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Exploring the factors promoting entrepreneurial intentions among female university students¹

Abstract:

Purpose: The purpose of this study is to examine the impact of the antecedents of female students' intention to start a business by extending the Theory of Planned Behavior with their individual experience and knowledge about entrepreneurship.

Design/Methodology: A survey was conducted among female students of Technological Education Institute of Athens, Greece. Structural Equation Modeling was used to analyze and examine the relationships among the variables included into the proposed conceptual framework.

Findings: The results present a robust relationship between Personal Attraction (PA) and Entrepreneurial Intention (EI) and also between, Perceived Behavioral Control (PBC) and EI. Furthermore, Social Norms and Valuations impact on EI directly and indirectly, through their effect on PA and PBC. In terms of individual differences, familiarity with entrepreneurs' society appears to have an indirect effect on EI through PA and PBC, while self-employment experience has an impact on PBC only. Finally, female student working experience presents no influence on EI.

Practical implications: In an effort to promote entrepreneurship among young females, policy makers ought to consider ways to increase PA and PBC, making business ownership and self-employment more desirable and feasible to them. In terms of individual differences, family members, or mentors, or other significant to the person people, from the industry or the academia, similarly as self-employment experience, can also play an important role in the same respect.

Originality/value: This is the first study, to our knowledge, to consider female student entrepreneurial intention in Greece and the first one to use the theory of Planned Behavior in this particular context. The divergence among the findings of other similar studies makes the need for studying each individual country imperative and this is the gap this study attempts to close

Keywords: Female entrepreneurial intentions, Personal attraction, Social norms, social values, Perceived behavioral control, Theory of planned behavior, Female students, Individual differences, Individual experiences

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1. Introduction

In the face of a continued mass transfer of jobs from the Western to the Eastern hemisphere and with the threat of higher rates of unemployment looming, academics and policy makers in Europe are increasingly concerned with the low rates of business start-ups (The Economist, 2012). New start-ups, especially the dynamic ones, with fast growth potential, are according to most economists the long-term solution to the unemployment problem, since these organizations tend to recruit their staff locally, in addition to creating income and boosting the local economies in various ways (Engle et al., 2010).

While governments are trying to implement policies to foster entrepreneurship, academics are focusing, at a more detailed or micro level, on more intricate issues that affect business creation (Audretsch, 2012). One strain of entrepreneurship research examines entrepreneurial intentions especially among young adults, since, according to a large body of research, intentions are the best predictor of behavior. However, this may not be the case in some situations and it is hard to pinpoint whose intention will translate to behavior and whose will not (Ajzen, 2005; Armitage and Conner, 2001; Krueger et al., 2000).

Although, scientists from a variety of disciplines, concurring on the import of entrepreneurship, have investigated the issue from various perspectives, in this study a behavioral science approach is taken, focusing on the identification of factors (antecedents) affecting entrepreneurial intention and other variables such as demographics that may affect these antecedents and intention itself. Behavioral science has made a serious contribution in understanding why people start a business and how they go about doing that (Audretsch, 2012). There are some scholars however, questioning this contribution, arguing that the predictive power of existing intention models is not a strong one and it becomes even less relevant when the prediction attempts to relate intention with action (Audet, 2004). Katz's and Gartner's study (1988) found that only 10 of 33 people with self-employment intention have actually started a business within a 5 year period. In spite of Katz's and Gartner's findings there appears to be an increasing interest in studying entrepreneurial intentions, including new variables added in older models, considering the effects of socio-cultural particularities and using new methodologies introduced from other disciplines (Schlaegel et al., 2013; Shinnar et al., 2012).

The present study will employ the Theory of Planned Behavior (TPB), one of the most valuable tools available, to investigate entrepreneurial intention among Greek university students (Krueger et al., 2000; Armitage and Conner, 2001). The study comes at a critical juncture in Greece's economic history, with the country facing her deepest economic crisis since WWII and the socio-economic system in disarray, among the top priorities of the country's political leadership, as well as the European Union one, is to remedy the situation through the development of greater Entrepreneurial Intention (EI) among the young people and especially students. The purpose of this study is to shed light to the level of entrepreneurial intention among third and fourth year Greek female students, given that their studies will soon come to an end and they will have to search for a job in a stagnant market where youth unemployment is over 60% and total official unemployment in 2013 is over 27% (OECD, 2013). A second aim of this study is to close the gap created by the lack of studies measuring Greek student EI in a comparable way with other studies i.e. using a similar methodology, within the context of the TPB. The prevailing view among researchers of EI supports the notion that, no single model to date can predict equally well intention in all kinds of settings, more so in different national cultures (Engle et al., 2010; Schlaegel et al., 2013). This becomes evident in studies using samples from multiple countries, reporting widely varying findings, in spite of their using the same measures (Engle et al., 2010; Heuer and Linan, 2013; Pruett et al., 2009; Iakovleva, T., Kolvereid, L. and U. Stephan, (2011); Shinnar et al., 2013). The findings of the study are expected to have serious implications for policy-makers, in their efforts to make start-up creation easier and for academics, in helping understand where the EI stands and how to improve it.

2. Literature Review and research hypotheses

The Theory of Planned Behavior is one of the most frequently used, on a variety of behavior-related issues, including the prediction of the entrepreneurial intention. Social scientists from a variety of disciplines, mostly from sociology, social psychology and psychology, have found TPB a well validated theory, supported in many studies, regardless of instruments used for the measurements of the basic variables and their inter-relationships. This model has been adapted to study the intention to start a venture (Krueger, 1993; Krueger et al., 2000; Kolvereid, 1996; Fayolle and Gailly, 2004). In this sense, an entrepreneurial intention model would argue that individuals make their firm-creation decision based on three elements (Liñán, 2004): his/her personal attitude

towards entrepreneurship, the social norms regarding that career option, and his/her perceived behavioral control.

A major challenge for the researchers of entrepreneurial intention is the lack of consensus in finding a set of specific variables of cultures or countries (or even circumstances) affecting EI. This is highly visible in the findings reported, with samples coming from different countries, even when the same instrument is used to collect data (Pruett et al., 2009; Engle et al., 2010). The latter study contains data collected from 12 countries, using the same methodology, found social norms to be a significant predictor of EI, as opposed to the majority of studies published that report a limited or no significant relationship between the two variables. They also found personal attitudes to be a significant EI predictor in 6 countries and PBC in 7 countries. The majority of the related research has reported both these variables as strong predictors of EI.

Another issue that stands out from a thorough review of the extant literature is that, in most cases the model proves to be a useful tool in predicting intention to behave and further actual behavior. Kim and Hunter (1993) in a meta-analysis of more than 100 studies found an average correlation of attitude to intention 0.65 and intention to behavior 0.46. Similarly, Armitage and Conner (2001), in a meta-analysis of 185 studies found that the TPB model explained 39% of the variance in intention, and 27% in behavior. In another meta-analysis by Sheeran (2002), a correlation of 0.53 was found, indicating a strong link between the two variables (Ajzen, 2005). Nevertheless, Audet (2004) raised the issue that, although intention does not change easily, the circumstances may change in the individual's environment, or significant events may occur in the person's life that can have an impact on the intentions, especially over relatively long periods of time. In Katz's and Gartner's study (1988), over a five year period 10 people of 33 initially intended to seek self-employment, did so, at some point. Nabi et al. (2010) also questioned the predictive ability of intention models in a study involving over 8000 students.

According to the Theory of Planned Behavior, a strong relationship would exist between the intention to be an entrepreneur, and its effective performance. Intention becomes the fundamental element towards explaining behavior. It indicates the effort that the person will make to carry out that entrepreneurial behavior (Liñán, 2004; Ajzen, 1991). And so, it captures the three motivational factors that influence behavior (Ajzen, 1991) including:

Personal Attitude (PA) to entrepreneurship is one the most important variables in predicting EI. Several studies reported strong significant relationships between EI and PA, (i.e. favorableness of it), or “Desirability” in the model proposed by Shapero and Sokol (1982). Ajzen (1991) reports very strong relationships between attitude and intention to behave, in a large number of issues studied. His findings have been corroborated in many studies on the subject of entrepreneurial behavior (Van Gelderen et al., 2008; Zhao et al., 2010; Armitage and Conner, 2001; Shook and Bratianu, 2010; Gird and Bagraim, 2008; Kolvereid, 1996, Liñán and Chen, 2009; Audet, 2004). Some of the researchers found a direct, strong relationship between PA and entrepreneurial intention (Armitage and Conner, 2001; Krueger et al., 2000; Van Gelderen et al., 2008), while others noted an indirect link between the two concepts, mostly with PA mediating the effect of social norms (Heuer and Linan, 2013, Guerrero et al., 2008; Ajzen, 2005).

Perceived Behavioral Control (PBC) is another very important variable in predicting EI and behavior. Researchers vary in their use of the term and frequently use the terms PBC, self-efficacy and Internal Locus of Control interchangeably, or with little clarification of the differences between these terms (Krueger et al., 2000). Most studies however, tend to avoid the Locus of Control use and opt for the PBC and self-efficacy constructs which are most compatible with one another (Engle et al., 2010; Ajzen, 1991; Schlaegel et al., 2013). Van Gelderen et al. (2008) using, self-efficacy found a strong predictive power for that variable. Harris and Gibson (2008) and Armitage and Conner (2001) and Pruett et al. (2009), similarly found a significant relationship between EI and PBC or self-efficacy. In a multicultural study by Engle et al. (2010), self-efficacy was found to significantly relate to EI only in 7 of the 12 countries investigated. All in all, the PBC construct is among the strongest predictors of EI together with attitude, according to researchers and almost invariably is reported to relate to EI (Ajzen, 2005).

The third variable, the social norms (SN), is a basic element of the TPB, aiming to assess the impact of the social surroundings of the individual on his/her intention to start a business. The focus in this case is on the parents, the friends and important others (such as mentors) who may promote or disapprove of the idea of the individuals taking entrepreneurial action. Some studies found support for the notion of social norms directly affecting EI (Pruett et al., 2009; Engle et al., 2010, in all of the 12 countries examined in their study; Heuer and Liñán, 2013; and Van Gelderen et al., 2008). Shook and Bratianu (2010), found a negative relationship between SN and EI, while Krueger et

al. (2000) and Armitage and Conner (2001) found a weak link between the two variables. Finally, Ajzen (2005) and Guerrero et al. (2009) found an indirect effect of social norms and valuations on EI with the mediation of attitudes and PBC. The norms, when supportive, tend to promote a favorable attitude toward entrepreneurship (PA) and also can increase the PBC or the self-efficacy, impacting thus EI. Zahra et al. (1999) considered the role of culture through social valuation in combination with social norms in determining their impact on entrepreneurial behavior. For this reason Guerrero et al. (2009) proposed a second-order construct, named Social Norms and Valuations (SNV), to include both norms and valuations as its sub-dimensions. The current study draws upon Guerrero et al. (2009) and conceptualizes social norms and valuations as a second-order reflective construct having social norms and social valuations as its first-order subdimensions.

Another important issue to be investigated in this study is how several situational or “demographic” factors, known as individual differences, are affecting entrepreneurial intentions (Lee and Wong, 2004; Liñán and Chen 2009). Specifically, greater knowledge of different entrepreneurial aspects will probably contribute to more realistic perceptions about the entrepreneurial activity (Ajzen, 2002), thus influencing intentions indirectly. The relevance of experience has been widely highlighted, especially for the increased knowledge it provides (Cooper, 1985, 1993). In general, experience and greater knowledge will also directly provide a greater awareness about the existence of that professional career option (Liñán, 2004), as may be inferred by the importance attached to the labor experience (LE), the existence of role models (RM), and the self-employment experience (SEE) respectively (Liñán and Chen, 2009; Nasurdin et al., 2009). These elements would have an influence on PBC and possibly on personal attraction as well (Scherer et al., 1991; Liñán and Chen, 2009). Therefore, it might be expected that experience and entrepreneurial knowledge would have a distinct and significant effect on the antecedents of intention.

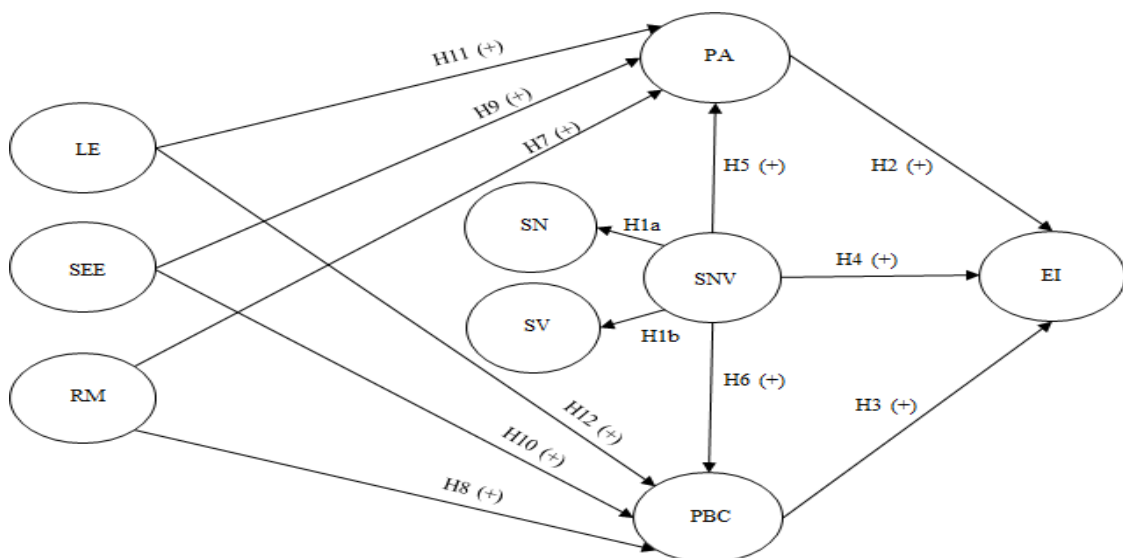
Based on the preceding analysis the following hypotheses are proposed:

- H1: Social Norms and Valuations are represented as a second-order construct having Social Norms (H1a) and Social Valuations (H1b) as its sub-dimensions.
- H2: The Personal Attitudes toward entrepreneurship will be positively related to Entrepreneurial Intention.
- H3: Perceived Behavioral Control will be positively related to Entrepreneurial Intention.

- H4: The Social Norms and Valuations will be positively related to Entrepreneurial Intention.
- H5: The Social Norms and Valuations will be positively related to Personal Attitude toward entrepreneurship.
- H6: The Social Norms and Valuations will be positively related to Perceived Behavioral Control.
- H7: Role model will be positively related to Personal Attraction toward entrepreneurship.
- H8: Role model will be positively related to Perceived Behavioral Control.
- H9: Self-employment experience will be positively related to Personal Attitude toward entrepreneurship.
- H10: Self-employment experience will be positively related to Perceived Behavioral Control.
- H11: Labor-experience will be positively related to Personal Attitude toward entrepreneurship.
- H12: Labor-experience will be positively related to Perceived Behavioral Control.

The model representing the aforementioned relationships between the seven constructs is illustrated in Figure 1.

Figure 1: Proposed model (LE-Labor experience; SEE-Self-employment experience; RM-Role model)



3. Research Methodology

3.1 Measures of research constructs and questionnaire development

A structured questionnaire was employed to collect data from a Greek university's students. Likert scales (1–7), ranging from “strongly disagree” to “strongly agree” were used for all belief items, to ensure statistical variability among survey responses for all items measured. The items of the questionnaire were adapted from existing and well tested scales offered by the extant literature. In particular, the scales for measuring entrepreneurial intentions (EI) and personal attitude (PA) are the ones used by Solesvik, Westhead, Kolvereid and Matlay (2012), perceived behavioral control (PBC) and perceived social norms (SN) were adapted from the instrument developed by Liñán and Chen (2009) while perceived social valuations (SV) were adopted from the study of Guerrero et al. (2009). Finally, the items used to gauge role models were retrieved by Autio et al. (2001).

In order to maintain the technical and conceptual equivalence of these instruments, a translation and back-translation strategy was applied during the development of the Greek version of the questionnaire. Finally, a factor analysis was performed on the data collected from a pilot study. The results were satisfactory, given that the five expected factors corresponding to the six intended constructs clearly emerged and all factors' Cronbach's alpha values were well above the commonly accepted threshold value of 0.70.

3.2 Data collection and sample profile

The study's fieldwork was carried out through an online survey, aimed at third and fourth year female students at the Technological Educational Institute of Athens. An online questionnaire was posted on the internet using Google_Docs facilities. To reach participants, a 'snowball' data collection technique was used. 10 appropriately trained students were used to approach 50 individuals each. The data were collected during November and December 2011. During the field study period, 500 persons were randomly approached by the interviewers. Finally, 399 usable, complete responses were obtained. The sample size is considered adequate. This view is backed by Struwig and Stead (2001) who state that if the sampling process has been correctly followed, then sample sizes of 150-200 can provide an acceptable reflection of the population.

The descriptive statistics of the respondents' demographics are as follows: of the 399 respondents, 96% were in the 18-24 age group, 30% were from the field of business administration, 56% from the field of health care sciences and 14% from the field of

engineering and technology. In terms of employment's background, 50% had work experience and 22% had self-employment experience.

4. Data analysis and results

The method of partial least squares (PLS) analysis (Gefen et al., 2000), an implementation of structural equation modeling (SEM), was applied to test the measurement model, to determine the internal consistency, reliability and construct validity of the multiple-item scales used to operationalize the study variables. PLS is a multivariate technique that helps in constructs' testing of the psychometric properties of the scales used to estimate the parameters of the structural model (Fornell, 1987). PLS and LISREL, in general, are the most widely used techniques for SEM. In this study PLS was preferred to LISREL because it fits both exploratory and confirmatory research, places less restriction on the data and requires smaller sample sizes.

The data analysis employed a two-phase approach suggested by Anderson and Gerbing (1988) in order to assess the reliability and validity of the measures before using them in the research model. The first phase includes the analysis of the measurement model, while the second phase examines the structural relationships among latent constructs.

4.1 Validation of the measurement scale

The test of the measurement model involves the estimation of internal consistency reliability as well as the convergent and discriminant validity of the study constructs, which indicates the strength measures used to test the proposed model (Fornell, 1987). As shown in Table 1, all reliability measures are well above the recommended level of 0.7 as an indicator for adequate internal consistency (Hair et al., 1995). The latent constructs also show adequate convergent and discriminate validity. Based on Fornell and Larcker (1981), convergent validity is adequate when constructs present an average variance extracted (AVE) which is bigger than 0.5. Convergent validity can also be verified when items loading on their associated factors are well above 0.5, which is true in our case (Hair et al., 1995).

Table 1: Descriptive statistics of items and psychometric properties of the constructs

| Construct | Item | Mean | Std. dev. | Std. loadings | Std. error | Critical ratio | Cronbach's alpha | Composite reliability | AVE |
|-----------|------|------|-----------|---------------|------------|----------------|------------------|-----------------------|-----|
|-----------|------|------|-----------|---------------|------------|----------------|------------------|-----------------------|-----|

| | | | | | | | | | |
|-----|------|-------|-------|-------|-------|--------|-------|-------|-------|
| SN | SN1 | 4.955 | 1.372 | 0.857 | 0.022 | 39.733 | | | |
| | SN2 | 5.098 | 1.438 | 0.909 | 0.010 | 89.158 | 0.872 | 0.921 | 0.796 |
| | SN3 | 5.153 | 1.345 | 0.909 | 0.011 | 83.529 | | | |
| SV | SV1 | 4.098 | 1.550 | 0.862 | 0.016 | 52.971 | | | |
| | SV2 | 4.018 | 1.379 | 0.870 | 0.020 | 44.138 | 0.844 | 0.906 | 0.762 |
| | SV3 | 4.088 | 1.365 | 0.886 | 0.023 | 39.344 | | | |
| RM | RM1 | 1.840 | 2.182 | 0.866 | 0.039 | 22.470 | | | |
| | RM2 | 2.218 | 3.479 | 0.813 | 0.047 | 17.233 | 0.755 | 0.860 | 0.669 |
| | RM3 | 2.358 | 3.891 | 0.772 | 0.055 | 14.013 | | | |
| PBC | PBC1 | 4.331 | 1.415 | 0.845 | 0.015 | 57.388 | | | |
| | PBC2 | 4.398 | 1.456 | 0.851 | 0.016 | 54.817 | | | |
| | PBC3 | 4.228 | 1.313 | 0.818 | 0.022 | 36.643 | 0.881 | 0.913 | 0.678 |
| | PBC4 | 3.501 | 1.592 | 0.797 | 0.023 | 34.478 | | | |
| | PBC5 | 3.576 | 1.426 | 0.805 | 0.026 | 31.036 | | | |
| PA | PA1 | 4.609 | 1.352 | 0.716 | 0.025 | 29.170 | | | |
| | PA2 | 4.847 | 1.454 | 0.831 | 0.017 | 47.777 | | | |
| | PA3 | 5.576 | 1.370 | 0.763 | 0.028 | 27.025 | 0.855 | 0.896 | 0.633 |
| | PA4 | 5.296 | 1.388 | 0.837 | 0.017 | 48.316 | | | |
| | PA5 | 4.677 | 1.493 | 0.825 | 0.018 | 45.070 | | | |
| EI | EI1 | 3.707 | 1.706 | 0.805 | 0.016 | 50.116 | | | |
| | EI2 | 4.138 | 1.771 | 0.884 | 0.011 | 78.924 | | | |
| | EI3 | 4.471 | 1.715 | 0.899 | 0.011 | 81.957 | 0.932 | 0.946 | 0.746 |
| | EI4 | 4.343 | 1.749 | 0.885 | 0.016 | 54.660 | | | |
| | EI5 | 4.531 | 1.755 | 0.861 | 0.017 | 51.757 | | | |
| | EI6 | 4.837 | 1.653 | 0.844 | 0.018 | 48.171 | | | |

In order to test for discriminant validity, a matrix of loadings and cross-loadings was constructed (see Table 2). By using this matrix, the loadings of an item with its associated factor (or construct) to its cross-loadings were compared. All items had higher loadings with their corresponding factors in comparison to their cross-loadings. Therefore, it was concluded that there is enough confidence in the discriminant validity of the measures and their corresponding constructs (Chin, 1998).

Table 2: Matrix of loadings and cross-loadings

| Items | SN | RM | PBC | SV | PA | EI |
|-------|----|----|-----|----|----|----|
|-------|----|----|-----|----|----|----|

| | | | | | | |
|------|-------|-------|-------|-------|-------|-------|
| SN1 | 0.857 | 0.177 | 0.267 | 0.325 | 0.339 | 0.239 |
| SN2 | 0.909 | 0.126 | 0.349 | 0.387 | 0.427 | 0.379 |
| SN3 | 0.909 | 0.129 | 0.320 | 0.397 | 0.446 | 0.329 |
| RM1 | 0.178 | 0.866 | 0.135 | 0.121 | 0.173 | 0.135 |
| RM2 | 0.056 | 0.813 | 0.100 | 0.048 | 0.149 | 0.148 |
| RM3 | 0.133 | 0.772 | 0.146 | 0.104 | 0.132 | 0.072 |
| PBC1 | 0.340 | 0.117 | 0.845 | 0.444 | 0.478 | 0.468 |
| PBC2 | 0.307 | 0.123 | 0.851 | 0.395 | 0.486 | 0.435 |
| PBC3 | 0.343 | 0.090 | 0.818 | 0.401 | 0.504 | 0.498 |
| PBC4 | 0.236 | 0.184 | 0.797 | 0.404 | 0.367 | 0.393 |
| PBC5 | 0.212 | 0.140 | 0.805 | 0.386 | 0.417 | 0.520 |
| SV1 | 0.405 | 0.107 | 0.466 | 0.862 | 0.403 | 0.438 |
| SV2 | 0.333 | 0.066 | 0.401 | 0.870 | 0.348 | 0.395 |
| SV3 | 0.347 | 0.128 | 0.420 | 0.886 | 0.428 | 0.399 |
| PA1 | 0.299 | 0.139 | 0.456 | 0.291 | 0.716 | 0.419 |
| PA2 | 0.313 | 0.184 | 0.444 | 0.374 | 0.831 | 0.532 |
| PA3 | 0.396 | 0.092 | 0.353 | 0.265 | 0.763 | 0.432 |
| PA4 | 0.414 | 0.138 | 0.400 | 0.364 | 0.837 | 0.558 |
| PA5 | 0.395 | 0.177 | 0.517 | 0.472 | 0.825 | 0.577 |
| EI1 | 0.223 | 0.134 | 0.599 | 0.452 | 0.503 | 0.805 |
| EI2 | 0.280 | 0.162 | 0.527 | 0.488 | 0.563 | 0.884 |
| EI3 | 0.362 | 0.132 | 0.469 | 0.450 | 0.581 | 0.899 |
| EI4 | 0.336 | 0.104 | 0.468 | 0.361 | 0.545 | 0.885 |
| EI5 | 0.310 | 0.113 | 0.417 | 0.334 | 0.544 | 0.861 |
| EI6 | 0.351 | 0.094 | 0.423 | 0.341 | 0.576 | 0.844 |

Table 3 illustrates the discriminant validity of the constructs, with correlation among constructs and the square root of AVE on the diagonal. All values in the diagonal were greater than those in corresponding rows meaning that all measurable variables load more highly on their own constructs than on the other constructs (Fornell and Larcker, 1981). Thus, it was concluded that student entrepreneurial intentions are explained sufficiently by the revealed first-order latent variables' structure (convergent validity) and this structure includes all unique manifest variables (discriminant validity).

Table 3: Discriminant validity assessment

| Constructs | EI | PA | SV | PBC | RM | SN |
|------------|----|----|----|-----|----|----|
|------------|----|----|----|-----|----|----|

| | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|
| EI | 0.864 | | | | | |
| PA | 0.640 | 0.796 | | | | |
| SV | 0.472 | 0.453 | 0.873 | | | |
| PBC | 0.563 | 0.550 | 0.493 | 0.823 | | |
| RM | 0.144 | 0.187 | 0.117 | 0.157 | 0.818 | |
| SN | 0.359 | 0.457 | 0.417 | 0.352 | 0.159 | 0.892 |

4.2 Assessments of higher-order construct

In Table 4, the composite reliability (CR) and AVE measures of the second-order construct named Social Norms and Valuations (SNV) are presented. This exhibit CR equal to 0.85 and AVE greater than 0.74, well above the recommended thresholds of 0.7 and 0.5 respectively, providing evidence of reliable second-order construct (Wetzels et al., 2009). Finally, second-order constructs loadings on first-order constructs of SNV are equal to 0.84 and 0.89 and are significant at $\alpha=0.01$. All these support the validity of hypotheses H1a and H1b that perception about SNV dimensions are based on perception about the pre-specified sub-dimensions of SN and SV.

Table 4: Higher-order construct's assessment

Second-order construct: Social Norms & Valuations
CR = 0.840 AVE = 0.724

| Sub-Dimensions | Loadings | Critical Ratio |
|----------------|----------|----------------|
| SN | 0.815 | 20.042 |
| SV | 0.885 | 44.418 |

4.3 Structural analysis results and discussion

The PLS method was also used to confirm the hypothesized relations between constructs in the proposed model. The significance of paths included into the proposed model was tested using a bootstrap resample procedure with 500 replications. Smart-PLS software was used to conduct the PLS analysis (Ringle et al., 2005). In assessing the PLS model, the squared multiple correlations (R^2) of all endogenous latent variables were initially examined and the significance of the structural paths was evaluated.

The assessment of the proposed SEM is presented in Table 5 where the standardized path coefficients, representing the direct effects of the constructs, their statistical significance, and the proportion of explained variance for each endogenous construct are given.

Based on the structural equation model estimation results, all TPB elements influence entrepreneurial intentions. However, PA presents stronger influence on EI followed by PBC and SNV, as indicated by model's coefficients of $\beta = 0.418$ ($t = 9.954$) for PA, $\beta = 0.284$ ($t = 7.139$) for PBC and $\beta = 0.123$ ($t = 2.991$) for SNV.

Therefore, hypotheses H2, H3 and H4 are confirmed. Furthermore, SNV also exert its indirect influence on EI through both PA and PBC, since the relevant path coefficients are statistically significant ($\beta = 0.541$, $t = 14.315$; $\beta = 0.465$, $t = 11.873$), confirming the validity of proposed hypotheses H5 and H6.

The influence of Role Models on PA and PBC is of small in magnitude ($\beta = 0.113$, $t = 2.902$; $\beta = 0.100$, $t = 2.375$) but significant and the signs of the coefficients are as expected. Based on that, both proposed hypotheses, concerning the impact of student's familiarity with entrepreneurial society on the two belief elements (H7 and H8), are confirmed.

Table 5: Structural equation model assessment

| Path | Coefficient | t-statistic | Pr > t | R ² | Hypotheses Validation |
|-----------|-------------|-------------|---------|----------------|-----------------------|
| RM → PA | 0.113 | 2.902 | 0.004 | 0.327 | H7 confirmed |
| SEE → PA | 0.024 | 0.610 | 0.542 | | H9 not confirmed |
| LE → PA | 0.008 | 0.190 | 0.849 | | H11 not confirmed |
| SNV → PA | 0.541 | 14.315 | 0.000 | | H5 confirmed |
| RM → PBC | 0.100 | 2.375 | 0.018 | 0.280 | H8 confirmed |
| SEE → PBC | 0.168 | 4.124 | 0.000 | | H10 confirmed |
| LE → PBC | 0.010 | 0.236 | 0.813 | | H12 not confirmed |
| SNV → PBC | 0.465 | 11.873 | 0.000 | | H6 confirmed |
| SNV → EI | 0.123 | 2.991 | 0.003 | 0.485 | H4 confirmed |
| PA → EI | 0.418 | 9.954 | 0.000 | | H2 confirmed |
| PBC → EI | 0.284 | 7.139 | 0.000 | | H3 confirmed |

Female students' Self-Employment Experience significantly affects PBC ($\beta = 0.168$, $t = 4.124$), while its effect on PA appears to be non-significant ($\beta = 0.024$, $t = 0.610$), meaning that hypothesis H10 is confirmed while H9 is not confirmed. The later result may be attributed to the uncertainty of the economic conditions of the country, the barriers posed by the structure of the public administration to new start-ups, and the limited financial resources due to Greek banks' liquidity problems.

Finally the impact of Labor Experience on PA and PBC was found to be non-significant ($\beta = 0.008$, $t = 0.190$; $\beta = 0.010$, $t = 0.236$) and the relevant hypotheses (H11 and H12) are not confirmed. The former result could be attributed to the fact that students, by and large, work as temporary employees (i.e. waiters, cashiers, etc.) aiming to earn extra money and they do not intend to start a similar business in the future.

The proposed model accounted for 32.7% of the variance in PA, 28% of the variance in PBC and 48.5% of the variance in EI. The relatively medium to high values

of coefficients of determination (R^2) indicate that sizeable portions of variance in endogenous variables are explained by the chosen independent variables.

5. Implications and Conclusions

The present study examined the previously unresearched field of entrepreneurial intention among Greek female university students, at a time of high uncertainty. The analysis of the data corroborated a number of the findings of several researchers in various other contexts. The theory of planned behavior was proven to be robust in its ability to predict entrepreneurial intention among students. This has a number of implications for policy makers as well as educators and researchers. Policy makers need to enact all types of promoting tools to “sell” the entrepreneurial benefits to the female students as well as to the public at large, given the high unemployment rate in Greece in the past 3 years. Increasing self-employment and fostering the creation of small businesses by young female entrepreneurs, can help alleviate the economic problems of the country. Not only will young women be able to secure work for themselves, but they will potentially provide employment for others. This will be a serious feat for a social group that traditionally lags behind the males and the young males groups in employability terms (GEM, 2012). Active promotion of entrepreneur role models and the rewards resulting from self-employment, or starting a business, can increase EI, indirectly, by impacting on the attitude towards entrepreneurship, and the perceived behavioral control, as shown in this study and several others (Alsos et al., 2006; Ajzen, 2005; Liñán and Chen, 2009). The traditionally voluntary task of mentoring can be offered in a systematic way by institutional entities, which can recruit members from the industry, the academia, or other fields. Providing incentives to existing small businesses can increase both the desirability towards becoming an entrepreneur and the feasibility (PBC) making starting up a business a less perplex phenomenon especially to younger people (Alsos et al., 2006; Krueger et al., 2000).

The implications for educators are also important. In countries with low rates of self-employed, teachers can attempt to increase the desirability of being an entrepreneur, focusing on the rewards following such a career choice. In the case of Greece where the self-employed and small business proprietors comprise 23,4% of the working population (Foundation For Economic and Industrial Research, 2013) the focus of the educators must be more on the perceived behavioral control, given that the

favorable attitude and the social norms encourage the new business start up. The PBC however relates with two issues specific to Greek culture. One is, that Greek people are highly risk averse (Hofstede, 1991) even if they consider themselves more knowledgeable and ready to start a business than any other European ethnic group (Foundation For Economic and Industrial Research, 2013). The second issue has to do with the obstacles the state bureaucracy sets, inhibiting entrepreneurial action.

In addition to the above, given the “global proliferation” of entrepreneurship classes (Jones et al., 2008) and in line with the thinking of Rae et al. (2008) investing on teaching entrepreneurial skills to all students is probably a good idea given the very high rate of self-employment. Even more so, in the case of female students, since they are less inclined to start a business, preferring a more secure place to work, considering women entrepreneurs tend to fail more often than men in their business ventures (Rosti and Chelli, 2009).

Finally the implications for researchers are also considerable. The fact that in spite of the enormous amount of research on EI, conflicting findings abound, poses a serious challenge on future endeavors on the issue. Although the TPB model as well as the SEE (Krueger et al., 2000) have been successful in predicting EI, the same cannot be argued in the prediction of actual behavior. Also, the fact that different studies find significant deviations in the predictive power of the key variables of the TPB, calls for improvement of the measurement, examining other variables not taken into account as yet. Cross cultural studies have also shown that there are major differences among cultures (Engle et al., 2010; Heuer and Linan, 2013; and Schlaegel et al., 2013) making the hypothesis that EI is a culture-specific concept and not a generally held one, worthy of investigation.

Although, the number of female entrepreneurs in Greece (31% of the total according to GEM data of 2011) is large, considering the self-employed approach 23% of the working people, it is still lagging to the numbers of male entrepreneurship. Recent studies have shown that mothers may affect significantly the decision of their daughters in undertaking a business venture, fostering their entrepreneurial intention through role modeling (Green, Han and Marlow, 2013). Therefore, policy makers and educators alike could systematically increase the awareness of mothers and promote the idea of their developing an entrepreneurial mindset among their daughters, to the extent that this is possible.

6. Limitations of the Study

An inherent problem of cross-sectional studies including the present one, is the static view of an evolving phenomenon. Although intention models tend to be linked with future behavior in some situations, they fail to do so in others (Krueger et al., 2000; Ajzen, 2005). However, to this point, many scholars propose that it is “the single best predictor of behavior” and as such, its contribution cannot be overlooked (Armitage and Conner, 2001). A second problem is that, while intention may be a valid predecessor of behavior in the short-run, its potency fades with time and while it may be easy to predict that intention to vote will lead to a certain voting behavior, in the next elections, it could hardly be argued that one can predict that a person will start a business after 3, 5, or 10 years, based on what his/her intention is today. Finally the student sample, of a specific university does not allow for generalizations about the public at large and even more so about people from other countries, cultures or age-groups (Liñán and Chen, 2009).

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Appendix: Measures of Entrepreneurial Intentions Model

Entrepreneurial intention

- EI1 I am ready to do anything to be an entrepreneur
- EI2 My professional goal is to be an entrepreneur
- EI3 I will make every effort to start and run my own business
- EI4 I am determined to create a business venture in the future
- EI5 I don't have doubts about ever starting my own business
- EI6 I have a strong intention of starting a business

Personal Attitude

- PA1 Being an entrepreneur implies more advantages than disadvantages to me
- PA2 A career as an entrepreneur is totally attractive to me
- PA3 If I had the opportunity and resources, I would love to start a business
- PA4 Being an entrepreneur would give me great satisfaction
- PA5 Amongst various options, I would be anything but an entrepreneur

Perceived Behavioral Control

- PBC1 Starting a firm and keeping it viable would be easy for me
- PBC2 I believe I would be completely able to start a business
- PBC3 I can control the creation process of a new firm
- PBC4 I know all about the practical details needed to start a business
- PBC5 I know how to develop an entrepreneurial project
- PBC6 If I tried to start a business, I would have a high chance of being successful

Social Norms

- SN1 My friends would approve of my decision to start a business
- SN2 My immediate family would approve of my decision to start a business
- SN3 My colleagues would approve of my decision to start a business

Social Valuation

- SV1 My immediate family values entrepreneurial activity above other activities and careers
- SV2 My friends value entrepreneurial activity above other activities and careers
- SV3 My colleagues value entrepreneurial activity above other activities and careers

Transactions with Electronic Bank Cards in Albania

Abstract:

Revolution of information and communication technology keeps on transforming day after day the way of running business. One of the latest novelty of E-business is electronic banking or E-banking. Transactions with banking cards, which is electronic paying instrument, issued by a licensed bank to develop banking transactions with pre-determined functions, are quite spread in developed economies.

Banking cards are paying instruments that have come into use in Albania, although their usage level compared with other countries' indicators of the region as well as with probable potential is still low. The situation in Albania continues reflecting an evolution of electronic services through banking cards over years that are offered from Albanian banking system. With all improvements that the global usage of banking cards has gained, by analyzing the up to present statistical data it is clear that although banking cards usage has had an increase, their usage level is still low, mainly in the period 2008-2012, cash loans from ATMs make up about 90-95% of transactions with cards, this is an indicator of an economy with high cash usage. In Albania, physical money (cash) is still the dominating tool of paying in all spheres.

This study attempts to appreciate the present state of banking cards usage in Albania, interference level of transactions-with-cards in banking services, main trends and objectives of this activity in Albania.

Key words: debit card, credit card, banking products, banking transactions, ATM, POS.

JEL-Classification: G21, D14

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1. Introduction

In the epoch of globalization and an increasingly fierce competition throughout the world, different companies are changing their strategies in order to be conveniently close to their clients around the world. Fierce competition from its side, has made organizations try constantly to increase their productivity and reduce their costs. One way of achieving this is by investing in information technology (Frederickson, 2003). Fast increase of systems which are based on electronic technology, especially those related to internet use and personal computer, led to an important change of products and services exchange. Many service organizations, among them banks as well, have approved modern technology to reduce cost and improve the quality of client service as well as offer standardization of general services. Revolution of information technology in channels of banking industry spread began in the beginning of 70s with the use of credit card, ATM automatic machines and nets. This was followed by telephonic banking, banking through television in the 80s as well as banking process through personal computer (pc) at the end of 80s-beginning of 90s (Giannakoudi, 1999). Information technology has enabled electronic channels to carry out many banking services that traditionally were carried over the counter. (Giannakoudi, 1999).

The concept of electronic banking system is defined in many ways. Daniel (1999) defines electronic banking as the offering of information and banking services from banks to clients through different offering platforms which can be used with various terminal tools such as a personal computer, a cell phone, telephone or digital television. According to Karjaluo (2002), electronic banking is a construct made up of some spreading channels. Electronic banking consists of each system that uses electronic signals. According to given definition of (Abid et al., 2006), it is determined as “every use of info communication tech and electronic tools” by a bank in order to carry out transactions and interact with interest groups. However, it is to be considered that electronic banking (e-banking) is not equal with the term Internet banking, even though this is the most spread type of it. Electronic banking involves many traditional services such as mobile banking, credit cards, debit cards, ATMs etc. The newest services added to electronic banking are internet banking and mobile banking. From the definitions mentioned above, we realize that “e-banking” is a super genetic term (general) and we should be clear when speaking about it. E-banking can be divided into

two ways: monetary electronic products, mainly in the cards form and channels of offering electronic products.

Banking through electronic cards, compared with traditional banking, offers facilities, commodity and access towards clients who can cooperate with banking page 24h per day and 7 days per week, it reduces costs (MPCS, 1998; Sathye, 1999), saves time, encourages following management which is one of the most important dimensions of service quality in e-banking. (Gonzalez et al, 2008; Singhal and Padhmanbhan 2008; Brodie et al, 2007; Williamson, 2006, Beer, 2006; Cooper, 1997; e IAMAI, 2006 and Jozefi et al, 1999) etc. This kind of banking can also improve the efficiency and competitive ability of a bank, so as existing and potential clients can benefit more and the banking affects transactional facility. This high level of facility offered by bank, when combined with other services, can result in the expansion of intended bank's clients beyond those of traditional trades. Consequently, financial institutions become more and more aggressive in approving electronic banking capacity which involve *sophisticated systems of marketing*, electronic banking capacities and programmes of value's conservation.

2. Literature review

The use of electronic banking service by banks in recent years has been the center of many academic studies (Andreas - Nicholas Papandreou 2000 etc.). Academic studies have been focused on the reasons or factors that make possible such necessary development which can undoubtedly be named "historic" and it can form its own stage in the *history of banking operations*.

Banks have invested in offering this service because of two main reasons:

- ✓ Firstly, through this banking service they have minimized the costs (Robinson, 2000) and
- ✓ Secondly, the number of branches and employees has been reduced (Karjaluoto, 2003), thus, increasing the *banking efficiency*. In other words, thousands of clients can use this service at the same time, without the help of bank accountants and employees, thus, reducing administrative work and also the costs, consequently, causing reduction in fees that banks apply to their clients.

How much will this new kind of banking be developed and spread ? How much will it succeed to be accepted by all people around the world? This depends on many factors, among which we would choose with full certainty:

- ✓ Tradition, which has made people trust their “financial secrets” to someone who works as bank employee.
- ✓ General forming of popularity, which gives to each discovery or development in different branches the healthiness and survival certificate.
- ✓ The ability of bank to be successful, which is and will remain the base on which faith is built and a cooperating relation of any kind is to be set.

Using electronic banking doesn't mean changing the tradition of money use. Contrary, with the help of communication and information technology, it is possible to get over timetables, time waste and bureaucratic aspects of traditional banking, in order to reduce service costs, so generally we can state: *to run faster and more efficiently personal finances.*

Banking cards are quite spread in the developed economies, it is the tool of electronic paying, emitted by a licensed bank in order to develop banking transactions with pre-determined functions. With the function of emission, banking card might be *debit card* or *credit card*.

Possession of a card enables money withdrawal from personal account in automatic machines out of the bank, which are called ATM (Automatic Teller Machine) – cash card. The card that offers access in the account to do sales and services with available funds, in sale stations POS (Point of Sale), restaurants and shops is the debit card. Whereas, when bank funds with one credit line are used, then, it is possible to sale, as well as to withdraw cash until a pre-decided limit and in this case we are talking about a *credit card*. Debit cards require an on-line system to verify and transmit the paying whereas credit cards can also work off-line.

During the last ten years, there have been many inquires which have studied a great number of factors affecting *the consumer's intention of using e-banking*, part of which are even the transactions with bank cards. The literature survey enables to identify the factors from which the consumers appeal to use these banking transactions.

a) Reliability - safety factor (confidence)

Sathye (1999), Polatoglu and Ekin (2001) have discovered that reliability dimension was an important indicator for consumers who had used electronic banking. Moreover, Sathye (1999), and Liao & Cheung (2002) have discovered that reliability was positively related to the use of electronic banking services. They reached the conclusion

that the more confidently consumers percept electronic banking service, the more possible it is that they will use electronic banking.

Previous studies have also showed that safety dimension is important to use electronic banking services by consumers (see Polatoglu and Ekin, 2001; Liao and Cheung, 2002). Moreover, Gerrard and Cunningham (2003) discovered that safety dimension (seen from the confidence aspect that is related with electronic banking) was positively related to the use of electronic banking services.

b) Reaction factor (*speed of transactions realisation*)

In the case of *reaction dimension*, Karjaluoto, Mattila and Pentto (2002) showed that the users of electronic bank services believe that electronic service did reply faster to their needs compared with the other traditional ways of banking. Except this, Polatoglu and Ekin (2001) identified that immediate reaction, quick transactions and light approach are important attributes to the electronic banking section. Moreover, Liao & Cheung (2002) and Gerrard & Cunningham (2003) stated that transactions' speed (the speed of perceived answer from electronic banking) and quick approach in the electronic banking accounts were important attributes for consumers who used to use electronic banking.

c) Appropriateness factor (*using facility, saved and appropriate time for their needs*)

Aderonke and Charles (2010) have discovered that "bank's clients who are active users of e-banking use it because it is appropriate, easy to use, saves time and it is appropriate for their transaction needs. As far as privacy is concerned, the net and system security are the greatest concerns of users and they are a barrier to the intention of adding users."

d) Seven-factorial models (*comodity, accessibility, correctness, safety, necessity, bank image and website design*).

Sadeghi and Hanzaae (2010) made up a model with seven factors as follows: comodity, accessibility, correctness, safety, necessity, bank image and website design, considering them as main indicators of quality perception of e-banking service by consumers. Also Yap, K et al. (2010) concetrated on the traditional service quality, internet characteristics and their implication on consumers' faith based on e-banking.

Centeno (2004) states that speed, facility of far approach, availability 7/24 and price stimuli are basic motivating factors for consumers to use internet banking.

Durkin, et. al. (2008) stressed that the simplicity of offered products through banking internet enables approval of internet banking by consumers. Calisir and

Gumussoy (2008) compared consumers' perception of internet banking and other banking channels and they report that internet, ATM and phone banking replace each other. Guerreri, et. al. (2007) studied the use of internet banking by Europeans and their results show that different financial products & service's owning, the attitude towards finances and faith on internet as banking channels that affect clients in the internet banking use. Another factor that eggs clients on using internet banking is the salesperson support (Nilsson, 2007). Perceived risk was one of the main factors that affected the approval and satisfaction of clients in online banking services (Polatoglu and Ekin, 2001). Perceived risk usually comes from unsecurity.

e) Demografic factor (age structure of popularity, young-old, civil status married-single, gender structure male-female) :

Other studies have evidenced the implication of demografic factors in the consumers intention to use e-banking. Study of Filotto, Tanzi and Saita (1997) has shown that norms of ATM approval were higher for young employees. Barnet as well (1998) showed that young consumers felt more comfortable when using electronic banking. Karjaluoto (2002) in his study showed that the users of e-banking were younger than those who used traditional banking channels. All these discoveries show that it is less probable that old consumers will favor e-banking.

As far as marriage status is concerned, when considering the electronic banking services, Stavins (2001) has identified that married consumers were much willing to use these services.

The results of Katz and Aspden (1997) showed that males are more willling than females to use e-banking. In a similar way, Karjaluoto (2002) showed that males dominated on the users of e-banking. Using the results from these studies, it can be proposed that the gender affects the choice of e-banking services.

Stavins (2001) identified that consumers with high status (occupation) had more possibilities to use electronic banking services, so the status of employment is positively related to the choice of e-banking. Studies of Al-Ashban and Burney (2001) and Stavins (2001) have shown that with the increase of qualified and educational level of consumers, the satisfaction and approval to get such e-banking service is also increased.

f) Income factor

Chan (1997) in his study has identified that the income was the only most important variable that implicated the use of credit cards. Empiric results of positive income implication in the approval of electronic banking can be found in the studies of Al-Ashban and Burney (2001), Stavins (2001) and Karjaluo.

3. Data and methodology

This study is an attempt to appreciate the actual state of the banking cards use in Albania. Our aim is to identify the penetration level of transactions with cards in bank services, main trends and the objectives of this activity in Albania.

In function of the above aim, the study has as principal objective:

Analysis of the actual situation and management to use bank cards in Albania as well as the level of transactions with cards penetration in bank services, main trends and possibilities & running of this service use in the levels of developed countries for medium - term period.

The period taken into consideration is 2008-2012. Basic method of the work will be that of analysis and synthesis. At the same time descriptive and comparative statistics will be used in order to get conclusions from the study.

Primary source of gathering data and analytic tools to reach conclusions will be used to realize this work.

Primary source:

-Literature survey is an important part of the work. All information gathered through primary source will be considered. Objects of this survey are planning, reading, analyzing and filing data.

-Academic studies and researches of foreign and Albanian authors, published on scientific magazines in and out of Albania. Author's texts, mainly foreign, will be the base of this piece of work. The objective will be the study of foreign experiences in the area of bank cards use and its advantages, from which valuable orientations can be extracted in order to fulfill successfully the objectives of this study.

-Gathering and analysis of data from the greatest bank's websites in Albania that offer e-banking services and the Bank of Albania for a detailed analysis. Some informative sources are as follows:

Database of the Albanian Bank

Yearly reports published from Albanian Bank

Database of main native banks

Conferences held by Albanian Bank

4. Analysis, data interpretation

Banking system (second level banks) in its real meaning, according to the conditions of a trade economy, is developed after 1991 and especially after 2000 with governmental ex-banks privatization and creation of many new banks.

The structure of banking and financial system in the end of 2012 is made up of 16 trade banks, 21 no-banks financial subjects, 1 representative office of the foreign bank, 322 exchange banks, 126 saving-credit companies and 2 unions of saving-credit companies. According to the capital origin in the banking system structure, 13 banks are with totally foreign private capital and 3 banks with foreign & native capital.

From the origin viewpoint, in all transfers of bank's approved stocks an increasing tendency of the foreign capital presence is noticed. Concretely, in our banking system there is not any bank with totally Albanian capital.

On the other hand, in the albanian banking commerce is evident the existence of subjects and banks that have an experience in foreign commerces, such as Raiffeisen Bank (Austria), Intesa Sanpaolo Bank (Italy), Piraeus Bank (Greece), Islamic Development Bank (internationally financial institution), Emporiki Bank (Greece), Societe Generale (France), European Reconstruction&Development Bank (internationally financial institution) etc.

The growth of banks and no-bank financial subjects' activity intends to diverse the products and services offered by them and the creation of possibilities for clients to have investment alternatives for their savings, different from traditional alternatives. This expansion of banking and financial activity's area eggs competition in the financial and banking section through offering as attractive as possible products / services, among which the electronic products through bank cards as well.

Electronic products through banking cards are offered by almost all banks (in total 14), which have already entered a new stage of this process that consists in their further perfection from the view of technology and services' variety offered to clients.

Electronic products/services through bank cards are a facility offered to clients from banks for different services. These services / products consist in offering debit cards, credit cards, ATM-s and POS-es from banks to their clients.

This means of communication helps clients to do banking transactions faster, compared to their presence in the bank's ticket offices. In these conditions, in order to serve better to their clients, almost all banks have applied and taken the approval of the Bank of Albania to carry out transactions with bank cards.

Table 1: Products with electronic cards approved by The Bank of Albania (2006-2012)

| <i>Electronic cards</i> | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | Total |
|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| Debit cards | 6 | 4 | 2 | 2 | | | | 14 |
| Credit cards | 5 | 3 | 1 | 1 | 1 | | | 11 |
| Maestro card-debit | 1 | | 1 | 1 | | | | 3 |
| Mastercard- kredit | | | 1 | 2 | | | | 3 |
| VisaCard-debit | | | | 1 | | | | 1 |
| VisaCard-kredit | | | | 1 | | | | 1 |
| MultiCash | 1 | | | | | | | 1 |
| ATM | 6 | 4 | 2 | 2 | | | | 14 |
| POS | 1 | 2 | 2 | 1 | | | | 6 |
| Prepaid Card | | | | | | 1 | | 1 |

Source: The Bank of Albania

- During 2009, 8 new cases of products of electronic banking cards were approved.
- During 2010, 1 new case of products of electronic banking cards and concretely the credit card was approved.
- During 2011, it is worth mentioning the request of Credins Bank which has applied for the first time and got the approval from the Bank of Albania to use cards with prepayment, serving in this way to the extra needs for particular segments of the client.

Except for the installation of technological infrastructure through the construction of specialized net tools (ATM, POS), banking system has enriched the services' variety involving alternative communicating channels such as internet and cell phones.

Instruments of electronic payment (e-payment) are a relatively new instrument of the payment services in Albania. These instruments are regulated in a general way, as one of the financial services offered by banks, through the regulative framework in power to observe banking system; and more specifically, as payment services, from the

regulative act approved by Observant Council of the Bank of Albania “To Electronic Payment Instruments” (decision nr. 11, date 06.02.2008).

Referring to section 5 of this regulation, instruments of electronic payment are classified as follows:

- a) Payment instruments with access in distance, which allow the holder to access financial funds in his bank account by using electronic and technical tools such as:
 - 1) Bank cards and
 - 2) Other electronic bank services; and
- b) Instruments of electronic currency.

4.1 Use of bank cards

Bank cards are electronic payment instruments that are being used in Albania, even though their usage level is lower than the indicators of other region’s places and possible potential.

Table 2: Number of licensed banks as card issuing and accepting ones.

| <i>Description</i> | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|-------------|-------------|-------------|-------------|-------------|
| Number of operating banks in Albania | 16 | 16 | 16 | 16 | 16 |
| Number of branches/agencies offering payment services | 517 | 524 | 529 | 534 | 538 |
| Number of licensed banks as card issuing | 12 | 14 | 14 | 14 | 14 |
| Number of licensed banks as card acceptor | 7 | 8 | 7 | 7 | 7 |

Source: The Bank of Albania

In the end of 2008, in the Republic of Albania operate 16 banks, which offer payment services in 517 bank branch/agencies in all country, from which 12 banks are licensed as card issuing, offering the service of cash withdrawal from ATM equipments. From banks that issue card, only 7 banks are at the same time licensed as card accepters, offering the acceptance service of payment with cards through POS equipments settled in shops and commercial centers.

In the end of 2009, in the Republic of Albania operate 16 banks, which offer payment services in 524 bank branch/agencies in all country, from which 14 banks are licensed as card issuing (from 12 in 2008), offering the service of cash withdrawal from ATM equipments. From the banks that emit cards, only 8 are at the same time licensed

as card accepters, offering the acceptance service of payment with cards through POS equipments settled in shops and commercial centers.

In the end of 2010, in the Republic of Albania operate 16 banks, which offer payment services in 529 bank branch/agencies in all country. Actually, there are 14 banks licensed as card issuing which offer the service of cash withdrawal from cash machines (ATM equipments). From the banks that emit cards, only 7 banks are at the same time licensed even as card accepters, offering the acceptance service of payments with cards in sale stations, through POS equipments settled in shops, restaurants, hotels or even commercial centers.

The number of banks licensed as card emitter in the Republic of Albania, in the end of 2011 results in 14, without showing any change compared with the end of 2010. From the banks licensed as card emitter only 7 banks result at the same time licensed even as card accepters. The number of banks licensed as card emitting in the Republic of Albania, in the end of 2012 results 14, the same with that of previous year. From the banks licensed as card emitting, only 7 banks result at the same time even as card accepters. The progress of circling card's number over years, according to card's function, is represented as follows.

Table 3: Number of cards according to the function over years

| <i>Number of cards according to the function</i> | 31 December 2008 | 31 December 2009 | 31 December 2010 | 31 December 2011 | 31 December 2012 |
|--|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Cards with cash function | 512,232 | 566,985 | 694,848 | 731,843 | 768,973 |
| Cards with payment function | 497,318 | 565,934 | 694,848 | 731,843 | 768,973 |
| From which: | | | | | |
| 1- Debit cards | 482,072 | 543,141 | 667,548 | 693,950 | 719,800 |
| 2- Credit cards | 15,246 | 22,793 | 27,300 | 37,893 | 49,173 |
| Cards with electronic cash function | | | | | |
| Total number of cards in circulation | 512,232 | 566,985 | 694,848 | 731,843 | 768,973 |
| From which: | | | | | |
| - Cards with more than one function | 498,003 | 566,985 | 694,848 | 731,843 | 768,973 |

Source: The Bank of Albania (Reports from banks according to "Methodology of payment instruments report")

In the end of 2008, number of cards in circulation is increased with 13.6% compared to the same period previous year. From the division of cards according to function, an increase of cards with credit function somewhat accelerated has been noticed, with 46%, compared to the division of cards with debit function which have exhibited an increase of 13%. Referring to bank reports, debit cards hold about 97% of the total cards in circulation in the end of 2008, compared with 97.6% in the end of 2007.

On 31 December 2009, an increase of 13.8% of circling cards number is noticed, compared with the end of 2008. Within this increase, the growth of emitted credit cards during this year has had volume, with an increase of 50%, towards the end year of 2008. Debit cards hold about 96% of the total cards in circulation in the end of 2009, compared with 97% in the end of 2008.

During 2010, an increase of 23% of the circulating cards is noticed, compared with the end of 2009. The number of debit cards is increased with about 23%, whereas the number of credit cards is increased with about 20%. Debit cards hold about 96% of the total cards in circulation in the end of 2010, being so the same figure with the end of 2009.

During 2011, an increase of 5.3% of the circulating cards is noticed, compared with the end of 2009. The number of debit cards is increased with about 4%, whereas the number of credit cards is increased with about 38.8%. Credit cards hold about 95% of the total cards in circulation in the end of 2011, compared with 96% of the end of 2010.

In the end of 2012, the number of cards in circulation is increased with 5.1% compared with the same period of previous year. From the cards division according to the function, an increase somewhat accelerated of cards with credit function is noticed, with 30%, compared to the division of cards with debit function which have exhibited an increase of 4%. Referring to the bank's reports, debit cards hold about 93.6% of the total cards in circulation in the end of 2012, compared with 95% in the end of 2011.

The spread of cards according to the gender and age of the card holder demonstrates a domination of male card holders and age-group 25-35.

The increase of bank cards' number (debit&credit) seems to be accompanied also by an increase of transactions with cards where those for cash withdrawal keep holding the main weight. The following table reflects types of transactions carried out with bank cards (debit/credit), in volume and value for a 5-year period.

Table 4: Transactions with cards weight according to terminals (volume)

| <i>Transactions with cards according to type of transaction</i> | Volume | | | | |
|---|---------------|-------------|-------------|-------------|-------------|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| 1- ATM cash withdrawal | 7,910,609 | 8,717,982 | 9,877,583 | 10,778,879 | 11,300,261 |
| 2- ATM deposit | 133 | 91 | 47 | 11 | 5 |
| 3- Transfer order through ATM | 271 | 366 | 260 | 277 | 80 |
| 4- Cash withdrawal in POS terminals | 2,999 | 2,647 | 1,654 | 2,088 | 3,450 |
| 5- Payments with cards in POS terminals | 291,131 | 403,214 | 527,411 | 750,397 | 1,107,425 |
| From which: | | | | | |
| -Payments with debit cards | 187,720 | 252,780 | 322,230 | 458,067 | 656,000 |
| -Payments with credit cards | 103,411 | 150,434 | 205,181 | 292,330 | 451,425 |
| Total of transactions with cards | 8,205,143 | 9,124,300 | 10,406,955 | 11,531,652 | 12,411,221 |

Source: The Bank of Albania (Reports from banks according to “*Methodology of payment instruments report*”)

Table 5: Transactions with cards weight according to terminals (value)

| <i>Transactions with cards according to type of transaction</i> | Value (million leke) | | | | |
|---|-----------------------------|-------------|-------------|-------------|-------------|
| | 2008 | 2009 | 2010 | 2011 | 2012 |
| 1- ATM cash withdrawal | 89,067.43 | 96,117.27 | 100,057.91 | 106,660 | 109,609 |
| 2- ATM deposits | 2.10 | 2.97 | 0.23 | 0.10 | 0.03 |
| 3- Transfer-order through ATM | 9.37 | 10.02 | 6.31 | 5.72 | 0.68 |
| 4- Cash withdrawal in POS terminals | 451.51 | 453.86 | 358.22 | 404 | 475 |
| 5- Payments with cards in POS terminals | 4,196.19 | 5,321.72 | 7,438.30 | 10,914 | 13,396 |
| From which: | | | | | |
| -Payment with debit cards | 2,013.71 | 2,565.67 | 3,151.13 | 4,719 | 4,739 |
| -Payment with credit cards | 2,182.39 | 2,756.05 | 4,287.17 | 6,195 | 8,657 |
| Total of transactions with cards | 93,726.60 | 101,905.3 | 107,860.96 | 117,980 | 123,481 |

Source: The Bank of Albania (Reports from banks according to “*Methodology of payment instruments report*”)

During 2008, over 8.2 million transactions with cards in total were processed, with a total yearly circulation of 93.7 milliard lek (Albanian currency). From the total of transactions, about 96.4% make up cash withdrawal from ATM.

During 2009, over 9.1 million transactions with cards in total were processed, with a total yearly circulation of 101.9 milliard lek. Compared with the same period of previous year, an increase of number and value of transactions with cards is noticed, correspondingly with 11.2% and 8.7%. From the total reported transactions, about 95.5% make up cash withdrawal from ATM-s and the difference is client's payment with cards from POS-es, this is an indicator of an economy with high cash use.

During the period time December - January 2010, over 10.4 million transactions with cards in total were processed, with a total yearly circulation of 107.9 milliard lek. Compared with the same period of previous year, an increase of number and value of transactions with cards is noticed, correspondingly with 14% and 5.8%. From the total of transactions, about 94.9% make up cash withdrawal from ATM and only 5.1% are client's payments with cards in POS-es.

*During 2011, over 11.5 million transactions with cards (ATM and POS) in total were processed, with a total yearly circulation of 118 milliard lek. Compared with the same period of previous year, an increase of number and value of transactions with cards is noticed, correspondingly with 10.8% and 9.4%. From the total of transactions, about 93.5% make up cash withdrawal from ATM and only 6.5% are client's payments with cards in POS-es. Payments with cards in terminal POS show a domination of the number of transactions done through debit cards. *However, in terms of value, transactions with credit cards are simply higher than those with debit cards.**

During 2012, over 12.4 million transactions with cards in total were processed, with a total yearly circulation of 123.5 milliard lek. Compared with the same period of previous year, an increase of number and value of transactions with cards is noticed, correspondingly with 7.6% and 4.7%. From the total of transactions, about 91% make up cash withdrawal from ATM.

High percentage of cash withdrawal transactions from ATM is an indicator of an economy with high cash use.

From the data analysis concerning number and value of transactions with cards, it can be seen that even though these two indicators have had an increase, the increase rhythm of transactions' number is much faster than the rhythm of transactions' value, an action that results in the value decrease of a transaction done with a card.

Referring to bank's reports, *debit cards hold about 96% of the total circulating cards.* As far as card type is concerned, according to operators offering their proceeding

service during 2010, VISA cards hold the greatest part, about 83% of the total, followed by Master Card with about 11%. Maestro and American Express cards hold the smallest part, correspondingly with 3% and 1%. Only two banks emit local cards, which hold about 2% of the total circulating cards.

From the total clients' bank accounts reported by banks, about 29% of bank accounts can be accessed in distance, by using a credit or debit card. Offering payment service or cash withdrawal from other accounts requires necessarily the physical being in bank's ticket office.

From the study of transactions number per card holder in proportion with the population number in Albania, it can be said that in the end of 2009, one in 6 people on average is a credit card holder and each card holder has carried out 16 transactions on average during 2009, from which 15 are cash withdrawal from ATM.

4.2 The use of electronic equipments ATM and POS

An important role in carrying out electronic transactions has played the use of cash machines (ATM) and electronic equipments in sale stations (POS).

In 2004 only 93 cash machines were counted in Albania (ATM) and only 155 POS equipments. As far as time aspect is concerned, we can say that they began to be used after 2000. After 2004 they kept on being used greatly. Thus, in 2005 there were 205 cash machines ATM and 779 POS equipments functioning.

Table. 6: Proceeding of ATM and POS number over years and yearly increase levels.

| <i>Years</i> | POS equipments (in sale stations) | Increase percentage | Cash machines ATM | Increase percentage |
|--------------|--|--------------------------------|------------------------------|--------------------------------|
| 2004 | 155 | - | 93 | - |
| 2005 | 779 | 402.58% | 205 | 120.43% |
| 2006 | 1234 | 58.41% | 309 | 50.73% |
| 2007 | 1832 | 48.46% | 433 | 40.13% |
| 2008 | 2953 | 61.19% | 642 | 48.27% |
| 2009 | 4370 | 49.98% | 741 | 15.42% |
| 2010 | 4903 | 12.20% | 771 | 4.05% |
| 2011 | 5126 | 4.55% | 805 | 4.41% |
| 2012 | 5307 | 3.53% | 823 | 2.24% |

Source: The Bank of Albania

They had an increase compared with year 2004 of 120.4% and 402.6%, whereas in year 2012 there were 823 cash machines ATM and 5.307 POS equipments functioning. 730 cash machines ATM or over 90 cash machines per year on average

have been added, whereas in POS equipments have been added 5.152 cash machines or 644 per year on average.

From the bank's reports for year 2010, it results that ATM equipments and POS have been settled in developed regions of the country as well as in industrial centers with a more developed infrastructure, about 53% of cash machines and 79% of POS terminals are settled in Tirana zone. This spread is noticed even in year 2011, where about 55% of cash machines and 78.3% of POS terminals are settled in Tirana zone.

Comparing the Albania data with other regional countries in order to study the dynamic and specific feature in their use, it would be of great interest, but, information with such data is difficult to be available. Therefore, comparison is not easy to be made.

5. The role Bank of Albania plays

Central Bank plays an important and irreplaceable role in the bank development and thrift, in our case is the Bank of Albania as an independent Regulator Organ with principal objective observing banking system. Development of banking operations based on electronic technology requires a legal and regulatory framework which in Albania are as follows:

Regulatory framework:

Through regulative territory that the Bank of Albania has created, banks have been able to increase the variety of electronic banking products, of course by filling in many prior conditions to guarantee safety use of this service. The code "To minimal administration standards of operational risk" is being recently approved, in which the risk of systems use/damage takes place as well.

Electronic systems of payment:

Electronic systems of payment that the Bank of Albania has offered to banks for settlement and clearing payments (AECH, AIPS), are pro contemporary standards and they cover electronically the whole clearing scheme of settlement from banks to the Bank of Albania and vice versa.

Education of public:

The Bank of Albania constantly publishes educational materials for general public. A number of brochures have been published to make the public aware of payment systems, payment instruments or different services where we can mention brochures

“Payment Systems”, “Electronic currency: The future of currency? ”, “Bank in the Internet era” etc.

Observation:

The Bank of Albania carries out exact examinations in the banking system to ensure that technical infrastructure, visibility towards consumers and all risks related to the offer of this service are addressed in compliance with the regulative framework of the Bank of Albania and the best international practices.

Cooperation with Bank's Association:

Undertaking initiatives that intend further steps coordination between banks is planned in cooperation with the Bank's Association, considering that it would create the necessary energy to increase the interference of the service in trade.

6. Conclusions and recommendations

6.1 Conclusions

The progress of world economy after second World War, especially the globalization of world economy and increasing competition, not only did increase bank's role in economy but also involved banks in a continuous movement to improve the quality of choosing and serving to the clients.

Fast progress of information technology after 70s a century ago and especially its use in society based on techno-scientific revolution could not have much importance without banking section.

Over the days, it was used by banks to serve clients fast, conveniently, efficiently and with lower cost. Electronic money was present in society both with its pros and cons.

Revolution of information technology in spreading channels of banking industry began at early 70s with credit card, automatic machines ATM and ATM nets interference. This was further extended with telephonic banking, banking through television in 80s as well as the process of banking through personal computer (PC) in late 80s and early 90s.

Information technology has enabled the management of banking services which used to be carried out on the counter.

On such conditions was born the concept of electronic banking system which is defined in different ways, however, it represents the offering of information and services by banks through different offering platforms which can be used with various terminal tools such as a personal computer, a cell phone, phone or digital television.

Factors affecting its process are various, but the most important are convenience, accessibility, correctness, safety, utility, bank image and website design, which are further considered as principal determiners of the perception of e-banking service quality from bank system.

In Albania, information technology in bank transactions began its way after 1990, following the great democratic changes and the tendency toward the trade economy, especially after 2000, a period when the country entered a complete competition and important reforms were carried out.

ATM cash machine and POS sale equipments' installation has progressed at great pace.

From the total reported transactions, about 95.5% make cash withdrawal from ATM-s and the difference is the client's payments with cards in POS-es. This is an indicator of an economy with high cash use.

Credit and debit cards are in use. However, in terms of value, transactions with debit cards are relatively higher than transactions with credit cards.

Electronic products of bank cards are offered by almost all banks (in total 14), which are already in a new stage of this process. *From the offered services' variety and technology point of view, they consist in their further perfection.*

Electronic payment instruments (e-payment) are a relatively new instrument of payment services in Albania.

E-banking service use has a great importance. The progress of transactions' value volume carried out electronically by clients over the years is increasing with low percentages.

In 2012, "home banking" service was offered by 11 banks. Also yearly increase of accounts' number accessed online reflects the spread of these services.

Based on the use of information technology for bank services, except of awaring clients about its advantages, the banks should also invest more in information technology to guarantee quality, reliability, privacy, safety etc., necessary to the net use in any aspect of life.

6.2 Recommendations

As a conclusion, we consider that the reach of critical stage of electronic banking development is the key to success. This can be achieved when there exists a substantial

penetration of Internet and banks are able to offer services replying to a wider request. In this case, satisfied users will serve as delivers and promoters of the service.

Therefore, we recommend that:

1. Banks can egg, subsidize costs, free trainings, numerous assess facilities, motivating programmes for users and all peoples.
2. E-banks should make attempts about aggressive marketing campaigns.
- 3 .Because of fast progress of technology, banks can cooperate firmly in the field of standards development, intending service offer towards third parties.
4. E-banks should try to enlarge their field as soon as possible because most of the clients use the facilities of E-Banking to pay bills etc. The more third parties are involved in the field mentioned above, the more will be clients affected by attacks.
5. The power of communicating person-to-person under no circumstances should be underestimated. An intelligent business culture, that values technological development and is available to carry out new advanced solutions, is another aspect to be considered from bank system in Albania for the internet banking development.

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Technical Efficiency enhancement in the European Union: A way out economic crisis

Abstract:

The objective of this paper is to estimate the deterministic non-parametric approach Data Envelopment Analysis (DEA), regarding technical efficiency estimation of high-technology manufacturing industries in selected E.U. economies, as a way out of the current economic crisis. This paper proposes a slack-based DEA which allows a full evaluation of inefficiency in country and industry level performance. The model estimated in this paper is a DEA variant called slack-based measure, which is able to deal directly with the input excesses and the output shortfalls of the industry under evaluation. By using slack-based efficiency measure, we obtain different frontier levels and more appropriate performance benchmarks for efficient industries.

Key Words: Technical Efficiency, Policy Planning, Efficiency Estimation, Industrial Policy

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1. Introduction

Nowadays, the role of high-technology industries to the economy is even more important taking into consideration the slowdown in the European Union economy, and the effects on the business environment created by the current economic crisis, making an important contribution to economic growth and development. However, due to their nature, high-technology industries are characterized by being very heterogeneous, since they differ in their endowments of resources, as well as on the risks involved in their productive activities. For this reason, it is of great importance, on the one hand to analyze their efficiency level and potential, considered to a large extent to depend on the EU's capability to transform the economy towards one that makes more productive use of its resources. However, it is difficult to predict which industries will be the most productive in the future, as technology and innovation trends are inherently difficult to forecast.

There is a huge literature on factors influencing technical efficiency and productivity growth. In this literature, it is widely accepted that decision making units are not homogeneous producing units and, therefore, not all units are operating at the same level of efficiency (Caves, 1989). Within this framework, technical efficiency represents the estimation of how well a producer uses the available resources to produce outputs from inputs. However, technical efficiency literature has emphasized factors such as technical efficiency, mainly through technological spillovers, increasing returns, learning by doing, and unobserved inputs (Koop, 2001). Within this framework, measuring efficiency is a quite important task in economic analysis. First only by measuring efficiency and by separating their effects from those of the general economic environment, can we explore hypotheses concerning the sources of efficiency differentials, as well as effectiveness of private practices and public policies designed to improve productive performance.

Data Envelopment Analysis involve the use of linear programming methods to construct a piecewise linear surface or frontier over the data and measures the efficiency for a given unit relative to the boundary of the convex hull of the input-output vectors. The individual efficiencies of the firms relative to this production frontier are then calculated by means of distance functions and they can be interpreted as the proportional reduction of the inputs to become technically efficient by a projection onto the efficient boundary, the production frontier. The efficiency score is the point on the frontier characterized by the level of inputs that should be reached to be efficient (Simar and Wilson, 1998).

The analysis assumes that there is a frontier technology (in the same spirit as the stochastic frontier production model) that can be described by a piecewise linear hull that

envelopes the observed outcomes. Some (efficient) observations will be on the frontier while other (inefficient) individuals will be inside. The technique produces a deterministic frontier that is generated by the observed data, so by construction, some individuals are efficient. The basic idea of this approach consists of enveloping the data (the observed input-output combinations) in order to obtain an approximation of the production frontier (best-practice frontier) and using this to identify the contribution of technological change, technological catch-up, and inputs accumulation to productivity growth (Coelli et al., 2005, Simar and Wilson, 1998, Simar and Wilson, 2007).

DEA is used to obtain efficiency measures based on the aggregated, or ‘virtual’, inputs and outputs. As described in McMillan and Chan (2006), let there be n producers using varying amounts of inputs to produce outputs. There are s inputs x_i ($i = 1, \dots, s$) and m outputs y_r ($r = 1, \dots, m$). For each producer, such as producer j ($j = 1, \dots, k, \dots, n$), the problem is to:

$$\max_{u,v} h_j = \frac{\sum_r u_{rj} y_{rj}}{\sum_i v_{ij} x_{ij}} \tag{1}$$

subject to

$$\frac{\sum_r u_{rj} y_{rj}}{\sum_i v_{ij} x_{ij}} \leq 1 \quad \text{for } j = 1, \dots, n \tag{2}$$

$$u_r, v_i \geq 0$$

where u_{rj} is the weight assigned each unit of output r from producer j and v_{ij} is the weight assigned each unit of input i used by producer j . That is, solutions are sought to maximize the ratio of weighted output to weighted input for each producer (the ratio of virtual output to virtual input). By normalization, the efficiency scores range from zero to one. The same weights (virtual multipliers) that maximize h_j for producer j are applied to the inputs and outputs of all producers in the solution to the problem for producer j . This solution process is repeated for each producer.

As far as the DEA characteristics are concerned, DEA can be specified as either an output-maximizing problem or an input-minimizing problem. Input models measure efficiency in terms of the potential (proportional) reduction in input use while output models measure efficiency in term of the potential (proportional) output increase. While the efficient and inefficient units do not change, the efficiency scores can differ between the two orientations in the variable returns to scale case:

Table 1: The basic DEA models

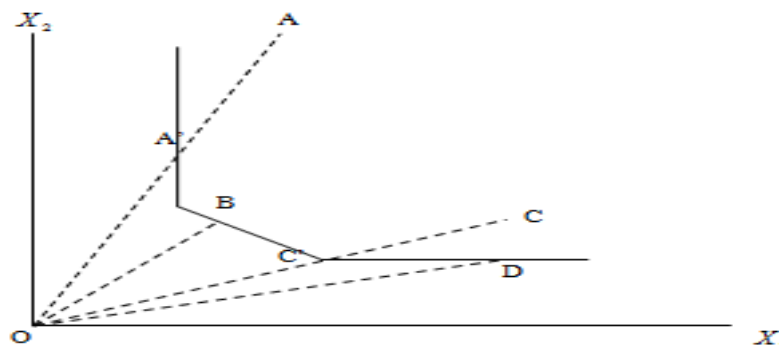
| Orientation | Constant Returns to Scale | Variable Returns to Scale |
|-----------------|---|---|
| Input Oriented | $\min \theta, v\lambda \theta$ $s.t. - yi + Y\lambda \geq 0$ $\theta xi - X\lambda, v \geq 0$ $\lambda \geq 0$ | $\min \theta\lambda, \theta$ $s.t. - yi + Y\lambda \geq 0$ $\theta xi - X\lambda \geq 0,$ $N_1' \lambda = 1$ $\lambda \geq 0$ |
| Output Oriented | $\max \phi\lambda, \phi$ $s.t. - \phi yi + Y\lambda \geq 0$ $xi - X\lambda, v \geq 0,$ $\lambda \geq 0$ | $\max \phi\lambda, \phi$ $s.t. - \phi yi + Y\lambda \geq 0$ $xi - X\lambda \geq 0,$ $N_1' \lambda = 1$ $\lambda \geq 0$ |

Source: Own elaboration

The variable returns to scale (VRS) approach assumes that scale inefficiencies in the industry are present (Banker et al., 1984 first allow for VRS). Within the VRS assumption we can distinguish between decreasing returns to scale (DRS), increasing returns to scale (IRS), non-increasing returns to scale (NIRS), and non-decreasing returns to scale (NDRS), modifying the restrictions in the linear optimization problem (see Cooper et al., 2006, for a summary of assumptions). All calculations can also be done using an output-orientation (Simar and Wilson, 2007).

Before assessing each industry’s efficiency, DEA compares the relative efficiency among industries. In DEA, efficiency is computed on the basis of the envelope or efficient frontier, formed by all values near the original point O :

Figure 1: DEA efficiency values



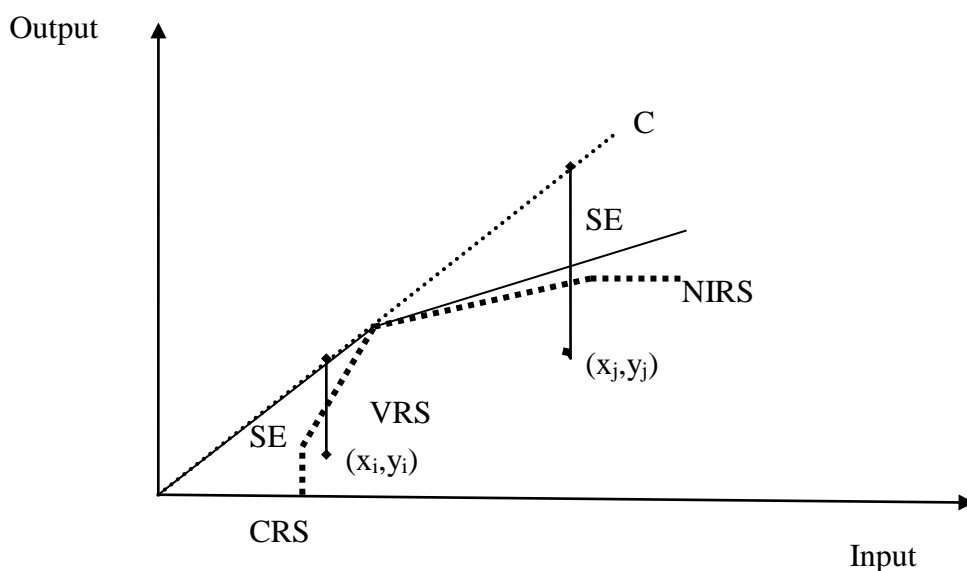
Source: Chen (2011)

DEA involves the use of linear programming methods to construct a non – parametric piece – wise frontier over the data, so as to be able to calculate efficiencies relative to this surface. The two principal model options are:

1. Standard CRS and VRS DEA model which involve the calculation of technical and scale efficiencies (where applicable) (Färe et al., 1994).
2. Panel data DEA model which refers to calculating indices of TFP change: technological change, technical efficiency change, and scale efficiency change (Färe et al., 1994).

DEA is based on either constant returns to scale (CRS), also called CCR for Charnes, Cooper, and Rhodes (1978), or variable returns to scale (VRS), also called BCC for Banker, Charnes, and Cooper (1984). Charnes, Cooper and Rhodes (1978) proposed a model which had an input orientation and assumed CRS. Banker, Charnes and Cooper proposed a VRS model. In each case a linear programming problem is solved to envelop the data in a convex area bounded by straight lines. Under CRS, only as many DMUs as outputs can be efficient. Under VRS, many DMUs can be efficient. Under VRS, scale efficiency refers to operating at the scale of operation, or linear sum of outputs, which maximizes the ratio the linear sum of outputs to the linear sum of inputs. An economically efficient business is both technically efficient and scale efficient. Under CRS, output-oriented technical efficiency and input-oriented technical efficiency are the same, but under VRS, they are different, because the efficient frontier is not just one line emanating from the origin.

Figure 2: Output – oriented technical and scale efficiency



Notes:

CRS: Constant returns to scale

NIRS: Nonincreasing returns to scale

VRS: Variable returns to scale

SE: Scale efficiency

Source: SpringerImages (2011)

The above figure presents hypothetical one-input one-output production processes with three different technologies: Constant returns to scale (CRS), Variable returns to scale (VRS) and Nonincreasing returns to scale (NIRS). The vertical distance from an observation (either (x_i, y_i) or (x_j, y_j)) to the CRS/VRS/NIRS best-practice frontier stands for output-oriented technical efficiency under CRS/VRS/NIRS assumptions, respectively. Scale efficiency in DEA is calculated as in Banker et al. (1984): $TE(CRS)/TE(VRS)$.

The methods are available in either an input or an output orientation. Efficiency in DEA is generally defined as the weighted sum of outputs divided by the weighted sum of inputs. The set of weights for a DMU is computed in DEA with the objective to give the highest possible relative efficiency score for the DMU, while keeping the efficiency scores of other DMUs in the range of 0 to 1 under the same set of weights. Efficient DMUs have the score of 1; the other DMUs which score less than 1 are considered as inefficient. Graphically, efficiency is obtained from the ratio between the distance from the original point to the relative point of the envelope and the distance from the original point to the observation point (optimal value=1).

2. Technical efficiency estimation through DEA

This section analyses and discusses the empirical findings of the technical efficiency estimation in high-technology European Union industries in selected member-states, using EU-KLEMS industry and country data. The results indicate that, from our model analysis, it is evident that the manufacturing industries in our research sample are not fully efficient. Our analysis followed the methodology by Kneller and Stevens (2006), who used panel data on manufacturing industries of OECD countries, estimating the distance to the technological frontier. Of great influence is also the methodology by Bhattacharjee et al. (2009) who explored the idea that the productivity enhancing positive component captures innovative activity raising certain industries above common productivity standards at specific times.

We employed the variable returns model of Data Envelopment Analysis (DEA), proposing a slack-based DEA. As described earlier, the model chosen for this approach is the DEA variant called slack-based measure, which is able to deal directly with the input excesses and the output shortfalls of the industry under evaluation (Tone, 2001). By using slack-based efficiency measure, we obtain different frontier levels and more appropriate performance benchmarks for inefficient industries. First, we estimate the technical efficiency levels by country and industry under two different assumptions regarding the returns to scale, which is why we estimate technical efficiency under constant returns to scale and variable

returns to scale. The production assumptions in DEA are that all actual observed inputs and outputs of any industries are feasible for all industries, as are linear combinations of observed inputs and outputs. The estimation is input-oriented, meaning that efficiency is relative to the amount of input needed, as opposed to being output-oriented, meaning that efficiency is relative to the amount of output that could be produced. Each industry is evaluated by itself.

Technical efficiency estimation is higher under variable returns to scale assumption, compared to industry efficiency under constant returns to scale assumption. United Kingdom, Netherlands and France present the higher levels of technical efficiency across industries. As far as the technical efficiency per industry is concerned, Manufacturing-nec and transport equipment present the higher levels of technical efficiency compared to the rest of the industries in our model.

Table 2: DEA technical efficiency estimation by industry

| | CRS_TE | VRS_TE | SCALE | RTS |
|----------------------|--------|--------|-------|-----|
| Electrical - Optical | | | | |
| France | 0.729 | 0.916 | 0.797 | irs |
| Germany | 0.739 | 0.915 | 0.808 | irs |
| Italy | 0.727 | 0.907 | 0.801 | irs |
| Netherlands | 0.720 | 0.905 | 0.797 | irs |
| Spain | 0.712 | 0.908 | 0.784 | irs |
| United Kingdom | 0.729 | 0.904 | 0.807 | irs |
| Food - Beverages | | | | |
| France | 0.721 | 0.913 | 0.790 | irs |
| Germany | 0.725 | 0.918 | 0.791 | irs |
| Italy | 0.717 | 0.909 | 0.789 | irs |
| Netherlands | 0.735 | 0.916 | 0.801 | irs |
| Spain | 0.701 | 0.915 | 0.766 | irs |
| United Kingdom | 0.745 | 0.924 | 0.807 | irs |
| Textiles | | | | |
| France | 0.740 | 0.918 | 0.807 | irs |
| Germany | 0.722 | 0.919 | 0.786 | irs |
| Italy | 0.738 | 0.918 | 0.802 | irs |
| Netherlands | 0.732 | 0.924 | 0.793 | irs |
| Spain | 0.738 | 0.914 | 0.808 | irs |
| United Kingdom | 0.733 | 0.932 | 0.787 | irs |
| Manufacturing nec | | | | |
| France | 0.738 | 0.924 | 0.799 | irs |
| Germany | 0.723 | 0.930 | 0.778 | irs |
| Italy | 0.725 | 0.918 | 0.791 | irs |
| Netherlands | 0.743 | 0.920 | 0.808 | irs |
| Spain | 0.759 | 0.924 | 0.821 | irs |
| United Kingdom | 0.729 | 0.919 | 0.794 | irs |

| Wood | | | | |
|-------------------|-------|-------|-------|-----|
| France | 0.739 | 0.929 | 0.797 | irs |
| Germany | 0.712 | 0.939 | 0.760 | irs |
| Italy | 0.709 | 0.899 | 0.790 | irs |
| Netherlands | 0.728 | 0.914 | 0.797 | irs |
| Spain | 0.709 | 0.906 | 0.782 | irs |
| United Kingdom | 0.856 | 0.959 | 0.889 | irs |
| Paper | | | | |
| France | 0.759 | 0.927 | 0.820 | irs |
| Germany | 0.729 | 0.912 | 0.799 | irs |
| Italy | 0.724 | 0.898 | 0.807 | irs |
| Netherlands | 0.721 | 0.914 | 0.789 | irs |
| Spain | 0.723 | 0.910 | 0.795 | irs |
| United Kingdom | 0.719 | 0.908 | 0.791 | irs |
| Chemicals | | | | |
| France | 0.721 | 0.925 | 0.781 | irs |
| Germany | 0.732 | 0.897 | 0.817 | irs |
| Italy | 0.706 | 0.897 | 0.788 | irs |
| Netherlands | 0.744 | 0.928 | 0.803 | irs |
| Spain | 0.734 | 0.916 | 0.801 | irs |
| United Kingdom | 0.728 | 0.927 | 0.787 | irs |
| Rubber - Plastics | | | | |
| France | 0.744 | 0.922 | 0.807 | irs |
| Germany | 0.723 | 0.900 | 0.803 | irs |
| Italy | 0.714 | 0.908 | 0.787 | irs |
| Netherlands | 0.558 | 0.897 | 0.610 | irs |
| Spain | 0.742 | 0.925 | 0.802 | irs |
| United Kingdom | 0.724 | 0.924 | 0.783 | irs |
| Non-metallic | | | | |
| France | 0.727 | 0.912 | 0.798 | irs |
| Germany | 0.730 | 0.923 | 0.791 | irs |
| Italy | 0.722 | 0.916 | 0.790 | irs |
| Netherlands | 0.725 | 0.911 | 0.796 | irs |
| Spain | 0.730 | 0.910 | 0.802 | irs |
| United Kingdom | 0.720 | 0.913 | 0.789 | irs |
| Metals | | | | |
| France | 0.728 | 0.912 | 0.799 | irs |
| Germany | 0.710 | 0.905 | 0.785 | irs |
| Italy | 0.670 | 0.902 | 0.741 | irs |
| Netherlands | 0.709 | 0.902 | 0.787 | irs |
| Spain | 0.723 | 0.916 | 0.790 | irs |
| United Kingdom | 0.733 | 0.926 | 0.793 | irs |
| Machinery | | | | |
| France | 0.739 | 0.917 | 0.807 | irs |
| Germany | 0.730 | 0.921 | 0.793 | irs |

| | | | | |
|----------------|-------|-------|-------|-----|
| Italy | 0.704 | 0.904 | 0.779 | irs |
| Netherlands | 0.715 | 0.908 | 0.788 | irs |
| Spain | 0.754 | 0.928 | 0.812 | irs |
| United Kingdom | 0.725 | 0.914 | 0.792 | irs |
| Transport | | | | |
| France | 0.710 | 0.907 | 0.784 | irs |
| Germany | 0.726 | 0.909 | 0.799 | irs |
| Italy | 0.731 | 0.926 | 0.791 | irs |
| Netherlands | 0.733 | 0.920 | 0.797 | irs |
| Spain | 0.750 | 0.927 | 0.810 | irs |
| United Kingdom | 0.719 | 0.911 | 0.790 | irs |

Source: Own estimation

Estimating also technical efficiency by industry, under both assumptions of constant and variable returns to scale, it is evident that ‘variable returns to scale’ assumption bears higher efficiency levels. Industries present, also in this case, increasing returns to scale. As far as the relative efficiency per industry and country is concerned, the results are reported in the following table:

Table 3: Relative Analysis per Industry and country

| Country Industry | France | Germany | Italy | Netherlands | Spain | United Kingdom |
|---------------------|--------|---------|-------|-------------|-------|-------------------|
| 1 | 0.956 | 0.962 | 0.929 | 0.935 | 0.935 | 0.927 |
| 2 | 0.974 | 0.981 | 0.965 | 0.954 | 0.967 | 0.967 |
| 3 | 0.980 | 0.978 | 0.939 | 0.986 | 0.979 | 0.974 |
| 4 | 0.940 | 0.987 | 0.936 | 0.969 | 0.952 | 0.964 |
| 5 | | | | | | |
| 6 | 0.990 | 0.972 | 0.958 | 0.980 | 0.976 | 0.968 |
| 8 | 0.965 | 0.979 | 0.963 | 0.977 | 0.969 | 0.953 |
| 9 | 0.901 | 0.942 | 0.935 | 0.946 | 0.944 | 0.922 |
| 10 | 0.979 | 0.970 | 0.974 | 0.973 | 0.967 | 0.970 |
| 11 | 0.944 | 0.904 | 0.879 | 0.901 | 0.907 | 0.914 |
| 12 | 0.934 | 0.969 | 0.954 | 0.975 | 0.976 | 0.965 |
| 13 | 0.949 | 0.970 | 0.959 | 0.958 | 0.948 | 0.953 |

Notes:

Industry 1 = Electrical and optical equipment. Industry 2 = Food products, beverages and tobacco. Industry 3 = Textiles, textile products, leather and footwear. Industry 4 = Manufacturing nec; Recycling. Industry 5 = Wood and products of wood and cork. Industry 6 = Pulp, paper, paper products, printing and publishing. Industry 7 = Coke, refined petroleum products and nuclear fuel. Industry 8 = Chemicals and chemical products. Industry 9 = Rubber and plastics products. Industry 10 = Other non-metallic mineral products. Industry 11 = Basic metals and fabricated metal products. Industry 12 = Machinery, nec. Industry 13 = Transport equipment.

Source: Own Estimation

As far as the relative efficiency per industry is concerned, it is apparent that industries such as Food – Beverages, Textiles, Paper, Chemicals and non metallic products experience the highest efficiency levels among the manufacturing industries in our sample. Even though the picture changes for each industry, however, Germany is experiencing the highest level of technical efficiency among the other countries, followed by the Netherlands.

To begin with, as far as the DEA results are concerned, regarding relative efficiency per industry, we concluded that industries such as Food – Beverages, Textiles, Paper, Chemicals and non metallic products experience the highest efficiency levels among the manufacturing industries in our sample. Even though the picture changes for each industry, however, Germany is experiencing the highest level of technical efficiency among the other countries, followed by the Netherlands. We also found that all the manufacturing industries operate in increasing returns to scale with the electrical – optical industry presenting the higher increasing returns to scale rate. Manufacturing nec industry presents also significantly high capital slacks; whereas the labor slacks are more limited.

However, on average, Germany, France, and Netherlands are the best performer countries, since they have the lowest average inefficiency levels, whereas Italy, Spain and United Kingdom seem to be the worst performer countries, since they have the highest levels of inefficiency. As far as the industry inefficiency is concerned, the best performing industries, on average, are the non- metallic, the chemicals and textiles industries, whereas, the worst performing industries are those of wood, electrical/optical and metals. Among the best performing industries are the industries of paper in France, Metals in France and Transport Equipment in Germany. On the other hand, the worst performing industries are those of wood in Germany and Netherlands, as well as metals industry in Italy and Netherlands.

3. Concluding Remarks and Policy Implications

Discussion in more specific terms vis-à-vis our empirical results, suggests that there are specific underlying policy implications, measures and initiatives in order to close the inefficiency gap across counties and industries.

In European Union there is an increasing interest in the contribution of productive efficiency in the sustainable long-term economic growth, taking into consideration the need that competition forces technological innovations, that increase productivity, renewed the interest for the role of innovation in the development process, underlining the interaction

between investment in innovative activities, technological change and sustainable economic growth.

European Union industrial and innovation policy is aimed at strengthening the competitiveness of European Union producers by promoting competition, ensuring access to markets and establishing an environment which is conducive to R&D across the Union. Knowledge and access to it has become the driving force for growth in advanced economies like the European Union known-how and intellectual capital, much more than natural resources or the ability to exploit abundant low-cost labor, have become the major determinants of economic competitiveness since it is through these that economies can not only increase their productive efficiency but also develop new products. Productive efficiency, therefore, holds the key to maintaining and strengthening competitiveness which in turn is essential for achieving sustained economic development. To achieve both sets of conditions requires an effective institutional and administrative framework to support development. The cost of not pursuing a vigorous cohesion policy to tackle disparities is, therefore, measured in economic terms, as a loss of the potential real income and higher living standards. Given the interdependencies inherent in an integrated economy, these losses are not confined to the less competitive states but affect every state in the Union.

By securing a more balanced spread of economic activity across the European Union, it will reduce the risk of imbalances and divergence, making it easier to sustain the European model of economic growth and cohesion. In policy terms, the objective is to help achieve a more balanced development by reducing existing disparities, avoiding regional imbalances, by making policies more coherent, improving integration and encouraging cooperation between states and regions. Among other development factors, countries or industries facing lags in productive efficiency face also a lag in growth. Lagging countries or industries in European Union has been one of the main objectives of the European strategy. Development problems are more intense in lagging regions or industries which present major differences in level of economic performance, output, productivity and employment. These disparities arise due to structural deficiencies in factors, which restrain economic activities and overall development.

These disparities cannot be ignored, since they affect the overall competitiveness of the European Union economy. Covering costs of congestion or treating the consequences of disparities implies a sub-optimal allocation of resources, as well as a lower level of efficiency and economic competitiveness than could potentially be attained. To combat disparities and

achieve a more balanced pattern requires some coordination of innovation and industrial policies if they are to be coherent and consistent with each other.

However, the answer to closing the inefficiency gap is also micro-related, suggesting perhaps cutting off the rail of more inefficient plants, or moving the distribution for all the plants in a specific industry. As companies become more efficient, the economy reallocates resources to more productive uses, either in existing companies or new ones. On the other hand, efficiency may be improved primarily through innovation and technological progress, better developed in a collaborative environment.

However, productive efficiency enhancement depends extensively on the presence or the formation of a network and environment favourable to innovation, which is based on the endogenous development capabilities. Even though the firm specific factors are important determinants of innovation activity, technological opportunities and favourable entrepreneurial environment have a positive effect on innovation activity, as well. This could also be related to country-level institutional reform or restructuring, or it could be mainly focused on measures and initiative actions in order to increase overall Research and Development expenditure and innovation investments, and/or promoting exporting activities. These actions should also be linked not only to different country-level programs, in order to tackle any inefficiency features found in different countries and industries, but also linked to European Union structural plans for innovation and growth.

It is also useful, in order to enhance technical efficiency that firms cooperate in order to bring technological advances and access, create and diffuse technological knowledge, trying to exploit the benefits from cooperative manufacturing and commercialising of research, to gain large-scale operation benefits and to take advantages of sharing the associated risks. These alliances are characterised 'strategic' because they aim to provide a competitive advantage to participating firms against their competitors by making them able to respond more effectively and dynamically to technological competition, organizing innovation in such a way that can successfully act in response to market conditions, by generating, coordinating, and controlling technology, since they are able to achieve a more efficient outcome, avoiding spillovers and unnecessary duplication of effort problems, and permitting the smooth dissemination of technology and information, beneficial for industries and countries. Co-operation and exchange of technology among firms and/or other research organisations can take place at a given point of R&D and/or commercialisation process, or cover the process as a whole and it may refer to the creation or just acquisition and use of knowledge.

Synergies may increase the rate of innovation, decrease the costs of knowledge diffusion and enhance the efficiency of the investment, due to effective pooling of resources and exploitation of research results having positive effects on costs. This development establishes favourable incentives to participants to combine their expertise and assets and engage in collaborative research activities.

Moreover, in Europe 2020 strategy, European Union has identified the following key areas in order to promote productivity and competitiveness of the European Union economy (European Commission, 2011):

- facilitating structural changes, to move towards more innovative and knowledge-based sectors;
- enabling innovation in industries, in particular by pooling scarce resources, by reducing the fragmentation of innovation support systems and by increasing the market focus of research projects;
- promoting sustainability and resource efficiency, in particular by promoting innovation;
- improving the business environment;
- benefiting from the single market, by supporting innovative services.

Through these five core pillars, industrial and technological policy should move towards a new path to build economic effectiveness and stimulate economic growth, supporting both basic science and strategically oriented research. In addition to the creation of new technologies, particular consideration should be dedicated to the diffusion of existing knowledge and innovations focusing on the ability of the firms to locate, access, adapt, and use new technologies. This development could be of collective nature, incorporating industries, government authorities, universities, and research institutes, through interactive relationships, to assist the authorities to engage in the needed technology policy goals.

Economies and industries should directly point towards the new challenges and focus on the newly raised prospects, recognising that government can play a major role in developing and reaping the benefits of productive efficiency promotion. There is excess need for active policies directed on science and technology crucial to today's business economy, which would be able to create a secure business environment in which innovation investments may have the expected results. Concluding, it is believed that such an approach will result in more efficient production levels, and can be rather beneficial for the business units and the overall economy. The suggestion made could be summarised in the view that cooperation activities should be treated as a core mechanism, accompanied by special policy considerations concerning any problems and drawbacks which may arise in their application.

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Museum Visitor Intentions to Revisit and Recommend¹

Abstract:

The purpose of the present study is to identify the factors affecting museum visitor intentions with regard to future behaviour, by formulating a behavioural model. The scope of this behavioural model was to understand and predict museum visitor future behaviour and to identify strategies that can explain and influence their behaviour. Structural Equation Modeling was selected as the most appropriate method for testing the Theory of Planned Behaviour model in the case of Greek public museums. Museum visitor future intentions are described for the first time, with the aid of a behavioural model. The present findings could assist both museum managers and the authorities, to focus their promotional activities on several target groups that are primarily interested in cultural tourism.

Keywords: Greek Museums, Visitor's Behavior, Cultural Tourism, Behavioral Model

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1. Introduction

In the increasingly competitive tourism market, investigating the factors that lead to positive assessments of a tourist destination by visitors and consequently to repeat visits and word-of-mouth recommendations, is complex. Tourists motivation and the decision making processes leading to the choice of a destination, is a very multifaceted process that has not yet been researched comprehensively (Lam and Hsu, 2006). Since the development of tourism has led to increased competition, and tourism expenditure is limited, the factors that lead to repeat visits and positive word-of-mouth communication, are very important. Assessing the determinants of museum visitor repeat visitation and word-of-mouth intentions, are the focus of the present study, and based on the Theory of Planned Behaviour (TPB). Armitage and Conner (1999) suggest that the TPB model can be used to measure a wide range of attitudes, since it is important to understand what motivates visitors to repeat visits and recommend. Accordingly, the museums must offer services in accordance with the needs and wants of tourists.

The research objectives were to identify the factors affecting museum visitor future intentions, and to design a behavioural model with the use of the Structural Equation Model (SEM). In order to obtain a more holistic view of the subject, in addition to the literature review, a survey of tourists, who were museums visitors, was conducted. The future intentions of visitors to Greek museums is analysed for the first time with the assistance of a behavioural model. This constitutes the research gap which the work aims to close. The application of TPB aids in understanding and predicting museum visitor future behaviour, and identifies strategies that could raise public awareness, attract and satisfy more visitors.

The World Tourism Organization (WTO) estimates that the demand for cultural tourism is growing by 15% per annum (Richards, 1996). Accordingly, tourist site and museum managers face the challenge of developing a better understanding of the market and providing services that best satisfy the needs of visitors (McKercher and Du Cros, 2002). The museums included in this survey were non-profit institutions, funded entirely by the state, have a permanent collection and are open to the public. They are public museums and thus reflect national cultural policy. The survey was conducted in five Greek archaeological museums, namely: the Delphi, the Mycenae, the Ancient Olympia, the Ancient Corinth and the Epidaurus Museum. These public museums represent about 15% of total museum visits in Greece, including their archaeological sites,

(http://www.statistics.gr/portal/page/portal/ESYE/PAGE-themes?p_param=A1802).

2. Literature review

Cultural tourism is growing worldwide and thus must confront the challenges posed, in order to remain a competitive form of tourism, since there is considerable competition from other forms (Phaswana-Mafuya and Haydam, 2005). According to Phaswana-Mafuya and Haydam (2005), those responsible for cultural tourism must broaden their offerings to meet the growing needs of increasingly discerning travellers, without lowering the quality of the services offered, or jeopardising the culture of the region.

The profile of tourists should be clearly defined, along with their needs, expectations, desires and perceptions, in order to ensure satisfaction and repeat visits. Surveys throughout the world have shown that museum visitors tend to be better educated and from higher social-economic groups than non-visitors, (Kelly 1991). Museum managers must change the services they offer to the public, according to visitor profiles and needs (McLean, 1994; Huo and Miller, 2007). Therefore, it is important to understand and predict visitors' future behavioural intentions to choose a particular destination and tourist attraction.

Travel motivation is an important area of study in the tourism literature (Lam and Hsu, 2004). The decision-making process, leading to the choice of a given tourist attraction, is a highly compound procedure. To investigate this, the TPB model has been applied to predict the behavioural intention of museum visitors, as has also done by other researchers with respect to a variety of social behaviours, and with impressively strong predictability (Ajzen and Driver, 1992; Lam and Hsu, 2004, 2006; Quintal et al. 2010).

In the tourism sector, attitudes are really predispositions toward a tourist destination, based on perceived attributes of the services and products offered (Lam and Hsu, 2006). In the present study, behavioural intention was defined as potential tourist anticipation of a revisit and positive recommendation, or word of mouth intention. Word of mouth (WOM) refers to oral communication between current or past consumers with other people, family and friends. There is evidence from the literature on the relationship between satisfaction and the desire to recommend the services (File et al, 1994; Shemwell, 1998; Soderlund, 1998; Sivadas and Baker -Rewitt, 2000; Hennig-Thurau et al, 2002).

The Theory of Planned Behaviour (TPB) model has been applied in past studies to predict behavioural intention (Ajzen and Driver, 1992; Armitage and Conner, 2001; Bagozzi and Kimmel, 1995; Beck and Ajzen; Norman and Conner, 1996) and to predict the choice of a destination (Lam and Hsu, 2004, 2006). The inclusion of past behaviour enhances the predictive ability of the TPB model (Lam and Hsu, 2006). From the literature, it is evident that there is so far no survey that applies the TPB model to museum visitors, in order to

predict their future behaviour. Therefore, the TPB should enhance our understanding of the motivation of museum visitors, and effectively investigate their intentions as a mean of forecasting future behaviour.

3. Conceptual framework

The research objectives of the present study were to identify the factors affecting visitor intentions with respect to future behaviour. The approach of this study was that of marketing research. According to Ajzen and Fishbein (1977), the stronger the expressed behavioural intentions, the more likely they are to be put into action. The investigated model on visitor intentions was based on the Theory of Planned Behaviour (TPB), (Ajzen, 1991), with Past Behaviour (Lam and Hsu, 2004, 2006). According to the TPB, the behavioural intentions of visitors are the primary means of forecasting their behaviour in the future. The aim of this model in the present study was to understand and predict future visitor behaviour and to identify strategies that could influence such behaviour, with the assistance of the TPB model.

According to the TPB (Ajzen, 1991), behavioural intention is formed by Attitudes toward Behaviour, the Subjective Norms and Perceived Behavioural Control. These all mediate between Behavioural, Normative and Control Beliefs and intentions to revisit and recommend. The intended behaviour of visitors was examined, regarding their intention to recommend and revisit the museum in the future (Figure 1). Thus, the behavioural intention of the visitors is that of recommending and revisiting, and Hypotheses 1 to 9 were formed according to Ajzen's model (1991), with variables the questions from the questionnaire of the survey. Hypotheses 10 and 11 are formulated according to Lam and Hsu (2006), who included Past Behaviour in the model.

Based on the Theory of Planned Behaviour model, Ajzen (1991) eleven (11) research hypotheses were formulated and investigated. Table 1 depicts questions from the questionnaire that refer to the constructs of the investigated model.

- Hypothesis 1: There is a positive relationship between Behavioural Beliefs and Attitude toward Behaviour, (Ajzen, 2002).

Behavioural beliefs (about the outcomes of a certain behaviour and their evaluation), produce a favourable or an unfavourable attitude toward behaviour (Ajzen, 2002). The behavioural beliefs of museum visitors are expressed in questions forming the questionnaire, (When do you visit a museum..., Usually I visit museums...). These form relationships with museum visitor attitudes toward behaviour (Value for money of the museum services offered...).

- Hypothesis 2: There is a positive relationship between the Normative Beliefs and Subjective Norm, (Ajzen, 2002).

Normative beliefs (about other's normative expectations and the motivation to comply with them), result in subjective norms, (Ajzen, 2002). The normative beliefs of museum visitors include such items as, (Rate the influence/impact of alternative sources of information on your decision to visit this museum...). These form a relationship with museum visitors' subjective norms (People who are important to me believe that...).

- Hypothesis 3: There is a positive relationship between Control Beliefs and Perceived Behavioural Control, (Ajzen, 2002).

The control beliefs (beliefs about the presence of factors that may facilitate behavioural performance and their perceived power), give rise to perceived behavioural control, (Ajzen, 2002). The control beliefs of museum visitors include such items as, (You visit a museum more often when...), form a relationship with museum visitor perceived behavioural control, (Visiting a museum when I am...).

- Hypothesis 4: There is a positive relationship between Attitude toward Behaviour and behavioural intention of Recommending, (Ajzen, 1991).

The more favourable the attitude, the stronger the person's intention to perform the behaviour (recommend and/or revisit) should be, (Ajzen, 2002). Visitor intention to recommend the museum to others is influenced by their own attitude toward behaviour.

- Hypothesis 5: There is a positive relationship between Attitude toward Behaviour and behavioural intention of Revisiting, (Ajzen, 1991).

Visitors' intention to revisit the museum in the future is influenced by their own attitude toward behaviour.

- Hypothesis 6: There is a positive relationship between Subjective Norms and behavioural intention of Recommending, (Ajzen, 1991).

The more favourable the subjective norm, the stronger the person's intention to perform the behaviour should be (recommend and/or revisit), (Ajzen, 2002). Visitor intention to recommend the museum to others is influenced by their subjective norms.

- Hypothesis 7: There is a positive relationship between Subjective Norm and behavioural intention of Revisiting, (Ajzen, 1991).

Visitor intentions to revisit the museum in the future are influenced by their subjective norm.

- Hypothesis 8: There is a positive relationship between Perceived Behavioural Control and behavioural intention of Recommending, (Ajzen, 1991).

The greater the perceived control, the stronger the person's intention to perform the behaviour should be (recommend and/or revisit), (Ajzen, 2002). Visitor intentions to recommend the museum to others are influenced by their perceived behavioural control.

- Hypothesis 9: There is a positive relationship between Perceived Behavioural Control and behavioural intention of Revisiting, (Ajzen, 1991).

Visitor intentions to revisit the museum in the future are influenced by their perceived behavioural control.

- Hypothesis 10: There is a positive relationship between Past Behaviour and behavioural intention of Recommending, (Lam and Hsu, 2004).

The behavioural intention (recommend and/or revisit), is increased with the inclusion of past behaviour in the TPB model, (Lam and Hsu, 2006). Visitor intentions to recommend the museum to others are influenced by their past experiences (Previous visits).

- Hypothesis 11: There is a positive relationship between Past Behaviour and behavioural intention of Revisiting, (Lam and Hsu, 2006).

Visitor intentions to revisit the museum in the future are influenced by their past experiences (Previous visits).

Figure 1: The investigated model

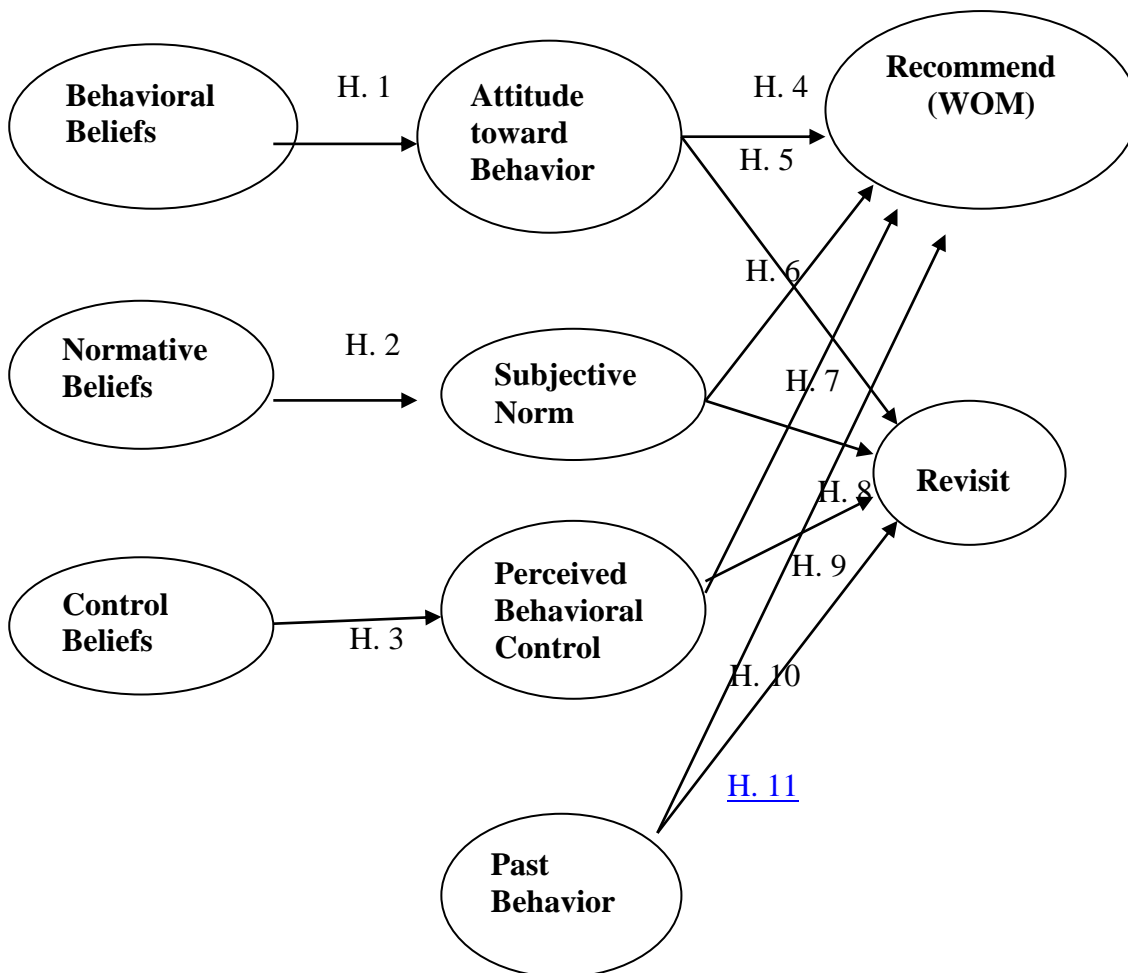


Table 1: The questions that consist the investigated variables with SEM

Behavioral Beliefs:

- When do you usually visit a museum?

When I am on vacation/ holidays

When I am visiting another city from the one I live

When I am coming to visit the café or the store of the museum

For a special exhibition or event

Always I try to visit museums when I have the ability

I visit museums with the kids

- Last year, how many times did you visit a museum?

- I usually visit museums because:

I am generally interested in history issues.

I am generally interested in the history of the place that I have visited.

I would like to enrich my knowledge.

I would like to live a new experience.

I would like to travel to other cities and centuries with my imagination.

I would like to talk about my unique experience to my friends and relatives.

Normative Beliefs:

- Please rate the influence/ impact of alternative sources of information on your decision to visit this city/destination, according to 1-5 scale.

- Please rate the influence/ impact of alternative sources of information on your decision to visit this museum, according to 1-5 scale.

Control Beliefs:

- Would you visit a museum more often in your vacations if:

You were interested in something to see

Tickets are not expensive

There is easy access

They are not boring places

You have time for that

The opening hours are suitable

- In case I do not have time, I do not visit museums in foreign cities, which I am visiting as a tourist.

- In case I do not have suitable company, I do not visit museums in foreign cities.

- In case I do not have adequate information, I do not visit museums in foreign cities.

- In case I do not feel I have the physical strength, I do not visit museums in foreign cities, which I am visiting as a tourist (when I am tired).

Attitude toward Behaviour:

- How would you rate the value for money of the service offered?
- How would you rate the working hours of the museum?

Subjective Norm:

- People who are important to me believe that I should visit museums in foreign cities.

Perceived Behavioral Control:

- Visiting museums when I am in a foreign city as a tourist is financially feasible.
- The information I have before visiting museums is always adequate.

Past Behavior:

- Previous experience, visit

Revisit:

- To what degree do you intend to visit this museum again in the future?

Recommend:

- To what degree do you intend to recommend this museum to your friends/relatives?

4. Methodology

The methodology was based on the strategic planning for marketing research by Kotler et al. (2008), the marketing strategy of Runyard and French (1999) and McKercher and Du Cros (2002). The analysis was based on the information gathered from the questionnaires completed by tourists, who visited the five Greek public museums. The museums included in this survey are five not-for-profit institutions, located in five different tourism destinations in Greece in urban and rural areas, where travel agencies organize tours and museum visits for tourists.

This quantitative research was conducted from January 2009 until July 2009, with 700 English language questionnaires (using 5-point Likert scale and open-ended questions). They were completed by international tourists who visited Greek tourism destinations including museums. They filled in the questionnaires alone after they completed their museum visit, specifically in the bus. The data was analysed using SPSS, initially to present some demographics (nationality, age, gender, education, income, family). Structural Equation Modeling (SEM) was selected as the most appropriate method to examine the relationship

between visitor intentions to revisit and recommend (Tabachnick and Fidell, 2007). SEM then evaluated the adaptation of the model, based on the suggestions made in the theory. The statistical analysis was conducted with the program STATISTICA 8.0 for Windows of StatSoft USA.

According to Hoe (2008), the critical sample size is a minimum of 200 questionnaires. This condition was met, since the sample consisted of 535 valid questionnaires and this sample could be considered as representative of a typical museum audience (Kawashima, 1998; Kotler and Kotler, 2000; Harrison and Shaw, 2004). The data show a good degree of adjustment to the model and the routes could be considered as important, when the model is well supported. The conformity of the data to the investigated model (Figure 1) was examined. The size, direction, and significance of the estimators of parameters, are expressed by the arrows in the diagram of tracks, shown in the final model (Figure 2). SEM is usually regarded more as a confirmatory rather than as an exploratory analysis method. In this survey, the confirmatory approach was therefore used.

5. Results

The sample consisted of 35.68% Europeans, 34.19% Americans, 8.97% Asians, 7.48% Australians, 6.84% Canadians, and 6.84% Other. The grouping was based on their percentage in the sample and was included when their rate was above 6%. The “Other” group consisted of more than fifty (50) different nationalities. The largest percentage of visitors was aged 46-56 at 24.35%, the age group of 26-35 with 22.36%, and the age group of 56-65, with 19.16%. The majority of visitors were women with 54.55%, while men comprised 45.45% of the sample. Visitors with a university degree made up 44.42%, followed by visitors with a postgraduate degree at 39.64%, and visitors with vocational education, 12.55%. Most visitors had an income exceeding 2500 euros per month (55.24%), followed by visitors with 2001 to 2500 at 15.38% and 13.05% of the sample with 1501 to 2000 euros per month. The largest percentage of visitors was unmarried and single (38.23%), followed by married with independent children (18.51%) and married with older dependent children (14.29%).

According to the SEM statistical analysis, the Maximum Residual Cosine, Maximum Absolute Gradient and RMS Standardized Residual, had very low values, thus demonstrating a good application to the SEM model. The χ^2 was statistically significant and therefore, the relationships examined through the SEM model could be regarded as real, and the model holds well in the investigated population (sample). The indices GFI and AGFI had moderate values (0.46 and 0.41), suggesting that the model explains about 50% of the variance,

according to Tabachnick and Fidell (2007:718). The low value of the index Steiger-Lind RMSEA showed a good model fit. The model would be stronger if the index CFI was higher (Tabachnick and Fidell, 2007:720). Yet, the model applied well to the data where the index Steiger-Lind RMSEA had a good fit (Table 2).

The variables of the model consisted of the relevant questions in the questionnaire. The statistical relationships were examined in terms of their loadings. The statistically significant p level ($p < 0.05$), confirmed that the results were not coincidental. The parameter estimate of each variable showed the importance of each variable in the relationship. It was stronger when closer to the unit and therefore confirmed the final model (Figure 2).

According to the application of the TPB model to the responses of visitors from five museums, the relationship between Attitude toward Behaviour and Behavioural Beliefs, was confirmed (Hypothesis 1). Similarly, the relationship between Normative Beliefs was confirmed with the Subjective Norm (Hypothesis 2) and the Perceived Behavioural Control confirmed its relationship with Control Beliefs (Hypothesis 3). The Behavioural Beliefs were investigated in terms of whether they form a strong relationship with several variable-indicators, (questions from the questionnaire). The SEM analysis showed that the relationship was confirmed with a number of variables. According to the responses of the visitors, they usually visit museums because they are interested in the history of the place, they are generally interested in history, they like to enrich their knowledge, like to travel to other cities and centuries with their imagination, they want new experiences, they want to talk about it to friends and relatives and they usually do this when they visit other cities (indicators, B1, B2, B3, B4, B5, B6, B7), (Figure 2).

The factors shaping Normative Beliefs were fourteen (14) indicators. Alternative sources of information influenced their decision to visit the museum and the city-destination. Articles in newspapers and magazines and the internet had an impact on their decision to visit the museum (indicators, N1, N3) and the city (indicators, N2, N4). Previous experience, books, friends and relatives, posters, leaflets and advertisements in magazines, newspapers, TV, radio, and others, were the factors shaping Normative Beliefs for the museum visit (indicators, N5, N6, N7, N8, N9, N13). The factors influencing their decision to visit the destination were books, travel agents, advertisement in magazines, newspapers, TV and radio, and others (indicators, N10, N11, N12, N14). Similarly, the Control Beliefs formed relationships with the adequacy of relevant information, company suitability, and physical capability to walk and excursion, when they have free time, opening hour's suitability and they

would visit a museum more often in their vacations if they had time (indicators C1, C2, C3, C4, C5, C6).

Respectively, the relationship of Attitude toward Behaviour was confirmed with the question of how to rate the museum's opening hours and not with the value of money of the service offered (indicator, A1). The relationship between Perceived Behavioural Control was confirmed with the question about visiting a museum when financially feasible, and not with the necessary or desired information before the visit (indicator PB1). The relationship of Past Behaviour was confirmed with the selection of the museum and the tourist destination, since they were affected by their previous experience which was reflected in a desire to revisit the same destination (indicators P1, P2), (Figure 2).

The relationship between Attitude toward Behaviour and future intention was stronger when recommending the museum to friends and relatives and less with revisiting (Hypothesis 4 and Hypothesis 5). Normative Beliefs and the Subjective Norm were more strongly connected with the intention to visit in the future and less with their willingness to recommend (Hypothesis 6 and Hypothesis 7). The relationship between the Subjective Norm with the revisit intention was close. The relationship of Control Beliefs prevailed with Perceived Behavioural Control (Hypothesis 3), but not with the intention to visit again and recommend the museum. The relationship of the Past Behaviour applied to the revisit intention (Hypothesis 11), and not with the recommendation of the museum to friends and relatives.

The TPB model is not completely applicable to the museums' visitors behavioural intention, since the Perceived Behavioural Control did not have an affect on visitor intentions to revisit and recommend. The Subjective Norm and Attitude toward Behaviour had the greatest direct effect on behavioural intentions to revisit the museum and spread positive comments. Past Behaviour had a significant impact on behavioural intention to revisit and not to recommend. The relationship between visitor attitudes and their behavior with respect to future visits and to recommend the museum was positive (Lam and Hsu, 2006).

The characteristics of the service affect its quality, and this reflects the key role of the museums' quality dimensions, in agreement with previous studies (Nowacki, 2005; Lam and Hsu, 2006). The application of the structural equation model (SEM) to five museums, confirmed the positive relationship between certain variables (characteristics), with the factors that affect attitudes to future behavior (Nowacki, 2005; Ajzen, 1991; Lam and Hsu, 2006), and revealed that certain factors and perceptions of visitors play more crucial roles in shaping

behavioral intentions for future visits and recommendations of the museum. The relationships that were confirmed are shown graphically in the final model (Figure 2).

Figure 2: The relations as depicted in the model with their parameter loadings by the SEM analysis

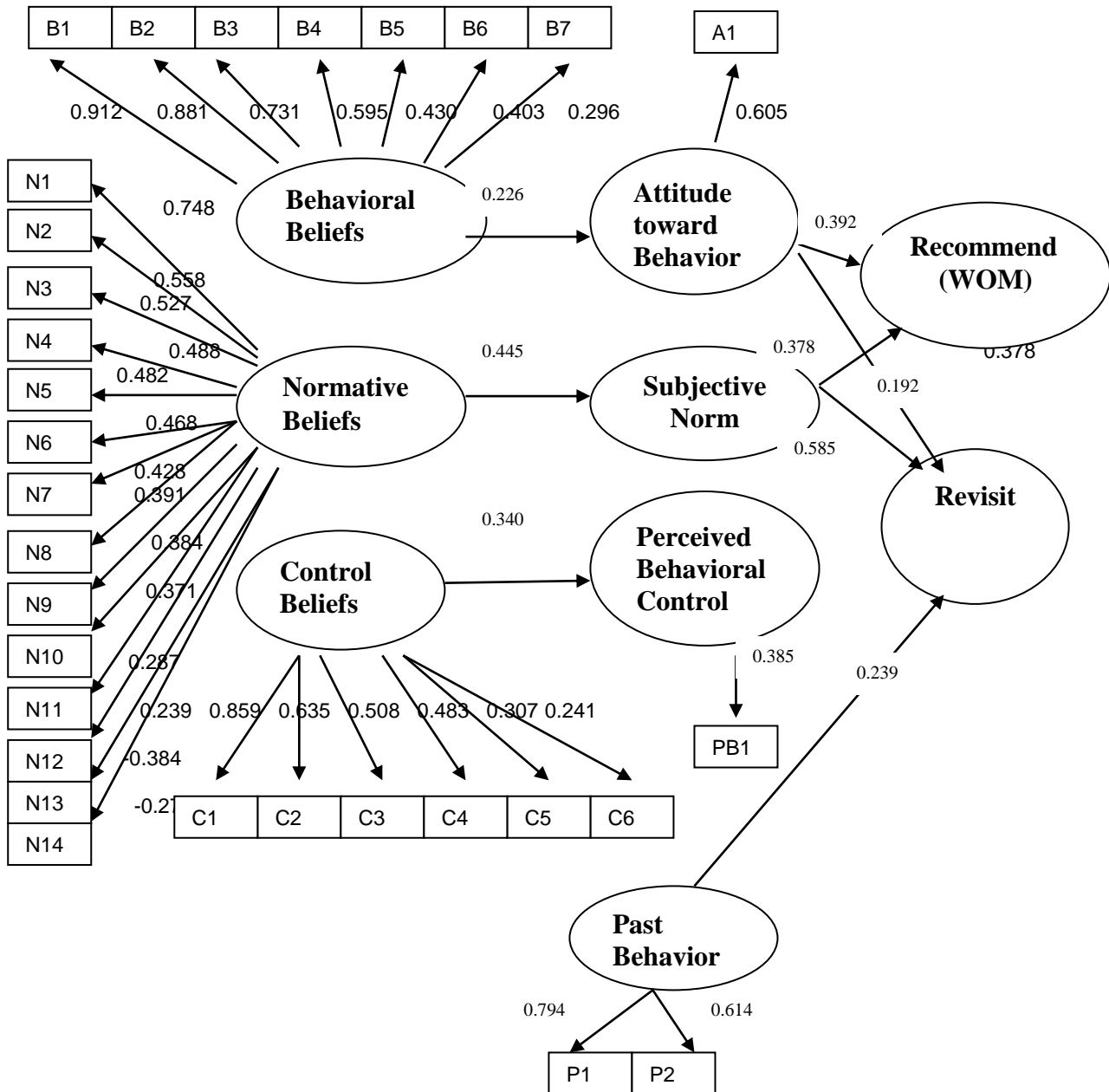


Table 2: Statistical analysis of the model

| | Value | | |
|------------------------------------|--------------------------|----------------|--------------------------|
| Discrepancy Function | 46,162 | | |
| Maximum Residual Cosine | 0,000 | | |
| Maximum Absolute Gradient | 0,052 | | |
| ML Chi-Square | 3692,978 | | |
| Degrees of Freedom | 1418,000 | | |
| p-level | 0,000 | | |
| RMS Standardized Residual | 0,141 | | |
| Joreskog GFI | 0,459 | | |
| Joreskog AGFI | 0,413 | | |
| Bentler Comparative Fit Index CFI | 0,196 | | |
| Noncentrality Fit Indices | Lower 90% Conf. Bound | Point Estimate | Upper 90% Conf. Bound |
| Population Noncentrality Parameter | 12,946 | 14,682 | 16,515 |
| Steiger-Lind RMSEA Index | 0,096 | 0,102 | 0,108 |
| McDonald Noncentrality Index | 0,000 | 0,001 | 0,002 |
| Population Gamma Index | 0,625 | 0,652 | 0,680 |
| Adjusted Population Gamma Index | 0,592 | 0,622 | 0,652 |

6. Discussion and strategic implications

The aim of this survey was to create a behavioural model of visitors to Greek museums, describing their future behavioural intention, in order to assist those responsible for museums and cultural tourism in Greece, in assessing the determinants of visitors' future behaviour and to identify appropriate strategies for attracting and satisfying visitors. The factors shaping the relationship of visitors' attitudes and their behavioural intentions were investigated. According to the visitors' responses, the strongest factors shaping Behavioural Beliefs and influencing tourists in their museum visits were their general interest in history, the history of the place they visited and their desire to enrich their knowledge. Museum visitors are mainly tourists with a desire to discover and learn; they are interested in cultural tourism. The Ministry of Culture and Tourism in Greece and museum managers, should focus their promotional activities on the very prominent groups of tourists that is primarily interested in history and in enriching their knowledge, stimulated by the media to which they are exposed (newspaper and magazine articles and internet).

Alternative sources of information had an impact on their decision to visit the museum and the city-destination. The articles, internet, books and previous experience, most

strongly influence visitor decisions to visit a particular museum and tourist destination, and constituted the most important factors in forming tourists' Normative Beliefs. Those responsible for promoting public museums and tourist destinations should attempt to influence visitors' Normative Beliefs and use various means of communication for publicity purposes, taking advantage of the internet boom and that of social media, since they have a great impact on the tourism market, fundamentally changing the travel experience in the new internet era.

Convenient museum opening hours are much more important in selecting a museum than the ticket price. Thus, the hours should be flexible, accommodating visitors' needs. Since Past Behaviour affects visitors' future intention to revisit, museum experience is of high importance and museum managers and their personnel should try to offer quality services in accordance to their needs. Providing high quality services and satisfying visitor needs and wants, will lead to repeat visits, recommendations and more revenue.

Although the final model did not totally confirm the TPB model, the application of SEM to five public museums, yielded interesting and useful results. Visitor intentions with respect to future behaviour are affected by various factors, forming Behavioural and Normative Beliefs, but not so much by Control Beliefs. These were the factors that affected future plans of visitors, to revisit and recommend. The museum managers and managers in the Ministry of Culture and Tourism in Greece should apply the present findings, in designing national cultural and tourism strategy. They could thus increase the frequency of repeat visits and attract new visitors, since the stronger people's intentions to revisit a museum and spread positive recommendations are, the more likely this will convert into real behaviour.

This behavioural model of tourists who visited the Greek museums, confirmed the validity of the basic relationships proposed by the theory of planned behaviour (TPB). Although the museums researched, constitute only about 15% of total museums visits, they could be considered as representative, since they are public museums as 90% of museums in Greece, and follow more or less the same public, cultural and tourism policies. Greek public museums are dominant features in cultural and tourism development, which can substantially strengthen the vital tourism sector. The appropriate marketing tools can help Greek museums to understand visitor needs and offer services in accordance with them. Museum managers and the local tourism authorities should understand that the cultural heritage and inherent advantages of the Greek tourist destinations could be supported by quality museum services that lead to repeat visits and positive word of mouth intentions.

7. Limitations and future research

The present study does have some limitations. The museums investigated only comprise about 15% of the total visits to public museums, due to money and time constraints. Thus, for a more holistic view of the subject, future studies should expand the analysis to more public and private museums in Greece, thus extending the range of the research. The lack of relationship between Perceived Behavioral Control and future intentions (Revisit and Recommend), and Past Behavior to Revisit may have occurred for the same reason, the limited sample. An expanded analysis to a wider range of museums, might confirm the complete model of the Theory of Planned Behavior. Future research could combine the TPB model with the SERVQUAL (Parasuraman et al, 1988) model. The relationship between past behavior and satisfaction with past visits could be investigated, in order to determine the circumstances in which satisfied past visitors would revisit and recommend.

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Expressions of solidarity in the European Union: The case of Greece¹

Abstract:

This paper examines the European discourse on solidarity during the first years of the Eurozone crisis (2009-2012), with special reference to Greece. It argues that the Greek sovereign debt crisis has not only raised concerns about the deficiencies of the European Monetary Union (EMU) and the effects of the Eurozone crisis on member states' politics and administration, but has also challenged democracy and solidarity within the European Union (EU). The impact of the financial crisis on solidarity has brought to light significant issues regarding cohesion, coordination, and socioeconomic development in the EU and has raised more questions than answers about the future of European governance and polity. The paper examines the EU political elites' discourse on the Greek case and questions whether or not solidarity was a driving force behind their actions.

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1. Introduction

The Eurozone crisis has brought to light major construction problems of the EMU, which reflect significant economic and social issues; among them and European solidarity. Particularly, the question of whether solidarity has remained a common principle for the EU has been raised many times. The debt crisis has exposed conflicting views about how far solidarity should go in the context of a monetary union and how to balance solidarity with austerity. Moreover, the crisis has pinpointed unresolved and delicate challenges about Europe as a political and social community that is based on cohesion, mutual commitment, and sharing of responsibility. The Greek sovereign debt crisis has required not only austerity measures and tense political negotiations in the Eurozone, but also evidence on behalf of the EU that it remains a Union founded on democracy and solidarity.

This paper aims to examine the evolution and the different instances of discourse, politicized and produced by senior EU officials (especially German and French) who played an important role in the EU politics and decision making regarding the case of Greece. Another objective of this article is to question whether or not the EU showed solidarity and if so, what kind of solidarity.

Understanding the role of discourse at the EU level, especially what type of discourse the EU political elites engender regarding European solidarity, entails adoption of some theoretical and methodological premises. An examination of the EU political discourse, be it 'communicative' or 'coordinative,' employed by political actors (Schmidt 2010)³ is particularly important. Its analysis provides not only a general understanding of EU politics, but also an explanation of the interplay between politics and the exercise of solidarity during the Eurozone crisis.

Our analysis is grounded on a systematic review of the electronic archives of *EurActiv*,⁴ supplemented by other leading European newspapers, from autumn 2009 to summer 2012. More specifically, we focus on the period spanning Papandreou's takeover at the helm of the Greek government in October 2009 until the formation of the Samaras coalition government in June 2012, that is, covering the first years of the country's sovereign debt crisis. A content analysis generated a number of articles, which were reviewed and filtered according to their relevance to the subject matter and the actors involved, that is, the

³For more information on discursive institutionalism (DI) in general and especially with reference to the Eurozone crisis, see Schmidt 2013 and 2010.

⁴*EurActiv* is a transnational and independent European media network that provides news about European politics and policies in 12 languages (660,523 monthly readership) (<http://www.euractiv.com/network>).

EU senior officials. The latter formed the basis for a selection of a representative sample, which revealed the discourse(s) on European solidarity.

This paper is structured as follows: Section 1 provides a brief account of the idea and history of solidarity and explores its concept and manifestations within the European context. Section 2 sets the historical and economic-political framework with reference to Greece's sovereign debt crisis. Section 3 introduces the empirical part of the article, exploring and discussing the European discourse(s) prevailing in the rhetoric and actions of the EU senior officials regarding the Euro crisis and Greece. Particularly, it traces the adopted tone and substance of the discourse(s) during the first years of the crisis, as well as examines whether or not a sense of solidarity was being conveyed and if so, what kind of solidarity. The last section offers the summary and conclusion.

2. A brief note on solidarity and expressions of European solidarity

The idea of solidarity can be traced back for more than two centuries. The term was particularly associated with the notion of *fraternité* during the French revolution and alongside with those of *freedom* and *equality*, they all became key concepts in the rhetoric of the Jacobins. Fraternity or brotherhood came to denote the sense of political community and the wish to emphasize what was held in common. In the 19th century, early social philosophers and sociologists (e.g., Durkheim, Fourier, and Leroux) observed that traditional feelings of togetherness and social bonds were torn apart in the process that gave birth to modern society, and they regarded solidarity as a means of social cohesion and integration (Stjernø 2005:1). Two hundred years later, the concept of solidarity has surfaced at the forefront of discussions, signifying a rebirth of interest and theoretical inquiry (e.g., in the fields of sociology and social theory), as well as a solution—similar to the case in the early 19th century—to the disintegration of social bonds and the conditions of the modern western world (e.g., consumerism, individualism, social exclusion and isolation, democratic deficit, and globalization).

In the European context, the idea of solidarity has re-emerged with the Eurozone crisis, and the question of whether solidarity has remained a common principle for the EU has been raised many times. Solidarity has been invoked to challenge a broad range of fundamental concepts within the European context, such as European identity, democracy, justice, sovereignty, individualism, and collective action, as well as altruism and self-interest.

Solidarity has a long history in the EU as one of its fundamental values appearing in key constitutional documents (e.g., the Constitutional Treaty, the Maastricht Treaty, the

Charter of Fundamental Rights, and the Lisbon Treaty) and has been included as a guiding principle in many European policies (e.g., concerning finances, security, energy, immigration, and asylum). The Preamble of the Treaty Establishing the European Coal and Steel Community (1951) acknowledged the importance of solidarity in the European process: “Europe can be built only through real practical achievements which will first of all create real solidarity and through the establishment of common bases for economic development.” (as quoted in Sangiovanni 2013:1). In both the Single European Act (1986) and the Maastricht Treaty (1992), ‘solidarity’ appeared alongside ‘cohesion’ as one of the central objectives of the EU, whereas in the Treaty of Lisbon with its endorsement of the ‘solidarity clause’⁵ solidarity was recognized as a value binding the member states and their respective citizens (Sangiovanni 2013:1–2).

The EU Solidarity Fund, which comes to the aid of any member state affected by a natural disaster, is an important manifestation of the solidarity mechanism in the EU. Moreover, the two major documents on the future of social policy in the EU—“Opportunities, Access and Solidarity: Towards a New Social Vision for the 21st Century Europe” (2007) and “The Renewed Social Agenda: Opportunities, Access and Solidarity” (2008)—indicated the significance of solidarity, not only as a rhetorical statement, but also as a core value for the EU’s future.

3. Greece and the Eurozone in context

The economic crisis that broke out in 2008 in the USA (due to the collapse of subprime markets) developed into a global economic recession impacting both financial and nonfinancial sectors (Kotz 2009:305). The crisis spread to Europe rapidly and affected much of the region. Greece was among the several European countries —already in recession—suffering marked economic setbacks. Eventually, the Greek debt crisis was triggered by the [global economic recession](#); however, it was not the only reason.

Assessments that the Greek economy was in a really poor condition started gaining ground in 2009. According to international reports, the situation was dramatic and much worse than the cases of Ireland, Portugal, Spain, and Italy (Global Competitiveness Report 2010–2011). The Greek economic recession had been caused by a combination of many factors, such as structural weaknesses of its economy, tax evasion and corruption, inefficient government bureaucracy, restrictive labor regulations, and policy instability. Successive governments in Athens had failed to overcome the endemic problems of low competitiveness

⁵ See, Art 222, TFEU (Treaty on the Functioning of the European Union).

and trade and investment imbalances, as well as fiscal mismanagement, placing the economy in a vulnerable international position (Featherstone 2011:193).⁶

The victory of the socialist party (PASOK) signalled a change of leadership in Greek politics—from conservatives to socialists—and marked the beginning of an unthinkable economic, social, and political adventure. Unable to access international markets at reasonable interest rates, Papandreou's administration was confronted with the threat of bankruptcy and took tough and unpopular austerity measures (e.g., abolition of various allowances, reductions in salaries and pensions, tax increases, and privatization of public companies). These were not temporary measures and were continued intensively by the succeeding administrations of Papadimos (interim coalition government) and Samaras (coalition government).

Apparently, the problematic status of Greece caused dramatic consequences not only on a national policy level but also on the European one. The potential metastasis of the Greek crisis to other EMU states (the *domino effect*) was a threat for the European economic governance. In May 2010, Greece signed the first Memorandum of Understanding with its creditors and came under strict international scrutiny for the next years. Europe's response—in cooperation with the International Monetary Fund (IMF)—started with a crucial bailout package worth €110 billion, conditional on Greek compliance with certain measures, followed by a second bailout deal of €130 billion in February 2012.⁷ The aim behind these measures was to support the Greek government's efforts to restore fiscal sustainability and to implement structural reforms in order to improve the economy's competitiveness, thereby laying the foundation for sustainable economic growth.⁸

Nonetheless, this aid was based on high interest rates and loss of national sovereignty. The austerity package measures and the radical reforms in the public sector that the Greek government had to adopt in order to meet the conditions of the loans caused violent demonstrations and strikes in Athens and social unrest throughout Greece. The above-mentioned factors, combined with the continuing increase in unemployment rates, poverty, and devastation of the Greek people caused reactions from many European elites who questioned the effectiveness and legitimacy of the measures imposed by the Troika (the

⁶For an interdisciplinary analysis of Greece's fiscal, economic, and political crisis, see Lavdas, Litsas, and Skiadas 2013.

⁷The bailout loans were conditional on compliance with three key points: implementation of austerity measures to restore the fiscal balance, privatization of government assets worth €50 billion by the end of 2015 to keep the debt pile sustainable, and implementation of outlined structural reforms to improve competitiveness and growth prospects.

⁸http://ec.europa.eu/economy_finance/assistance_eu_ms/greek_loan_facility/

monitoring body),⁹ as well as the democracy and solidarity of the EU itself.¹⁰ Specifically, “the unprecedented external monitoring and policing of Greece’s economy—though matched by some initial successes—raised the longer-term, sensitive issues of legitimacy and governability, with uncertain prospects for avoiding further crises” (Featherstone 2011:193).

Berlin has received strong criticism about its aggressive and tough response to the Eurozone crisis, tendency to adhere to its own monetary and economic model, and failure to promote a clear vision for Europe. Berlin’s will to urge southern states and especially Greece to emulate Germany has been an almost impossible request (Bulmer and Paterson 2010). The Greek crisis has also reflected the imbalance in Germany’s favor, created by the Franco-German tandem (Guérot and Leonard 2011).

The threat of a ‘Grexit’ (Greek exit from the Eurozone) during the first years of the crisis addressed not only the structural deficiencies of the Greek state and economy, but also the Eurozone’s structural deficits, as well as questioned Europe’s capacity to consolidate Greece’s position in the Eurozone. Moreover, it expressed concern about Europe’s mission as a community of ‘shared values’ and a ‘common destiny,’ based on democracy and solidarity.

4. The European ‘solidarity’ discourse(s) on Greece’s troubles

The strict conditions attached to the aid packages and the delay in helping Greece and other countries raise questions about the supposedly altruistic motives behind them, as well as concerns about whether these measures prove European solidarity and what kind of solidarity. Why did the EU fail to act promptly? Was it a matter of different perceptions about fair sharing and responsibility? Did it reflect a lack of coordination among the EU elites and an absence of political will? Was it related to certain ethics and morals regarding self-interest, altruism, obligation, or collective action? Did it have to do with the actual lack of *the moral imperative to help someone in need, to help one of us* or with a different interpretation, on behalf of the European political elites?

It seems that the exercise of solidarity during the crisis had been initially obstructed by the EU leaders’ denial to realize the impact of the global financial crisis on the Eurozone and to recognize that the crisis was not only an American problem. The latter is reflected in Joaquin Almunia’s –former European Commissioner for Economic and Financial Affairs– words: “The economic fundamentals of Europe are solid [and] should not be significantly

⁹The three-member body monitoring is consisted of the European Central Bank, the European Commission, and the IMF.

¹⁰For instance, read Daniel Cohn-Bendit’s speech on May 5, 2010 at the European Parliament at [http://www.europarl.europa.eu/RegData/seance_pleniere/compte_rendu/traduit/2010/05-05/P7_CRE\(2010\)05-05_EN.pdf](http://www.europarl.europa.eu/RegData/seance_pleniere/compte_rendu/traduit/2010/05-05/P7_CRE(2010)05-05_EN.pdf)

affected by the recent turbulences and are capable of overcoming the ongoing uncertainties.”¹¹ The discourse of denial, combined with EU officials’ difficulty to identify their interest in helping other members of the Eurozone and the actual lack of solidarity mechanisms in place (that should have been ready for activation to provide financial support to an EMU country in need) (Fernandes and Rubio 2012:19–20), outlined the context of the exercise of solidarity during the first stage of the crisis.

Particularly, the Maastricht Treaty had not provided for an exceptional crisis and the Eurozone had been ill-equipped to tackle a catastrophe such as the one that exploded in early 2010 (Featherstone 2011). The Eurosystem was lacking the capacity for speedy reaction, policy discretion and centralized action (Pisani-Ferry and Sapir 2009; De Grauwe 2010, as referred to Featherstone 2011:201). The European Financial Stabilization Mechanism (EFSM), replaced later by the European Financial Stability Facility (EFSF) and the European Stability Mechanism (ESM), was an important solidarity tool. However, it emerged as a means of dealing with the ‘exceptional’ Greek case, the ‘unruly pupil’ of Europe, and the ‘statistics cheater,’ not as a result of a scheduled plan based on prediction and knowledge of the pros and cons of the Eurozone project. Against this background, Greece’s eventual bailout by the EU and the IMF in May 2010 had little to do with the sense of solidarity toward the Greek government and eventually with the forging of a European identity and the rise of a European consciousness, based on mutual respect and understanding. The German Minister of Finance, Wolfgang Schäuble, set the tone of ‘solidarity’ toward Greece by saying, “We are not defending Greece, we are defending the stability of our currency” (as quoted in Papadimitriou and Zartaloudis 2014:8).

The decisions regarding the ‘no bailout clause’ and generally, the way the EU elites handled the Eurozone crisis express a form of solidarity based on self-interest rather than altruism. The European leaders showed their brand of solidarity with the suffering countries when they understood that if they left one EMU country helpless with serious economic problems and unable to cope with its debts, then this case would have tragic consequences for their own economies. *I help because by doing so, I ultimately serve my self-interest.*

In the case of Greece, it seems that the decisions on whether or not to help it were made by balancing the (high) political cost of breaking the no bailout rule against the benefits of avoiding the unlikely default of a small EMU country representing only 3% of the EMU economy (Fernandes and Rubio 2012:20). The Greek debt crisis was initially portrayed as an

¹¹Hearing, European Parliament, Plenary Session in Strasbourg, 5 September 2007. *Europa.eu*. http://europa.eu/rapid/press-release_SPEECH-07-507_en.htm

exceptional case that was not a symptom of deeper malformations within the Eurozone. The ‘Greek problem’ started to be perceived as an ‘EMU problem’ only with the realization of its potential overall effects on the EMU economies, even those of the so-called ‘AAA’ countries. As then French President Nicolas Sarkozy said, “If Greece had defaulted, there would have been a domino effect carrying everyone away.”¹² Moreover, as Harvard historian Niall Ferguson commented, the bailout “wasn’t done to help the Greeks; it was done to help the French and German banks.”¹³

Generally, the discussion on the no bailout rule seems to reflect different beliefs about solidarity in Europe—dating back from the Maastricht Treaty—perhaps contradicting what kind of Europe is envisaged by Germany and France. More specifically, the French position is reflected in Article 103 of the Treaty of the European Union (TEU), which states that member states should regard their economic policies “as a matter of common concern.” On the other hand, the German position is mainly indicated in the introduction of a no bailout clause (Article 104b of the TEU), which actually forbids the EU from helping an EMU country that fails to meet its financial obligations. The latter seems to contradict Robert Schuman’s call for a “de facto solidarity”¹⁴ within the European community and the EU’s role in promoting ‘solidarity among Member States’ (Lisbon Treaty).¹⁵ Moreover, France’s role in addressing the Eurozone crisis challenges its initial vision for the EU.

5. The politics of denial, blame, and threat

The exercise of solidarity, especially during the first years of the Eurozone debt crisis, was jeopardized by a rather narrow *interpretation of the latter’s causes* by the EU political elites, as well as by some sectors of the press,¹⁶ which eventually led to a monolithic concept of what constituted *financial solidarity*. Particularly, the interpretation of the root causes of the EMU sovereign debt crisis was deployed mainly in a political narrative of blame and accusation. As Fernandes and Rubio (2012:25–26) argued, the dominant interpretation pointed to the crisis as a result of unreliable and irresponsible governments, which manipulated their statics to gain entry into the EMU and never implemented the necessary

¹²<http://www.bbc.co.uk/news/world-europe-15487269>

¹³http://www.nytimes.com/2010/05/17/business/global/17fear.html?_r=0

¹⁴“Europe will not be made all at once, or according to a single plan. It will be built through concrete achievements which first create a de facto solidarity” (Robert Schuman, *The Schuman Declaration*, May 9, 1950).

¹⁵ Art 222, TFEU.

¹⁶For an account on the Eurozone crisis coverage by the media, see <http://reutersinstitute.politics.ox.ac.uk/publication/euro-crisis-media-coverage-and-perceptions-europe-within-eu>, Reuters Institute for the Study of Journalism. For the media’s coverage of the Greek crisis in particular, see Tzogopoulos 2013.

reforms they had promised, in order to make their economies competitive. Similarly, Papadimitriou and Zartaloudis maintained that a key element of the EU discourse during the first years of the crisis was the ‘moral hazard’ argument, according to which “the ‘prudent’ northern flank of the Eurozone should not write ‘blank checks’ or be penalized (through higher borrowing costs) for the ‘sins’ of [the] profligate south” (2014:6).

The moral hazard argument was fuelled by the revelation of the Greek statistics scandal, and a storm broke involving the negative stereotyping discourse on the ‘cheating Greeks.’ The announcement that Greece had lied about its deficit and had revised its budget had as a consequence, severely damaged its credibility and national image. Moreover, added to Greece’s economic woes the European Commission’s possible legal action against it. From Greece’s plea for help in autumn 2009 till the first bailout in May 2010, the expression of solidarity toward Greece was based on the belief that “Athens would need to put its own house in order and brush aside all questions of financial support”¹⁷ and that “A quick act of solidarity is definitely not the right answer. Rather, the right answer is to seize the problem at the roots [...] therefore there is no alternative to the Greek savings programme.”¹⁸

Moreover, German Chancellor Angela Merkel commented on the issue of responsibility and discipline: “European rules need to change so that countries that repeatedly break the bloc’s economic guidelines can be expelled from the euro zone.”¹⁹ It seems that the exercise of solidarity during that phase was framed in a narrative of denial, moral hazard, self-responsibility, and discipline, as well as threat. Germany had staunchly resisted calls from other states to promise help for heavily indebted Greece, on the grounds that “A good European is not necessarily one who offers help quickly. A good European is one that respects the European treaties and national rights so that the stability of the euro zone is not damaged”²⁰ and that “the instruments available to safeguard [the] monetary union [are] not sufficient at present.”²¹ The European Commission President José Manuel Barroso also acknowledged that no mechanisms were in place to offer help; however, he insisted that the creation of an instrument for coordinated action, which could be used to provide assistance for Greece, was a matter of responsibility and solidarity. “Solidarity is a two-way street. Greece is

¹⁷<http://www.theguardian.com/theguardian/2010/feb/11/germany-greece-merkel-bailout-euro?guni=Article:in%20body%20link>

¹⁸Ibid.

¹⁹<http://www.euractiv.com/priorities/merkel-wants-scope-expel-eurozon-news-354178>

²⁰ <http://www.euractiv.com/priorities/merkel-eu-back-greece-resort-news-379169>

²¹Ibid.

making an economic effort at this point and by supporting these efforts we do not only help Greece but the stability of the euro zone as a whole.”²²

The IMF’s involvement in the Greek bailout program and the establishment of the Troika as a monitoring body revealed not only significant shifts in the EU’s coordinative discourse on the Eurozone crisis, but also an important symbolism, which eventually determined the nature of European solidarity toward Greece. The power vested in the Troika over Greece not only questioned its national sovereignty and created a sense of national humiliation, but also indicated a rescue plan drawn mainly from the moral hazard lens. Furthermore, as Papadimitriou and Zartaloudis (2014:9) maintained, “it was a lesson for a wider audience within the Eurozone.” It also indicated Berlin’s suspicions that the Greek government would not adequately collaborate without the IMF’s tried-and-tested know-how in disciplining “unruly pupils” around the world (ibid).

During the period between the first Greek bailout and the second one, European discourses on Greece grew increasingly hostile, showing no sense of solidarity. Greece was struggling to fulfill its obligation and cope with the pressure of intensifying its austerity program. However, the situation seemed irreversible and the need for a second bailout and a ‘haircut’ was more than apparent. The Dutch government openly called for Greece’s exit from the Eurozone. According to Dutch Prime Minister Mark Rutte and Finance Minister Jan Kees de Jage, a new “commissioner for budgetary discipline”²³ should have the authority to veto national budget plans that break EU debt and deficit rules. “In the future, the ultimate sanction can be to force countries to leave the euro.”²⁴ A month later, in an interview on French television, Sarkozy admitted that Greece’s entry to the Eurozone had been “a mistake” because the country had “entered with false [economic] figures.” [...] “It was not ready.”²⁵

The situation turned worse in the aftermath of Papandreou’s call for a referendum on the second Greek bailout. President Sarkozy and Chancellor Merkel brought Grexit to the forefront of their discourse and political rhetoric, declaring: “We will not allow the euro to be destroyed”²⁶ and implying that the idea of Greece exiting the Eurozone was no longer a taboo. Merkel was clear about Europe’s intentions: “We will defend the euro. We want to do that together with Greece. But we are not going to jeopardize this great project of unity. That is our priority.” [...] “We respect the decision of the Greek people. But we are not going to give

²²Ibid.

²³<http://www.euractiv.com/euro-finance/commission-rebuffs-euro-exit-debt-offenders-news-507495>

²⁴ Ibid.

²⁵<http://www.bbc.co.uk/news/world-europe-15487269>

²⁶<http://www.spiegel.de/international/europe/tough-words-merkel-and-sarkozy-halt-payments-to-athens-a-795638.html>

up the euro.”²⁷ In the same vein, Sarkozy set the tone for a possible Greek exit from the Eurozone by stating, “The Greeks have to decide whether to continue the adventure with us or not. We hope to continue with the Greeks, but there are rules that have to be respected. The Europeans and the IMF can’t release the sixth tranche of loans to Greece until Greece endorses the package of Oct. 27.”²⁸ For the first time, the stability and security of the Euro were placed above Greece’s ongoing membership in the Eurozone, and it was clear that if the Greeks voted against membership, the country could leave the Eurozone. A blackmail game between the two sides had started, challenging not only the Eurozone’s future, but also dynamiting the EU’s fundamental values. Solidarity was at stake!

The threat of the Greek exit, the politics of blame, the rigorous critique of Greece’s reform efforts, the huge pressure placed on the country to implement unpopular and tough measures, the widespread public hostility against the bailout programs, the unstable political scenario, and the ‘in-or-out’ political and social climate characterized the period from Papandreou’s resignation in November 2011 until the formation of a pro-bailout coalition government in June 2012, under the premiership of Anthony Samaras. The aforementioned conditions also reflected the European discourses on dealing with the Greek case and the lack of solidarity toward Greece. Solidarity seemed absent in the aims and actions of the EU elites; moreover, disapproval toward Greece, which was considered a “bottomless pit,” a country whose “promises were not enough for the EU anymore,” was hard to miss in EU officials’ statements.²⁹

Apparently, the criticisms about the Greek economic performance had mostly been fair and well deserved. Greece was primarily responsible for its macroeconomic problems. However, Europe was also accountable because it failed to foresee the possible structural shortcomings of the Eurozone and to act immediately, as well as to predict effective solidarity mechanisms that should have been in place. Europe was equally responsible for ‘cooking Greek statistics’ since it was supposed to check the numbers before accepting them.

On March 13, 2014, the European Parliament presented two nonbinding reports—one drafted by the Parliament’s Economic and Monetary Affairs Committee and the other by the Employment and Social Affairs Committee—regarding the Troika. Although the reports recognized that the Troika had “helped avoid further deterioration of the economic

²⁷ Ibid.

²⁸ Ibid.

²⁹ <http://www.reuters.com/article/2012/02/12/us-germany-greece-idUSTRE81B05N20120212>

situation”³⁰ they were critical of the Troika’s methods and its lack of democratic accountability. The members of the European Parliament found that the conditions imposed on bailed-out countries had negative social consequences due to the lack of a “proper impact assessment”³¹ on citizens such as cuts in healthcare, increased unemployment, youth migration, and rising poverty.³² Furthermore, in the working paper entitled “Growth Forecast Errors and Fiscal Multipliers”³³ written by Olivier Blanch and Daniel Leigh for the Research Department of the IMF, it was admitted that the IMF had made mistakes in handling Greece’s first international bailout, despite its success in keeping the country in the Eurozone. “Market confidence was not restored, the banking system lost 30% of its deposits and the economy encountered a much deeper than expected recession with exceptionally high unemployment.”³⁴

Evidently, the responsibility for the outcome lies not only with the country receiving the aid, but also with the entities giving it. Obviously, mutual responsibility and solidarity are interrelated.

6. Conclusion

This paper has examined the European discourse on solidarity during the first years of the Eurozone crisis, with special reference to Greece. The narrative of denial, blame, punishment, threat, and even blackmail is evident. Initially, the European leaders employed a narrative of denial based on their unwillingness to identify their interest in helping others (by using the ‘moral hazard’ argument about ‘unreliable and irresponsible’ governments) and to recognize the impact of the global economic crisis on the EMU. The lack of solidarity mechanisms that should have been ready for activation to help the EMU countries in need was not acknowledged until the ‘troublemaker’ Greece threatened to destabilize the whole Eurozone. The latter expressed a European solidarity discourse based on self-interest rather than altruism.

The establishment of the EFSF was an important solidarity tool; however, it was portrayed as a solution to the exceptional Greek case and not as a necessity for tackling the serious European economic conditions. From the politics of ‘denial,’ ‘disguise,’ and ‘exceptionalism,’ the European discourse shifted to the politics of blame and accusation. The difficulty of Papandreou’s government to satisfy the strict conditions attached to the first

³⁰<http://www.euractiv.com/euro-finance/meps-call-creation-european-mone-news-534135>

³¹ Ibid.

³² Ibid.

³³ <http://www.imf.org/external/pubs/ft/wp/2013/wp1301.pdf>

³⁴<http://www.theguardian.com/business/2013/jun/05/imf-underestimated-damage-austerity-would-do-to-greece>

bailout, the climate of political unrest in Greece, and the country's possible failure to meet its obligations generated a gradually hostile and anti-solidarity discourse toward it. The hostility was fuelled by Papandreou's announcement of a referendum and his subsequent resignation from the premiership. It was then that the taboo of the Greek exit from the Eurozone was broken. This Grexit threat formed the basis of the European solidarity discourse till the advent of the Samaras coalition government. The Greek exit discourse was deployed as a means of discipline and safeguarding the fundamentals for the implementation of austerity measures.

As discussed, the European solidarity discourse during the crisis denotes a polarized relationship between 'us and them' and a tendency toward 'self-help' instead of 'one for all, all for one.' Moreover, it signifies a reconfigured Europe, distant from 'a union of people' where solidarity and respect for human dignity were the de facto preconditions for its evolution and democracy. Was the Greek debacle a "clear warning of the post-democratic road taken" as Jürgen Habermas³⁵ wondered? This question needs to be answered.

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³⁵ As quoted in Rabinbach 2012. <http://www.thenation.com/article/168819/good-european-juergen-habermas>

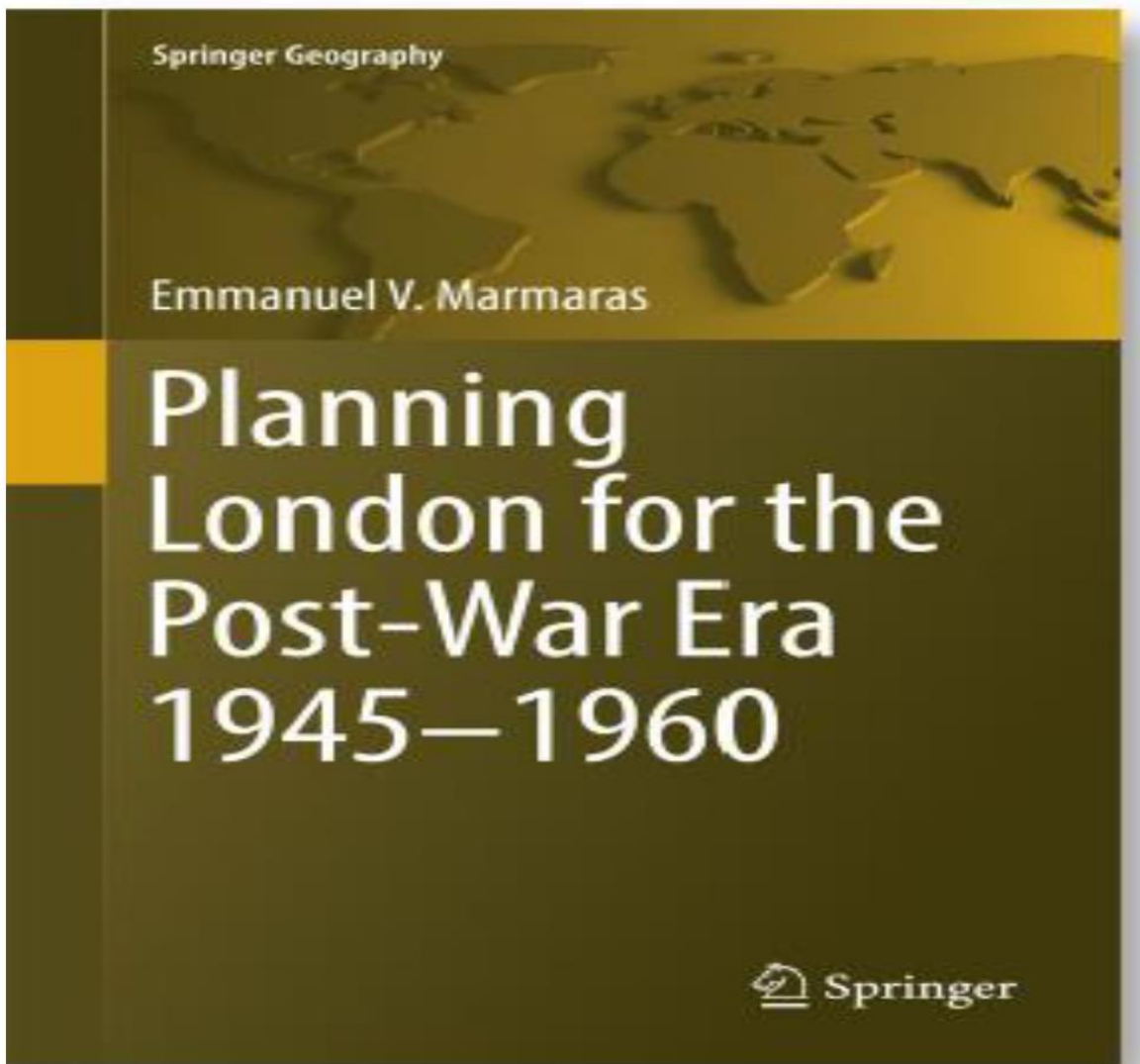
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Socio-Economic Sustainability,
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