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# TRAINING UKRAINIAN MILITARY IN JOB CREATION AND JOB TAKING

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## ABSTRACT

This study investigates the effectiveness of courses offered in a training program for transfer to the civilian sector of Ukrainian personnel and their family members. The study also compares the quality of life between individuals with different employment statuses. The analysis is based on questionnaire data from 1077 participants in the training program. The findings indicate that among the forty courses offered, fifteen are particularly effective with regard to job taking and ten are associated with higher than expected odds of leading to business ownership. The analysis of quality of life shows that business owners are most satisfied with their life and other indicators of quality of life, followed by civilian employees and military employees. Individuals who are unemployed or not members of the workforce have the lowest quality of life.

## STRUCTURED ABSTRACT

**Purpose:** The purpose of this study is: (1) To examine the effectiveness of courses offered to Ukrainian military personnel and their families to facilitate transfer to the civilian society. (2) To investigate the extent to which transfer to the civilian sector is associated with increased quality of life.

**Methodology:** Data were collected from 1077 former course participants by handing out a structured questionnaire at different locations in Ukraine.

**Findings:** Among the forty courses arranged, fifteen proved to be effective with regard to the odds of obtaining a civilian job, and ten with regard to the odds of becoming a business owner. Business owners and civilian employees scored higher than military employees with regard to different indicators of quality of life. Individuals who are unemployed or not members of the workforce score lower on quality of life than any other group.

**Originality:** This study evaluates the courses offered in a large educational program where the Norwegian and Ukrainian government cooperate in order to facilitate transfer of military veterans in Ukraine to the civilian sector.

## INTRODUCTION

Sitzmann and Weihardt (2018) define training effectiveness as the extent to which training produces the intended results. The first purpose of this study is to investigate the degree to which training of military personnel and their family members in Ukraine reaches its objectives with regard to the transfer of course participants to the civilian society. Such transfer takes place when former course participants are able to find a civilian job or become business owners. We examine civilian job taking and job creation among 1077 participants in 40 different courses that took place in Ukraine between 2015 and 2018. The second purpose of this study is to examine the extent to which transfer to the civilian sector is associated with benefits for the individual. We do this by comparing groups of former course participants with regard to different indicators of quality of life, including a measure of life satisfaction. The two research questions addressed are: (1) Which courses are associated with higher odds of civilian employment and business ownership? (2) Do program participants who enter the civilian sector score higher than participants who remain in the military with regard to their quality of life? The answer to the first research question indicates the effectiveness of courses intended to increase the odds of civilian employment and courses intended to boost business ownership. The answer to the second research question indicates the extent to which the training program contribute to increased quality of life for those who transfer to the civilian sector.

The literature clearly acknowledges the need for training of military veterans to prepare them for transfer to the civilian sector (Davis and Minnis, 2017; Terziev, 2018; Tūtlýs et al., 2018). However, little research has been conducted in order to examine the effectiveness of courses offered for this purpose. Another novel contribution of this study is the comparison of the quality of life between people who remain in the military and those

who leave the military and become civilian employees, business owners, unemployed or unemployable.

## THE SETTING

### **The training program**

In 2003, Nord University established a training program for military veterans in Ukraine to prepare them for transfer to the civilian society. The program, which is financed by the Norwegian Ministry of Foreign Affairs, was designed to support military personnel to better integrate with and adapt to civilian life through self-employment or employment in the civilian public and private sectors. An objective of the program is to reduce the negative social consequences of military and economic reforms in Ukraine for military veterans and their family members. In addition to facilitating employment and business start-ups, the program has contributed to reduce negative outcomes such as family violence, suicide, depression, and post-traumatic stress syndrome. Unique elements of the program, compared to other similar projects in Ukraine, is the inclusion of family members as course participants and the integration of psychological support throughout the transfer process to civilian life.

In Ukraine, the International Foundation for Social Adaptation (IFSA) takes care of the management and coordination of the program. IFSA was founded in March 1999. The Foundation's mission is the development of civil society and local communities in Ukraine. To organize the "Ukraine – Norway" training project is one of IFSA's main activities.

In addition to Nord University in Norway, 20 different universities in Ukraine have been involved in the program. The universities are the executors of the main part of the project. Each course consists of 500 academic hours, including 10 hours taught by Norwegian faculty of Business Administration. This amount of academic hours is the minimal

requirement for each course in the program. The duration of each course is 3-4 months depending on the syllabus.

According to the Ukrainian legislation Ukrainian universities can only provide educational services to the population. Therefore, a special range of organizations in the regions that are called NGOs (non-profit community organizations or “gromadska organizatsia” in Ukrainian) carry on support functions that contribute to the project’s realization. Services offered by NGOs to program participants include legal assistance, psychological adaptation assistance, and help to find employment. Normally, one NGO cooperate with one university in the region. Involving universities in Ukraine and NGOs in the program has several advantages. Universities and NGOs are stable and durable institutions likely to provide long-term relationships with national and local governments and industry clusters. Universities also have access to valuable resources such as a library, training centers, and young and enthusiastic students who together with highly qualified teachers contribute to learning and social adaptation.

The portfolio of courses is a collegial decision made by the regional university, the NGOs, employment agencies, local governments, the ministries of defense and veterans in Ukraine, IFSA and Nord University. The decisions are based on analyses of the regional labor markets and the capacity of universities. The willingness for local governments and businesses in the region to participate in the financing of courses and hiring of course participants after graduation is also considered.

Upon successful passing all course requirements, course graduates receive three documents: a certificate of professional training from the Ukrainian university, a joint certificate of Nord University and the Ukrainian university responsible for the course, and a joint diploma from the Norwegian Ministry of Foreign Affairs and the Ukrainian Ministry of Defense. The graduation rate is about 95%. Graduates join the alumni and continue

developing their networks, share experiences, support each other, and receive information and support from NGOs and partner universities.

The program has been in operation for more than 16 years and is by far the most ambitious in Ukraine with regard geography, number of participants, and content (training, psychological adaptation, employment assistance). The program is popular among participants and addresses a significant problem in Ukraine. From 2003 to June 2018 - 9341 people, including military veterans and members of their families, were trained and received social adaptation and employment assistance services. The program has been responsible for training courses in thirty-nine different Ukrainian cities and towns. The total number of trained participants by the program in any given year ranges from 984 to 1008. This accounts for 5-7 percent of the total number of veterans leaving the military every year in Ukraine. In the absence of robust support systems provided by the Government for veterans following their retirement, the project has offered training and psychosocial support that has facilitated the transition process, the integration to the civilian society, and assisted veterans to find jobs or become business owners.

## **Ukraine**

Ukraine is Europe's second largest country in terms of surface area after Russia, and is the seventh largest consumer market in Europe (UN, 2018). According to State Statistics Committee of Ukraine (2019), the country has a population of about 42,1 million people. Ukraine gained independence after the collapse of the Soviet Union in 1991 and has since veered between seeking closer integration with Western Europe and its eastern neighbors, going through significant ups and downs in economic development (Loughb & Solonenko, 2016). Compared to other Post-Soviet countries, Ukraine has made a significant progress towards becoming a democratic and market-based society, not least because of the reformation of the private sector (Ruban & Rydén, 2019; Havrylyshyn, 2017). Ukraine is

reforming its business sector and trying to make it easier for entrepreneurs to receive credits and to start up new businesses (Word Bank, 2019).

In the period from 2010 to 2016, the amount of procedures needed and the costs involved in business start-up have been reduced by 50% (Iermolenko et al., 2016). However, due to unstable economy, corruption and political crises, the risks involved with the start-up of new businesses are very high. Interest rates for loans to new businesses are much higher compared to other European countries, and can be as high as 30-40% per annum. The purchasing power in the country is relatively low. Therefore, establishing and operating small and medium size businesses in Ukraine is quite challenging.

Economic and political crises in Ukraine have necessitated major changes in the Ukrainian defense sector. Ukrainian veterans are not entitled to any pension and 60% do not own their own home. Statistics show that 65% of the discharged military personnel are unemployed for a period of three years (Global Security Organization, 2019). Ukraine has not yet established an effective system of addressing issues regarding transformation to the civilian sector and social adaptation of military veterans and their family members. Decent job opportunities for former military officers remain scarce.

Every year, up to 30,000 people are dismissed from the Armed Forces of Ukraine. Due to the ongoing Russian-Ukrainian war in the eastern part of Ukraine 2014-2019, the number of combatants in the end of 2019 has reached 370,000. Many of these people need professional or psychological rehabilitation in order to integrate in the civil sector and fit into the labor market. The average salaries in Ukraine are much lower than in other European countries, an effect of the war with Russia and by the long-lasting economic recession. As a consequence the war and the depression, many people are leaving the country. It is increasingly difficult to find competent individuals to fill the jobs in many sectors, from top

management, middle management, and young professionals. Effective retraining programs are therefore important.

## LITERATURE REVIEW

The basic premise of the Ukrainian training program is that it will increase the career adaptability of participants and ultimately lead to employment or self-employment in the civilian sector. Savickas and Porfeli (2012, p. 662) define career adaptability as “a psychological construct that denotes an individual’s resources for coping with current and anticipated tasks, transitions, traumas in their occupational roles”. High levels of career adaptability are positively associated with preparations for future career tasks, responsibility for career development, the exploration of career opportunities and the confidence in the ability to solve career-related problems (Savickas and Porfeli, 2012). According to career construction theory, individuals’ adaptivity positively influences their career adaptivity, which again positively influences adapting responses and adaptation results (Savickas, 2013). In the present study, the desired adapting responses are employment or self-employment in the civilian sector, and the desired adaptation result is increased quality of life. In a recent meta-analysis of 75 studies relating to career construction theory, Rudolph et al. (2017) found a positive relationship between education, adapting responses, and ultimately adaptation results such as satisfaction with job, career, life, and income.

### **Civilian job taking**

Some scholars argue that there is an education - job gap. In Livingstone’s (1998) book the basic thesis is that most of us continually learn much more work-related knowledge than we ever have a chance to apply in paid workplace. Livingstone (1998) argues that we need to study the social forces that lead to unemployment and consider the economic alternatives that can reduce it.

Other scholars are more optimistic about the role of education and training in finding employment. Training needs assessment is usually a primary phase in the development and design of training programs (Dierdorff and Surface, 2008). The assessment of training needs generally includes collection of information with regard to where training is needed, identification of individuals who need to be trained, and identification of relevant tasks that determine the content of the training program (Goldstein, 1993). A systematic needs assessment is important because it can significantly impact the effectiveness and quality of training programs (Dierdorff & Surface, 2008; McGehee & Thayer, 1961).

Some military jobs are similar to jobs in the civilian sector, making the transition to civilian careers somewhat easier. Other military work is not comparable with civilian work. Much military knowledge is hidden and not obvious to others, such as their familiarity with effective leadership, decision-making and communication, which can be used to benefit civilian organizations. Davis and Minnis (2017) emphasize the importance of getting a better understanding of veterans' experience and focus on the skills that are transferable to the civilian sector. In a recent study based on semi-structured face-to-face interviews with 25 retired military officers in Lithuania, Tūtllys et al. (2019) concluded that there a lack of awareness among civilian employers of the skills and competencies that can be acquired in military service. Their findings indicated that military personnel exhibited negative feelings about their future career and skills development and that veterans tended to lack information about the skill requirements of civilian jobs. Therefore, civilian employers should benefit from a better understanding of military jobs, and knowledge about the requirements in the civilian sector should facilitate the transfer of military personnel to civilian employment (see also Tūtllys et al., 2018).

Terziev (2018) identified a number of problems that can occur when transitioning from military to civilian employment. According to him, such a transition is often associated

with a “radical change of the entire way of life: moving to a new place; deterioration of financial status; loss of home and uncertainty with respect to finding a home on the new place; problems with finding a job and need to adapt one’s way of life to new conditions” (2018, p. 787). To cope with these problems, Terziev (2018) suggested a three-stage training program in which psychologists should play an important role: (1) A preparation stage, with emphasis on the process of readiness for reorientation as a specific activity. (2) An employment placement stage, which includes a joint evaluation between the individual and the military of the willingness to look for a job. (3) A stage for picking up the new activity, acknowledging that the problems associated with the transformation to the civilian sector have not been solved once the veteran has obtained a civilian job or become self-employed. These three stages call for an active involvement of the military in the transformation of personnel to the civilian sector. Historically, the military does not always adequately prepare soldiers for the transition to civilian life (Connelly, 2015).

### **Civilian job creation**

Hope & Mackin (2011) tested the hypothesis that military service imparts some unique training or acculturation that makes veterans more likely to become self-employed than other individuals. Their findings confirm earlier studies from the USA that show significant positive effects for military service on the probability of self-employment (Moutray, 2007; Mid-Atlantic Research, Inc., 1984, Waldman Associates & REDA International, 2004). Hope & Mackin (2011) further found that self-employment is negatively correlated with the length of military service, but failed to find any evidence that military training, education, or culture that predisposes individuals toward entrepreneurship. They tried to explain this finding by suggesting that those who enter the military and have an entrepreneurial predisposition toward self-employment tend to leave the military service earlier. The alternative explanation, that military training and education have a positive effect on the self-employment decision, they considered to be less likely.

Veterans may perceive that civilian employers do not appreciate their military background sufficiently, often failing to compensate them according to the qualifications they believe they possess. Adams (1963) introduced equity theory to explain how individuals respond cognitively and behaviorally to perceived unfairness in the workplace. Adams (1963) and Mowday and Colwell (2003) argue that both conditions of underpayment and overpayment can influence subsequent behavior. The theory suggests that former military personnel who perceive that civilian employers do not compensate them according to their qualifications will feel unfairness be more likely to become self-employed.

Based on a long career as researcher and professor in entrepreneurship, Johannisson (2016) suggested several guidelines for university education in entrepreneurship. First, universities should adopt a process view in which situated and embodied insight, such as intuition, should be developed in addition to traditional academic knowledge. Second, students should be taught several different subjects, networking and collaboration with external partners should be encouraged, and emphasis should be put on developing students' social skills as well as their affective and conative capabilities. Third, collaboration with external stakeholders is inevitable and teachers involved in entrepreneurship education should be able to translate between conceptual and general knowledge, on one hand, actionable and situated knowledge on the other.

## METHODOLOGY

### **Selection of course participants**

To be eligible for participation in one of the courses in the program, candidates have to meet the following selection criteria: Participants should be a member of the Armed Forces of Ukraine, Ministry of Internal Affairs, Security Service of Ukraine, State Border Service of Ukraine, State Special Transport Service, State Service of Emergencies of Ukraine, have

served at least 10 years and have at least 7 years left to retirement. Military personnel subject to dismissal in the current year can also join the project provided that they submit a reference to the intended dismissal issued by the military unit. Military family member must submit a copy of a document conforming belonging to a military family. Finally, to be eligible for participation in the program, the age of the candidate should normally not exceed 50 years.

### **Sample**

The data used in this study stems from a survey among the participants who graduated from a course in between 2015 and 2018. From January 2015 to June 2018, 3538 people were enrolled and trained in 20 different locations – in the north (Kyiv, Chernihiv), center (Vinnytsya, Kropyvnytsky), east (Dnipro, Zaporizhzhya), south (Mykolayiv, Odesa, Melitopol), and west (Lviv, Lutsk, Ternopil, Chortkiv, Ivano-Frankivsk, Chernivtsi, Volodymyr-Volynskyi and Uzhhorod). During this period, 19 different Ukrainian universities offered 40 different courses in 17 different cities. Twelve different NGOs actively contributed to the program by providing psychological and employment assistance to the participants. In total, 1077 graduates responded to our survey, a response rate of 30.4%. Each respondent had only participated in a single course.

The data was hand collected by one of the authors who visited 15 locations between February and June 2018. Data from the two last locations (Uzhhorod and Volodymyr-Volynskyi), was collected by representatives from the local university ensuring that only course graduates answered the questionnaire. The respondents answered the survey anonymously. Therefore, none of the respondents can be identified.

Among the respondents, 161 were senior officers, representing 15.6% of the sample. Military personnel constitute 62.4% of the sample, family members 31.2%. The remaining 6.4% of the respondents group consists of volunteers, medical personnel, personnel related to back office or support systems associated with the military, and people who have not clearly identified their employment status. Among the respondents, 36.5% are females. A majority of

the females enter the program as family members, and the females who entered the program as military tended to have lower ranks than those of the project's male military participants. The respondents are between 19 and 62 years old, with an average age of 38 years at the time of the survey. Among respondents, 73.5% report being in a relationship, and 63% have children. The average number of members of our respondents' households is 3.8 people. Among respondents, 11.6% reported living in a city with fewer than 10,000 inhabitants, 26.8% in a city with 10,000-100,000 inhabitants and 61.6% in a city with more than 100,000 inhabitants.

## **Measures**

We grouped respondents with regard to employment status based on their answers to the following questions: (1) What is your current employment status? (with options indicating whether the respondent is working, unemployed, or unemployable). (2) In which sector is your main work? (with options indicating whether the respondent is employed in the military or civilian sector). (3) Do you currently own at least one business? (coded as 1=yes, 0=no). The first group consists of participants who responded that they are employed and work in the military. This group is labeled military employees. The second group consists of participants who responded that they are employed, work in the civilian sector, and do not own a business. This group is labeled civilian employees. The third group contains entrepreneurs who responded that they work in the civilian sector and own at least one business. This third group is labeled business owners. The fourth and last group consists of participants who stated that they are unemployed or unemployable because they are not members of the work force (homemakers, students, disabled and retired individuals). This group is labeled unemployed or unemployable. Among respondents, 167 (15.5%) are military employees, 492 (45.7%) civilian employees, 187 (17.4%) business owners, and 231 (21.4%) unemployed or unemployable.

We conducted a multivariate analysis of the data to substantiate that course completion rather than characteristics of course participants is the main reason for the increased odds associated with some of the courses for obtaining employment or becoming a business owner. This is important since the sample consists of men and women with different age and marital status, some military veterans and some family members, living in cities of different sizes, and have taken courses at different points of time. There is a chance that all of these factors can influence the effectiveness of the courses offered. In the multivariate analysis we include the following control variables: (1) Gender (1=male, 0=female) because participation in the work force and the propensity to become a business owner is likely to vary with gender (Bosma and Kelly, 2019). (2) Age and age squared because of a possible inverted U-shaped relationship between age and finding a civilian job and between age and becoming a business owner (Bosma and Kelly, 2019). (3) Military veteran or family member since military veterans have higher odds of becoming self-employed (Hope and Mackin, 2011), (4) Localization in a small town with less than 10,000 inhabitants and localization in a large town with more than 100,000 inhabitants because more jobs are available in urban areas and because the propensity of business ownership can be related to the degree of urbanization and business cluster size (Faberman and Freeman, 2016). (5) Recent graduation from the training program, since finding a job and becoming a business owner can be time consuming processes. This is a dummy variable where graduation in 2018=1, else=0. (6) Civilian status of the respondent (married/partner=1, else=0) since civilian status may be associated with membership in the workforce and the propensity to become a business owner. (6) Whether or not there are children in the household (1=yes, 0=no), since previous research has shown that having children is positively associated with business ownership and may also be related to the propensity of finding civilian employment (Kolvereid, 2018).

Our measures of quality of life included an index for life satisfaction and four other indicators of wellbeing. Life satisfaction was measured using the five-point scale developed by Diener et al. (1985). Along a 7-point Likert-type scale (from 1=strongly disagree to 7=strongly agree) respondents indicated their agreement with the following items: (1) In most ways my life is close to the ideal. (2) The conditions of my life are excellent. (3) I am satisfied with my life. (4) So far I have gotten the important things I want in my life. (5) If I could live my life over, I would change almost nothing. We averaged the items to obtain a measure of life satisfaction (Cronbach's alpha=0.85). Our other measures of wellbeing included: (1) the number of cars owned (coded as 0=1, 1=1, 2=2, 3 or more=3), owning your own home (coded as no=0, yes=1), the number of annual holidays away from home (coded as 0=0, 1=1, 2=2, 3 or more=3), and family ownership of a dasja (cabin) (coded as no=0, yes=1).

## **Analysis**

The first step in the analysis is to identify courses that are associated with the highest odds of belonging to each of the four groups of respondents by crossing course participation with employment status. This enables us to identify job-taking courses, associated with higher odds for employment in the civilian sector as well as job creation courses, associated with higher odds for business ownership. The next step in the analysis is to check whether participation in courses associated with civilian employment remains a statistically significant predictor of civilian employment after controlling for relevant factors that concern the participants.

Similarly, to check whether graduation from courses associated with business ownership remains a significant predictor of business ownership after entering the control variables in a multivariate analysis. This analysis was carried out using correlation and logistic regression. After entering the control variables in the logistic regression, having taken a course associated with higher odds of civilian employment should remain a statistically significant predictor of the propensity of civilian employment. Similarly, having taken a course associated with

higher odds of business ownership should remain a significant predictor of business ownership after entering the control variables. In the logistic regression analysis 52 respondents were lost because they had failed to state their age or gender, leaving 1025 respondents for the multivariate analysis.

We address the second research question with regard to quality of life by comparing life satisfaction and other indicators wellbeing between military employees, civilian employees, business owners and the unemployed/unemployable. In the analysis of these variables we required respondents to have submitted complete data, a procedure that reduced the number of cases from 1077 to 634. A comparison between the 634 remaining cases and the 443 cases removed did not reveal any significant differences between the two groups with regard to gender, localization or marital status. However, in the reduced sample the military employees and the unemployed/unemployable are under-represented. This is hardly a surprise as response rates tend to decrease with income (Holbrook et al., 2008). The underrepresentation of respondents who are not working in the civilian sector is more likely to decrease rather than increase the difference in quality of life between individuals with different employment statuses.

## RESULTS

### Bivariate analysis

We carried out the bivariate analysis by cross-tabulating the course taken by the respondents' employment status. We then classified the courses into three groups: (1) Courses associated with higher than expected values for job taking, (2) courses associated with higher than expected values for job creation, and (3) courses associated with higher than expected values for not having civilian work. This procedure enabled us to classify all the courses arranged into one of the three groups.

Participants from fifteen of the courses had a higher number of civilian employees than expected in case of independence among employment status groups. These courses are listed in Table 1. Table 1 shows the fifteen courses from which at least 50% of the participants are employed in the civilian sector (the expected value is 45.7%). Some of the courses have too few participants to allow us to draw conclusions about course effectiveness, but the four of the courses with more than 30 graduates participating in our survey are associated with higher odds of civilian employment. These four courses are in “municipal administration”, “energy management”, “accounting and audit in services”, and “organization and business administration”.

#### INSERT TABLE 1 HER

Ten courses stand out as primarily being associated with higher odds of business ownership. Table 2 shows courses associated with at least 28.2 percent of self-employed (the expected value is 17.4%). For example, among graduates from the course “entrepreneurship”, 29.3% are currently business owners. Among participants who have taken the course in “securing business entities in Ukraine”, 28.2% are business owners. Seven of the courses have fostered an even larger proportion of business owners, but in these courses the number of respondents participating in our survey is too small to allow us to draw any certain conclusions about their effectiveness.

#### INSERT TABLE 2 HERE

Participants in eleven courses and the miscellaneous “other courses” have higher than expected odds for being unemployed or not members of the workforce. Table 3 shows the courses from which at least 22.4% of the participants are unemployed or unemployable (the expected value is 21.4%) and the courses from which at least 20.5% of the respondents are military employed (the expected value is 15.5%). Twelve of the courses are associated with

higher odds of being unemployed or unemployable. The course in “organization of search and rescue operations” has by far the highest proportion of participants with employment in the military. Courses in the English language, courses in small business management, IT-courses, and courses in entrepreneurship in the hospitality industry do not seem to be very effective in terms of job taking or job creation.

Four of the courses that prove to be effective with regard to job taking also have a higher than expected number of business owners. Two of these courses have more than 30 participants in our study, “organization and business administration” and “energy management”.

INSERT TABLE 3 HERE

### **Multivariate analysis**

To begin the multivariate analysis, we first calculated the correlations among the analysis variables. The results are shown in Table 4.

INSERT TABLE 4 HERE

The strongest correlation reported in Table 4 is between gender and having military background when entering the retraining program. Male participants are much more likely to be military and females more likely to be family members and have a non-military background. As expected, having taken a course associated with job taking correlates positively and significantly with civilian employment ( $r=.161$ ) and having taken a course associated with job creation correlates with current business ownership (.190).

INSERT TABLE 5 HERE

Table 5 shows the results from the logistic regressions. As shown in Table 5, age influences the odds of taking a civilian job. As both age and age square are significant, the results indicate that there is an inverted U-shaped relationship between age and the odds of civilian employment. Having a military background is negatively associated with the odds of

getting a civilian job. Living in a large town is marginally positively associated with the odds of finding civilian employment, probably because more jobs are available in urban areas.

Having taken a course primarily concerned with job taking almost doubles the chance of obtaining a civilian job.

In the logistic regression for business ownership, late graduation is the only control variable that is statistically significant. Becoming a business owner appears to be a process that requires some time after graduation. Graduates from courses primarily concerned with job creation, almost treble their odds of becoming business owners compared with graduates from other courses.

### **Quality of life**

Table 6 shows how the different measures of quality of life vary between different groups of former course participants.

PLACE TABLE 6 HERE

As Table 6 shows, business owners score higher than all other groups with regard to life satisfaction and ownership of a cabin (dasja). A life satisfaction score between 4 and 5 is the average of life satisfaction in economically developed nations (Jang et al., 2017). It indicates that people are generally satisfied, but have some areas where they very much would like some improvement. Table 6 shows several statistically significant differences between groups. Business owners score significantly higher than all other groups on life satisfaction, own significantly more cars than people who are unemployed or unemployable, and can afford more annual holidays away from their home than employees can. Military employees are significantly less likely to own their own home than all other groups of respondents. While not all group differences are statistically significant, the results reported in Table 6 suggest that people who are unemployed or unemployable have the worst quality of life. Military personnel are better off than the unemployed or unemployable, but score lower on all

indicators of quality of life than civilian employees and business owners. Business owners appears to be the group of respondents who have the highest quality of life, because they score higher than all other groups on all quality of life indicators.

## DISCUSSION

The first research question concerned the identification of courses associated with higher odds of civilian employment and business ownership. The results show that 15 of the 40 courses offered are effective with regard to the odds of finding civilian employment and that 10 of the courses are effective with regard to the odds of becoming a business owner. Four of the courses appear to be effective with regard to both job taking and job creation, but only two of these courses have more than 30 respondents to our survey. The multivariate analysis essentially confirms the results from the bivariate cross-tabulation.

With regard to the second research question concerning the quality of life, military personnel is likely to increase their quality of life if they are able to find civilian jobs or become business owners. On the other hand, military veterans who become unemployed or unemployable are likely to suffer a decline in life satisfaction and other indicators of their quality of life.

Most studies of the training of military veterans have focused on the transition from military to civilian employment. Much of the literature covers issues regarding problems associated with this transition process. Scholars have argued that successful training of military veterans should emphasize the psychological process associated with adaptation to the civilian society (Faurer et al., 2014). In order to facilitate this psychological process, Sherman & Larsen (2018) recommend that veterans' family members should be included in training programs. Many researchers have devoted their attention to the competences and skills needed for successful transition to a new civilian career (Baruch & Quick, 2009; Galily

& Shimon, 2012; Kramm & Heinecken, 2015; Lebel & Dahan-Caleb, 2004; Nägele & Stalder, 2017; Tūtlýs & Spöttl, 2017; Tūtlýs et al., 2018).

Research on training of military veterans in entrepreneurship is scarce even though former military experience is positively associated with the propensity to become self-employed (Hope & Macklin, 2011). Among participants in an entrepreneurship course in USA, Kerrick et al. (2018) found that military participants' entrepreneurial passion and the number of actual business launches one year after the course were higher than for civilian participants. Moreover, franchisors often actively recruit veterans as franchisees (Short et al., 2018). Training in entrepreneurship should therefore be particularly relevant for military veterans.

Studies that evaluate training of veterans for transfer to the civilian society generally concern an entire training program, such as the Transitions Assistance Program in USA (Faurer et al., 2014), or single courses (Kerrick et al., 2016). We have not come across any prior study that has evaluated all the courses included in a training program for military veterans. The present study shows that courses in a training program can have varying degrees of effectiveness, highlighting the need for continued evaluation of courses and renewal of the course portfolio.

In the present study we find that the outcomes or adaptation results from becoming a business owner is more positive for course participants who become business owners than for those who become paid employees. We do not believe that these findings are generalizable across nations since the adaptation results from job creation and job taking courses will vary depending on the attractiveness of organizational employment and self-employment in the country. Such differences in employment status attractiveness can explain why self-employed score higher than payed employees on life satisfaction in some countries, while the opposite is found in studies from other countries (Bencsik and Chuluun, 2019). Further, it is possible that

the benefits for the society are higher for courses resulting in business start-ups and self-employment than for courses leading to organizational employment. After all, many business owners do not only create a job for themselves, but for many others, and many businesses create wealth and pay a considerable amount of taxes.

This study has implications for career adaptability theory (Rudolph et al., 2017; Savickas, 2013). We argue that the adaptation results from job taking and job creation courses will vary between countries depending on the attractiveness of organizational employment and self-employment. We also suggest that the outcomes for the society can be greater for job creating courses than for job taking courses because new businesses can provide many employment opportunities and because profitable businesses contribute to the society by paying taxes.

This study has several limitations. The cross-sectional design means that it is difficult to correctly describe and classify participants before and after participating in a course and isolate the effect of the training program. For example, it is possible that some of the participants have obtained a civilian job offer or initiated a business start-up prior to the course. When interpreting the bivariate results with regard to effectiveness of the courses the time passed since the course was given should be taken into consideration, since obtaining a civilian job and becoming a business owner can be time-consuming processes. Since we did not have data from all individuals who have taken part in the training program, we could not perform any sample selection or response bias test. The questionnaire used was quite long and not all the questions were relevant for all former course participants. Therefore, some of the respondents did not submit complete datasets, and there is a danger that the removal of incomplete responses harmed the representativeness of the sample when comparing groups with regard to their quality of life. Finally, when evaluating the courses offered, we did not have access to data with regard to the costs involved with each course. When designing future

course portfolios the costs involved with each course should certainly be taken into considerations.

## CONCLUSION

With few exceptions, the courses offered in this training program are either effective with regard to job taking or job creation. The safest option is therefore probably to distinguish clearly between courses designed for job taking and job creation. To be effective, courses preparing participants for taking jobs should be designed based on the demands in the labor market. Course participants should be selected based on their interests and suitability for the jobs and occupations in question. When offering courses primarily associated with obtaining civilian employment, organizers can increase the effectiveness of their courses by selecting middle-aged course participants who do not have a former military background and by localizing such courses to areas where more jobs are available. The effectiveness of course designed for obtaining jobs will probably to a large degree depend on characteristics of the demand in the labor market. The findings with regard to the effectiveness job creation courses, however, may be generalizable to other countries. The present study suggests that courses in entrepreneurial management, sustainable entrepreneurship, small business management, and entrepreneurship in specific industries are not very effective with regard to new business start-ups. Our findings suggest that more general courses in entrepreneurship and conducting own business are more likely to result in new business formation.

Business owners appear to have the highest quality of life, but not all are fit for an entrepreneurial career. Courses that prepare for employment in the civilian sector are probably relevant for a larger number of people than courses that prepare for business ownership. Courses that prepare for business ownership should be offered to people who are particularly

interested in an entrepreneurial career and are able and willing to do what it takes to become a successful business owner.

The worst outcome for course participants is not to find any work. Individuals who are not members of the workforce or are unemployed score lower than military personnel on all measures of quality of life. Course participants, organizers of the training program, the military, local and national government as well as possible employers should all do their utmost to avoid this outcome. The present study has shown that the effectiveness of courses with regard to job taking and job creation varies. A main challenge for the organizers is to design and offer courses that are effective with regard to job taking and job creation and avoid offering courses that are less effective.

## REFERENCES

- Adams, S. J. (1963). Towards an understanding of inequity. *Journal of Abnormal and Social Psychology*, 67(5), 422-436.
- Åmo, B. W., & Iermolenko, O. (2019). *Report from a survey among participants of the project “Retraining and Social Adaptation of Military Officers and their Family Members in Ukraine”*. Nord University, Bodø, R&D Report no. 38.
- Baruch, Y., & Quick, J.C. (2009). Setting sail in a new direction: career transitions of US Navy Admirals to the civilian sector. *Personnel Review*, 38(3), 270-285.
- Bencsik, P., & Chuluun, T. (2019). Comparative well-being of the self-employed and paid employees in the USA. *Small Business Economics*, 1-30, <https://doi.org/10.1007/s11187-019-00221-1>
- Bosma, N. & Kelly, D. (2019). *Global Entrepreneurship Monitor. 2018/2019 Global Report*. Accessed September 16<sup>th</sup> at: <https://gemconsortium.org/report>
- Connelly, V. (2016). ‘Changing step’: The transition from the regular army to civilian life and work. In Manfredi S. & Vickers, L., Eds., *Challenges of Active Ageing*. London: Palgrave Macmillan, London, pp. 287-298.
- Davis, V. E., & Minnis, S. E. (2017). Military veterans’ transferrable skills: An HRD practitioner dilemma. *Advances in Developing Human Resources*, 19(1), 6-13.
- Diener, E., Emmons, R.A., Larsen, R.J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71-75.

- Dierdorff, E.C., & Surface, E.A. (2007). Assessing training needs: do work experience and capability matter? *Human Performance*, 21(1), 28-48.
- Faberman, R.J., & Freedman, M. (2016). The urban density premium across establishments, *Journal of Urban Economics*, 93(May), 71-84.
- Faurer, J., Rogers-Brodersen, A., & Bailie, P. (2014). Managing the re-employment of military veterans through the transition assistance program (TAP). *Journal of Business & Economics Research*, 12(1), 55-60.
- Galily, Y., & Shimon, P. (2012). The transition of retired military officers to a second career in sport management: the Israeli case. *Journal of Multidisciplinary Research*, 4(2), 5-17.
- Global Security Organization (2019). *Military Personnel in Ukraine*. Accessed November 25<sup>th</sup> 2019 at: <https://www.globalsecurity.org/military/world/ukraine/personnel.htm>
- Goldstein, I.L. (1993). *Training in Organizations: Needs Assessment, Development, and Evaluation*. Pacific Grove, CA: Brooks/Cole, 3<sup>rd</sup> ed.
- Havrylyshyn, O. (2017). *The Political Economy of Independent Ukraine*. London: Palgrave Macmillan.
- Holbrook, A. L., Krosnick, J. A., & Pfent, A. (2008). The causes and consequences of response rates in surveys by the news media and government contractor survey research firms. In Lepkowski, J.M., Tucker, C.J., Brick, de Leeuw, E., Japec, L, Lavrakas, P.J., Link, M.W., and Sangster, R.L., Eds., *Advances in Telephone Survey Methodology*, 499-528. Hoboken, NJ: John Wiley & Sons, Inc.
- Hope, J.B., & Mackin, P.C. (2011). *Factors Affecting Entrepreneurship Among Veterans*. Annandale, VA: SAG Corporation.
- Iermolenko, O., Vakulenko, V., & Henk, A. (2016). *Guide to Doing Business in Ukraine*. Norwegian-Ukrainian Chamber of Commerce. Accessed November 25<sup>th</sup> 2019 at: <https://nucc.no/wp-content/themes/NUCC/eguides/1/flipbook.html#p=6>
- Jang, S., Kim, E.S., Cao, C., Allen, T.D., Cooper, C.L., Lapierre, L.M., O'Driscoll, M.P., Sanchez, J.I., Spector, P.E., Poelmans, S.A., & Abarca, N. (2017). Measurement invariance of the satisfaction with life scale across 26 countries. *Journal of Cross-Cultural Psychology*, 48(4), 560-576.
- Johannisson, B. (2016). Limits to and prospects of entrepreneurship education in the academic context. *Entrepreneurship & Regional Development*, 28(5-6), 403-423.
- Kerrick, S.A., Cumberland, D.M., & Choi, N. (2016). Comparing military veterans and civilians responses to an entrepreneurship education program. *Journal of Entrepreneurship Education*, 19(1), 9.
- Kolvereid, L. (2018). Entrepreneurship among parents. *Journal of Innovation and Entrepreneurship*, 7(1), 9.

Kramm, N., & Heinecken, L. (2015). We are different now? The effect of military service on youth reintegration and employment in South Africa. *African Security Review*, 24(2), 122-137.

Lebel, U., & Dahan-Caleb, H. (2004), Marshalling a second career: generals in the Israeli school system, *Journal of Educational Administration and History*, 36(2), 145-157.

Livingstone, D.W. (1998). *The Education-Jobs Gap: Underemployment Or Economic Democracy?* Boulder, Colorado: Westview Press.

Lough, J., & Solonenko, I. (2016). *Can Ukraine Achieve a Reform Breakthrough?* Chatham House for the Royal Institute of International Affairs.

McGehee, W., & Thayer, P.W. (1961). *Training in business and industry*, New York: Wiley.

Mid-Atlantic Research, Inc. (1984), *Profiling Entrepreneurial Veterans*. Washington, DC: U.S. Small Business Administration, Office of Advocacy.

Mowday, R. T., & Colwell, K. A. (2003). Employee reactions to unfair outcomes in the workplace: The contributions of Adams' equity theory to understanding work motivation. In Porter, L.W., Bigley, G.A., & Steers, R.M. (2003). *Motivation and Work Behavior*. Burr Ridge, IL: Irwin/McGraw-Hill, 7<sup>th</sup> ed., pp. 65-82.

Moutray, C. (2007). *Educational Attainment and Other Characteristics of the Self-Employed: An Examination Using Data from the Panel Study of Income Dynamics*. Washington, DC: U.S. Small Business Administration, Office of Advocacy.

Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2017). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, 16(2), 277-299.

Nägele, C., & Stalder, B.E. (2017), Competence and the need for transferable skills. In Mulder, M. (Ed.), *Competence-Based Vocational and Professional Education*. Cham: Springer, pp. 739-754.

Ruban, A., & Rydén, L. (2019). Introducing environmental auditing as a tool of environmental governance in Ukraine. *Journal of Cleaner Production*, 212(March), 505-514.

Rudolph, C. W., Lavigne, K. N., & Zacher, H. (2017). Career adaptability: A meta-analysis of relationships with measures of adaptivity, adapting responses, and adaptation results. *Journal of Vocational Behavior*, 98(1), 17-34.

Savickas, M. L. (2013). Career construction theory and practice. In Lent, R.W., and Brown, S.D., Eds., *Career Development and Counseling: Putting Theory and Research to Work*. Hoboken, NJ: Wiley, pp. 147-183.

Savickas, M. L., & Porfeli, E. J. (2012). Career Adapt-Abilities Scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80(3), 661-673.

Sherman, M. D., & Larsen, J. L. (2018). Family-focused interventions and resources for veterans and their families. *Psychological Services*, Volume 15(2), pp. 146–153.

Short, J.C., Zachary, M.A., & Ketchen Jr, D.J. (2018). Entrepreneurial orientation rhetoric and franchise system size: The moderating role of military veteran recruitment. *Journal of Business Venturing Insights*, 10, e00097.

Sitzmann, T., & Weinhardt, J. M. (2018). Training engagement theory: A multilevel perspective on the effectiveness of work-related training. *Journal of Management*, 44(2), 732-756.

Solesvik, M.Z. (2013) Entrepreneurial motivations and intentions: investigating the role of education major. *Education+ Training* 55(3), 253-271.

State Statistics Committee of Ukraine (2019). *Population (by estimate) as of April 1, 2019*. Accessed December 25<sup>th</sup> at:

[https://ukrstat.org/en/operativ/operativ2019/ds/kn/kn\\_e/kn0319\\_e.html](https://ukrstat.org/en/operativ/operativ2019/ds/kn/kn_e/kn0319_e.html) Accessed 04.06.2019

Terziev, V. (2018). Possible aspects of occupational and psychological adaptation of the military, discharged from military service and their families to a new activity life cycle. *IJASOS-International E-Journal of Advances in Social Sciences*, 4(12).

Tūtlys, V., Winterton, J., & Liesionienė, O. (2018). Integrating retired military officers into the civilian labour market: A competence-based approach. *European Journal of Training and Development*, 42(5/6), 319-341.

Tūtlys, V., Winterton, J., & Liesionienė, O. (2019). Institutional aspects of competence-based integration of retired military officers into the civilian labour market. *Personnel Review*, 48(1), 21-39.

Tūtlys, V., & Spöttl, G. (2017). From the analysis of work processes to designing competence-based occupational standards and vocational criteria. *European Journal of Training and Development*, 41(1), 50-66.

UN (2019). *List of European countries by population*. United Nations Development of Economic and Social Affairs. Accessed November 25<sup>th</sup> at:  
<http://statisticstimes.com/demographics/european-countries-by-population.php>

Vinogradov, E., Kolvereid, L., & Timoshenko, K. (2013) Predicting entrepreneurial intentions when satisfactory employment opportunities are scarce. *Education+ Training*, 55(7), 719-737.

Waldman Associates & REDA International (2004). *Entrepreneurship and Business Ownership in the Service-Disabled Veteran Community*. Washington, DC: U.S. Small Business Administration, Office of Advocacy.

World Bank Group. 2019. *Ease of doing Business Ukraine*. Accessed November 25<sup>th</sup> 2019 at:  
<https://www.doingbusiness.org/en/data/exploreeconomies/ukraine#>

Table 1. Job taking courses primarily associated with higher than expected values for civilian employment (n=1,077).

	Military employed (n=167, 15.5%)	Civilian employed (n=492, 45.7%)	Business owner (n=187, 17.4%)	Unemployed or unemployable (n=231, 21.4%)	Number of respondents taking course
Energy and resource efficiency	0	<b>100</b>	0	0	4
Construction and administration of modern IP-based networks	0	<b>75.0</b>	25.0	0	4
Entrepreneurship in the field of physical rehabilitation and fitness	33.3	<b>66.7</b>	0	0	8
Accounting and audit in the field of services	7.3	<b>61.0</b>	7.3	24.4	41
Economics of energy efficiency	10.0	<b>60.0</b>	30.0	0	10
Energy management	7.3	<b>60.0</b>	18.2	14.5	55
Municipal administration	24.1	<b>57.1</b>	8.3	10.5	133
Management and information technologies in business activities	0	<b>55.6</b>	11.1	33.3	9
Organization of small business: IT technology in the field of design	5.6	<b>55.6</b>	16.7	22.2	18
Web-design and the English language in information technologies	22.0	<b>55.6</b>	0	22.2	9
Organization and business administration	5.3	<b>52.6</b>	23.7	18.4	38
Organization of business activities	0	<b>50.0</b>	0	50.0	6
Organization of entrepreneurial activities and information technologies in the sphere of small and medium business	0	<b>50.0</b>	16.7	33.0	6
Fundamentals of business communication. English language	25	<b>50.0</b>	0	25	4
Internet marketing: the development of online business	18.2	<b>50.0</b>	13.6	18.2	22



Table 2. Job creation courses primarily associated with higher than expected values for business ownership (n=1,077).

	Military employed (n=167, 15.5%)	Civilian employed (n=492, 45.7%)	Business owner (n=187, 17.4%)	Unemployed or unemployable (n=231, 21.4%)	Number of respondents taking course
Energy efficient management	0	0	<b>100</b>	0	1
Business security	0	33.3	<b>55.6</b>	11.1	9
Administration of business activities	0	25.0	<b>50.0</b>	25.0	4
Private enterprise: organization, accounting and control	0	35.7	<b>50.0</b>	14.3	14
Conducting own business	0	30.8	<b>38.5</b>	30.8	13
Organization of small business in the field of architectural and graphic design	12.5	37.5	<b>37.5</b>	12.5	8
Small business organization	20.0	40.0	<b>30.0</b>	10.0	10
Entrepreneurship	15.2	42.4	<b>29.3</b>	13.0	92
Entrepreneurship in the field of recreational activities	4.2	37.5	<b>29.2</b>	29.2	24
Securing business entities in Ukraine	25.6	33.3	<b>28.2</b>	12.8	39

Table 3. Courses associated with higher than expected values for unemployment/not workforce member or continued military employment (n=1,077).

	Military employed (n=167, 15.5%)	Civilian employed (n=492, 45.7%)	Business owner (n=187, 17.4%)	Unemployed or unemployable (n=231, 21.4%)	Number of respondents taking course
English and visual communication in business	0	42.9	0	<b>57.1</b>	7
Management in the tourist and hotel-restaurant sphere	0	40.0	6.7	<b>53.3</b>	30
Other courses	12.7	32.9	15.2	<b>39.2</b>	79
Entrepreneurship in the field of travel and restaurant business	12.5	31.3	18.8	<b>37.5</b>	32
Entrepreneurship for sustainable development	12.0	44.0	12.0	<b>32.0</b>	25
English and digital communications	9.4	43.8	15.6	<b>31.3</b>	32
Entrepreneurship in the field of hotel and restaurant businesses	7.7	46.2	15.4	<b>30.8</b>	13
Internet technologies in business and web-design	10.0	45.0	15.0	<b>30.0</b>	20
Entrepreneurship and information technologies in business	28.6	42.9	0	<b>28.6</b>	7
Small and medium business management	25.0	37.5	12.5	<b>25.0</b>	16
Information technologies in business	23.1	34.6	19.2	<b>23.1</b>	26
Entrepreneurial management	15.8	44.7	17.1	<b>22.4</b>	76
Organization of search and rescue operations	<b>87.5</b>	12.5	0	0	8
Practical web-design: design, creation and maintenance of web-site	<b>32.1</b>	44.9	11.5	11.5	78
Business management	<b>20.5</b>	43.2	15.9	20.5	44

Table 4. Means and correlations among the analysis variables (n=1,025).

	Mean	1	2	3	4	5	6	7	8	9	10	11
1.Gender (1=male, 0=woman)	.631	1										
2.Age	38.2	.099	1									
3.Former military	.621	.627	.193	1								
4.Recent graduation	.291	.022	-.061	.054	1							
5.Small town	.116	.006	-.107	.032	-.017	1						
6.Large town	.611	.028	.143	-.002	.048	-.454	1					
7.Spouse	.724	.007	.291	.030	.035	-.028	.040	1				
8.Children	.648	-.039	.022	.000	.067	.012	-.065	.298	1			
9.Job taking courses	.314	.064	.097	.053	-.077	-.048	.088	.070	.046	1		
10.Job creation courses	.197	.018	.014	.003	-.080	-.026	-.047	-.045	.062	-.335	1	
11.Civilian employed	.453	-.056	-.018	-.145	-.017	-.054	.076	.040	.010	.161	-.081	1
12.Business owner	.176	.029	.102	.002	-.098	-.031	-.015	.038	-.025	-.080	.190	-.142

Note: Correlations  $\geq .060$  are significant at  $p \leq .05$  (two-tailed).

Table 5. Factors associated with the odds for civilian employment and business ownership (n=1,025).

	Exp (B) Civilian employment	Exp(B) Business ownership
Gender (1=male, 0=woman)	1.265	1.277
Age	1.180**	1.026
Age squared	.998**	1.000
Former military	.428***	.797
Recent graduation	.992	.604*
Small town	.927	.748
Large town	1.316†	.820
Spouse	1.150	1.260
Children	.861	.782
Job taking courses	1.975***	-
Job creation courses	-	2.868***
-2 Log likelihood	1347,787	897.236
Cox & Snell R Square	.065	.053
Nagelkerke R Square	.087	.087

Note: n=1025 ; †indicates  $p \leq .1$ , \*indicates  $p \leq .05$ , \*\*indicates  $p \leq .01$ , \*\*\*indicates  $p \leq .001$ .

Table 6. Mean differences in quality of life between groups (n=634).

	Military employees (n=78)	Civilian employees (n=316)	Business owners (n=128)	Unemployed or unemployable (n=112)	F-value and differences between groups
Life satisfaction	4.19 (1.25)	4.25 (1.19)	4.75 (1.23)	4.08 (1.29)	7.16***a
Number of cars owned	0.94 (0.83)	0.83 (0.68)	1.19 (0.79)	0.95 (0.83)	6.83***b
Owning home (0=no, 1=yes)	0.67	0.83	0.90	0.82	6.08***c
Annual holidays away from home	0.77 (0.74)	1.01 (0.78)	1.24 (0.83)	0.98 (0.90)	5.82***d
Owing cabin (0=no, 1=yes)	0.28	0.39	0.54	0.36	5.38***a

Note: Standard Deviation is shown in parentheses. Significance of F: \*\*\* indicates  $p \leq .001$ . Significant group differences at  $p \leq .05$ : (a) between business owners and all other groups, (b) between business owners and the unemployed/unemployable, (c) between military employees and all other groups, (d) between business owners and military and civilian employees.