Investigating the effects of self efficacy on innovativeness and the moderating impact of cultural dimensions

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Abstract

The purpose of this study is to understand the effect of self efficacy on the innovativeness of professionals within a cultural context. Innovativeness of employees is one of the coveted characteristics as previous research has shown that innovativeness contributes beneficially towards an organization's competiveness and growth. On the other hand, self-efficacy is a construct which has been studied in the context of individual entrepreneurship, technology solutions, and task completion. The link between self-efficacy and innovativeness has not been studied and this research hypothesized a relationship between self efficacy and innovativeness of an individual. The study also investigated the mediating impact of cultural dimensions on this relationship. We found a positive relationship between self efficacy and innovativeness and found positive effects of the "individualism" dimension on this relationship. This has useful implications for assessing the innovation potential of an organization as well as for training employees in order to make the organization more innovation-ready in today's competitive and flexible business environment. The study was conducted with data from 271 professional respondents in Turkey.

Keywords Self efficacy, innovation, culture, Turkey, individualism, innovativeness,

INTRODUCTION

Organizations regard the innovativeness of their workforce and workplace culture as an important source of competitive advantage and a driver of economic growth. Innovativeness of an individual employee is a trait which organizations covet and often conduct trainings to inculcate innovativeness. To that end, several researchers have studied the assessment as well as improvement of an individual's innovativeness in specific contexts such as inventions, process and product innovations, consumer new product purchase, and technology innovation adoption (Goldsmith and Foxall, 2003; Hyvonen and Tuominen, 2006). In parallel, there has been recognition of the innate, global personality traits of an individual which manifest in their functioning as organizational employees and members of the organizational workplace and culture. Self efficacy is one such innate, global trait which refers to the judgment of one's capability to accomplish a certain level of performance or desired outcomes (Kelly and Kumar, 2009; Hmieleski and Baron, 2008). A high level of self-efficacy can help individuals maintain their efforts for goal attainment until their initial goals are met.

In this research we investigate the relationship between self efficacy of professionals and their innovativeness. Individuals with high levels of self efficacy are likely to have higher belief in their own ability to make new products, processes and changes happen and accordingly may function as highly innovative employees or be more likely to be the force driving an innovative workplace culture. However, previous studies have indicated that an individual's cultural background impacts how personality traits are exercised practiced and manifested (Kumar and Kelly, 2006; Steenkamp, Hofstede, and Wedel, 1999). Cultural dimensions have gained importance as researchers as well as organizations have become sensitive to the impacts that cultural background can play in positively or negatively impacting the realization of desired behaviors and outcomes. Accordingly, this research studies culture as an important dimension which moderates the relationship being investigated.

We used a developing economy as the referent data set for this study. Understanding the mechanisms to strengthen innovativeness in developing economies and nations is a second objective of our study. There were several reasons for this. In today's global economy, there is a renewed recognition of the role *progress* of developing economies play in equally distributing the wealth and advantages of the post-industrial era. Organizational innovativeness is recognized as one of the driving forces for propelling the progress of developing economies. Second, we have used Turkey as the context for this study. Turkish consumers, given Turkey's regional location, have characteristics of both Europe and Middle East and therefore provide us insights which may be applicable to diverse contexts. In recent years, businesses in Turkey have begun to pay special attention to innovativeness in order to compete in the global arena. Although Turkey is regarded as a developing country much like South Korea, Brazil and Mexico, it has become evident that innovativeness in some of the other developing nations such as India, China and Korea can be emulated. Therefore, the results of this research would lead to managerial prescriptions to help raise the self efficacy of Turkish professionals and harness Turkish cultural characteristics leading to improved innovativeness and thereby raising the likelihood of organizational success.

BACKGROUND DOMAINS: SELF EFFICACY, INNOVATIVENESS AND CULTURE

In order to investigate the relationship between innovativeness and self efficacy of professionals, we utilize three separate theories, well rooted in literature: (1) individual innovativeness, (2) the construct of self-efficacy, and (3) culture and its interplay with self-efficacy and innovativeness.

Self Efficacy

Self efficacy is a construct which describes the confidence of an individual in their own abilities. Self efficacy is defined as the belief in one's capabilities to perform a particular behavior and successfully execute certain actions to attain goals (Bandura, 1997; Chen, Greene & Rick, 1998; Gist & Mitchell, 1992). Research has shown that individuals gradually accumulate their self-efficacy through prior cognitive, social, and physical accomplishments as well as through learning (Bandura, 1986), Self-efficacy thus grows with hard won achievements as opposed to personality and traits, which are relatively stable characteristics.

One of the popular streams of research within the self efficacy literature relates to the relationship between self efficacy and entrepreneurship. There has been much research devoted to several factors which motivate entrepreneurial orientation and ability (Lumpkin, G.T. and Dess, 1995; Forbes 2005). Some studies have suggested that self-efficacy successfully differentiates entrepreneurs from non-entrepreneurs (Lucas, Cooper & Sarah., 2004; Makman, , Balkin, & Baron, 2002; Chen, Greene & Crick 1998; Gist & Mitchell 1992). The high self-efficacy of the entrepreneur is likely to contribute to his or her seeing the positive potential outcomes that might accrue from a new venture and pursuing those goals vigorously. As a result, entrepreneurship is correlated with a high level of self-efficacy (Hmieleski and Baron, 2008; Hyvonen and Tuominen, 2006)

Entrepreneurship can be defined as the process of creating something new with value and devoting the necessary effort to making it successful (Blanchflower and Oswald, 1998). An entrepreneur has high self-efficacy and truly believes in his or her capability to execute all of the requirements to perform a new task successfully (Bandura, 1997). A high level of self-efficacy can help entrepreneurs maintain their efforts for goal attainment until their initial goals are met (Gist, 1989). The high self-efficacy of the entrepreneur is likely to contribute to his or her believing in the positive potential of their own abilities to make the outcomes accrue from a new venture and thus pursuing the entrepreneurial goals to success (Forbes, 2005).

Entrepreneurship thus incorporates elements of process and product innovation in addition to several other characteristics such as perseverance, motivation and vision (Markman, Baron and Balkin, 2005; Krueger and Dickson, 1994).

CONSUMER INNOVATIVENESS

An individual's innovativeness can have several different manifestations and this study focused on innovativeness of an individual as a consumer. Several researchers have paid close attention to consumer innovativeness because consumer innovativeness seems particularly useful in helping to understand the consumer propensity to adopt new products and services. The literature has paid special attention to the importance of influencing and identifying innovators and the personalities and characteristics that may predict innovation adopting behavior

(Goldsmith and Flynn 1992; Im et al., 2003; Mahajan et al., 1990). Rogers (1995, p. 22) defined innovativeness as "the degree to which an individual or other unit is relatively earlier in adopting new ideas than other members of a system".

It is usually assumed that consumer innovativeness and innovators are an important factor in the diffusion and adoption of new products (Roger and Shoemaker, 1971; Gatignon and Robertson, 1991;). Hirshman (1980, p.283) explain that "the propensity of consumers to adopt novel products, whether they are ideas, goods, or services, can play an important role in theories of brand loyalty, decision making, preference and communication".

In the literature, it is seen that consumer innovativeness has been conceptualized in two main streams (Midgley, 1977). First, some of the researches have called it as "innate innovativeness" or innovativeness predisposition that reflects a person's inherently innovative personality, predisposition, and cognitive style (Stempkamp et al., 1999; Midgley and Dowling, 1993; Hirshman, 1980). Goldsmith and Foxal (2003) labeled it as "global innovativeness". Global or innate innovativeness can be applied across product classes because of its high level of abstraction (Im et al. 2007). In this sense, some researchers defined the consumer innovativeness as a predisposition to buy new and different products and brands rather than remain with previous choices and consumer patterns (Stenkamp and Hofstede, 1999), having independent judgment making (Midgley and Downling, 1978) and a tendency to change (Hurt, Joseph and Cook, 1977) and being inherently novelty seeking (Manning, Barden and Madden, 1995), (Hirschman, 1980) in terms of generalized personality traits. Midgley and Dowling (1978) defines innate innovativeness as "the degree to which an individual makes innovation decisions independently from the communicated experience of others.

Goldsmith and Hofacker (1991), Goldsmith et al., (1995) distinguished global innovativeness from "domain-specific innovativeness" that can be applied to a specific product category. Researchers have also focused on the generalized perspective of innovativeness, which segments consumer innovativeness on the basis of their personality and cognitive style (Im et al., 2003).

Second, the researchers have studied innovativeness as "actualized innovativeness". Actualized innovativeness or new product adoption behavior has assumed the actual acquisition of new information, ideas, and products (Hirschman 1980; Midgley and Dowling 1978). Researchers in this stream have used number of products owned, the relative time of adoption for a particular product, and purchase intentions as a way to measure innovativeness (Foxal 1995; Rogers, 1995; Holak and Lehman, 1990; Midgley and Downling, 1993; Rogers and Shomaker 1971). Midgley (1977) defined innate innovativeness as a trait possessed by every human being, and actualized innovativeness as an actual innovative behavior.

Roehrich (2004) grouped the consumer predisposition to adopt new product in four forces: stimulation need, novelty seeking, independence toward others' communicated experience and, need for uniqueness. Consumer innovativeness has been measured by number of new products owned, the relative time of adoption for particular new products or purchase intentions and opinions for certain new products (Lassar et al. 2005). Roehrich (2004) classified consumer innovativeness as "adoptive innovativeness" and "life innovativeness" scales. Adoptive innovativeness refers to the ability to introduce newness in one's life while life innovativeness scales refer to a tendency to buy new products.

In summary, it appears that some researchers have measured innovativeness as an expressed behavior; others measure it as a global personality trait, and still others as a domain-specific personality trait (Goldsmith and Foxall, 2003). This study has conceptualized that

consumer innovativeness viewed as a global personality trait or as a domain-specific personality trait will apply to the individual's role and functioning as an employee in an organizational setting. An individual's global personality trait of innovativeness in the context of their openness to consumption of new products will also apply innovativeness in organizational settings.

Self efficacy and Innovativeness

The literature summarized above shows a link between self efficacy and entrepreneurship. In addition, entrepreneurship has been shown to incorporate elements of innovativeness. Several different conceptualizations of innovativeness have been studied in the literature and the construct of individual innovativeness has been cast as one with several dimensions and several desired characteristics from an organizational process as well as product marketing point of view. We believe that individual innovativeness requires some of the same characteristics displayed by entrepreneurs. No studies have been done on this specific relationship between innovativeness and self-efficacy in developing countries. Accordingly, this is a major focus of this study.

Hypothesis 1: A positive relationship will be found between self-efficacy and innovativeness.

Cultural Dimensions

At the outset, it is important to note that much research has been done on the relationship between organizational culture and innovation within the organization. Organizational culture has been shown to have a strong impact on the innovation in organizations. Organizational culture stems from consistency in organizational practices and can be designed and altered. On the other hand, national culture stems from consistency in values of the society. In that sense, national culture is more an inherent characteristic of an individual which guides him or her, no matter which organization they are employed in. In fact there is research which tends to establish that national culture is carried over with an individual across national boundaries when they immigrate or start working in a different nation and results in sub-cultures within a national culture. (Kumar and Kelly, 2006; Steenkamp, Hofstede, and Wedel, 1999).

Hofstede's dimensions of culture

Not much research has investigated the dimensions of national *culture* which define an individual employee and their impact on the individual's innovativeness. In this study, we explore how the dimensions of national culture impact an individual's innovativeness. The characteristics of national culture can be understood according to the five dimensions used by Hofstede (1991) in his analysis of national culture. Hofstede identified four dimensions with which to characterize national culture: 1) individualism-collectivism 2) masculinity-feminity 3) power distance, and 4) uncertainty avoidance. Later research added a fifth dimension, long term orientation, which we did not focus on in this study. Hofstede's findings were based on a large sample of professionals employed within IBM in over fifty countries. Although criticized at times for the narrow sample, the findings have been validated by similar studies and in different professional contexts such as airline pilots, students and consumer (Hamden-Turner & Trompenaars, 2000).

Individuastic versus Collectivist culture: This dimension refers to the degree to which individuals are intrinsically integrated into groups. Individualistic cultures have ties between individuals as lose bonds and individuals are expected to look after themselves and their immediate responsibilities. Such cultures find that individuals tend to act, think and perform individually as opposed to collectively as part of a group. Collectivist cultures tend to find individuals naturally cohesive and part of groups and individuals tend to act and perform in collective manners and for the good of collective referent groups.

Masculinity versus Feminity: This dimension refers to the degree to which a culture values such behaviors as assertiveness, achievement, social support for nurture, quality of life. Individuals in high masculinity score cultures tend to push harder for achievement and ambition.

Power distance: Power distance is a scale of dependence on relationships in a cultural context (Hofstede, 1991). In small power distance countries, there is a limited dependence of subordinates on bosses; instead interdependence is preferred in that the subordinate consults with the boss. In contrast, in countries with high power distance, there is considerable dependence of subordinates on bosses, and the subordinates respond by either preferring dependence (paternalism) or rejecting it entirely (counter-dependence).

Avoidance of uncertainty: This characteristic refers to the rejection of ambiguity or uncertainty in order to avoid anxiety. It refers to the extent to which individuals in a culture tend to feel comfortable in unstructured, novel or surprising situations versus structured, stable or known situations. This uncertainty avoidance shows up as a fear of ambiguous situations, a suppression of deviant ideas and behaviors and resistance to innovation (Steenkamp, Hofstede and Wedel, 1999).

HOFSTEDE'S DIMENSIONS OF CULTURE, SELF EFFICACY AND INNOVATION

Cultures which are highly individualistic tend to nurture individuals for independent thinking and foster behaviors which promote questioning the status quo. Such individuals believe in their own abilities and their own ways of thinking. This could positively impact the relationship between self efficacy and innovativeness of an individual. Cultures which are high on masculinity would tend to emphasize achievement and surety of wealth creation or project success. This could be a deterrent for innovativeness of an individual. On the other hand, aggressiveness of achieving goals could provide an impetus for new thinking and innovativeness in order to amass success measures. It seems that this dimension of masculinity/feminity may not have a clearly identified impact on the relationship being studied in this research. High power distance in a culture tends to stifle the independent thinking and creative spirit of an individual by enforcing natural work patterns which routinize operations and thinking. This would therefore lead to a negative impact on the relationship between self efficacy and innovativeness. Uncertainty avoidance means that an individual will be less comfortable with surprise results and unstructured working. Innovativeness is about new products, projects, ideas and situations which are rarely well structured and challenge the status quo. As a result, we would expect that high scores on the uncertainty avoidance dimension would negatively impact the relationship between self efficacy and innovativeness.

Hypothesis 2: A high score on individualism will positively mediate the relationship between self efficacy and innovativeness while a high score on power distance and uncertainty avoidance will negatively impact the relationship between self efficacy and innovativeness.

MODEL FOR THE STUDY

The model which guided this study and analysis is shown in Figure 1. The model proposes the relationships among self efficacy, consumer innovativeness and cultural dimensions. Our literature review leads us to place self efficacy as an independent variable and consumer innovativeness as dependent variable. Cultural dimensions-individualism, power distance, and uncertain avoidance- are hypothesized to be moderator variables on this relationship between self efficacy and consumer innovativeness.

RESEARCH METHODS

Data Context: The Context of Turkey

Innovativeness has a critical importance on competitiveness for businesses in all countries, and especially so in a developing country. The innovative and competitive capabilities and skills ensure significant competitive advantage in international markets for a developing nation such as Turkey. Turkey is regarded as a developing country much like South Korea, Brazil and Mexico. In recent years, businesses in Turkey have begun to pay special attention to innovativeness in order to compete in the global arena. Understanding the mechanisms to strengthen innovativeness in developing economies and nations is a second objective of our study. On the other hand, it could be said Turkish consumers have characteristics of both Europe and Middle East consumer, fitting its regional location.

Accordingly, we conducted this study with data from Turkey. It is understood from the literature that there is a lack of research in the Turkish context which examines the dimension of self efficacy, the dimension of innovativeness, as well as the relationships among these research variables. Therefore, the results of this study could provide some useful findings to both the literature and practitioners.

Turkish culture has been classified as highly collectivist meaning that Turkish citizens prefer to be part of and act as per in-groups. The culture has a medium index in masculinity which means it has a good balance between aggressive achievement and nurturing. It is among the higher end for power distance or dependence of subordinates on bosses. Turkish citizen culture is high on uncertainty avoidance and prefers to have structured and predictable situations.

Sample

Data for this study were collected through a survey. The survey was administered in the workplace to professionals with more than 2 years of work experience. The respondent organizations and the respondents themselves within the organization were chosen as a convenience sample. Organizations and respondents were all situated in the city of Eskisehir in Turkey. Eskisehir was chosen as it is generally expected to represent a cross-section of Turkish professionals in respect to its demographic, socio-economic and cultural characteristics. It is one of the largest cities and most cosmopolitan cities in Turkey. Data collection occurred face to face over a three-week period. The interviewers distributed a total of 300 questionnaires to professionals. 271 questionnaires were accepted as usable for the study.

Measures

Dependent variable: Consumer innovativeness

To measure the consumer innovativeness we used a scale developed by Doghfous et al., (1999). Doughfous et al., (1999) developed this scale combining cognitive, affective and conative aspects of consumption behavior. These three dimensions are mostly used in the literature to measure the consumer innovativeness. This scale contains 7 items and is scaled on a 5 – point Likert scale (1=strongly disagree to 5=strongly agree).

Independent variable: Self Efficacy

To measure self efficacy, we used a scale developed by we used Bandura's (1983) nine-item self-efficacy scale which is intended to assess the degree to which individuals feel they are capable of performing in a certain manner or attaining certain goals. Previous studies have reported evidence of reliability and validity for these self-efficacy measures (Chau, 2001; Compeau, & Higgins, 1995). Studies have also recommended some adaptations and we added three items based on that (Compeau, D.R. & Higgins, 1995; Chen and Gully, 2001)

Moderator variables: Cultural dimensions

We utilized Hofstede's (1984) work-related cultural dimensions scale to measure the four cultural dimensions of individualism, power distance, masculinity, and uncertainty avoidance. This scale and the dimensions were developed in Hofstede's seminal work on the effects of culture on organizational functioning. Individualism refers to how people value themselves in the context of their organizations; power distance refers to inequality between superiors and subordinates; uncertainty avoidance describes people's tolerance of ambiguity; masculinity refers to the extent to which people value items such as achievement and assertiveness in organizations. The 16 items of the scale are 5-point scales (1= a little important to 5= most important).

RESULTS

Sample characteristics

Table 2 presents demographic characteristics of the sample. Of the 271 respondents, 50.6% were female; majority of the sample were married (70.1%), a large proportion had completed postgraduate and University study (72%). Majority of the sample consists professionals between the ages of 21 and 30 years (64.2%).

Validity and reliability

To test the reliability of the scales used in the study, Cronbach Alpha scores were calculated for each scale. Table 3 shows that the Cronbach Alpha scores for each scale were good with overall Alpha reported of 0.69-0.83. From the results of the reliability analysis, all

items with a corrected-item-total correlation of less than 0.40 were eliminated. 3 items in the self efficacy scale was dropped based on the reliability analysis.

Exploratory factor analysis using principle components of factor extraction and varimax rotation techniques was performed to examine the unidimensionality/convergence of each predefined multi-item construct. Factor analysis resulted in the 7 independent items of the self efficacy scale being reduced to one factor/construct, the 12 dependent items of the innovativeness also reduced to one factor, and the 16 moderating items of the cultural dimensions factor reduced to four factors. As a cut-off loading was used 0.40. Most factor loadings were above 0.50 which can be assumed a high level of significance. The results from our factor analysis of the measurement items for each of the categories imply that measures used in this study have construct validity (Nunnally, 1978).

Hypotheses Testing

Table 4 shows the bi-variate correlation coefficients of the variables in the research model. The findings in the table show that most of the variables were positively related to each other. To assess the degree of multi-colinearity for the factors in the model the VIF (variation inflation factor) was used (Stapelton, 1995). The VIF values for the factors were between 1.14 and 1.92 and no problem of multi-colinearity appears to be present in the study.

Direct effect of self efficacy on consumer innovativeness

The hierarchical regression analysis was employed to test the research model. Table 5 presents the results of the hierarchical regression analysis. For the dependent variable of innovativeness five hierarchical models were developed: first model introduces the self efficacy in the model 1; then adds the four cultural dimensions step by step in model 2, 3, and 4; all cultural dimensions were added the model 4.

Model 1 in Table 5 shows that self efficacy has a positive effect on the consumer innovativeness. Hypothesis H1 for this study is supported: “A positive relationship will be found between self-efficacy and innovativeness”.

Moderating impact of cultural dimensions on the relationship between self efficacy and consumer innovativeness

In Model 5, with all the cultural dimension variables included, individualism has a moderating role on the effect of the self efficacy on the innovativeness. However the other cultural dimensions of power distance, masculinity, uncertainty have no moderating effect on the self-efficacy and innovativeness effect. Thus, hypothesis H2 is partially supported in this study “A high score on individualism will positively mediate the relationship between self efficacy and innovativeness while a high score on power distance and uncertainty avoidance will negatively impact the relationship between self efficacy and innovativeness.”

DISCUSSION

This research investigated the relationship between self efficacy and innovativeness and the moderating effect of cultural dimensions. The data context for the study was Turkey which

was chosen as a developing country where innovativeness could act as a major force in improving global competitiveness.

We found a positive relationship between self efficacy and innovativeness among the Turkish consumers. Individuals with higher self-efficacy exhibited higher levels of innovative behavior. In addition, high scores on the individualism dimension moderated positively the relationship between self efficacy and innovativeness.

These findings have wide ranging and interesting implications for organizations. When hiring employees, organizations can assess self efficacy or institute training programs directed towards increasing the self efficacy of their employees. Similarly, they could promote a culture of individualism and nurture aspects of individualism. This particular aspect merits further research as the prevalent wisdom is to promote collaboration, adherence to rules and tradition, and team work. However, collaboration, team work and individualism can co-exist and one does not obviate the other. The delicate balance of self-efficacy, individualism and organization collaboration and team work could lead to an optimal environment for innovation.

Our results also indicate that developing countries with national cultures which have a high score on individualism can harness it to their advantage. Widespread efforts directed towards honoring and training self-efficacy in individuals can lead to a higher profile in consumer and citizen innovativeness, which in turn is expected to contribute to global competitiveness.

In summary, this research has given important insights into dimensions which could be utilized to raise consumer innovativeness. Self efficacy of individuals and high individualism in the national culture are desirable characteristics worthy of being nurtured and honored.

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Figure 1. Research model (relationship between self efficacy and consumer innovativeness)

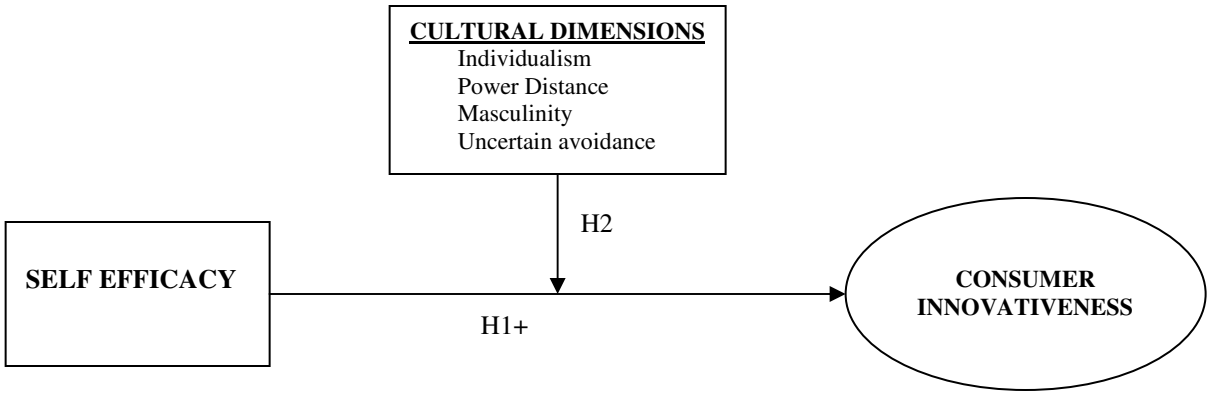

Table 1: Hofstede's original scores for Turkey and three sample cultures

	Turkey	Japan	Germany	US
Individualistic/Collectivist	37	46	67	91
Masculinity/Feminity	45	95	66	62
Power Distance	66	54	35	40
Uncertainty Avoidance	85	92	65	46

Table 2. Sample characteristics

Demographic Characteristics	***Frequency***	***Percentage***
Sex		
Male	134	49.4
Female	137	50.6
Education Level		
Primary- High	89	32.8
University	156	57.6
Postgraduate	26	9.6
Age		
20 and under	24	8.9
21-30 yrs	174	64.2
31-40 yrs	31	11.4

41-50 yrs	24	8.9
51-60 yrs	13	4.8
61 and older	5	1.8
Marital Status		
Married	190	70.1
Single	73	26.9
Divorce	8	3.0

Table 3. Measures used in the study

Construct	Source	Items	Factor loadings	Reliability[a]
Consumer Innovativeness (CIN)	Doughfous et. al., (1999)	CIN3.I am really interested in learning about new products (new brands, quality, improvements…)	0.77	0.84
		CIN6.Right now, I am using many of new products	0.77	
		CIN4.I think new product are really useful	0.71	
		CIN5.I love to try new products before anyone else	0.71	
		CIN7.Presently I am using new products and services appealing to me	0.70	
		CIN2.People often ask me to give my opinion about products (new brands, quality, improvements…)	0.68	
		CIN1.Lately, I have been hearing a lot about new products appealing to me	0.60	
Self Efficacy (SE)	Bandura (1983)[b]	SE8.I feel competent to deal effectively with the real world	,769	0.80
		SE3.I can handle the situations that life brings	,741	
		SE1.I am strong enough to overcome life's struggles	,701	
		SE12.I usually feel I can handle the typical problems that come up in life	,673	
		SE7.I feel that I have enough information to make good decisions	,612	
		SE2.At root, I am a weak person	,576	
		SE4.I'm usually an unsuccessful person	,565	
		SE10.I often think that I'm a failure	,544	
		SE6.I often feel that there is nothing I can do well	,493	
Cultural Dimensions	Hofstede, (1984)			
Individualism (IND)		IND1.I have sufficient time for your personal or family life	0.82	0.72
		IND3.I have security of employment	0.80	
		IND4.I have an element of variety and adventure in the job	0.76	
		IND2.I have good physical working conditions (good ventilation, lighting, adequate space, etc.)	0.72	
Power distance(POW)		POW2.I am consulted by my direct superior in his/her decisions	0.71	0.69
		POW1.I have a good working relationship with your direct superior	0.69	
		POW3.An organization structure in which certain subordinates have two bosses should be avoided at all costs	0.62	
		POW4.How frequently, in your experience, are subordinates afraid to express disagreement with their superiors	0.62	
Masculinity(MASC)		MASC1.I work with people who cooperate well with one another	0.66	0.77
		MASC2.I have an opportunity for advancement to higher level jobs	0.64	
		MASC4.When people have failed in life it is often their own fault	0.60	
		MASC3.Most people can be trusted	0.59	
Uncertainty avoidance (UNCA)		UNCA1.One can be a good manager without having precise answers to most questions that subordinates may raise about their work	0.67	0.74
		UNCA2.Competition between employees usually does more harm than good.	0.66	
		UNCA3.A company's or organization's rules should not be broken	0.56	
		UNCA4.How often do you feel nervous or tense at work	0.54	

[a.] Reliability estimates are Cronbach's alpha computed from study sample.
[b.] 3 items was dropped based on the reliability analysis (SE5, SE9, and SE11)

Table 4. Bivariate correlations

	Mean	SD	1	2	3	4	5	6
1.Self Efficacy	3.90	0.63	-					
2.Consumer innovativeness	3.33	0.74	0.225**	-				
3.Individualism	4.32	0.97	0.254**	0.224**	-			
4.Power distance	3.60	0.46	0.126*	0.157**	0.307**	-		
5.Masculunity	3.68	0.48	0.206**	0.189**	0.297**	0.321**	-	
6.Uncertainty avoidance	3.10	0.68	-0.002	0.110	0.035	0.115	0.464**	-

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 5. The results of regression analysis

Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Antecedent variable					
Self Efficacy (SE)	0.225***	0.180**	0.175**	0.163**	0.169**
Mediators					
(Hofstede's Cultural Dimensions)					
Individualism (Ind.)		0.178**	0.153*	0.135*	0.141*
Power Distance (PowD.)			0.087	0.063	0.064
Masculinity (Masc.)				0.096	0.059
Uncertainty Avoidance (UncertA.)					0.072
Constant/intercept term	2.296***	1.914***	1.516***	1.219**	1.132**
R^2	0.051***	0.080***	0.087***	0.095***	0.099***
Adjusted R^2	0.047***	0.074***	0.077***	0.081***	0.082***
Change in R^2		0.030***	0.007***	0.008***	0.004***
F (d.f)	14.322*** (268)	11.676*** (267)	8.478*** (266)	6.950*** (265)	5.795*** (264)

Notes: Table entries are standardized regression coefficient
[a]P<0.10; *P<0.05; **P<0.01; ***P<0.001