

Predicting entrepreneurial intentions when satisfactory employment opportunities are scarce

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Introduction

The theory of planned behaviour (Ajzen, 1991) has been widely used as a tool for explaining entrepreneurial intentions. One of its underlying assumptions is that an individual can select at will from a number of alternatives that are available. In conditions where the job market is failing and the social security system is collapsing, the range of options may be severely constrained. Such conditions can be found in many less developed economies as well as those in transition. The present study investigates how the theory of planned behaviour may be applied in Ukraine, a country which has an economy that is in transition, and which has been severely affected by the economic meltdown. The research question is whether the availability of perceived employment opportunities moderates the relationship between entrepreneurial intention and its antecedents. In contrast with previous research, which has, for the most part, focused exclusively on students, the sample for this study consists of 276 military officers from the Armed Forces of Ukraine who transferred into the reserve and undertook a retraining programme designed by a Norwegian business school.

The structure of this manuscript is as follows. First, the research setting is described. After the introduction of the theoretical framework, previous research is reviewed and hypotheses are derived. Thereafter, the methodology used is described in detail, before the results and statistical analyses are presented. Finally, public policy implications and limitations of the survey are discussed.

The setting

When the Communist era closed at the end of the 1980s, many Central and Eastern European countries embarked on a transformation from centrally-planned to market-based economies.

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3 What was considered an appropriate way of “doing business” during Soviet times was no
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5 longer congruent with new realities. The privatization of previously state-run businesses and
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7 the creation of completely new private entrepreneurial firms were intended to contribute to the
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9 transition toward a democratic, market-based society. While some Central and Eastern
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11 European countries have thrived in coping with these new realities, others have fallen short of
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13 expectations for various reasons (Aidis *et al.*, 2007; Danis and Shipilov, 2002). Hence, it is
14
15 not appropriate to think of all transitional nations as though they constitute one
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17 undifferentiated or homogenous group. Some of these countries are still centrally-planned
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19 economies under authoritarian regimes while others have become functioning market
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21 economies under democratically elected governments.
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26 Ukraine became independent when the Soviet Union ceased to exist in 1991. With an
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28 area of 603,628 km², Ukraine is the second largest country in Europe, after Russia. Based on
29
30 the World Bank classification¹, it is a lower middle-income economy, with GDP per capita
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32 (adjusted for the Purchasing Power Parity) estimated at \$6,700 in 2010. The population
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34 dwindled catastrophically during the 1980-2000 period, but since then the birth rate has been
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36 comparable with the European average. As of January 1st 2012, the country had a population
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38 of about 45.6 million people, 77.8 per cent of whom were ethnic Ukrainians, with sizable
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40 minority of Russians making up another 17 per cent (State Statistics Committee of Ukraine,
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42 2012). The independence of Ukraine sparked off a period of transition to a market economy,
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44 starting with an eight-year recession, followed by a period of rapid increase in GDP. The 2008
45
46 worldwide economic downturn hit Ukraine hard, and GDP plummeted 20 per cent between
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48 the spring of 2008 and the spring of 2009. After that the economy has recovered, and the
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50 country remains a significant player in the world economy. Ukraine’s economic successes
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52 include the fact that it is the world’s third largest exporter of grain in 2011 (UkrAgroConsult,
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54 2012).
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3 According to the methodology of the International Labour Organization², the
4 unemployment rate in Ukraine increased from a record low of 6.5 per cent in September 2008
5 to an all time high of 10.3 per cent in March 2009. It was most recently reported as being 9.1
6 per cent in the first quarter of 2012 (Trading Economics, 2012). While many Ukrainian firms
7 encounter a lack of skilled personnel, a great number of university graduates cannot find
8 employment, or end up in jobs that do not use their skills due to a skills mismatch (World
9 Bank, 2012a).

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20 Ukraine lags far behind many of the former Soviet-bloc nations in terms of general
21 economic growth and entrepreneurial development. Ukraine has often been criticized for slow
22 and indecisive reforms, and most procedures are still more suited to the Soviet “command and
23 control” style than to a modern market environment. For example, the 2012 World Bank
24 Doing Business Report ranked the country 152nd out of 183 nations in the world in terms of
25 ease of doing business (World Bank, 2012b). Ukraine has also been notorious for its
26 unprecedented political struggle, for the size of its shadow economy, for changing legislation
27 and for heavy dependence on external donors such as the IMF to keep the economy afloat. All
28 these issues have had a dramatic effect on the Ukrainian people in general and military
29 personnel in particular.
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42 After the demise of the Soviet Union in 1991, Ukraine inherited a military force on its
43 territory that employed 780,000 people. Although the military has undergone a sharp
44 reduction in numbers since then, the Ukraine’s military remains the second largest in Europe,
45 after that of Russia. The Armed Forces of Ukraine (AFU) were reduced by about 115,000
46 servicemen from 2000 to 2004, and they constituted about 221,000 employees in 2006
47 (Gladkyy, 2007). Plans exist to downsize the country’s military even further. With the
48 expected discharge of thousands of actively serving military personnel in years to come, the
49 demand for employment will rise dramatically. Thus, military personnel leaving service in
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3 Ukraine are under severe pressure to adjust to civilian life and find alternative sources of
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5 income. Most officers resign from the military with no rights to a pension or housing. They
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7 are, however, eligible to participate in retraining programmes designed to promote social
8
9 adaptation.
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12 Moreover, the current welfare system in Ukraine cannot guarantee former military
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14 personnel a satisfactory income. With the current levels of unemployment and not enough job
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16 vacancies in the country, finding a satisfactory job can be highly problematic. Many military
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18 veterans turn to the pursuit of entrepreneurial endeavours as the only way of surviving. In
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20 such harsh conditions, a large segment of discharged military personnel may also experience
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22 displacement or triggering events which may eventually lead them to decide to establish a
23
24 business (Bergmann and Sternberg, 2007).
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28 To facilitate a smooth transition from military service to the civilian workforce, a
29
30 number of specific training projects and programmes have been launched throughout the
31
32 country, tailored to provide retraining and employment assistance. While some projects have
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34 been implemented under the aegis of international organizations such as NATO and the
35
36 OSCE³, others have been fully sponsored by individual foreign governments. An example of
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38 the latter is considered in this manuscript, a brief description of which is presented below.
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42 The Norwegian “Ukraine-Norway” project was launched in October 2003. It was
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44 announced to help Ukraine mitigate the social and economic consequences of the ongoing
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46 defence reform and the associated downsizing of the armed forces. The project has been
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48 implemented in close cooperation between a business school in Norway and a centre for
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50 social adaptation in Ukraine, with assistance from a constellation of partnering educational
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52 institutions in Ukraine. Among other elements, the project delivers lectures and conducts
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54 seminars on a wide array of business-related subjects, such as accounting and
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56 entrepreneurship, just to name a few. However, it does not present any type of business
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3 training *per se*, but rather aims at providing discharged military personnel with multiple
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5 opportunities to find a job in either the private or public sector, as well as to become self-
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7 employed. As of today, more than 2,400 servicemen who have transferred to the reserve have
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9 been retrained through this project.
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11 12 13 14 15 **Theoretical Perspectives** 16

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18 Intentionality is central to the process of entrepreneurship, since creating a new venture is
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20 always intentional (Bird, 1988; Krueger and Carsrud, 1993). Entrepreneurial intentions are
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22 among the best predictors of new business start-ups (Krueger, 1993). Several theories
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24 explaining intentions to start one's own business have been advanced. Rational explanations,
25
26 such as the NPV model (Campbell, 1992) and utility model (Eisenhauer, 1995), suggest that
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28 the expected utility from the alternative actions influence entrepreneurial intentions. As
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30 Douglas and Shepherd (2002) indicated, income and attitudes to risk and independence were
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32 significant in individual's assessment of career utility, while income had no impact on the
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34 intention to become an entrepreneur as opposed to an employee.
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40 Ajzen's (1991) theory of planned behaviour (hereafter, TPB) is widely used to explain
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42 and predict entrepreneurial intentions (Autio *et al.*, 2001; Carr and Sequeira, 2007; Choy *et*
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44 *al.*, 2005; Kolvereid, 1996; Kolvereid and Isaksen, 2006; Krueger *et al.*, 2000; Liñán and
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46 Chen, 2009; Tkachev and Kolvereid, 1999; van Gelderen *et al.*, 2008; Wu and Wu, 2008).
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48 According to the TPB (Ajzen, 1991; Ajzen, 2005), intentions are determined by attitude
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50 toward the act, subjective norm and perceived behavioural control. The TPB has passed
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52 severe tests of its adequacy in a variety of settings, such as consumer behaviour, attending
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54 classes, participating and voting in elections, the behaviour of alcoholics, cheating and lying
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56 (Ajzen, 1991; Ajzen and Fishbein, 1980; Ajzen and Driver, 1992), just to name a few. A
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3 meta-analysis performed by Armitage and Conner (2001) provides support for the efficacy of
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5 the TPB as a predictor of intentions and behaviour.
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8 According to the TPB (Ajzen, 1991; Ajzen, 2005), intentions are determined by three
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10 conceptually independent constituents: (1) *attitude toward the act*, which refers to the degree
11
12 to which a person has a favourable or unfavourable appraisal of the behaviour in question; (2)
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14 *subjective norm* (hereafter, SN), which refers to the perceived social pressure to perform or
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16 not to perform the behaviour; and (3) *perceived behavioural control* (hereafter, PBC), which
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18 refers to the perceived ease or difficulty of performing the behaviour.
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22 Since the expected utility of employment depends, at least partly, on the availability of
23
24 alternative employment opportunities, this study may be seen as an endeavour to bring
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26 together the utility maximization explanation of entrepreneurial choice (Campbell, 1992;
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28 Eisenhauer, 1995; Douglas and Shepherd, 2002) and the TPB (Ajzen, 1991; Ajzen, 2005).
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30 While the former refers to alternative choices and mostly neglects the role of SN and PBC, the
31
32 TPB lacks reference to the availability of alternative employment opportunities.
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36 The TPB assumes that the behaviour in question is under volitional control, that is, the
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38 person can decide at will to perform or not perform the behaviour. When individuals are
39
40 forced to start a business because there are no other options available, this assumption may be
41
42 jeopardized. The Global Entrepreneurship Monitor⁴ distinguishes between necessity driven
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44 entrepreneurs and opportunity driven entrepreneurs. Necessity entrepreneurs are those who
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46 have entered self-employment because they had no better options for work. In other words,
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48 they start businesses in order to generate income for themselves and their families.
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50 Opportunity entrepreneurs, on the other hand, have chosen to establish businesses because
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52 they represent an opportunity, even if they had other employment possibilities. Among those
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54 countries participating in the Global Entrepreneurship Monitor, the percentage of necessity-
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3 driven entrepreneurs is lowest in rich Northern European countries such as Denmark, Iceland,
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5 Norway, Sweden and the Netherlands, where less than 10 per cent of the entrepreneurs are
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7 necessity-driven, and highest in relatively poor counties such as Macedonia and Bosnia and
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9 Herzegovina, where more than 50 per cent of the entrepreneurs are necessity-driven. The
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11 proportion of necessity-driven entrepreneurs is highest in factor-driven economies and lowest
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13 in innovation-driven economies.
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16 While opportunity and necessity are often presented as clearly distinguishable motives,
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18 we argue that both opportunity and necessity entrepreneurs can choose whether to start a
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20 business or not. Rosa *et al.* (1998) investigated the motives for starting a business among
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22 entrepreneurs from Uganda and Sri Lanka. Other motives for starting a business were clearly
23
24 more important than “necessity”. The poorer the people were, the less likely they were to start
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26 a better business, and the very poor tended to be “trapped” in a state of routine in which long
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28 hours were needed to earn a subsistence living. Most new business ventures were associated
29
30 with entrepreneurs who were opportunity-driven and had command of some resources. Even
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32 though the job opportunities were few and the entrepreneurs were poor, their behaviour was
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34 still under volitional control. While individuals can select between many appealing business
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36 and employment opportunities in some cases, the number of options are constrained in other
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38 cases, and the attractiveness of the options available may not be appealing.
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44 Most previous research on entrepreneurial intentions has used student samples (Autio *et*
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46 *al.*, 2001; Choy *et al.*, 2005; Kolvereid, 1996; Krueger *et al.*, 2000; Liñán and Chen, 2009;
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48 Tkachev and Kolvereid, 1999; van Gelderen *et al.*, 2008; Wu and Wu, 2008). In Schlaegel
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50 and Koenig’s (2012) recent meta-analysis of the determinants of entrepreneurial intention,
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52 only 6 out of the 52 studies included non-student samples. Even though these surveys have
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54 been carried out in different countries, they have in common that they surveyed young people
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56 enrolled at a university or business school. The question of entrepreneurial intentions for full-
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3 time students is rather hypothetical if they have several years before graduation and have no
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5 immediate need to make a choice. Moreover, young people with little or no employment
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7 experience may represent another set of attitudes, values and beliefs than more experienced
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9 individuals. Young people may tend to overestimate the odds of entrepreneurial success and
10
11 underestimate the risk associated with new business start-ups which have an impact on PBC.
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13 Finally, the influence of family, friends and significant others (that is, SN) may be different
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15 among students than among more mature and experienced groups of people.
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19 To the best of our knowledge, there is no research that investigates whether military
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21 personnel are more or less creative, innovative or entrepreneurial than other comparable
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23 groups of people. Jackson *et al.* (2012) found that people who scored lower on scales of
24
25 agreeableness, neuroticism and openness to experience during high school were more likely to
26
27 enter the military after graduation. This and other studies (Bachman *et al.*, 1987) suggest that
28
29 self-selection is the dominant factor explaining psychological differences between military
30
31 personnel and civilians, and that actual service may not substantially change pre-existing
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33 differences in attitude. Thus, in the current study, it is not expected that the length of military
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35 service will be an important moderator of entrepreneurial intentions.
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43 **Hypotheses**

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45 Researchers have suggested that several factors may moderate the relationship between
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47 behavioural intention and its antecedents. Schlaegel and Koenig (2012) investigated the
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49 mediating role of national culture on the relationship between attitude, SN, PBC and
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51 entrepreneurial intention. They found that the attitude – intention relationship was stronger in
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53 countries with collectivistic culture and in short-term orientation cultures and that the SN –
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55 intention relationship was more positive in collectivistic cultures and in countries with high
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3 power distance. Moreover, indicated by Schlaegel and Koenig (2012), the PBC – intention
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5 relationship was more positive in countries with high power distance. The scores for Ukraine
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7 on the power distance, individualism and other cultural dimensions were not presented in the
8
9 original works by Hofstede (2001), but there is reason to believe that Ukraine scores relatively
10
11 high on power distance and collectivism (based on the data from Poland and Russia). In the
12
13 case of Ukrainian servicemen undertaking the retraining programme, all the respondents were
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15 embedded in the same culture and in this way we consider the influence of cultural norms in
16
17 society on the entrepreneurial intention to be controlled for.
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20
21 Schlaegel and Koenig (2012) noted that studies conducted after 2007 had unveiled a
22
23 stronger SN – entrepreneurial intention relationship than studies conducted before 2007, and
24
25 suggested that the support of family, friends and significant others has become more
26
27 important after the financial crisis in 2008. Therefore, we suggest that the financial crisis may
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29 at least partly influence the SN – entrepreneurial intention relationship through the reduction
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31 of available employment opportunities in times of recession.
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35 Goode and Harris (2007) studied the moderating effect of switching costs and switching
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37 inducements on the relationship between intentional antecedents and the behavioural
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39 intentions of customers, and reported that several of the proposed mediating effects were
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41 statistically significant. Switching inducements, which have been defined by Jones *et al.*
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43 (2000) as “the attractiveness of alternatives”, are particularly relevant in the present
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45 circumstances.
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49 There are a very few previous studies investigating the effect of the presence of
50
51 satisfactory employment opportunities on entrepreneurial intentions. With regard to a sample
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53 of 701 matriculating university students in South Africa, Fatoki (2010) found that most
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55 graduates who were interested in becoming entrepreneurs, did so because of the fear of
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57 unemployment. In South Africa, there are too many graduates for relatively few graduate
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3 jobs, and the graduate unemployment is particularly high. Kennedy *et al.* (2003) collected
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5 data from 1,075 first-year students at a university in New Zealand. They observed that only
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7 SN, and not perceived desirability or feasibility, was significantly related to the expectation of
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9 starting a business because there would not be jobs available. They concluded that people who
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11 experienced difficulty finding a job were under the most intense pressure from family, friends
12
13 and significant others to start a business.
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17 The present research suggests that the availability of employment opportunities will
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19 moderate the relationships between the three motivational factors of the TBP and intention. It
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21 may be assumed that, in cases where satisfactory employment opportunities are in place, a
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23 person may have the luxury of behaving in accordance with his or her preference or attitude.
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25 In contrast with this, when jobs are scarce, practical considerations prevail over the person's
26
27 attitude. It is therefore expected that the higher the scarcity of jobs, the less important attitudes
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29 concerning entrepreneurship become in predicting entrepreneurial intentions. This hypothesis
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31 is in line with the within-subject model of predicting behaviour from attitudes (Davidson and
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33 Morrison, 1983). The model asserts that individuals often have a range of competing
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35 behavioural alternatives and corresponding attitudes and individuals will most likely perform
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37 the behaviour toward which they have the most positive attitude.
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42 **Hypothesis 1:** The availability of satisfactory employment opportunities moderates the
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44 relationship between attitude and entrepreneurial intention. The higher the supply of
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46 satisfactory employment opportunities, the stronger will be the positive relationship between
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48 attitude and entrepreneurial intention.
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52 An individual considers the consequences of his or her social integrity while taking a
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54 career decision. Keeping all other variables constant, a person is expected to act in a manner
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56 that coincides with the opinion of his or her family, friends and significant others. Lack of
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58 satisfactory employment opportunities may force a person to start a business. Having
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3 satisfactory employment opportunities may imply that people are less dependent on their
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5 networks and that they may to a greater extent act on their own will, not conforming with the
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7 opinion of their family, friends and significant others.
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10 **Hypothesis 2:** The availability of satisfactory employment opportunities moderates the
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12 relationship between SN and entrepreneurial intention. The lower the supply of satisfactory
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14 employment opportunities, the stronger will be the positive relationship between SN and
15
16 entrepreneurial intentions.
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19 A dearth of satisfactory employment opportunities may make it easier for persons to
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21 make a choice in favour of starting a business when they are not sure about their own abilities
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23 to succeed as an entrepreneur. When employment opportunities are rather scarce, individuals
24
25 may be pushed to accept the risks associated with a venture.
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28 **Hypothesis 3:** The availability of satisfactory employment opportunities moderates the
29
30 relationships between PBC and entrepreneurial intention. The higher the supply of
31
32 satisfactory employment opportunities, the stronger the positive relationship between PBC
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34 and entrepreneurial intentions becomes.
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38 The research model with hypotheses is illustrated in Figure 1. Note that the attitude –
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40 intention and the PBC – intention relationships are hypothesized to be stronger when
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42 employee positions are available, while the SN – intention relationship is hypothesized to be
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44 stronger when jobs are scarce.
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51 Insert Figure 1 about here
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55 **Methodology**

56 *Sample*

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3 Military officers of the AFU being transferred in the reserve and retraining within a 500-hour
4 long Norwegian “Ukraine-Norway” project comprised the sample for this study. All of the
5 project’s participants were briefed on the purpose of the present research, and then asked to
6 answer the questionnaire voluntarily. The respondents were anonymous, and they could not
7 be identified in any way. Questionnaires were administered in classes, with prior permission
8 from the International Foundation for Social Adaptation of Ukraine. Of the 296 questionnaires
9 distributed in 2010-2011 in Kiev, as well as in eight other cities and towns of the Southern
10 Ukraine and Crimean peninsula, 293 were returned. The unusually high response rate was
11 achieved because the questionnaires were administered during the classes and under the
12 supervision of a lecturer. The choice of the cities and towns was dictated by the geographical
13 coverage of the project. Of the questionnaires answered, 17 questionnaires were removed due
14 to a high level of errors or missing data. The final sample included 276 officers.

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30 This sample seems to be unique and sufficiently homogenous, and was specifically
31 chosen. The underlying reason was that officers, who had devoted almost all their lives to the
32 Soviet and then Ukrainian army, decided to take part in the Norwegian programme. On
33 graduation from the programme, they were probably going to work for a company, large or
34 small, to continue their education, to start their own firm, or to join the ranks of the
35 unemployed. The average age of the respondents was 38 years (range 22 to 60). About 68 per
36 cent of the respondents were married. Of the participants, 18.1 per cent had previous
37 experience of being self-employed, and 18.5 per cent reported that at least one of their parents
38 had been self-employed at some time. The respondents’ average length of military service
39 was 16 years, ranging from 2 to 36 years.

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55 *Measures*
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3 A slightly modified version of the Entrepreneurial Intention Questionnaire developed by
4 Liñán and Chen (2009) was used in this study. Whenever possible, the translation from
5 English into Russian was made in accordance with the translation made by Tkachev and
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10 Kolvereid (1999).

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12 Intentions are assumed to capture the motivational factors that influence a behaviour;
13 they are indications of how hard people are willing to try, of how much of an effort they are
14 planning to exert, in order to perform the behaviour (Ajzen and Driver, 1992). As Shook *et al.*
15 (2003) have pointed out, previous research on entrepreneurial intentions have used two
16 different types of intention measures: (1) Employment status choice intentions, that is,
17 intentions to become self-employed, and (2) Intentions to start a business. Measures of
18 employment status choice intentions do not directly address the question of how hard people
19 are willing to endeavour, or how much of an effort they are planning to exert. Measures of
20 behavioural intentions, that is items that focus on how hard people are willing to try to start a
21 business, were therefore used in the present circumstances. The intention measure was
22 calculated as the average of 6 items adopted from Liñán and Chen (2009) (Cronbach's
23 alpha=0.95).

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39 An aggregate measure of attitude previously applied by Krueger *et al.* (2000) and Liñán
40 and Chen (2009) was adopted in the present research as it tends to be a better predictor of
41 intention than a belief-based measure of attitude (Kolvereid and Isaksen, 2006) (Cronbach's
42 alpha=0.87).

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49 In the entrepreneurship literature, SN has been measured in two ways. First, the
50 multiple-item SN measure relies on the questions of what relatives, peers, colleagues and
51 significant others think about one's decision to start a business (Chen *et al.*, 1998; Krueger,
52 1993). Second, the answers to the above-mentioned questions may be adjusted by "motivation
53 to comply" (Kolvereid and Isaksen, 2006; Tkachev and Kolvereid, 1999). The former method
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3 was applied in the present study because it tends to demonstrate a relatively high predictive
4 power (Armitage and Conner, 2001), and this simpler measure helps to keep the questionnaire
5 as parsimonious as possible (Liñán and Chen, 2009). The measure of SN was computed as
6 the average of 3 items adopted from Liñán and Chen (2009) (Cronbach's $\alpha=0.78$).
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12 The measure of PBC was based on the aggregate measure consisting of 6 items
13 developed by Liñán and Chen (2009). However, two items were deleted. One of these two
14 items, "I am prepared to start a viable firm", was hard to translate into Russian without
15 distorting the original meaning. The other item, "I can control the creation process of a new
16 firm", represented a controllability statement, which distinguished the measure of PBC from a
17 general self-efficacy measure. Omitting this question was believed to provide better predictive
18 power, since self-efficacy is more clearly defined and relatively more strongly correlated to
19 intention (Armitage and Conner, 2001). PBC was calculated by averaging the responses to the
20 4 items (Cronbach's $\alpha=0.89$).
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33 The following question (7-point scale from 1 = totally disagree to 7 = totally agree) was
34 applied to measure the perceived availability of satisfactory employment opportunities: "I am
35 confident that if I tried, I would find a job such that I would not need any additional sources
36 of income". This measure captures the perceived ability to find a job providing a reasonable
37 salary. In order to validate this item, mean scores were compared across different
38 occupational alternatives. Unemployed and unemployable persons scored significantly⁵ lower
39 (mean 3.45) than those who were employed (mean 3.97). This result fits well with the
40 expectation that people who are employed believe that it is easier to find a job than those who
41 are not employed.
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53 All items are presented in Table 1, showing that there is a high degree of consistency
54 between the original formulation by Liñán and Chen (2009) and the items back-translated
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3 from Russian. The Cronbach's alphas reported by Liñán and Chen (2009) and those found in
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5 the present study are also very similar.
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Insert Table 1 about here

Several control variables commonly used in entrepreneurship studies were applied in the regression analysis. Education was measured according to the Russian system of education, ranging from elementary education to tertiary (university-level) education (from 1 to 7). Concerning entrepreneurial experience, the respondents were asked if they had ever been entrepreneurs. Family status was measured by dividing the respondents into two groups: 1) married/cohabiting and 2) single/divorced/widowed. The respondents' age was also used as a control variable. As is consistent with previous studies, the demographic control variables had little or no direct effect on intentions, fitting well with the predictions of the TPB (Liñán and Chen, 2009; Tkachev and Kolvereid, 1999).

To assess common method bias and discriminant validity, a principal component analysis was carried out. The results showed that common method bias was not a problem and that a satisfactory discriminant validity of the applied measures of attitude, SN, PBC, intentions and the availability of satisfactory employment opportunities was achieved.

Results

An investigation of moderating effects can be carried out in two different ways, namely by dividing the sample in two and by adding products representing interaction terms to the regressions. The results obtained from the former approach are easier to interpret, but unfortunately much information is lost by dichotomizing the moderator. Therefore, in the

1
2
3 present study the hypotheses are tested by adding interaction terms to the regressions. The
4
5 sample is then split in two to ease the interpretation of the findings and to show the
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7 moderating effect in diagrammatic form. Correlations between all the variables considered in
8
9 this study and descriptive statistics are given in Table 2. The only variable significantly
10
11 correlating with perceived availability of satisfactory employment opportunities was level of
12
13 educational. Not surprisingly, more educated respondents perceived it easier to find a job.
14
15 Entrepreneurial intention was negatively correlated with entrepreneurial experience, probably
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17 indicating that many people in Ukraine were forced into marginal survivalist-type
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19 entrepreneurship during the turbulent 1990s. Age and being married / cohabiting were
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21 negatively correlated with entrepreneurial intention.
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Insert Table 2 about here

A hierarchical regression was carried out on the entire sample of 276 respondents. The control variables were first entered into the regression, followed by the antecedents of entrepreneurial intentions. Finally, the control variables, the antecedents of intentions and the interaction terms were included. The results are shown in Table 3.

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Insert Table 3 about here

Among the control variables, only family status (married/cohabiting versus single/divorced/widowed) was significantly related to entrepreneurial intention. Single respondents were relatively more likely to report entrepreneurial intention, probably because

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2
3 of the absence of obligations associated with family life. Compared with the base model,
4
5 which included only the control variables, the TPB significantly enhanced R^2 and F statistics.
6
7 Attitude and PBC were found to be strong predictors of entrepreneurial intention, while SN
8
9 had no significant effect. The availability of employment opportunities had no significant
10
11 independent effect on intention.
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14 Before testing the hypotheses, a short recapitalisation of the hypotheses is in order:
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17 H1. The attitude – intention relationship is stronger when jobs are available.
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20 H2. The SN – intention relationship is stronger when jobs are scarce.
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23 H3. The PBC – intention relationship is stronger when jobs are available.
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26 In order to check for the moderating role of the availability of employment
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28 opportunities, interaction terms were added to the equations. This significantly improved both
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30 adjusted R^2 and F statistics. No significant interaction was detected for attitude and PBC,
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32 while the interaction between the availability of employment opportunities and SN was
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34 significant at $p \leq 0.005$.
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37 The sample was split into two groups in order to help the interpretation of the results.
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39 One group ($n_1=99$) included those individuals reporting that satisfactory employment
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41 opportunities were scarce (below 4) and the other group ($n_2=105$) included those who
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43 reported that satisfactory employment opportunities were present (5 and higher on the seven-
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45 point scale). Seventy-two respondents who answered “4” to this question were removed from
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47 the sample, reducing the number of respondents to 204. The respondents with many
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49 satisfactory employment opportunities reported slightly higher entrepreneurial intention than
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51 those with a few satisfactory employment opportunities (5.3 compared to 4.9, the difference is
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53 significant at $p \leq 0.001$).
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3 The TPB was able to successfully predict variations in entrepreneurial intentions for
4 both groups. The main difference between the two regression models is that in the case of few
5 satisfactory employment opportunities SN is a significant predictor, while in the case of many
6 satisfactory employment opportunities this variable is not important. This indicates that the
7 availability of satisfactory employment opportunities has a moderating role in the relationship
8 between SN and entrepreneurial intentions. The relationship between attitude and intention is
9 weaker for the respondents with low employment opportunities⁶, providing some support for
10 Hypothesis 1. However, the moderating effect was not detected in the previous test using
11 interaction terms. The relationships between PBC and intention are almost identical for the
12 respondents with low and high employment opportunities, implying that no support is found
13 for Hypothesis 3.
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Insert Table 4 about here

36 Figure 2 illustrates the relationships between SN and entrepreneurial intention in the
37 two groups. Trend lines crossing each other indicate the moderating role of the availability of
38 satisfactory employment opportunities. Supporting Hypothesis 2, entrepreneurial intention
39 increases with more favourable SN but at a greater rate for those respondents who have few
40 satisfactory employment opportunities (see Figure 2).
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Insert Figure 2 about here

58 Discussion and Conclusions

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3 The present research investigates entrepreneurial intentions among a novel sample of 276
4 officers in the Armed Forces of Ukraine who transferred into the reserve and undertook a
5 retraining programme designed by a Norwegian business school. The context of an Eastern
6 European country, suffering from the global economic crisis, is characterized by the limited
7 employment opportunities in the labour market. This study has explored how the TPB can be
8 applied in conditions where employment opportunities are scarce.
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17 As our empirical evidence has shown, the TPB explained a significant part of the
18 variation in entrepreneurial intention for individuals reporting both high and low availability
19 of satisfactory employment opportunities. In our sample, attitude and PBC played a similar
20 role for both groups of respondents. This contradicts the relevant hypotheses (H1 and H3) and
21 might indicate that the external environment, which dictates the number of available options,
22 has little or no effect on the internal drivers of entrepreneurial intention. While one's attitude
23 towards entrepreneurship and perceived ability to perform entrepreneurial tasks is rooted in an
24 individual's self-evaluation, SN is related to other persons. The analysis revealed that SN
25 played a relatively more significant role in the case of meagre employment opportunities.
26 When jobs are scarce, individuals have to rely on their relatives and friends to a greater
27 extent. This is especially true in the context of less developed economies that have been
28 severely hit by a global meltdown, when networks are thought to be critical for survival of
29 people who have failed to find a job.
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46 Irrespective of the alternative employment availability, the intentions of respondents in
47 the sample are influenced by the internal factors to the same degree. Thus, one may expect
48 that, at least over the short-term period, growing unemployment does not change a person's
49 internal world. Those who do not believe in their own ability to succeed as self-employed
50 (low PBC) and who dislike entrepreneurship (low attitude measures) will not alter their
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3 attitude when the economy falls into stagnation. However, in a severe crisis in the labour
4 market, people pull together and start listening to the opinions of important significant others.
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8 The moderating role of the availability of satisfactory employment opportunities may
9 explain why SN is often found to have no significant effect on intention in developed
10 economies such as the US (Kruger *et al.*, 2000) and Spain and Taiwan (Liñán and Chen,
11 2009), while the effect is significant in less developed countries such as Russia (Tkachev and
12 Kolvereid, 1999) and Malaysia (Choy *et al.*, 2005). In developed economies, the number of
13 options, such as organizational employment and social benefits, are available for the majority,
14 weakening the dependency on other people.
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24 The findings reported here may outline an important implication for specific training
25 programmes that provide support for personnel who are making the transition from military
26 service to the civilian workforce and that promote self-employment as an alternative means of
27 survival in developing nations such as Ukraine. On the one hand, attitude and PBC are strong
28 predictors irrespective of the available options, suggesting that the entrepreneurial intention is
29 at least to some extent determined by those factors that may be altered by teaching and
30 mentoring. Indeed, it may be anticipated that providing classes on practical aspects of
31 business founding and entrepreneurship will somehow bridge the gap between military and
32 entrepreneurial mindsets, mitigate the stress of adjusting to civilian life and augment the
33 officers' PBC. Promotion of self-employment as a respectable behaviour may also enhance
34 attitude. All this may ultimately lead to higher entrepreneurial intention. On the other hand,
35 the educational programmes may have a somewhat limited effect in conditions where
36 employment opportunities are scarce since SN, which is hard to alter in the short-run,
37 significantly and directly affects entrepreneurial intention.
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55 The present research has several limitations. First, the results of the analysis may be an
56 artefact of Ukrainian culture. Indeed, social or subjective norms may vary significantly
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3 between countries, hypothetically moderating the relationships between the variables
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5 considered by the TPB (Kruger *et al.*, 2000). In highly individualistic societies the moderating
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7 effect of availability of employment opportunities may be stronger than in collectivistic
8
9 cultures. In the case of high individualism, people are expected to cease to comply with the
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11 collective opinion as soon as multiple attractive opportunities become accessible. People in
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13 relatively collectivistic societies, on the contrary, may tend to act in accordance with
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15 subjective norms even when multiple behavioural alternatives are available. Thus, one of the
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17 intriguing avenues for future research may include testing if the moderating effect of
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19 employment opportunities on entrepreneurial intentions is relatively strong in *individualistic*
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21 *societies* under the conditions of *severe economic crisis*.
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26 Second, the present study focuses on intentions, while the effect of the availability of
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28 satisfactory employment opportunities on actual behaviour needs to be addressed in future
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30 studies. Third, this study has demonstrated that the TPB has significant explanatory power
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32 when applied to a novel sample of military personnel leaving service in Ukraine. However,
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34 more research is needed in order to comprehend the extent to which the results of this study
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36 may be generalised to other settings. No previous studies have compared military personnel
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38 with civilians when it comes to entrepreneurial intentions/behaviour, but it is known that
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40 military recruits are preselected with respect to certain personality traits (Jackson *et al.*, 2012)
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42 and that military experience has a long-lasting effect on the life course (Jackson *et al.*, 2012;
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44 Settersten, 2006). Therefore, more research would be invaluable in order to unravel contrasts
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46 between students, officers and other social groups.
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51 Furthermore, a single-item measure of employment opportunities was applied. More-
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53 advanced measures that still need to be developed may provide stronger results in the future.
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55 Finally, the dichotomous choice between full-time organizational employment and
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57 entrepreneurial career is definitely an oversimplification. It is, therefore, of great importance
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3 to develop a model that incorporates the variety of choices, spanning from unemployment to
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5 illegal economic activity, or a combination of several occupations, including both part- and
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7 full-time employment.
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Footnotes

¹ www.worldbank.org

² <http://www.ilo.org/global/lang--en/index.htm>

³ Organization for Security and Co-operation in Europe

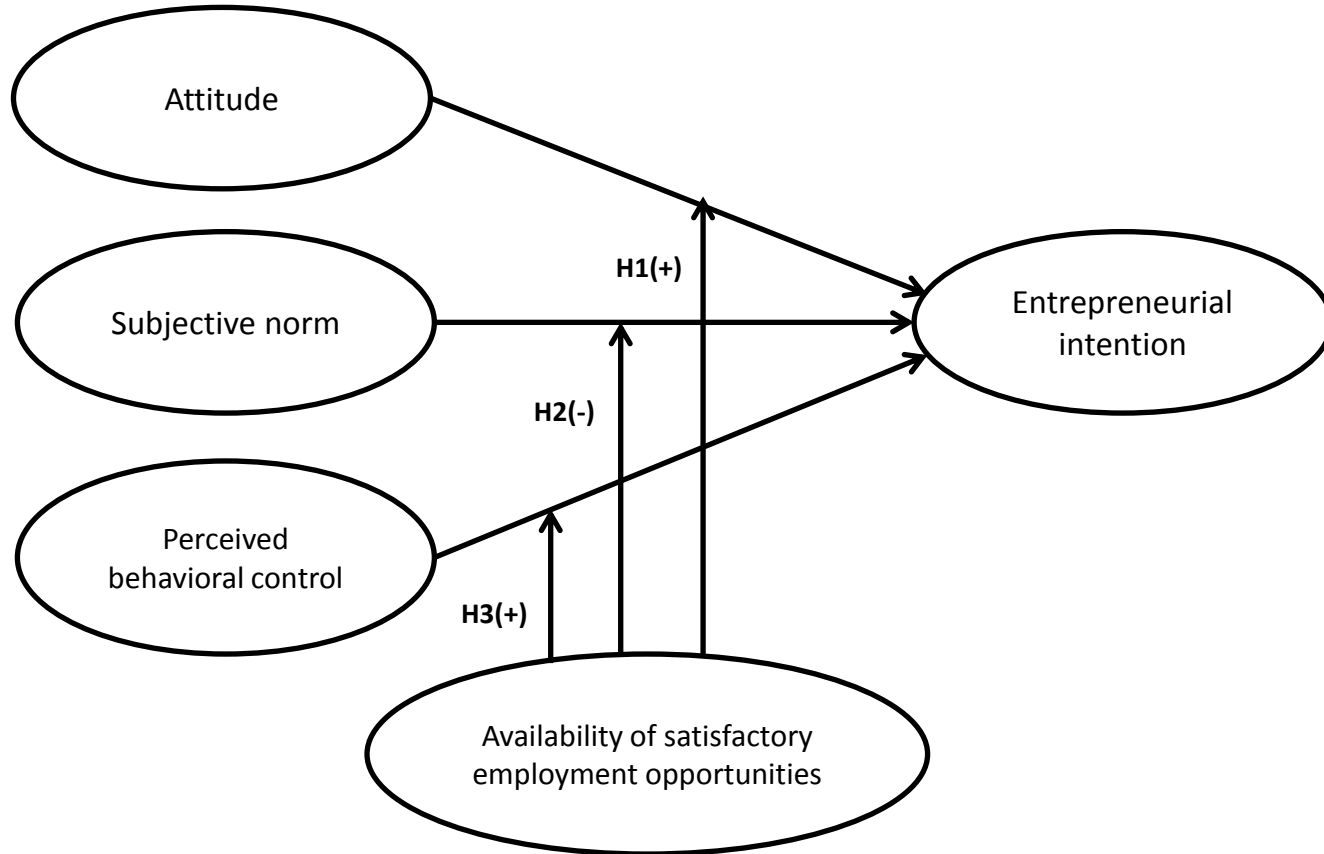
⁴ www.gemconsortium.org

⁵ Unemployable persons are those who are not members of the work force. T-test, $p \leq 0.001$

⁶ Additional tests revealed that the difference between the respective beta coefficients is significant at $p < 0.03$

Figure 1

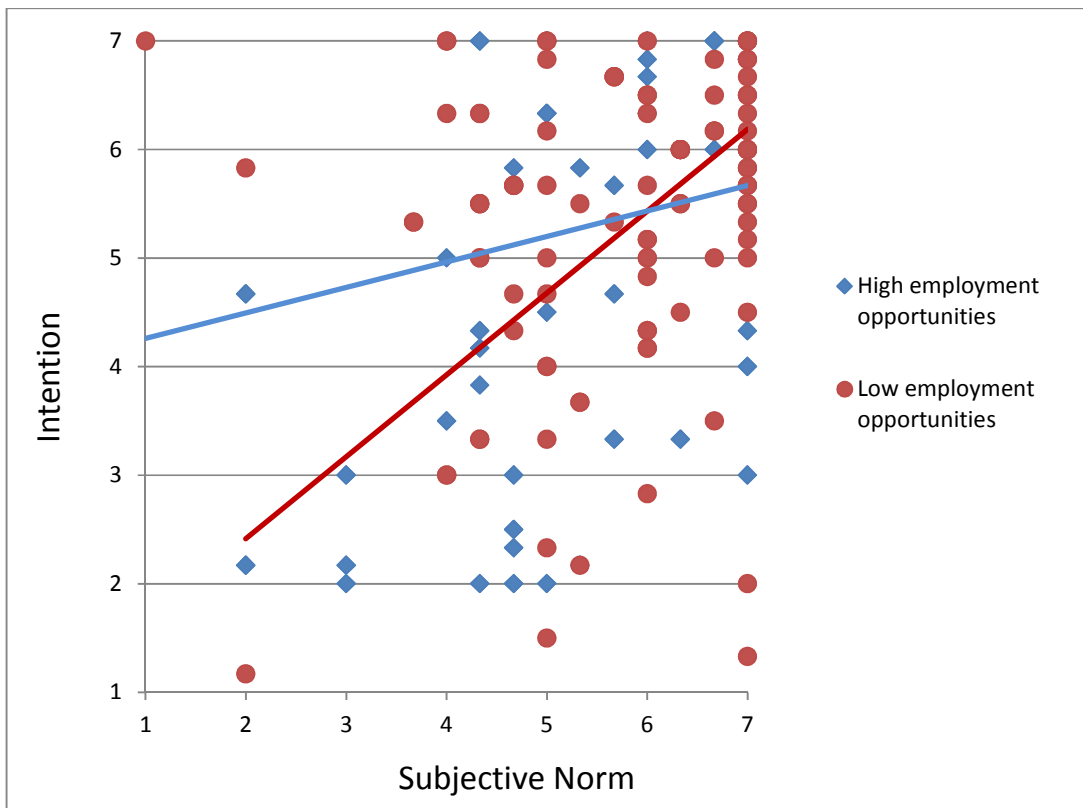
The Theory of Planned Behavior and availability of satisfactory employment opportunities: the research model



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Figure 2

The Relationships between the Availability of Satisfactory Employment Opportunities, SN and Entrepreneurial Intention



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Table 1

Questionnaire Items with Cronbach's Alphas

Construct with Cronbach's alphas	Original formulation	Back translated from Russian	Scale (from... to...)
Entrepreneurial Intention ($\alpha=0.94/0.95$)	I am ready to do anything to be an entrepreneur	I am ready to do everything to become an entrepreneur	Totally disagree (1) – totally agree (7)
	My professional goal is to become an entrepreneur	My professional goal is to become an entrepreneur	
	I am determined to create a firm in the future	I am determined to start up my business in the future	
	I will make every effort to start and run my own firm	I will do everything that I can to start up my own business	
	I have very seriously thought of starting a firm	I have already thought seriously about establishing my own business	
	I have the firm intention to start a firm some day	I have a firm commitment to establish my own business one day	
Attitude ($\alpha=0.90/0.87$)	Being an entrepreneur implies more advantages than disadvantages to me	I see more advantages than disadvantages in an entrepreneur's career	Totally disagree (1) – totally agree (7)
	A career as entrepreneur is attractive for me	A career as an entrepreneur is attractive to me	
	If I had the opportunity and resources, I'd like to start a firm	If I had enough money, I would establish my own business	
	Being an entrepreneur would entail great satisfaction for me	For me, a career as an entrepreneur would bring great pleasure	
	Among various options, I would rather be an entrepreneur	Among other opportunities, I would prefer a career as an entrepreneur	
Subjective Norm ($\alpha=0.77/0.78$)	If you decided to create a firm, would people in your close family approve on that decision?	If you decided to start up your own business, would your family members approve this decision?	Will totally disapprove (1) – will totally approve (7)
	If you decided to create a firm, would your friends approve of that decision?	If you decided to start up your own business, would your friends approve this decision?	
	If you decided to start a firm, would your colleagues approve of that decision?	If you decided to start up your own business, would your colleagues at work approve this decision?	
Perceived Behavioral Control ($\alpha=0.89/0.89$)	To start a firm and keep it working would be easy for me	There is no problem for me to start up my own business	Totally disagree (1) – totally agree (7)
	I know the necessary practical details to start a firm	I know all the practical details needed to start up own business	
	I know how to develop an entrepreneurial project	I know how to develop an entrepreneurial project	
	I am prepared to start a viable firm	I am ready to start up a viable business ^a	
	I can control the creation process of a new firm	I am able to control the process of creating a new business ^a	
If I tried to start a firm, I would have a high probability of succeeding	If I tried to start up my own business, the success probability would be great		
The availability of satisfactory employment opportunities	-	I am confident that if I tried, I would find a job such that I would not need any additional sources of income	Totally disagree (1) – totally agree (7)

Note: The table shows the original items as formulated by Linan and Chen (2009) and items after having been back-translated from Russian. The Cronbach's alphas are those reported by Linan and Chen (2009) and those found under the present circumstances. ^(a)- item excluded from analysis.

Table 2

Descriptive statistics and Pearson correlations (N=276)

	<i>mean</i>	<i>SD</i>	1	2	3	4	5	6	7	8
<i>Control variables:</i>										
1. Education	6.55	0.92	1							
2. Entrepr. experience†	0.19	0.39	.012	1						
3. Married	0.75	0.43	.042	.043	1					
4. Age	38.0	8.87	-.065	.007	.224**	1				
<i>TPB Intention predictors:</i>										
5. Attitude	5.53	1.18	.080	-.011	-.043	-.074	1			
6. SN	5.55	1.27	.115	.003	-.047	-.138*	.381**	1		
7. PBC	4.56	1.36	.070	-.130*	-0.093	-.101	.447**	.346**	1	
8. Perceived availability of satisfactory employment opportunities	3.94	1.78	.123*	-.070	.018	-.040	-.003	.065	.033	1
9. Dependent variable: Entrepreneurial intention	5.16	1.56	.105	-.123*	-.184**	-.122*	.603**	.373**	.666**	.022

* $p < 0.05$; ** $p < 0.01$.

† 0 = no, 1 = yes.

Table 3

Prediction of Entrepreneurial Intentions ($n=276$)

	Base model	Independent effects	Interaction effects
Education	0.08	0.03	0.03
Entrepreneurial experience	-0.12	-0.05	-0.04
Married/cohabiting	-0.16*	-0.11**	-0.12**
Age	-0,07	0.01	0.02
Attitude		0.38**	0.36**
SN		0.07	0.33**
PBC		0.45**	0.46**
Satisfactory Employment opportunities (SEO)			0.52*
SEO * Attitude			0.08
SEO * SN			-0.63**
SEO * PBC			-0.05
R ²	0.056	0.587	0.601
Adj. R ²	0.041	0.574	0.583
F Change	3.750**	80.360**	2.930*

* $p < 0.05$; ** $p < 0.01$.

For Peer Review

Table 4

Prediction of Entrepreneurial Intentions among People Who Have Few and Many Satisfactory Employment Opportunities ($n=204$)

	Few satisfactory employment opportunities	Many satisfactory employment opportunities
Control variables:		
Education	0.01	-0.05
Entrepr. experience	-0.06	-0.06
Married/cohabiting	-0.16*	-0.01
Age	0.06	-0.01
TPB:		
Attitude	0.43**	0.59**
Subjective norm (SN)	0.27**	-0.06
PBC	0.36**	0.31**
R ²	0,72	0,60
Adj. R ²	0,70	0,57
F	32,914**	19,679**

* $p < 0.01$; ** $p < 0.001$.