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**PSYCHOMETRIC PROPERTIES OF A QUESTIONNAIRE
MEASURING THE ANTECEDENTS OF ENTREPRENEURSHIP
EDUCATION INTENTION**

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Abstract

A limit of the questionnaires measuring Entrepreneurial Intention (EI) is the lack of a multidimensional vision of its antecedents. The definition of a multidimensional model of the main drivers affecting the intentions of aspiring entrepreneurs in building a start-up seems a fundamental milestone to overcome this pitfall. This paper aims to explore the internal consistency reliability of a new multidimensional questionnaire measuring the antecedents of EI and Entrepreneurial Education Intention (EEI). The tool consists in a self-administered online questionnaire that has been built in accordance with the Theory of Planned Behavior in entrepreneurship research. It includes 54 items adapted by others studies or created by the authors and it has been administered to college students and graduates (N = 70). Cronbach's Alpha and Confirmatory Factor Analyses (CFA) were performed using SPSS v23. The value of Cronbach's Alpha and the CFA confirmed the internal stability of the questionnaire, even if the post hoc diagnostic information forced the authors to remove some items with a low value of their standardized regression weights and to estimate some within-factor correlated errors to improve model fit. Although the number of subjects involved in the study was small, this pilot study shows a good internal consistency reliability of the questionnaire.

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1. Introduction

Entrepreneurs can have a huge economic impact on the socio-economic development of a country, due to their capability of moving resources, creating new jobs and generating product and process innovations. Recently, many European countries have promoted several public policies to support young students and graduates in building their own start-up (Von Graevenitz, 2010). Since the Entrepreneurial Intention (EI) is at the base of the individual decision to start an enterprise, this construct has been widely studied by scholars and it has been defined as the volition of creating new business (Engle et al, 2008). The choice of an individual to become an entrepreneur finds its motivational and cognitive roots on his volition to behave accordingly to his attitude and beliefs (Kautonen et al., 2013). EI has been widely studied adopting a cognitive framework called “Theory of Planned Behaviour” (TPB) (Ajzen, 1991) and the application of this framework on entrepreneurial field showed a high degree of robustiveness and validity, even across nation (Engle et al, 2008; Linan et al., 2009).

According to TPB, behavioural intention is the most effective predictor of a behavior (Bae et al., 2014; Ajzen, 2001), and it has been found out that its three main antecedents - theorized by Ajzen (1991) and called “personal attitude”, “subjective norm” and “perceived behavioral control” - positively affect the EI (Linan et al., 2009; Wee et al., 2014). These findings, together with the importance to assure a high level of entrepreneurial dynamics in a country, have encouraged scholars to explore new factors that can inhibit and foster the development of EI. From this point of view, Ajzen (2015) states that there is nothing in the TPB to preclude addition of new predictors in order to better account for the variance in behavioural intention, wishing TPB will be fine-tuned and tested in different countries and environmental contexts in order to verify its strength (Rise et al, 2010).

Connected to the field of study about the willingness to become an entrepreneur, another important topic refers to how an individual can effectively handle the difficulties associated with starting an entrepreneurial activity. The challenge is to better understand if the educational activities aimed to develop entrepreneurial skills and aptitudes, namely Entrepreneurial Education (EE), positively affect EI and the entrepreneurship performance outcomes, including success in terms of firm duration, financial performance and personal income from owned business (Martin et al., 2013; Bae et al., 2014).

Several studies have underlined the complex relationship between EE and EI, encouraging some authors to verify if attending at an entrepreneurial courses may change the EI of aspiring entrepreneurs and showing that EE can have a positive effect on individual beliefs or personal traits as, respectively, the perceived self-efficacy or the risk-taking propensity (Sanchez, 2013; Fayolle & Gailly, 2015; Rauch & Hulsink 2015). However, the meta-analysis conducted by Rideout and Gray (2013) shows that the causal relationship between EE and EI is not easy to confirm due to the lack of reliable measure to assess the explored constructs and a valid experimental design, hypothesizing that the small positive relationship between EE and EI is mainly affected by the pre-education behavioural intention (Von Graevenitz, 2010).

2. Problem Statement

Despite the growing number of studies exploring the relationship between EI and its main antecedents, actually there is not an integrated model that can explain the complexity of the phenomenon and, consequentially, no questionnaire have been developed in coherence with this multidimensional

perspective. Even the three antecedents already theorized by Ajzen (1991) have been considered as weak predictors of EI by some studies due to, according to Linan et al. (2009), a systematic use of powerless psychometric tools and instruments that, for example, try to measure EI using just one item. Moreover, many authors advocate for an expansion of the TPB model in entrepreneurial field suggesting to add more factors to adequately explain the variance of EI. This expansion can be achieved in two different ways: proposing to add contextual factors in TPB model; trying to identify and test other motivational and cognitive antecedents of EI (Rise et al., 2010).

With regard to the first way, Allini et al. (2017) tried to incorporate in the TPB model the perceived corruption as a contextual factor that can inhibit the development of EI in young aspiring entrepreneurs demonstrating that perceived corruption might have a detrimental effect on EI creating a culture of mistrust. Keat et al. (2012) openly reasoned about two categories of perceived obstacles that could negatively affect the intention of an aspiring entrepreneurs in starting a new firm: endogenous obstacles, linked to the beliefs showed by the individuals about their attitude and other personal characteristics; exogenous obstacles, linked to the individual perception about factors that can be seen as difficulties generated by the policies adopted by government (e.g. bureaucracy, lack of funds, etc.). This study demonstrates that these kind of obstacles could pose a serious threat to EI, discouraging aspiring entrepreneur to take the risk of building a start-up.

With regard to the second way, some factors can be viewed as proper antecedents of EI, being totally independent from the three ones showed in Ajzen's TPB. For example, some scholars have argued that Self-Identity (SI) should be taken into account in order to better predict a planned behaviour (Rise et al., 2010).

Although these studies allow to increase our knowledge about planned entrepreneurial behaviour they show only some portions of the construct, risking to misrepresent it and avoiding to take in consideration its complex nature.

3. Research Questions

We built a multidimensional questionnaire in accordance with the TPB in entrepreneurship research specifically focused on factors that can enhance or inhibit EI. Our assumption is that a multidimensional questionnaire with robust psychometric properties can properly expand knowledge about the TPB applied in the entrepreneurial field. The rationale of the questionnaire structure and the reasons why the authors included the proposed factors are reported below.

3.1. The Personal Attitude, Subjective Norm and Perceived Behavioural Control as Entrepreneurial Intention Antecedents

The concrete application of TPB in the entrepreneurial field has been a controversial matter, although recently the majority of studies seem to support the idea that entrepreneurial behaviour can be viewed as an intentional behavior and only some conceptual adaptation are required for being fully explained by TPB, especially for what concern the role of the three main antecedents of EI (Engle et al., 2008; Linan et al., 2009; Do Paco et al., 2011; Kautonen et al., 2013). Linan & Chen (2009) states that the perceived unreliability of the model can be attributed to errors of measurement especially referring to the

instrument used to assess the EI, since it has been observed that some studies used a single-item to assess it (Chandler & Lyon, 2001).

For what concerns the three independent antecedents of TPB applied to the entrepreneurial field, and for the purpose of this study, we can specify that:

- Personal Attitude (PA) can be viewed as the attractiveness towards entrepreneurship as a career or the degree to which an individual holds a positive or negative personal evaluation of entrepreneurship (Ajzen, 1991; Kautonen et al., 2013; Zhang et al. 2014). This factor is strictly connected to the expected outcomes of the behaviour (Ajzen, 1991). In the entrepreneurial context this antecedent has been strongly associated with EI (Montano & Kasprzyk, 2015; Di Paola et al., 2016)
- Subjective Norm (SN) is the factor that measures perceived social pressure and is strictly linked to one's background and cultural, political environment. Some authors found non-significant relation between SN and EI (Autio et al., 2001; Krueger et al., 2000). However, other studies demonstrated that SN could play an important role in explaining EI. For Example, Linan & Chen (2009) found out that SN, while regarding entrepreneurship, doesn't exert a direct effect on IE but rather indirect through the moderation of the level of PA and PBC while Kautonen, Gelderen & Fink (2015) concluded that SN has a direct effect on EI.
- Perceived Behavioral Control (PBC) is defined as the perception of the ease or difficulty of being an entrepreneur and is a factor that comprehends perceptions about one's self-efficacy and behavioural controllability (Linan et al., 2009). This factor has been rated as one of the strongest in explaining variability in EI (Krueger et al. 2000; Jung et al., 2001; Engle et al., 2008)

3.2. The Perceived Obstacles as Entrepreneurial Intention Antecedents

Aside from these three relations, some scholars argued that other exogenous variables should be taken into account when one is studying antecedents of EI, even the ones who possess an indirect effect (Zhang et al., 2014).

Recently, several authors added exogenous and contextual variables to the list of factors that can inhibit or enhance the EI, especially for what concerns the perception of an individual about taxes, funds, government's regulation, that can affect his decision to undertake an entrepreneurial career (Samuel et al., 2013; Fatoki, 2010; Neneh, 2014). These elements, that are independent of the young entrepreneurs' volition, can have a significant impact on EI as demonstrated by the work of Neneh (2014), where EI were greatly affected by endogenous and exogenous factors, in accordance with several previous research (Kautonen et al., 2011).

The role of these factors in affecting EI have been also suggested by Keat & Ahmad (2012) that clustered the factors that can hinder EI into two main categories: exogenous factors, as taxes, government support, strictly market regulation and perceived corruption; endogenous factor, referred to a personal

perception about his own attitudes or other personal characteristics as, for example, the fear of failure and taking risks.

3.3. The Self-Identity as Entrepreneurial Intention Antecedents

Some scholars have argued that Self-Identity (SI) should be taken into account in order to better predict a planned behaviour (Rise et al., 2010). Self-Identity construct refers to the social meaningful categories people utilize to describe themselves and it has been conceptualized as an independent behaviour intention (BI) predictor from the three components of the TPB, since it has different motivational roots (Rise et al., 2010; Carter, 2013).

Studies on the relation between SI and BI have collected mixed results ranging from an apparently no effect of SI on BI (Fekadu, & Kraft, 2001) to statistically significant results showing that SI has a strong effect on BI (Terry et al., 1999; Nigbur et al., 2010).

Rise et al. (2010) demonstrated that SI can be fully conceptualized as the fourth independent predictor for the TPB model because its ability to increase the predictive power of the model from the 35% to the 41% of the explained variance, and SI exerts a statistically relevant influence on EI. These results seem to be improved when the variable “subjects past experiences” is taken into account.

3.4. Entrepreneurial Intention and Entrepreneurial Education Intention

Although the relation between EE and EI has been one characterized by a path starting from Education and ending to Intention (Bae et al. 2014), some authors suggested that this relation can be better understood by applying a reverse causation pattern (Oosterbeek, Van Praag, & Ijsselstein, 2010; Von Graevenitz, Harhoff, & Weber 2010), demonstrating that students might choose to enrol in an entrepreneurial education course motivated by the intention to become an Entrepreneur. For the purpose of this study, we define Entrepreneurial Education Intention (EEI) as the volition to enrol in an entrepreneurial course of study.

So, why someone would choose to become an entrepreneurial student? It could be hypothesized that an entrepreneurial course can be seen by individual as an useful tool to reach the specific goal of becoming an entrepreneur. In this sense, the literature about the TPB showed a surrogate theory used to understand the adoption of a technology or instrument by no experience user, called Technology Acceptance Model (Rauniar et al., 2014). One of the key components of this theory, that has a significant impact on BI, is the individual’s perception about the usefulness of such a tool in order to reach a goal. That is, higher is the level of Perceived Usefulness (PU) of a tool, more likely the individual will adopt or start using this particular tool.

4. Purpose of the Study

[This pilot study aims to test the internal consistency reliability of a new multidimensional questionnaire measuring the antecedents of Entrepreneurial Intention and Entrepreneurial Education Intention. Moreover, this study aims for posing a further step in the direction of studying EI as a complex construct requiring a multidimensional approach.]

5. Research Methods

5.1. Subjects

The sample is composed by 70 college students and graduates at the University of Palermo (31% males and 69% females) and the 81% of the subjects is less than 29 years old. Most of them were students at the time of the questionnaire administration (60%), with poor or no working experience (80%) and currently unemployed or looking for a first job (90%). For what concerns the parents' role, the sample is characterized by a massive presence of dependent employment as job status for fathers (46%) and mothers (44%), while only a little percentage of parents are classified as self-employed (13% of fathers' and 3% of mothers).

5.2. The Questionnaire

In order to analyse the relationship between EI and EEI and their main antecedents, a questionnaire segmented in 14 sections has been developed, where 10 sections were related to likewise factors for a total of 56 items. The other 4 sections were related to likewise demographic clusters. Twenty items have been originally created by the authors and the overall 54 items have been measured with a seven-point likert-type scale, ranging from 1 (not agree at all) to 7 (absolutely agree).

After a systematic literature analysis about EE, EI and EEI, we decided to include some factors that can represent valid predictors of EI and EEI. The questionnaire sections were organized as follows:

- The first three sections are about demographic information as age, university course, previous work experience, etc;
- The fourth, fifth, sixth and seventh sections are about the three antecedents described in the TPB proposed by Ajzen (1991) plus the Entrepreneurial Intention scale. The items has been adapted from the Entrepreneurial Intention Questionnaire (EIQ) developed by Linan et al. (2009) called, respectively, Personal Attitude, Subjective Norm, Perceived Behaviour Control and Entrepreneurial Intention. The subjects were asked to indicate how much they agreed with several statements like: "In my opinion, being an entrepreneur implies more advantages than disadvantages", "My parents will accept my goal of becoming an Entrepreneur", "I know all the necessary details to build a start-up" or "I'll do everything to become an entrepreneur";
- The eighth section is composed of 5 items about the Self-Identity Perception. The item were created taking under consideration the Self-Identity Scale developed by Terry et al. (1999) and its application on TPB. The respondents were asked to indicate how much they agreed to the statements about consideration about themselves, keeping in mind their past. For example, they had to answer to the following item: "I consider myself having entrepreneurial characteristics";
- The ninth section is composed of 5 items and is about the Course Perceived Usefulness Factor. The items were created taking under consideration the questionnaire developed by Lu et al. (2009), and the respondents were asked to indicate how much they agreed with

statements, after reading a description about a well-prepared entrepreneurial course. For example, they had to answer to the following item: “The Entrepreneurial Course will allow me to have all the needed instruments and knowledge to become an Entrepreneur”.

- The tenth and eleventh sections are composed in total of 16 item adapted from the questionnaire developed by Keat et al. (2012) about the Perceived Endogenous and Exogenous Obstacles to become an entrepreneur. The respondents were asked to indicate their level of agreement to statements like: “I have very low business competencies”, “I’m afraid to fail” or to value how much they weight factors that can inhibit their entrepreneurial volition as “Bureaucracy”.
- The twelfth section is composed of 7 items about perception of corruption, as it can be thought as an exogenous obstacle. Authors have developed these items. The respondents were asked to honestly indicate their level of agreement to statements about entrepreneur’s behaviour in our territorial context. For example, they had to answer to the following item: “It’s very difficult to have success as an entrepreneur without being part of a lobby”.
- The thirteenth section is composed of 3 items and is about Entrepreneurial Education Intention. Authors have developed these items adapting the item from the EIQ questionnaire (Linan et al., 2009)). The respondents were asked to indicate their level of agreement to statements about volition to enrol in an Entrepreneurial Course in the next future. For example, they had to answer to the following item: “I’m firmly determined to enrol in an entrepreneurial course in the next future”.
- The fourteenth section is composed of 2 items and is about additional demographic variables, such as Parent’s Career and the subject’s perception of parent’s career in their own career’s choice. We included five possible professional conditions: Employed, Entrepreneur, Looking for a Job, Unemployed, Other.

Table 01 summarizes the factors of the questionnaire.

Table 01. The Factors of the questionnaire and the sources of their items (sections 4 - 13).

Factor	Nr. Item	Source
Personal Attitude (PA)	5	Adapted by Linan et al. (2009)
Subjective Norm (SN)	3	Adapted by Linan et al. (2009)
Perceived Behavioral Control (PBC)	6	Adapted by Linan et al. (2009)
Entrepreneurial Intention (EI)	6	Adapted by Linan et al. (2009)
Self Identity (SI)	5	Items proposed by authors taking in consideration the work of Taylor et al. (1999), trying to connect Self-Identity perception to Entrepreneurial Context.
Perceived Usefulness (PU)	5	Items proposed by authors taking in consideration the work of LU et al. (2009)
Perceived Obstacles Endogeneous	6	Adapted by Keat et al. 2012
Perceived Obstacles Exogeneous	10	Adapted by Keat et al. 2012
Perceived Corruption	7	Items proposed by authors
Entrepreneurial Education Intention	3	Items proposed by authors taking in consideration the work of Linan et al. (2009)

5.3. The Procedure

The subjects were asked to answer the questions through an online questionnaire. The data has been analysed by IBM’s SPSS software v.23 and its expansion Amos v.23 to produce some descriptive psychometric statistics, a Cronbach’s Alpha analysis and a confirmatory factor analysis.

6. Findings

The following are the main psychometric characteristics of the proposed questionnaire.

6.1. The descriptive statistics and Cronbach’s Alpha of the questionnaire scales.

Table 2 shows the mean, standard deviation and the Cronbach’s Alpha value for each factors of the questionnaire.

Table 02. Descriptive Statistics and Cronbach’s Alpha of the questionnaire factors.

Factors	Mean	SD	Cronbach’s Alpha
Personal Attitude (PA)	4,94	1,41	.93
Subjective Norm (SN)	5,19	1,39	.85
Personal Behavior Control (PBC)	3,45	1,42	.94
Entrepreneurial Intention (EI)	4,29	1,64	.97
Self-Identity (SI)	3,22	1,38	.85
Course Perceived Usefulness (CPU)	4,97	1,52	.97
Perceived Obstacles endogenous (PO_END)	2,65	1,08	.77
Perceived Obstacles exogenous (PO_EXO)	5	1,11	.89
Perceived Corruption (PC)	3,87	1,23	.88
Entrepreneurial Education Intention (EEI)	4,80	1,82	.96

In general, the descriptive statistics did not indicate a polarization on one tail of the normal curve for any factors and the standard deviation values show that there is an acceptable variability in the test scores of the sample.

6.2. The internal consistence of the questionnaire scales.

To test the internal consistency of the new scales, a reliability analysis and a confirmatory factor analysis has been conducted. We launched a reliability analysis using the Cronbach’s Alpha Coefficient. In accordance with Nunnally (1978), we consider a Cronbach’s Alpha value equal or greater than 0.70 as an acceptable reliability coefficient, although others sometimes use lower thresholds. The confirmatory factor analysis (CFA) was performed using the statistical program AMOS 23.0 (Arbuckle, 2014).

From the point of view of the questionnaire reliability (table 2), our factors show an high internal consistence (values ranging from .77 to .97). It should be noted that we were forced to erase two items in total from our questionnaire, one from Self-Identity factor and one from Perceived Obstacles, since the reliability analysis showed that they were lowering the Cronbach’s alpha value, indicating that there was something wrong. This has happened probably because these items were inversely polarized about their

meaning on respect the other ones. This semantic inversion could probably cause a bias in the respondents' cognitive evaluation about such items.

The hypothesized factor structure was compared with the empirical data, allowing each item to saturate on a single factor, and by setting to zero all other factor loadings. Covariance between the factors were free parameters. To fix the measurement scale of each factor, their variance was set at 1.0. The goodness of fit of the model was verified by the following indices: χ^2 ; the ratio between χ^2 and the degrees of freedom of the model (χ^2/gl); the goodness of fit index (GFI); the adjusted goodness of fit index (AGFI); the root mean square error of approximation (RMSEA).

Table 03 shows the main Indices of Goodness of Fit of the model for the Questionnaire.

Table 03. Indices of Goodness of Fit of the model for the Questionnaire (N=70)

Factor	Model	χ^2	gl	χ^2/gl	GFI	AGFI	RMSEA	p
PA	A	8,865	5	1,773	.954	.861	.10	.115
SN	A	0	0	0	NT	NT	NT	NT
PBC	A	55,215	9	6,135	.8	.532	.27	.000
	B	2,694	2	1,347	.982	.908	.07	.260
EI	A	17,972	9	1,997	.928	.832	.12	.036
SI	A	13,872	5	2,774	.924	.771	.16	.016
	B	5,294	2	2,647	.964	.818	.15	.071
CPU	A	15,955	5	3,191	.911	.732	.18	.007
	B	0,947	3	0,316	.995	.973	.00	.814
PO_END	A	16,439	9	1,827	.929	.833	.11	.058
	B	5,533	4	1,383	.971	.891	.07	.237
PO_EXO	A	87,98	35	2,514	.805	.694	.15	.000
	B	51,749	31	1,669	.877	.781	.10	.011
PC	A	56,595	14	4,042	.809	.617	.21	.000
	B	32,4	11	2,945	.891	.722	.17	.001
EDI	A	0	0	0	NT	NT	NT	NT

The first factor is the Personal Attitude (PA). The Cronbach's Alpha value is .93 (F = 22,765; p = .000), and the corrected item-total correlation range between 0.56 and 0.88. As Table 03 shows, the model fit to the data in a satisfactory way. The analysis of the standardized regression weights range between .567 and .940 and the standard errors are acceptable (range between .09 and .23).

The second factor is the Subjective Norm (SN). The Cronbach's Alpha value is .85 (F = 3.319 p = 0.039), and the corrected item-total correlation range between 0.69 and 0.78. As Table 03 shows, it hasn't been possible to test the model fit to the data since we have three variables measuring a single latent variable, then the empirical data are three variances and three covariances. Since the parameter to be estimated are three error variances and three factor loadings, the degrees of freedom is zero. The analysis of the standardized regression weights range between .764 and .911 and the standard errors are acceptable (range between .14 and .15).

The third factor is the Perceived Behavioral Control (PBC). The Cronbach's Alpha value is 0,94 ($F = 9,000$; $p = .000$), and the corrected item-total correlation range between .72 and .90. As Table 03 shows, the model fit to the data in a not satisfactory way. The model was therefore modified (Model B) by taking steps, based on indications from the post-hoc diagnostic procedure (Modification Indices - MI). Two items have been deleted since they show high errors covariance. These modifications improved the fit between the model and the data in a satisfactory way. The analysis of the standardized regression weights range between .567 and .940 and the standard errors are acceptable (range between .09 and .23).

The fourth factor is the Entrepreneurial Intention (EI). The Cronbach's Alpha value is .97 ($F = 13,681$ $p = .000$), and the corrected item-total correlation range between .81 and .95. As Table 03 shows, the model fit to the data in a satisfactory way. The analysis of the standardized regression weights range between .819 and .977 and the standard errors are acceptable (range between .08 and .11).

The fifth factor is the Self Identity (SI). The Cronbach's Alpha value is .85 ($F = 34,740$ $p = .000$), and the corrected item-total correlation range between .49 and .84. As Table 03 shows, the model fit to the data in a not satisfactory way. The model was therefore modified (Model B) by taking steps, based on indications from the post-hoc diagnostic procedure. One item has been deleted since it show a very low standardized regression weight (.053). These modifications improved the fit between the model and the data in a satisfactory way. The analysis of the standardized regression weights range between .819 and .977 and the standard errors are acceptable (range between .08 and .11).

The sixth factor is the Course Perceived Utility (CPU). The Cronbach's Alpha value is .97 ($F = 3,667$ $p = .006$), and the corrected item-total correlation range between .88 and .94. As Table 03 shows, the model fit to the data in a not satisfactory way. The model was therefore modified (Model B) by taking steps, based on indications from the post-hoc diagnostic procedure (Modification Indices - MI). An estimation of some within-factor correlated errors covariance have been added. These modifications improved the fit between the model and the data in a satisfactory way. The analysis of the standardized regression weights range between .886 and .977 and the standard errors are acceptable (range between .05 and .07).

The seventh factor is the Perceived Obstacles Endogenous (PO_END). The Cronbach's Alpha value is .77 ($F = 7,728$; $p = .000$), and the corrected item-total correlation range between .40 and .64. As Table 03 shows, the model fit to the data in a not satisfactory way. The model was therefore modified (Model B) by taking steps, based on indications from the post-hoc diagnostic procedure. One items have been deleted since it show a very low standardized regression weight (-.026). These modifications improved the fit between the model and the data in a satisfactory way. The analysis of the standardized regression weights range between .312 and .869 and the standard errors are quite acceptable (range between .18 and .37).

The eighth factor is the Perceived Obstacles Exogenous (PO_EXO). The Cronbach's Alpha value is .89 ($F = 21,810$; $p = .000$), and the corrected item-total correlation range between .51 and .74. As Table 03 shows, the model fit to the data in a not satisfactory way. The model was therefore modified (Model B) by taking steps, based on indications from the post-hoc diagnostic procedure (Modification Indices - MI). An estimation of some within-factor correlated errors covariance have been added. These modifications improved the fit between the model and the data in a satisfactory way. The analysis of the

standardized regression weights range between .535 and .816 and the standard errors are quite acceptable (range between .14 and .48).

The ninth factor is the Perceived Corruption (PC). The Cronbach's Alpha value is .88 ($F = 19,941$; $p = .000$), and the corrected item-total correlation range between .43 and .77. As Table 03 shows, the model fit to the data in a not satisfactory way. The model was therefore modified (Model B) by taking steps, based on indications from the post-hoc diagnostic procedure (Modification Indices - MI). An estimation of some within-factor correlated errors covariance have been added. These modifications improved the fit between the model and the data in a satisfactory way. The analysis of the standardized regression weights range between .540 and .828 and the standard errors are quite acceptable (range between .17 and .44).

The tenth factor is the Entrepreneurial Education Intention (EDI). The Cronbach's Alpha value is .96 ($F = 9,421$; $p = .000$), and the corrected item-total correlation range between .87 and .92. As Table 03 shows, it hasn't been possible to test the model fit to the data since we have three variables measuring a single latent variable, then the empirical data are three variances and three covariances. Since the parameter to be estimated are three error variances and three factor loadings, the degrees of freedom is zero. The analysis of the standardized regression weights range between .889 and .965 and the standard errors are acceptable (range between .08 and .17).

7. Conclusion

The study show that the questionnaire possesses a substantial internal consistency reliability. The adjusted internal goodness of fit indexes (AGFI) range between .72 and .97 and the root mean square error of approximation (RMSEA) values are between .07 and .17, after testing a second model (model B) of some factors. Moreover, the high values of the standardized regression weights indicate a good level of predictive validity of the questionnaire. Finally, as cited before, the reliability analysis performed utilizing the coefficient Cronbach's alpha in conjunction with the item-scale correlation coefficient showed that the items seem to measure the latent variable as a whole. It should be noted, though, that while the study results show a good level of internal consistence, indicating that there is an acceptable similarity between our empirical data and the ones hypothesized by our model of EI and EEI antecedents, the transferability of these results is limited due the small number of subjects of the sample ($n=70$). This condition has certainly affects the generalizability of this pilot study. More researches, possibly with larger samples, are needed to test the questionnaire psicometric characteristics. This study can be viewed as a steps into a direction of handling EI and EEI as multidimensional construct improving our knowledge about entrepreneurial career choice.

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