

FACTORS THAT INFLUENCE UNIVERSITY STUDENTS' INCLINATION TO BECOME AN ENTREPRENEUR: INSIGHTS FROM GUATEMALA

FACTORES QUE INFLUYEN EN LA INCLINACIÓN DE ESTUDIANTES DE HACERSE EMPRENDEDORES: PERSPECTIVAS DESDE GUATEMALA

Nicholas Virzi^a · Bishwa Koirala^b · John E. Spillan^c

Clasificación: Trabajo empírico - investigación
Recibido: 12 de octubre de 2015 / Aceptado: 20 de diciembre de 2015

Abstract

Research regarding the entrepreneurial intentions of university students has been primarily limited to developed countries. There is a scant amount of literature and academic discussion about students' entrepreneurial perceptions and intentions in developing countries. This paper contributes by filling this void; it estimates the likelihood that students who major in undergraduate business or economics programs will pursue a career as an entrepreneur. The data for this study was obtained by conducting a survey of students who were studying either business or economics at Landívar University in Guatemala City, Guatemala. Using Multinomial Logit (MNL) and logit estimation techniques, we found that if the student is more confident with both methods used, the relative odds of him/ her becoming an entrepreneur in the future will increase. Although this study did not find any significant effects for the family variable on future entrepreneurship, positive and significant effects of the friends' variable on future entrepreneurship were found.

Keywords: Entrepreneurship, intentions and determinants of entrepreneurship, developing countries.

Resumen

La investigación acerca de las intenciones de emprendimiento empresarial en estudiantes universitarios se ha limitado principalmente a los países desarrollados. Existen una escasa bibliografía y discusión académica en relación con las percepciones e intenciones empresariales de los estudiantes en países en vías de desarrollo. Este artículo contribuye a llenar dicho vacío. Estima la probabilidad de que los estudiantes graduados de licenciaturas de pregrado en Ciencias Empresariales o Ciencias Económicas prosigan una carrera de emprendimiento empresarial. La información para este artículo se obtuvo al realizar una encuesta a alumnos que estudiaban Ciencias Empresariales o Ciencias Económicas en la Universidad Landívar de Guatemala. Mediante el uso del modelo logit multinomial y técnicas de modelización logit, encontramos que si el estudiante tiene más confianza en ambos métodos utilizados, las probabilidades relativas de que se convierta en un emprendedor empresarial aumentarán en el futuro. Aun cuando el estudio no encontró ningún efecto significativo de la variable familia sobre un futuro emprendimiento empresarial, sí se encontraron efectos positivos y significativos de la variable amistades sobre un emprendimiento empresarial futuro.

Palabras clave: emprendimiento, intenciones y determinantes del emprendimiento empresarial, países en vías de desarrollo.

^a Faculty of Engineering, Universidad Rafael Landívar, Guatemala, Email: nicholasvirzi@gmail.com

^b School of Business, University of North Carolina at Pembroke, Pembroke, North Carolina, 28372, Email: koiralabs@uncp.edu.

^c School of Business, University of North Carolina at Pembroke, Pembroke, North Carolina, 28372, Email: john.spillan@uncp.edu.

Introduction

An entrepreneur is a person who, in the face of risk and uncertainty, creates a new business opportunity with the aim of achieving profit, by identifying opportunities and gathering the resources needed to exploit these opportunities (Sandhu, Jain & Yusof, 2010). Low and MacMillan (1988) state that entrepreneurship is “the creation of a new enterprise with all its demands and realizations. These new enterprises have been increasing in today’s competitive and globalized economy. As an integral component of business sophistication, innovation and entrepreneurship contribute to national competitiveness, which, of course, is central to economic and human development (World Economic Forum [WEF], 2013). Given the importance of entrepreneurship to national competitiveness, economic growth and human development, entrepreneurship is a worthy topic of scientific study from the vantage point of both academic and practitioner point of view (Zellweger & Nason, 2008).

The value of entrepreneurship in the developing country context cannot be overestimated, and yet remains understudied. Entrepreneurial intentions weigh heavily on the early stages of development, as countries transition away from factor-driven to efficiency-driven to innovation-driven economies. Entrepreneurial intentions are most important in the early stages of development, when economies are mostly factor-driven (Global Entrepreneurship Monitor [GEM], 2012). Notwithstanding the importance of early entrepreneurial intentions and Carey’s important research (2010), academic study regarding student intentions towards pursuing entrepreneurial opportunities remains limited. Not a lot of attention has been focused on entrepreneurship in Latin America, and even less on Central America. This paper aims to fill the gap.

The purpose of this study is twofold. First, it provides a methodical and modeling framework for analyzing students’ intent. Second, through the lens of this methodology or model we can gain insight into what are the Critical Success Factors (CSFs) relating to entrepreneurship that affect students’ interest, desires and ambitions to pursue entrepreneurial ventures, and hopefully spark the interest so that they will continue the pursuit of economic development using entrepreneurship as a vehicle to achieve their goals. This study investigates Guatemalan students’ intentions of pursuing entrepreneurship as a career path. It also estimates the likelihood of students, who major in business and economics in their undergraduate studies, with the intentions of becoming an entrepreneur in the future. This study employs survey data collected at Landívar University in Guatemala, Central America.

The study contributes to both the academic and practitioner literature by specifying what factors influence a person’s inclination to become an entrepreneur. This information is important for investors, economic development experts and business development people. Business development and economic growth requires potential entrepreneurs to not only be entrepreneurially inclined but also competently prepared to successfully operate a business.

This paper consists of seven sections. We begin with a discussion of the relevant literature regarding students’ intentions and internal factors associated with their predictions towards entrepreneurship. Then we move on to a discussion about Guatemala and entrepreneurship. From here we discuss the research methodology and findings. Finally, we present our discussion, conclusions, managerial implications and the studies limitations.

Entrepreneurship and Economic Development

Beugelsdijk (2007) emphasized the role of an entrepreneurial culture in justifying the economic success among many countries and regions. Entrepreneurs perform important tasks in the growth and development of an economy. Entrepreneurs are critical to a country’s economy by creating jobs (employment), increasing the quality of life, and decreasing the incidents of poverty (Uddin, Reaz & Bose, 2012).

Different factors allow entrepreneurship to happen. Among the most important factors are cultural orientations, values, and institutional incentives, which exert strong influences on entrepreneurial attitudes (Szerb & Imreh, 2007). Though one might like to think that gender would be irrelevant to entrepreneurship, local traditions and norms, among other factors, can determine gender roles within families and, in turn, help explain why female entrepreneurs take place in certain low-growth and low-income industries. The social and cultural context is important for understanding “when, how, and why entrepreneurship happens and who becomes involved” (Baughn & Neupert, 2003; Welter, 2011).

The preceding discussion raises the question of whether certain cultures will reach the critical mass of entrepreneurs needed before a country can take off on the developmental path. Where local cultures may not be conducive to entrepreneurial conduct, the teaching of entrepreneurship, as well as entrepreneurial values and attitudes may be particularly important. Since local entrepreneurial talent, aptitudes and attitudes may be lacking, university training and careers in entrepreneurship have merit and deserve serious treatment in the studies of development (Steyaert, Hjorth & Gartner, 2011).

One of the primary ways to enhance entrepreneurship skill development is through entrepreneurial education and training. Colleges and universities serve as centers for delivering entrepreneurship training and education. Providing the practical and experiential learning to students gives them the skills to quickly initiate business development projects and begin the job creation process right away (GBSN, 2013, a). Students who are entrepreneurially trained should have an increased chance of focusing on business development. The larger the number of students who have an entrepreneurial oriented education, the greater is the potential for economic development and job creation (GBSN, 2013, b). This effort is precisely what is needed for a developing country like Guatemala, which desperately needs to increase its economic growth rate above the 3.5% annual average it has shown in the last two decades (authors' calculations, 2015). Long-term business sustainability necessitates the continuous development of entrepreneurial ambition and training. Universities ostensibly provide training for entrepreneurial talent. As opportunities emerge because of globalization, it is critical to have entrepreneurs available to take advantage of these chances. Universities provide an apt forum for this training to take place.

Although the decision to become an entrepreneur or an independent business owner has many antecedents, the literature signals that intentions occupy a central role in this important decision (Carey, Flanagan & Palmer, 2010). This is in line with Bagozzi and Yi (1989), who long ago affirmed that intentions are the single best predictors' of actual behavior. Intentions hold a special place in the set of determinants to a successful career path, especially in family businesses, and particularly in the areas pertaining to succession issues (Zellweger *et al.*, 2008). For developing economies such as Guatemala, where economic power in key industries is often concentrated among family businesses (Dosal, 2005), understanding a student's entrepreneurial intentions can provide important information to the policy makers and the academic institutions that are providing degrees in economics and business.

Given the importance of entrepreneurship for economic development, governments today are cognizant of the need to encourage entrepreneurship. Entrepreneurship increases the arrival intensity of innovations. This, in turn, spurs economic growth. This role of entrepreneurship has profound policy implications, because entrepreneurs contribute to growth and development, as was most famously observed by Schumpeter (Braunerhjelm, Acs, Audretsch & Carlsson, 2010).

The Challenges of Entrepreneurship in Guatemala

Entrepreneurial intentions are important, regardless of where development takes place. In a study of entrepreneurship in Latin America and the Caribbean, for instance, more than 75% of respondents considered entrepreneurship to be a viable career choice, but not one necessarily associated with high social status or favorable media light. Entrepreneurship may, therefore, be strong in practical appeal, but have less social status and saliency in the Latin American economies (GEM, 2012). Despite the importance of the existence of an entrepreneurial critical mass for a nation's developmental path, relatively little exists, in the way of investigation of the entrepreneurial cultures in developing countries. The Global Monitor would be an important exception. In particular, little effort has been made to study the entrepreneurial attitudes, perception and intentions of university students in developing countries. The link between major preferences and entrepreneurial intentions and interest should be a question of considerable interest since university students success in entrepreneurship can be instrumental in promoting economic development in their country.

Guatemalan private university students are the focus of this study. Guatemala is a lesser-developed country located in Central America with approximately 15 million inhabitants (International Monetary Fund, World Economic Outlook, 2014). Guatemala is predominately a service oriented economy with 48% of the labor force involved in this activity. In terms of value added as % of GDP, the country's economy is composed of agriculture 11.3%, services 58.8% and industry 29.9%. The second major labor force involvement—agriculture, which has about 38% of the workforce involved. The remaining portion of the labor force occupies about 14% and is involved in light industry—crafts, and generally hand made goods (World Bank, 2013). On the competitiveness front, Guatemala ranks 78 out of 144 countries on the Global Competitiveness Index elaborated by the World Economic Forum (WEF, Global Competitiveness Report, 2014-2015). According to the Global Entrepreneurship Monitor, Guatemala boasts high perceived entrepreneurial capabilities, but low entrepreneurial intentions, signifying high barriers to entrepreneurship. However, in terms of Ease of Doing Business, Guatemala improved in the 2014 database, to a ranking of 73 versus 78 in the prior year, and 93 in the year before that (World Bank, 2015). Slowly, the entrepreneurial business climate in Guatemala is improving.

Entrepreneurship in Guatemala is driven by necessity as much as by opportunity. Poverty in the country is estimated at 54%, (World Bank, 2015) and some 1 million Guatemalans have immigrated to the United States

because of lack of economic opportunities (Guatemalan Human Rights Commission [GHRC], 2012). That such a substantial portion of the country's low-skilled workers emigrates to the United States must surely mean that the stock of potential entrepreneurial talent in the country is seriously depleted. Due to the lack of quality well-paid jobs, entrepreneurs focus on business ventures for survival. It has been reported that 59% of Guatemalans who started their business did it out of necessity and most of them entered into businesses that required capital of less than \$1,300. Most of these enterprises employed only the owner. Furthermore, most of the businesses in these categories use old technology and close to half of them have not completed basic education (Central American Business Network, 2010). Since many of them have limited access to capital it constrains them in their efforts to broaden and expand the business development.

Despite serious structural flaws, Guatemala has great potential with its young population, abundant resources and undeveloped land and business situations. Guatemala is the largest country in Central America, representing roughly 34.6% of the region's population, and 26.9% of its G.D.P., albeit only 11.5% of all incoming foreign direct investment to the region (authors calculations). Although only 7.5% of the population between 15 and 34 years of age will access university education, given her population size, Guatemala still possesses a critical mass of human talent, making the country ripe for entrepreneurial development and advancement (Diéguez & Maricel, 2015). With properly trained and motivated young people, the future business development capabilities are substantial. As such, students who are interested in entrepreneurship and have entrepreneurial intentions can be a major source for driving economic development in Guatemala.

Conceptual Framework

Student's Entrepreneurial Intentions

Intentions connect a person's goals or plans to the actions they perform. An intention is a state of mind that points a person's attention and action in the direction of self-employment as opposed to organizational employment. Entrepreneurship intention can be defined as the emerging conscious attitude(s) that a person has regarding the wish to start a new enterprise or create new core value in existing organization (Krueger, Reilly & Carsrud, 2000). From another point of view, "Entrepreneurial intentions" can also refer to the action(s) that are produced based on an individual's attitudes that eventually produce results, which were initially intended (Raguz & Matic, 2011). Entrepreneurial intentions are determined by certain traits such as high achievement, tolerance for

ambiguity, willingness to take financial risk or internal locus of control. These ideas refer to a belief, that the future is determined by one's own actions and pro-activeness (Krueger & Carsrud, 1993). Through actual observations and investigation(s), intentions have been proven to be the best predictor of entrepreneurial behavior in various research studies conducted over the past decade (Krueger, Reilly & Carsrud, 2000). Essentially, intentions are at the essence of entrepreneurship. Almost anything an entrepreneur does is directly or indirectly linked to his/her intentions. The manner in which an entrepreneur expresses or implements his/her intentions will determine their success. Almost all of the entrepreneurial motivating factors relate to intentions. As such, intentions can be summed up as specific inclinations to perform an action or series of actions. Results come from deliberate thinking, which directs behavior.

Studies have revealed that entrepreneurial intentions are diverse in nature across cultures and different ethnicities (Uddin's *et al.*, 2012). Researchers have studied entrepreneurial intentions among university students in several countries, such as the United States, Australia, Austria and Germany, among others (Szerb & Imreh, 2007). The results of these studies have indicated that situational variables such as one's environment, education, network, and subjective norms all determine the intentions of entrepreneurs (Uddin's *et al.*, 2012). Based on Bird's, 1988, analysis, the influences of both personal traits and environment can define entrepreneurship intentions. Analyzing and expecting entrepreneurship intentions by concentrating on personal and environmental factors can guide the researcher towards some justification and conclusions regarding the development of entrepreneurs (Krueger, Reilly & Carsrud, 2000).

Ajzen's (1991) research, one of the most popular on this subject, states that the social expectation and pressure from one's family, friends, peers and society at large are major factors that have an impact on the intentions to perform or not perform a behavior. As such, the more intense the social expectation or pressure, the greater is the attraction towards establishing the new venture (Krueger & Carsrud, 1993; Zhao, Hills & Seibert, 2005). These findings have been reinforced by Usman, Rehman and Ahmed (2010) study on entrepreneurial intentions, which found that innovative and family business experiences are related to entrepreneurial intentions.

Recognizing how entrepreneurial intentions shape a student's rationale for becoming an entrepreneur is crucially important for Guatemala. Being aware how an individual's intentions emerge and are acted upon can provide significant insight as to what drives a person to become an entrepreneur. Moreover, knowing entrepreneur-

ial intentions will help establish policies in the area of entrepreneurship development, and restructuring education so that opportunities for students to actualize their intentions can be realized (Delmar & Davidsson, 2000).

What actually motivates people to open their own business is a natural object of academic interest in entrepreneurship research and education (Carey *et al.*, 2010). A better understanding of entrepreneurial attitudes and entrepreneurial characteristics of university students will enable us to estimate future entrepreneurial activity. It is within this context that the authors launched their investigation of the attributes and characteristics of Guatemalan students inclination to pursue entrepreneurship as a career.

The Theoretical Framework

The theory we are using in this study is Ajzen's, (1991) "Theory of Planned Behavior (TPB)". It is an effective theory for studying human intentions and actions. Essentially, it is composed of three major elements:

- *First*, it focuses on the attitudes towards performing certain behaviors and the consequences that those behaviors produce;
- *Second*, it represents an individual's subjective beliefs based on values, thinking and norms possessed by others who have a major influence on them (Khuong & An, 2015);
- *Third*, it is the belief as to how these factors may help or hinder the performance of the behavior (Ajzen, 2002).

As it applies to our study, items such as attitudes, subjective beliefs and perceived behavioral restrictions become the independent variables, which are analyzed to explain intentions and entrepreneurship. These are the dependent variables. The TPB theory offers a viable framework for understanding and predicting the entrepreneurial intentions not only based on personal factors but also social factors (Krueger, Reilly & Carsrud, 2000). The behavioral intentions are determined by attitudes towards behavior, subjective beliefs and perceived behavioral restrictions.

Attitudes Towards Behavior

The following section provides a discussion of the variables included in the conceptual framework and an explanation of their relationship to the TPB.

Family and Friends' Involvement in Entrepreneurship

Previous studies have shown that family involvement in business development can have a positive influence on siblings or immersion into entrepreneurship. Research

reveals that entrepreneurs are often brought up in families where their parents have been self-employed (Crant, 1996; Dyer, 1992; Roberts & Wainer, 1968). According to Kennedy (2003) family involvement in business has had a major impact on students in Hong Kong, Norway, Catalan and Singapore. Students who, at a young age, are connected to family business development are more apt to have these experiences influence their entrepreneurial intentions. A family environment wherein the parents are the owners/ operators presents a specific context in which career and entrepreneurship intentions are formed (Chua, Chrisman & Sharma, 1999). Family role models influence entrepreneurial attitudes (Szerb & Imreh, 2007). Friends or peers also can shape a student's entrepreneurial intentions. How students get excited about business development has many dimensions. While family involvement is one major determinant, peers and friends constitutes another determinant. Students with entrepreneurial backgrounds may provide direct counsel to their peers and help identify business ideas worth pursuing. Family members, relatives and friends have been shown to be associated with development of entrepreneurs. Their support and encouragement has been critical to the initiation and creation of entrepreneurs (Baughn, Cao, Le, Lim, Neupert, 2006; Davidson & Honig, 2003). Family and friends involvement with a student's thinking about entrepreneurship is significant in determining and influencing the desirability for the development of a particular business venture (Ismail *et al.*, 2009). Such involvements make an entrepreneurial career both desirable and worthwhile.

Subjective Beliefs

Internal Factors

Some experts (Szerb & Imreh, 2007) emphasise that personal characteristics of the individual such as their *locus of control* attributes have an impact on desires to become an entrepreneur. *Locus of control* refers to an individual's perception of his/her ability to control events. There are both internal and external factor controls that can affect a person's inclinations and actions toward particular events or interests in their life. External factor control refers to the belief that external events are determinate, making observed results the mere consequences of fate. Entrepreneurship is more apt to come from internal *locus of control* types (Yusof, 2007).

Self Confidence

Feelings of inadequacy, lack of skills, and fear of failure can impact negatively on entrepreneurial attitudes (Szerb

& Imreh, 2007), whereas maturity and self-confidence impact positively on entrepreneurial attitudes (Ghulam Nabi, Rick Holden, Andreas Walmsley, *Journal of Small Business and Enterprise Development* 2010 17:4, 537-551). A person who desires to go on his/her own must have the self-confidence that it is possible to reach certain goals. There is a direct relationship between a potential entrepreneur's self-confidence and other variables such as risk taking, and tolerance of ambiguity (Koh, 1996).

Perceived Behavioral Restrictions

The concept is that the real behavior is not only reliant on the stimulus or inclination to demonstrate specific behavior, but also depends on the insight of the complexity of demonstrating the behavior (Aslam, Awan & Khan, 2012). This can be seen as the perception of the difficulty of becoming an entrepreneur (Rauch & Hulsink, 2015). Fortunately, perceived behavioral control is believed to be something that can be influenced by a formal education in entrepreneurship (Liñan, Rodríguez-Cohard & Rueda-Cantuche, 2011).

Financial Limitations

Carter, Gartner, Shaver and Gate (2002) and Segal, Borgia and Schoenfeld (2002) identify financial motivations as entrepreneurship drivers (Segal *et al.*, 2002). Financial limitations, however, can constitute an important external factor that affects student entrepreneurship intentions. Poorly functioning financial markets not only negatively affect productivity; they act as barriers to market entry (Paulson & Townsend, 2005). The emerging literary consensus is that entrepreneurs are credit-constrained (Petrova, 2012) and this factor could have an impact on a person's inclination to pursue business development or entrepreneurship opportunities.

Formal Education

Consistent with the theory, the relationship between education and new firm formation is uncertain, except for richer countries where postgraduate training has been shown to have positive effects on high-tech start-up rates (Blanchflower, 2004). The uncertainty surrounding education is due in part to the fact that education levels have been primarily contextual (Arenius & Minniti, 2005). Since the education offered by a university mostly influences the career selection of students, universities can be seen as potential sources of future entrepreneurs (Turker & Selcuk, 2009). Entrepreneurship education has been recognized as one of the vital determinants that could influence students' career decisions (Kolvereid & Moen,

1997). In light of the growing appreciation of the role of entrepreneurs in economic growth and development, the growth in entrepreneurship studies in universities has been phenomenal. This is important because the students of today are the entrepreneurs of tomorrow. Formal education can help fuel the development of entrepreneurial competencies. Throughout the world, student interest and intentions about entrepreneurship as a career choice is growing (Fayolle, Gailly & Lassas-Clerc, 2006).

Education can have a major impact on entrepreneurial intentions and the ability of a person to be a successful entrepreneur (Basu & Virick (n.d.)). Limited or no education can lead to low levels of entrepreneurial intentions among students (Franke & Luthje, 2004). Students who have a basic understanding about entrepreneurship are better at identifying business opportunities. Their knowledge gives them the confidence and motivation to pursue new and existing paths towards entrepreneurship (Krueger & Brazeal, 1994). Business and Economic majors have been shown to be two of the best majors to prepare students for becoming entrepreneurs (Brazen, 2015). In a business world composed of big data and a need for understanding accounting, statistics, marketing, accounting and finance, business and economics majors become a nice fit for the day-to-day operation of a business venture. Clearly these education majors provide the knowledge and skill set needed to help in the performance of a business's administration.

Other Attributes Affecting Entrepreneurial Involvement

Typically, entrepreneurial activity is fraught with excessive risk and returns to capital are too low. Entrepreneurial activity appears to provide high utility, increased feelings of job satisfaction, suggesting that entrepreneurship provides nonmonetary benefits to those who pursue it as a career (Bianchi, 2012). A host of personal aspirations and motivational antecedents drive entrepreneurship (Carey, Flanagan & Palmer, 2010). Personal qualities may, of course, help or hinder entrepreneurship. Wright argues that a desire for wealth, autonomy and independence drives entrepreneurship (Wright, Robbie & Ennew, 1997). A high tolerance for uncertainty and ambiguity, and risk taking are some of the other important personal components that determine entrepreneurship (Yusof, 2007). Such personal traits such as a risk-loving nature, creativity, innovation and willingness to make quick decisions are typical entrepreneurial traits, however, mere positive attitudes towards entrepreneurship in general does not guarantee that a person will start a business (Acs & Szerb, 2007).

Gender

Gender also may have an impact on student's entrepreneurial intentions. A variety of studies have indicated that men are more closely linked to entrepreneurship than women. There appears to be more obstacles for women in developing a business than for men. Issues relating to finance have generally been a barrier to starting businesses. Additionally, stereotyping has been an attribute that has stood in the way of many potential women entrepreneurs (Ahmed, *et al.*, 2011).

Fortunately, in recent years, gender differences in entrepreneurial behavior have been also the subject of a significant amount of attention. Brush and Cooper (2012) have observed that men and women entrepreneurs differ very little with respect to demographic and psychological variables, while more pronounced differences seem to exist in business goals and management styles. Similarly, Langowitz and Minniti (2005) found that the factors influencing female and male entrepreneurship tend to be the same. In spite of these similarities, women participation rates in entrepreneurship are systematically below those of men.

Age

Age has for a long time been a factor affecting the entry of people into the field of entrepreneurship. Entrepreneurship tends to be a young person's game. Consistently, Reynolds, Bygrave and Hay (2003) have found empirical evidence showing individuals between 25 and 34 years of age to be the most likely to be nascent entrepreneurs.

Methodology

Data Collection

This study employs the survey data conducted at Landivar University in Guatemala, Central America. The data was gathered at Landivar University, a large Jesuit University in Guatemala City, Guatemala. The English language questionnaire was translated into Spanish. Students were instructed on how to take the questionnaire. The students in this data set are all from the Department of Business and Science economics at Landivar University, from the introductory courses in microeconomics, which all majors of the Faculty must take. The majors offered in the faculty are Business Administration, Marketing, Accounting, Hotel and Restaurant Management, and Economics. A total of 250 replies were obtained from the classroom student survey.

Variable Definitions

The dependent variable for the multinomial logit model, the future plan (FUTURE-PLAN) has been divided into

four different categories based on the responses of students on their future plan. The four categories are: a future entrepreneur (FUTURE-ENTP) if they want to be entrepreneur or run their own business, an economist (ECONOMIST) if they want to work as an economist professionally, a manager (MANAGER) if they want to work as a manager or an administrator and other (OTHER) profession if they are not sure about their future profession.

Under the independent variables category, a total of nine variables are controlled. The choices of explanatory variables are based on the objective of study and variables that affect the student behavior on their future professional plan, and these controlled variables are grouped into four different categories. The first category includes major related categorical variables in their undergraduate—an economic major (ECONMAJOR), business major (BAMAJOR). The second category considers personal behavior, which includes students' self-identified self-confidence (CONFIDENCE) to run and own a business; the student feels excitement about owning their own business (EXCWORK), age of student (AGE) and if the student is male (MALE) (Yes= 1, 0 otherwise). The third category includes the variables that influence the student future plan: the student has a family business or the family is entrepreneurial (FAMENTP), and student has a friend entrepreneur (FRDENTP). The last or the fourth category includes the economic variable—cost of the undergraduate study (EDUCOST), which is controlled to capture the effect of education costs in choosing a future profession. See Table 1 for definitions and details about descriptions of the variables.

Empirical Method

To analyze and measure the entrepreneurial intentions of students, the authors applied a Multinomial Logit Model (MNL) to evaluate the variations of being a future entrepreneur (FUTURE-ENTP), economist, manager and other professions after graduation. In addition the model implements a logit estimation technique to estimate the likelihood of being a future entrepreneur after graduation as opposed to all other professions.

For the MNL modeling, the likelihood of the future plan (FUTURE-PLAN) is estimated as the dependent variable and the other (OTHER) is the base category. The MNL model of the probability is given by the following equation:

$$\Pr(Y_i = j | M) = \frac{\exp(\beta'_j X_i)}{\sum_{k \in M} \exp(\beta'_k X_i)} \quad (1)$$

where, $\Pr(Y_i = j | M)$ is the probability that the FUTURE-PLAN (Y_i) for i study falls under alternative j

Table 1. Definition of and Description of Variables

Variable	Definition	Mean
	Dependent Variable	
FUTURE-PLAN	Future plan =1 if plan to run a business, (FUTURE-ENTP) Future plan =2 if to be an economist, (ECONOMIST) Future plan = 3 if to be a manager or an administrator (MANAGER) Future plan = 4 if undecided, (OTHER)	2.668 (1.191)
	Independent Variables	
ECONMAJOR	Student with economic major, 1 if yes 0 otherwise	0.108 (0.310)
BAMAJOR	Student with business major, 1 if yes 0 otherwise	0.712 (0.453)
CONFIDENCE	Student with self-confidence, 1 if yes 0 otherwise	0.468 (0.499)
FAMENTP	Student whose family has own business, 1 if yes 0 otherwise	0.684 (0.465)
FRDENTP	Student whose friends have own business, 1 if yes 0 otherwise	0.148 (0.355)
EXCWORK	Student who feels excitement owning business, 1 if yes 0 otherwise	0.440 (0.497)
MALE	Gender, 1 if male 0 otherwise	0.384 (0.487)
AGE	Age of student	20.884 (2.416)
EDUCOST	If the cost of undergraduate is greater than \$ 25,000 then 1 otherwise 0	0.176 (0.381)

Note: Standard deviations are given in the parenthesis.

Source: Authors' calculations – see note above.

within M possible choices, which include future entrepreneur (FUTURE-ENTP), ECONOMIST, MANAGER and OTHER professions. In the equation (1), X_i represents a vector of attributes and K stands for choices. β_j and β_K are vectors of interested parameters (Greene, 2003).

The logit estimation is the odds of some event happening (e.g. the event that $Y = 1$), which is defined as the ratio of the probability that the event will occur divided by the probability that the event will not occur. That is, the odds of being FUTURE-ENTP, $E[Y_i] = \Pr(Y_i = 1)$ is given by

$$\Pr(Y_i = 1) = \frac{\exp\{\beta' X_i\}}{1 + \exp(\beta' X_i)} \quad (2)$$

In equation (2), X_i represents a vector of attributes and β is a vector of corresponding coefficients.

Results

Estimation results of the Multinomial Logit (MNL) model for investigating the future plans for undergraduates are presented in Table 2 Compared with the base category of

OTHER (that is, the students who had not decided on a future profession) the results of this study indicated that the likelihood of being a future entrepreneur will be relatively reduced by 1.78 percent if students major in economics (ECONMAJOR). This finding is consistent with the results of logit regression in terms of sign and significance (see Table 3). Similarly the result of MNL shows that if the student majors in business management (BAMAJOR) the likelihood of being a future entrepreneur reduces by 2.025 percent against the base category, OTHER. The result of the logit model is also consistent, suggesting that a future entrepreneur won't major in business though a business degree is helpful in establishing a business. But if the student is either an economics major or a business major her relative likelihood of being an economist or manager increases by 2.264 and 3.384 percent, respectively. Results show the explanatory variable level of the self-confidence of the student (CONFIDENCE) is significant at the 5 percent level in the multinomial logit model and at a 10 percent level in the logit model. Since the CONFIDENCE variable is significant in both econometric models, it suggests that if the student is more confident her relative odds

of being an entrepreneur in the future increase by 0.804 percent (MNL) and by 0.637 percent (logit). This study tested the effect of family on future entrepreneurs (FAMENTP) but finds no significant effect from both models (MNL and logit), interestingly it finds that if friends own businesses or are entrepreneurs it will influence the student to be an entrepreneur in future by both models. We find that if a friend is an entrepreneur (FRDENTP) the relative likelihood of the student becoming an entrepreneur will increase by 1.00 percent (MNL model) and by 0.753 percent (logit model). Students are not affected by the excitement of work in the future to become an entrepreneur, as this study did not find any significant effect of variable—excitement in owning a business (EXCWORK). However, the excitement of owning a business will reduce the odds of being a manager in the future by 0.917 percent relatively.

Table 2. Results of Multinomial Logit Model

	Future Entrepreneur	Future Economist	Future Manager
INTERCEPT	-0.222 (1.461)	-8.549 (9.048)	0.315 (2.078)
ECONMAJOR	-1.781*** (0.662)	2.264* (1.357)	0.191 (1.486)
BAMAJOR	-1.052** (0.415)	-2.025 (1.782)	3.384*** (1.062)
CONFIDENCE	0.804** (0.393)	0.995 (1.155)	0.264 (0.371)
FAMENTP	0.619 (0.408)	-0.768 (1.08)	0.522 (0.367)
FRDENTP	1.000** (0.515)	-30.901 (175.000)	0.621 (0.560)
EXCWORK	0.004 (0.382)	-35.397 (102.000)	-0.917** (0.371)
MALE	0.614 90.385	0.710 (1.211)	0.257 (0.372)
AGE	-0.019 (0.070)	0.336 (0.461)	-0.159* (0.089)
EDUCOST	0.956** (0.462)	-35.219 (138.000)	-0.270 (0.542)
Log likelihood: -229.4021			
n	250	250	250

Note: ***, ** and * represent significant at 1%, 5% and 10% respectively.
Source: Authors' calculations – see note above.

This research finds that gender exerts some influence in the choice of future profession. The logit results confirm that if the student is a male then the likelihood of being an entrepreneur increases by 0.542, which is significant at the 10 percent level. This translates into a 90% level of confidence, which is enough to suggest that future research into the impact of gender on the choice of professions, in particular, and entrepreneurship, in general, is warranted.

Table 3. Results of Logit Model

	Future Entrepreneur
INTERCEPT	-1.590 (1.338)
ECONMAJAR	-2.03*** (0.596)
BAMAJAR	-2.016*** (0.386)
CONFIDENCE	0.637* (0.353)
FAMENTP	0.433 (0.372)
FRDENTP	0.753* (0.417)
EXCWORK	0.494 (0.339)
MALE	0.542* (0.337)
AGE	0.041 (0.064)
EDUCOST	1.112*** (0.415)
Log likelihood	-123.27792
n	250

Note: ***, ** and * represent significant at 1%, 5% and 10% respectively.
Source: Authors' calculation – see note above.

Age was not found to be a factor that affected the likelihood of being an entrepreneur in the future. Although a negative relationship between the age (AGE) variable and future entrepreneurship was found, it was not statistically significant.

The cost of undergraduate study was another factor that was found to affect the choice of future profession. In this study, if the cost of undergraduate study is higher than \$25,000 then the student will be more likely to become an entrepreneur—with the relative odds of being a future entrepreneur reported at 0.956 percent (MNL model) and 1.112 (logit model).

Conclusions and Recommendations

Ajzen's (1991) Theory of Planned Behavior (TPB) has provided a framework for understanding Guatemalan students' intentions to become entrepreneurs. In this study we introduced several of Ajzen's TPB major elements in order to evaluate their influence on a student's intentions to become an entrepreneur. Among the major elements studied were attitudes regarding certain behavior, and the consequences of said behavior, as well as the influence of other people (family, friends) on an individual's subjective beliefs (Mai Ngoc Khuong & Nguyen Huu An, 2016).

As these elements apply to our study, items such as attitudes, subjective beliefs and perceived behavioral restric-

tions became essential factors for explaining intentions and entrepreneurship.

The first step in our study was to provide a methodical and modeling framework for analyzing students' intent. Through the lens of this methodology or model, and using Ajzen's (1991) framework we were able to gain insight into the Critical Success Factors (CSFs), the entrepreneurial intentions, that affect students' interests, desires and ambitions to pursue entrepreneurial ventures, and hopefully spark the interest so that they will continue the pursuit of economic development using entrepreneurship as a vehicle to achieve their goals.

Overall the present study addresses its main goals. The study finds that there are no clear-cut attributes that are directly associated with students and their inclination to choose entrepreneurship as a career. Some of the main stay attributes such as age and being part of an entrepreneurial family are not always predictors of a student's desire to become an entrepreneur. The findings of this study present some interesting and contrary indications as they relate to the entry into an entrepreneurship career.

The traditional literature on "who becomes an entrepreneur" is quite general. In very few places, if any, does the literature specifically say that a person has to have a specific background or skill set to become an entrepreneur. Factors such as age, training, gender, and family involvement have different relationships to a person's intentions to become an entrepreneur. In this study, the results indicate that majoring in economics or management in undergraduate will not necessarily serve a future entrepreneur. This is a counterintuitive finding that deserves more research.

The factors of confidence and friendship contribute to entrepreneurship, while the cost of an undergraduate education works against it.¹ These findings are significant and provide a more insightful perspective on what factors might be more dominant in determining a student's decision to become an entrepreneur.

Limitations of the Study

The principal limitations of this study are that the sample size is relatively small and it is specific to one university. The students come from one geographic location within one country, where the region in question (the Capital city) has particular characteristics. These limitations are important to recognize as limiting factors of the study. Future research on students' entrepreneurial inclinations should be focused on, inter alia, a larger cross-section of students.

¹ An interesting area of further, more profound and specialized study would be the relationship between the cost of an undergraduate education and entrepreneurship.

In other words, there should be more than just business and economic students and a larger array of students from different universities around the country. This approach would provide a broader view of students and possibly present different responses that would allow the authors to make some inferences about the true career inclination of students towards a career in entrepreneurship.

References

- Acs, Z., & Szerb, L. (2007). Entrepreneurship, economic growth and public policy. *Small Business Economics*, 28(2/3), 109-122.
- Ahmed, I., M. M. Nawaz, Z. Ahmad, M. Z. Shaukat, A. Usman, W.-ul-Rehman, N. Ahmed (2010). Determinants of student's entrepreneurial career intentions: Evidence from business graduates. *European Journal of Social Science*, 15(2), 14-22.
- Ajzen, I. (1991). "The theory of planned behavior". *Organizational Behavior and Human Decision Processes* 50 (2), 179-211
- Ajzen, I. (2002). Perceived Behavioral Control, Self-Efficacy, Locus of Control, and the Theory of Planned Behavior. *Journal of Applied Social Psychology*, 32(4), 665-683.
- Arenius, P., & Minniti, M. (2005). Perceptual variables and nascent entrepreneurship. *Small Business Economics*, 24, 233-247.
- Aslam, T. M., Awan, A. S., & Khan, T. M. (2012). An empirical study of family background and entrepreneurship as career selection among university students of Turkey and Pakistan. *International Journal of Business and Social Science*, 3(15), 118-123.
- Bagozzi, R., & Yi, Y. (1989). The degree of intention formation as a moderator of the attitude-behavior relationship. *Social Psychology Quarterly*, 52(4), 266-267.
- Basu, A., & Virick, M. (n.d.). *Assessing entrepreneurial intentions amongst students: A comparative study*. Retrieved on 8/04/15 from <http://nciia.org/conf08/assets/pub/basu2.pdf>. 7/29/15.
- Baughn, C. C., Cao, J. S. R., Le, L. L. M., Lim, V. A., & Neupert, K. E. (2006). Normative, social and cognitive predictors of entrepreneurial interest in China, Vietnam and the Philippines. *Journal of Developmental Entrepreneurship*, 11(1), 57-77.
- Baughn, C., & Neupert, E. (2003). Culture and national conditions facilitating entrepreneurial start-ups. *Journal of International Entrepreneurship*, 1(3), 313-330.
- Beugelsdijk, S. (2007). Entrepreneurial culture, regional innovativeness and economic growth. *Journal of Evolutionary Economics*, 17, 187-210.

- Bianchi, M. (2012). Financial development, entrepreneurship and job satisfaction. *Review of Economics and Statistics*, 94(1), 273-286.
- Blanchflower, David G. (2004). Self-employment: More may not be better. National Bureau of Economic Research NBER Working Paper Series #10286, February. [Download: www.nber.org/papers/w10286]
- Bird, B. (1988). Implementing entrepreneurial ideas: The case of intention. *Academy of Management Review*, 13(3), 442-453.
- Braunerhjelm, P., Acs, Z. J., Audretsch, D. B., & Carlsson, B. (2010). The missing link: knowledge Knowledge diffusion and entrepreneurship in endogenous growth. *Small Business Economics*, 34 (2), 105-125.
- Brush, C. G., & Cooper, S. Y. (2012). Female entrepreneurship and economic development: An international perspective. *Entrepreneurship & Regional Development*, 24(1/2), 1-6.
- Brazen, accessed on 8/4/15 from <http://www.brazencareerist.com/blog/2013/08/19/10-best-college-majors-for-entrepreneurs/> accessed. Accessed 8/15/15.
- Carey, T., Flanagan, D. J., & Palmer, T. B. (2010). Entrepreneurship, an examination of university student entrepreneurial intentions by type of venture. *Journal of Developmental*, 15(4), 503-517.
- Carter, N. M., Gartner, W. B., Shaver K. G., & Gate, E. J. (2002). The reasons of nascent entrepreneurs. *Journal of Business Venturing*, 18, 13-39.
- Central American Business Network (2010). Accessed from http://www.centralamericadata.com/en/article/home/guatemalan_Entrepreneurs. 8/05/15.
- Chua, J. H, Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19-39.
- Crant, J. M. (1996). The pro personality scale as a predictor of entrepreneurial intentions. *Journal of Small Business Management*, 34(3), 42-49.
- Davidson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18, 301-331.
- Delmar, F., & Davidsson, P. (2000). Where do they come from? Prevalence and characteristics of nascent entrepreneurs. *Entrepreneurship and Regional Development*, 12(1), 1-23.
- Diéguez, M. J. (2013). Educación superior: Desafíos del siglo XXI. *Revista Crónica*, accessed 7/29/ 2015 <http://cronica.gt/2015/07/29/educacion-superior-desafios-del-siglo-xxi/>
- Dosal, P. (2005). *El ascenso de las élites industriales en Guatemala, 1871-1994*. Guatemala: Fundación Soros.
- Dyer, W. G. J. (1992). *The entrepreneurial experience*. San Francisco: Jossey-Bass.
- Family Business Review*, 21(3), 203-216.
- Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Effect and counter-effect of entrepreneurship education and social context on student's intentions. *Estudios de Economía Aplicada*, 24(2), 509-23.
- Franke, N., & Luthje, C. (2004). Entrepreneurial intentions of business students: A benchmark study. *International Journal of Innovation and Technology Management*, 1(3), 269-288.
- Ghulam Nabi, Rick Holden, Andreas Walmsley (2010). Entrepreneurial intentions among students: towards a re-focused research agenda, *Journal of Small Business and Enterprise Development*, 17(4), 537-551.
- Global Business School Network (GBSN) (2013) a. Education, employment and entrepreneurs: A snapshot of the global jobs challenge, a report by the global business school network. Accessed on 10/08/14 from <http://www.gbsnonline.org>.
- Global Business School Network (GBSN) (2013) b. <http://blog.up.co/2013/12/11/top-15-gsb-teams-champion-circle-powered-google-entrepreneurs>, 8/12/15.
- Global Entrepreneurship Monitor (GEM). *Global Entrepreneurship Report 2012*. Accessed on from <http://www.gemconsortium.org/docs/download/2409>, accessed 6/30/15.
- Greene, W. (2003) *Econometric Analysis*, Prentice Hall: Upper Saddle River.
- Guatemalan Human Rights Commission (GHRC) (2012). Fact sheet, Guatemalans in the United States. Accessed on from http://www.ghrc-usa.org/Publications/factsheet_immigration.pdf. Accessed on 7/06/15.
- International Monetary Fund. (2013). World economic outlook database. www.imf.org. Accessed October 29, 2013 from <http://www.imf.org/external/np/sec/pr/2014/pr14432.htm>, accessed on 5/24/15.
- International Monetary Fund. (2014). World Economic Outlook, October 2014, online database. Accessed March 16, 2015 from <http://www.imf.org/external/pubs/ft/weo/2014/02/weodata/weoselgr.aspx>.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, K., Abdul Rahman, N., Mohammed, K. M., & Shekh, R. Z. (2009). Entrepreneurial intention among Malaysian undergraduates. *International Journal of Business and Management*, 4(10), 54-60.
- Kennedy, P. (2003). *A guide to econometrics* (5th ed.). Cambridge, MA: MIT Press.
- Koh, H. C., (1996). Testing hypotheses of entrepreneurial characteristics: A study of Hong Kong MBA students. *Journal of Managerial Psychology*, 11(3), 12-25.
- Kolvereid, L., & Moen, O. (1997). Entrepreneurship among business graduates: Does a major in entrepreneurship make a difference? *Journal of European Industrial Training*, 21(4), 154-160.

- Krueger, N., & Brazeal, D. V. (1994). Entrepreneurial potential and entrepreneurial intentions. *Entrepreneurship Theory and Practice*, 18, 91-104.
- Krueger, N., & Carsrud, A. (1993). Entrepreneurial intentions: Applying the theory of planned behavior. *Entrepreneurship and Regional Development*, 5, 315-330.
- Krueger, N., Reilly, M. D., & Carsrud, A. L. (2000). Models of entrepreneurial intentions. *Journal of Business Venturing*, 15(5-6), 411-432.
- Langowitz, N., and M. Minniti (2007). The Entrepreneurial Propensity of Women, *Entrepreneurship Theory and Practice* 31(3), 341-364.
- Liñan, F., Rodriguez-Cohard, J., & Rueda-Cantuche, J. (2011). Factors affecting entrepreneurial intention levels: A role for education. *The International Entrepreneurship and Management Journal*, 7(2), 195-218.
- Low, M. B., & MacMillan I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14, 139-161.
- Mai Ngoc Khuong and Nguyen Huu An, (2016). The Factors Affecting Entrepreneurial Intention of the Students of Vietnam National University - A Mediation Analysis of Perception toward Entrepreneurship, *Journal of Economics, Business and Management* vol. 4, no. 2, 104-111
- Ghulam Nabi, Rick Holden, Andreas Walmsley (2010). Entrepreneurial intentions among students: towards a re-focused research agenda, *Journal of Small Business and Enterprise Development*, 17(4), 537-551
- Paulson, A. L., & Townsend, R. (2005). Financial constraints and entrepreneurship: Evidence from the Thai financial crisis. *Economic Perspectives*, 29(3), 34-48.
- Petrova, K. (2012). Part-time entrepreneurship and financial constraints: evidence from the Panel Study of Entrepreneurial Dynamics. *Small Business Economics*, 39(2), 473-493.
- Raguž, I. V., & Matic, M. (2011). Student's Perceptions And Intentions Towards Entrepreneurship: The Empirical Findings From The University Of Dubrovnik-Croatia. *International Journal Of Management Cases*, 13(3), 38-49.
- Rauch, A., & Hulsink, W. (2015). Putting entrepreneurship education where the intention to act lies: An investigation into the impact of entrepreneurship education on entrepreneurial behavior. *Academy of Management Learning and Education*, 14(2), 187-204.
- Reynolds, P., Bygrave, D. B., & Hay, M. (2003). *Global Entrepreneurship Monitor Report*. Kansas City: MO: E. M. Kauffmann Foundation.
- Roberts, E. B., & Wainer, H. A. (1968). New enterprise on Jte 128. *Science Journal*, 4(12), 8-83.
- Segal, G., Borgia, D., & Schoenfeld, J. (2002). Using social cognitive, career theory to predict self - employment goals. *New England Journal of Entrepreneurship*, 5, 47-56.
- Steyaert, C., Hjorth, D., & Gartner, W. B. (2011). Six memos for a curious and imaginative future scholarship in entrepreneurship studies. *Entrepreneurship and Regional Development*, 23 (1-2), 1-7.
- Szerb, L., & Imreh, S. (2007). Entrepreneurship education and entrepreneurial attitudes of Hungarian students: An international comparison. *5th International Conference on Management, Enterprise and Benchmarking*, June 1-2, Budapest, Hungary.
- Turker, D., & Selcuk, S. S. (2009). Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training*, 33(2), 142-159.
- Uddin, M., Reaz, D., & Bose, T. K. (2012). Determinants of entrepreneurial intension of business students in Bangladesh. *International Journal of Business and Management*, 7(24), 128-137.
- Usman, A., Rehman, W., & Ahmed, N. (2010). Determinants of students' entrepreneurial career intentions. Evidence from business graduates. *European Journal of Social Science*, 15(2), 14-22.
- Welter, F. (2011). Contextualizing entrepreneurship-conceptual challenges and ways forward. *Entrepreneurship: Theory and Practice*, 35(1), 165-184.
- World Bank, Worldwide Development Indicators Database, (2013), Accessed October 29, 2013 from www.worldbank.org.
- World Bank. Ease of Doing Business Index. Accessed on from <http://www.doingbusiness.org/data/exploreeconomies/guatemala/>. Accessed October 29, 2013.
- World Bank. (2014). World development indicators. Online database, Accessed March 16, 2015 from <http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators>
- World Bank. Ease of doing business index. Online database, Accessed March 16, 2015 from <http://www.doingbusiness.org/rankings>
- World Economic Forum (WEF) (2013). Global competitiveness reports. www.weforum.org
- World Economic Forum (WFE) (2014). Global competitiveness index, 2014-2015. Online database. Accessed March 16, 2015 from <http://www.weforum.org/reports/global-competitiveness-report-2014-2015>.
- Wright, M., Robbie, K., & Ennew, C. (1997). Serial entrepreneurs. *British Journal of Management*, 8, 251-268.

Yusof, M. (2007). Relationship between psychological characterizes and entrepreneurial inclinations: A case study of students at University of Tun Abdul Razak (Unitar). *Journal of Asia Entrepreneurship and sustainability*, 3(2), 1-18.

Zellweger, T. M., & Nason, R.S. (2008). A stakeholder perspective on family firm performance.

Zhao, H., Hills, G. E., & Seibert, S. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, 90(6), 1265-1272.

Note:

Authors' calculations based on World Bank data. See World Development Indicators, online database. Accessed March 16, 2015 from <http://databank.worldbank.org/data/views/variableSelection/selectvariables.aspx?source=world-development-indicators>

Authors' calculations based on data from the International Monetary Fund. 2014. World Economic Outlook, October 2014, online database. Accessed March 16, 2015 from <http://www.imf.org/external/pubs/ft/weo/2014/02/weodata/weoselgr.aspx>