lesson; this we did not really have. (RG12)

Overall, respondents reported a positive experience with, and evaluation of, technical/vocational education in Cyprus. However, they were almost unanimous in their call for changes and improvements, especially in relation to the practical aspect of education offered at this level.

In general, technical education is a major help in the effort of Cyprus to acquire ....skilled labour. In general, at the technical education level, the system is excellent. But it can be improved, by giving more attention to the provision of practical training to students. (RG 5)

## ***5. Conclusions and implications***

The present study aimed at investigating the link between secondary technical/vocational education and the labour market in Cyprus, with emphasis on the transition of graduates from education to the labour market. An attempt was made to identify problems faced by graduates in this transition, especially in relation to their employability and the degree to which the skills they acquired at school were useful and/or sufficient in relation to the demands of the workplace. Moreover, we also aimed to evaluate technical/vocational education in Cyprus and identify ways of addressing employability and labour market transition problems of technical/vocational education graduates.

Primary data were collected from both officials/experts and technical education graduates through a qualitative research approach. The qualitative research approach enabled us to conduct an in-depth analysis of beliefs, views and perceptions associated with the provision of technical/vocational education in Cyprus.

In agreement with the findings of the international literature, it appears that technical/vocational education graduates benefit from a smooth transition from education to the labour market. Both graduates and officials believed that this was the case and pointed to short periods of unemployment, underemployment or employment in non-related fields of study. The practical training included in the curriculum was considered to be an important factor in predicting employment and labour market success.

Problems faced by technical/vocational education graduates after their employment, were generally reported to be limited even though both officials and graduates pointed to what they considered to be problematic areas and/or limitations. As regards foreign workers, both groups of respondents were divided in relation to whether their influx resulted in problems for graduates of technical/vocational education. Reference was made to the fact that their presence in large numbers led to greater competition but many respondents felt that the specialisation and skills of technical/vocational education graduates gave them a clear advantage. Officials drew attention to the need for stricter legal frameworks and professional standards in order to prevent (foreign) workers with no and/or not suitable qualifications to work in certain jobs.

According to officials, the curricula were not always aligned to the needs of employers, especially in relation to the acquisition of soft skills which include communication, collaboration, problem solving etc. In some cases, graduates

considered the school curricula to be outdated and inadequate. They also believed that the curriculum emphasised theory at the expense of practice and was not informed by recent (technological) developments to the greatest possible extent.

Both officials and graduates provided a positive evaluation of technical/vocational education in Cyprus even though almost all respondents believed that there was a need for changes and improvements. The main suggestions given by officials included the promotion of a stronger link between technical/vocational education and the labour market, the formulation of professional standards, more training for graduates after labour market entry, and changes in the curriculum and available infrastructure. Graduates provided similar suggestions but also drew attention to the need for greater focus on student preferences and more measures to enhance student motivation and teacher performance. Moreover, they recommended that the curriculum be revised to provide more practical training. It is also interesting to note the reference to the acquisition of financial literacy skills, which is in line with an initiative currently supported by the Central Bank of Cyprus and other national institutions.

In addition to measures proposed by respondents, it is important that strategies are formulated for the long-term support and improvement of technical/vocational education in Cyprus. The fact that this type of education is not a popular choice among prospective students results in low levels of enrolment in contrast to most other European countries. This, in turn, can be associated with shortages of highly trained skilled labour in the country. Our findings point to the fact that technical/vocational education graduates in Cyprus do not experience employment problems even though youth unemployment in the country is relatively high for both secondary general education graduates and higher education graduates. This suggests that more attention should be given to the development and enhancement of technical/vocational education through targeted investment and strategic planning.

The strategic component of policy formulation for technical/vocational education can be informed by approaches and measures adopted in other European countries which have succeeded in developing strong links between technical and vocational education, and the labour market. Germany, for instance, has emphasised a lifelong learning approach in the area of vocational education and training (Federal Ministry for Economic Cooperation and Development 2005; Hippach-Schneider and Huisman 2019). It has adopted specific principles and priorities which include the following: partnerships between the state, the private sector, and civil society; the training and further training for teaching and management staff; and the promotion of

international networks for knowledge transfer. In this context, vocational guidance and counselling is considered important in the attempt to enable students and graduates to find suitable occupations and prepare job applications. Moreover, the availability of adequate infrastructure along with the development of appropriate teaching materials is also considered important, in agreement with the suggestions made by officials and graduates in the present study.

Overall, the present study points to the need for more research into technical and vocational education in Cyprus in the context of a strategic planning and improvement initiative in the framework of education economics. For this to be possible, labour market analyses must be conducted on a systematic basis through the development of labour market information systems and the collection of relevant data based on various methodological approaches and perspectives.

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