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"The importance of character and identity in the creation of entrepreneurial lifestyles"

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Abstract

Entrepreneurship is known to be a career choice which is both demanding for the entrepreneur and his/her business. With this in mind, this analysis looks at the different elements constituting one's character and whether these will tend to be represented in entrepreneurs character profiles. Results show that through individual perceived capabilities for instance, confidence is associated to the entrepreneur's profile. Furthermore, given the varied nature of entrepreneurship, it may be that the different types of entrepreneurships, most notably the necessity and motivation driven types, also attract different character types. The results here show that indeed, motivation-based entrepreneurship is associated to individuals who have the ambition to innovate as part of their careers. To reach these results, survey data retrieved from the Adult Population Survey conducted by the Global Entrepreneurship Monitor over the period from 2001 to 2021. The survey is conducted in 115 countries where at least 2000 respondents create the representative sample.

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Table of Contents

Introduction

Entrepreneurship is a term and a function that has been around since the history of economic thought started (Blaug, 2000). Classical economists such as Smith and Riccardo, in the 18th century, were not shy in associating both terms of "capital" and "entrepreneurship" together. It is a term that can be defined and perceived in many ways. French economist Richard Cantillon described the function of the entrepreneur as someone who would take risks. Schumpeter classified the entrepreneur as pivotal for technical innovation and disruptive and dynamic change. Further down the line, in the 20th century, Mark Casson argues that entrepreneurs are ones who make judgments about the allocation of resources. Though the contrast in these definitions exist, it seems that up until today, economists agree that entrepreneurs are at least changemakers and risk takers, through their function.

For the entrepreneurial role to have a great impact, entrepreneurs tend to possess a particular nature about them, but also be nurtured to fit the entrepreneurial lifestyle (Lindquist, Sol & van Praag, 2015). In their article, Lindquist et al. (2015) discuss the origins of intergenerational association in entrepreneurship through twin studies and conclude that post-birth factors, which are nurtured, account for twice as much intergenerational association in entrepreneurship as pre-birth factors, which are derived from nature. Post-birth factors can be numerous, though in this case they are described as the influence of adoptive parents. Other studies by Oosterbeek, van Praag and Ijsselstein (2010) look at the effect of entrepreneurial education on entrepreneurial skills and motivations. Though their results are inconclusive due to lacking external validity, they observe a drastic self-selection process, which sees many students lose interest in entrepreneurship after understanding the dedication, responsibilities and sacrifices needed for an entrepreneurial lifestyle.

Therefore, the importance of personality and character are also relevant candidates whilst looking at entrepreneurial tendency. A study by Nicolaou et al. (2008) looks at the association between sensation seeking and the heritability of entrepreneurship. By comparing individuals' genetics, they concluded that between 37 and 43 percent of the tendency to engage in entrepreneurship is determined genetically. Specifically, the genes associated with sensation seeking were responsible for a substantial part of this variation. Further studies by Shane et al. (2010), looked at the Big Five personality traits and their association with the tendency towards entrepreneurship, and found that extraversion and openness to experience were both correlated with entrepreneurship. Though traits stem from genetic factors, they are also nurtured during early educational processes. Furthermore, they are considered to have

little variation over time, meaning that traits are strong elements to describe one's character. Therefore, these are key in helping determine whether a person fits the entrepreneurial role or not.

Understanding whether a person fits an entrepreneurial role might also be a matter of understanding whether the entrepreneurial role will work for a certain individual. Since the role of an entrepreneur is so broadly defined, two entrepreneurs could hold two drastically different functions, creating the need for multiple entrepreneurial profiles. Previous studies strongly focus on the effect of the person on their function as entrepreneurs. As well as observing certain character traits on the tendency to engage with entrepreneurship, the purpose of this analysis will be to understand how the different types of entrepreneurship attract different entrepreneurs. This analysis will have for objective to understand where the role of an individual, and the role of an entrepreneur meet. Hence the following question will guide this paper:

(Main Question) *What are the drivers behind the choice to become an entrepreneur? Among the following:*

- *Perception of one's character*
- *Perceptions of the entrepreneurial lifestyle*
- *Type of entrepreneurship: career intentions*

Our self-expectations relate to the vision individuals have of themselves. This can be translated as the perception one has over his or her capabilities as an entrepreneur, associated also to their self-assessed lack of capability. Humans are creatures of bias, who tend to use their own sensations, emotions, and cognitions to construct opinions and judgements about themselves and others (Pronin, 2008). Therefore, these perceptions play a big role in decision making, which is the first step into entrepreneurship which helps nurture future career paths. The role of an entrepreneur varies from one individual to another. Therefore, looking at the effect of individuals on their tendency to engage with entrepreneurship whilst being narrowly defined would be naive. Since the entrepreneurial lifestyle is so variable, it seems only just to understand how the realities of the entrepreneurial lifestyle attract individuals into entrepreneurship. Therefore, this analysis will try its best to look at the dual interaction between individuals and entrepreneurial lifestyles.

The purpose of this analysis, scientifically, will be to consolidate an all-encompassing understanding of the interaction of entrepreneurship and the idea of self, whilst also looking at the interaction between self and entrepreneurship. Previous literature has been particularly focused on more singular effects of self and entrepreneurship, in that order, to measure their depth to the best of their capabilities. This paper will include a literature review of the multiple factors which can lead an individual into entrepreneurship. Namely, the genetic, and environmental factors which are considered from family environments to educational environments as well as societal environments. Furthermore, this analysis will delve into the socially defined nature of entrepreneurship, and its tendency to attract entrepreneurs. The different types of entrepreneurships including opportunity as opposed to necessity driven entrepreneurship will be compared when studying the different types of entrepreneurs these captivate.

The global shift of the nature of work, specifically the chase from stable and secure job opportunities, to a more risk taking, impact seeking approach observed in the GenZ, is a subject of reflection (The Deloitte Global 2022 GenZ and Millennial Survey, 2022). With the dynamics changing so fast, what are the new roles that will emerge from these synergies, what will it take to become one of these changemakers? This paper aims, through its mixed approach, to make an omniscient understanding of these questions, hopefully, helping guide its readers understand the nature of entrepreneurship, making it socially relevant.

Literature Review

Mise-en-place

Since it seems that many factors are to be considered whilst looking at the natured and nurtured determinants of entrepreneurship, it will be necessary to look at these effects separately. Firstly, the effect of self-expectations on the tendency to engage with entrepreneurship will be observed. Self-expectations as defined above are the individual's perceptions of their own capabilities. Capabilities in this case comprise of skills and knowledge of an individual (GEM, 2022). These tend to derive from two sources which are nature and nurture. Natured through the heritability of certain traits and characteristics of parents and earlier ancestors. Nurtured through the exposure to certain growth environments which facilitate the learning of practices and skills. For this, the following question will be set:

(Sub Q.1) *What roles do perceived feats of identity play in an individual's tendency to engage with entrepreneurship?*

In a second tempo, using a reversed scope, it will be of interest to observe how the perception of entrepreneurship as a lifestyle plays a role in determining whether an individual is likely to engage with it or not. The realities of the entrepreneurial lifestyle are estimated through two specks. The first being the perception that entrepreneurship is a good career choice, a survey measure which describes the respondent's lifestyle satisfaction. Secondly, the idea that successful entrepreneurship is at the top of the social status ladder, which to this day, is an important measure in society. The two estimators in this part are a good representation of the social quality of an entrepreneurial lifestyle in their respective countries. This part will look at the differences in tendency to engage with entrepreneurship considering the quality of the lifestyle in a certain country. This will be analysed using the following question:

(Sub Q.2) *How do perceptions of the entrepreneurial lifestyle relate to an individual's tendency to engage with it?*

The broadness in the definition of entrepreneurship is also present when looking at the numerous motivations people have for engaging with it. Necessity driven entrepreneurs find

themselves making the career move through lack of satisfactory alternatives, whilst opportunity driven entrepreneurs move into entrepreneurship out of choice (Williams, 2008). Since the nature of these two types of entrepreneurships are different, it will be of interest to understand the feats of character that lead to either one or the other type of entrepreneurship. Therefore, it will be of interest to observe the differences in individual characteristics leading to opportunity versus necessity entrepreneurship:

(Sub Q.3) *How do career intentions relate to the willingness to become a necessity versus opportunity driven entrepreneur?*

Defining Entrepreneurship

Entrepreneurship has been at the front of traditional scholarly thinking for long, yet still finds itself debated in a multitude of ways, emanating from different academic traditions. The German school, led by vin Thuenen and Schumpeter, the Chicago school led by Schultz and Knight and finally the Austrian school led by von Mises, Kirzner and Shackle (Audretsch, 2012). These three schools, also called traditions, each trace back to Richard Cantillon (Herbert & Link, 1989). Though some academics mentioned above did not openly acknowledge Cantillon as progenitor of their theories of entrepreneurship, his definitions are recognised in most of these authors' research. Cantillon's definition is simple and sees entrepreneurs as personas who engage in exchanges with the goal of creating profit. In this manner, he described the function of the entrepreneur, rather than his person. His generalisation of the role of the entrepreneur is adopted so that the definition can be embraced across industries, meaning that it is transparent even to social classes. However, in this case, the definition of the entrepreneur lacks foresight into the future. Whilst Cantillon accepted the fact that the future cannot be foreseen, due to human nature, economist Knight saw it as a defect of the market system, caused by risk and uncertainty. Since uncertainty is such a pervasive part of our everyday lives, individuals who deal with it economically are entrepreneurs. Therefore, Cantillon's definition had to be broadened and adapted to the inescapable nature of economic uncertainty.

Schumpeter's approach is simple and powerful. By basing his definition around economic growth, he attributes the fundamental nature of change to the innovator (Herbert & Link, 1989). The entrepreneur in this case is made into a mechanism for economic change. The point of departure for an entrepreneur is the economic equilibrium which can be found in the works of French mathematician Leon Walras. Economic development then comes

through the disruption of the current equilibrium, as capitalism both creates and destroys existing structures, accelerating change and innovation. This process is what Schumpeter coins as a creative destruction. In other words, innovation is the disturbance of economic cyclical flows. Here again, the role of the entrepreneurs is described as a function, and its role in the growth economy is unambiguous. This also makes the function of the entrepreneur distinct from landowners, laborers, and inventors, but not exclusive of them. This categorisation of entrepreneur's stifles pragmatic economist Albert Hirschman who believes entrepreneurs are more than creative rebels. For him they must also embody "the ability to engineer agreement among all interested parties such as the inventor of the [new] process, the partner, the capitalist, the supplier of parts and services, the distributors…" (Hirschman, 1959). This complements the definition of Schumpeter, making it more specific and propping it at the core of economic development.

Stemming from Schumpeter's theorisation of equilibriums and the important role of entrepreneurs disrupting them, Nobel Laureate T. W. Schultz understands it differently. Rooted in the theory of human capital, Schultz's contribution is exhibited in two ways. Firstly, rather than disrupting equilibriums, entrepreneurs are redefined as the agents capable of dealing with disequilibria. Secondly, he introduces the role of education and its ability to help people's tendency to perceive and react to disequilibria. Schultz's method reaches further than Schumpeter's as the idea of equilibrium is no longer static, but always changing through disequilibria. It is such as he wonders whether economic growth is "progress" as such, with there being no stable growth but "various classes of disequilibria" (Schultz, 1975). This approach is also well established within the neo-classical tradition whose paradigm states that each useful factor of production has an identifiable marginal product (Herbert & Link, 1989). This is the case for entrepreneurs whose ability is a useful service, deemed recognisable. Hence, regardless of how the entrepreneur interacts with an equilibria/disequilibria, his role is endogenous to making this one shift.

Israel Kirzner gives his own provocative approach which lies between the neo-classical models and Schumpeter's. He sees the essence of entrepreneurship as the alertness to profit opportunities (Herbert & Link, 1989). He does this in contrast to mainstream economics as he believes it leaves little space for human action. Away from equilibrium models, he sees the role of the entrepreneur as necessary to move economic markets. As he views the economy in a dynamic way, where knowledge is neither complete nor perfect, equilibriums may not exist, making disequilibria responsible for the scope of entrepreneurial function. These disequilibria are what Kirzner sees as opportunities. Delving further into the

definition, he observes that all entrepreneurs are not built the same, as different people won't respond to opportunities in the same manner, putting the entrepreneur and his persona at the centre of entrepreneurship.

For the sake of this study, a fusion of these definitions will be solicited and assembled as follows. An entrepreneur is a profit seeking opportunist, who through opportunity or necessity engages with different parties to give added value to his business. Furthermore, he is a self-employed owner of a business.

At this point in the study, a distinction between necessity and opportunity driven entrepreneurship shall be made (Williams, 2008). Necessity driven entrepreneurship is a career choice derived from lack of alternatives. Here, the alternatives are unsatisfactory or absent. A typical example of a necessity entrepreneur would be a street food vendor in a developing country, whose career options are narrow, with a low access to capital. On the other side of the coin are opportunity entrepreneurs. These find themselves identifying a certain gap, or opportunity in a market, and are willing to take the necessary risks to act upon them. This type of entrepreneurship is an outcome to a conscious choice.

The specificities of the entrepreneurship type and one's tendency to become (by choice or default) one type of entrepreneur over another will be the focus of the third sub-question. The effect of certain career intention measures such as the willingness innovate, or employ a certain number of people, or the shear willingness to become an entrepreneur, will be measured against the ratio of necessity versus opportunity driven entrepreneurs. Furthermore, since career choices are also influenced by external factors, not associated through nature but nurtured through social agreement, the effect of entrepreneurship as a good career path and the role of the entrepreneur as a successful member of society will be measured in regard to the tendency to become an entrepreneur.

Since it is now clear what the role of the entrepreneur will be for this analysis, it will now be of interest to understand who the entrepreneur is, and how he ends up with that specific function or nature of entrepreneurship.

Nature and genetics of entrepreneurship

As most economists define entrepreneurship as a function, it is task to wonder who the entrepreneur is. Academic literature is extensive on this subject, with some academics believing that entrepreneurs tend to be sensation seekers, extroverts, individuals who like to experience events, opportunists and many more (Shane et al., 2010; Nicolaou et al., 2009 &

Nicolaou et al., 2008). Additionally, entrepreneurship, through its nature is a lifestyle rather than a profession. Entrepreneurs tend to seek life achievements and experiences, provided that these have a true passion for their work. Therefore, the person behind the entrepreneur, the character (ethos), is key in determining whether a person will engage with entrepreneurship. According to Thomas A. Wright (2014), the character refers to the impenetrable and habitual qualities within individuals, leading them to pursue certain personal goals and social ambitions. Character and personality are both influenced by what is nature to humans, our genetic predispositions, and our nurtured environment (Jang et al., 2002). Henceforth, in a first movement, the association between genes and entrepreneurship will be assessed, then the environmental factors helping nurture entrepreneurship will follow.

Genes are sequences of nucleotides, which make up humans DNA, transferred from parent to child, through reproduction. In their article Why Do Entrepreneurial Parents Have Entrepreneurial Children? Lindquist, Sol and van Praag (2015) discuss which parts of one's tendency to engage with entrepreneurship is due to genetics rather than the environment by using Swedish adoption data, for which they are able to isolate the pre-and-post birth factors of individuals. Their findings stipulate that having entrepreneurial parents increases the probability of children engaging with entrepreneurship by 60%. Parental influence stems through genetics but also through the formal educational environment, the social environment and the education parents give their children. Given the isolation of the factors, the authors also find that post-birth factors are responsible for twice as much of the variation than the pre-birth factors. This means that genetics are responsible for a third of the intergenerational association in entrepreneurship, whilst environment influences entrepreneurship nearly twice as much. Delving further into the research is question of understanding which genes are responsible for influencing entrepreneurship.

Twin Studies

A different method which isolates the genetic factors leading to entrepreneurship is to study monozygotic (MZ) twins, who are genetically identical, and dizygotic (DZ) twins which can be considered like siblings (Nicalaou et al., 2008). By assuming that twins are exposed to family environments in similar manners, it is possible to dissect additive genetic effects as well as family environment effects and individual environment effects. The results find high estimates for the heritability of entrepreneurship, whilst the environmental factors of the family and upbringing have relatively little effect. Both the adoption and twin studies are useful to determine the variation for genetic factors, however, they are not capable of

identifying specific genes or biological pathways through which genes function (Rietveld et al., 2020). Genes are not observed in these studies, but the estimations inferred through family relationships, making the sequencing of genes pivotal in the study of the effect of genes on the tendency to engage with entrepreneurship.

A similar twin study looking at the influence of sensation seeking on the heritability of income produced promising results for the practice of genoeconomics (Nicalaou, Shane, Cherkas, & Spector, 2008). By comparing MZ twins with DZ twins the authors found that between 37% and 42% of the variance in the tendency to engage with entrepreneurship is genetic. In their sample of 3,454 twins in the UK, they estimated a measure for individuals' sensation seeking through The Zuckerman Kuhlman Personality Questionnaire (ZKPQ-S). By correlating sensation seeking to entrepreneurship, they were able to estimate a genetic contribution to entrepreneurship that, mediated through genes, affects sensation seeking behaviour. Adding this into their model, their estimations show that between 31% and 46% of the heritability of entrepreneurship was due to the psychological trait of sensation seeking. Though a specific gene is not studied in this research, the indirect association of sensation seeking to a genotype helps genoeconomics considerably.

Genome-Wide Association Analysis

A human genome is composed of approximately 20,000 genes with variating lengths, making the identification of these a long and strenuous process, up until recently. The first human genome was sequenced at the dawn of the 21st century and was no easy task (Pareek et al., 2011). It took over two decades to complete and the effort of hundreds of scientists across dozens of countries, costing over 3 billion U.S. dollars. In order to study these large data sets, academics can use a Genome-Wide Association Analysis (GWAS) (Rietveld et al.,, 2020). For this method, behavioural genetics researchers must identify Single Nucleotide Polymorphisms (SNP's), differences in a single nucleotide sequence, which is the most common type of variation in the human genomes[1]. The GWAS then performs a single regression for each SNP on the outcome variable, to deal with overidentification[2]. Since there are millions of SNP's identified, there are millions of regressions performed in a GWAS. A study of 3,933 Caucasian females from the TwinsUK Adult Twin Registry enabled leading genoeconomists to study the specific genetic variants influencing the phenotype of entrepreneurship using a GWAS (Quaye et al., 2012). The researchers isolated the 30 most

[1] The most common type of sequence differences between alleles (Rafalski, 2002)
[2] In this case, overidentifying one gene to the outcome variable in an excessive way, overestimating the effect of the SNP

significant SNP's but found a total explanation of the variation to equal 1%. Of these genes, 80% were found on the same 3 chromosomes[3]. The issue with the study, as defined by the authors, is that the effect of each individual SNP on entrepreneurship is extremely small, making a large sample necessary to find genome wide significance. Since the individual genetic variants are too insignificant for empirical studies, other methods are derived to help answer whether entrepreneurship is genetically transmitted.

Polygenic Risk Scores

Polygenic Risk Scores (PGS), aggregate individual genetic variations to create more significant and explanatory power (Rietveld et al., 2020). The PGS adds up each SNP using different weights, in the following manner:

$$PGS = \sum_{j=1}^{J} \beta_j \, x_{ij}$$

PGS_i stands for the polygenic risk score value for individual i, β_j is the regression coefficient of SNP j from the GWAS, and x_{ij} is the genotype of individual i for SNP j (coded as 0, 1, or 2). Cornelius Rietveld (2013), who is a leading genoeconomics academic, along with others, measured the association between genes and educational attainment using a GWAS. Here using a sample of over 100,00 individuals found that genes were responsible for 2.5% of the variation of educational attainment, relatively larger and more significant score than using the GWAS. Looking at genes and entrepreneurship however proved to be harder using PGS's. Van der Loos (2013) was unsuccessful in estimating the effect as the results of their polygenic risk score for entrepreneurship captured less than 0.2% of the variance and was insignificant, for a sample of N = 3,271. These results fall in line with the previous research by Quaye et al. (2012), where the size of the sample has huge influence on the significance of the results.

Lastly, a study by Nicalaou, Shane, Cherkas and Spector (2009) looks at the heritability of opportunity recognition through twin-studies on the tendency to engage with entrepreneurship. They find a substantial heritability for opportunity recognition through genetic factors whilst the environmental factors account for no variation. Hence, it seems the opportunity recognition flows from one generation to another, through DNA. Their study further investigates the correlation between the recognition of opportunity and the tendency to engage with entrepreneurship, where they find a 53% phenotypic correlation. This is a

[3] Chromosomes 11 (43%), 14 (23%) and 15 (17%)

strong discovery for the factors leading to opportunity driven entrepreneurship, as it seems that the tendency to engage with opportunity driven entrepreneurship stems from genetic factors.

Conclusively, the relationship between someone's genetic makeup and their behaviour is more complex than expected (Rietveld et al. 2020). It seems that many pathways, likely multiplicative pathways, are responsible for the presence of a certain behaviours. This entails that finding a direct relationship between a gene and one's likeliness to engage with entrepreneurship is unlikely. To further explore the relationship between ethos and entrepreneurship, a study of the post-birth (environmental) components is a possible pathway.

Nurture of entrepreneurship

Genetics play a big role in determining who we are as a species, with humans sharing as much as 99.9% of their DNA (Rietveld et al. 2020). In that remaining tenth of percentage, are threaded the genes that are specific to our inherited nature, the genes that differentiate one person from another. Though differences stem from genetic discrepancies, many other factors, such as gender, culture, educational environment, life experiences and many more shape our personality (Kagan, 2010). As mentioned above, the ethos, one's character refers to the interpenetrable and habitual qualities that lie within individuals (Wright, 2014). This leads them to construct thoughts and personal goals and develop social ambitions with the objective of finding purpose. Therefore, the aim of this part will be to evaluate the existing literature whose subject is to determine the extent to which ethos determines entrepreneurial outcomes.

Education at Home

Parental education, for the majority of humans on the planet, is an essential part to the personal learning curve. Parental influences over their children's choice of profession are multiple (Jungen, 2008). Some of the channels include parental values and expectations, the relationship between the parent and child, and the socialisation of gender. Academics Lindquist, Sol and van Praag (2015) found that when one biological parent is an entrepreneur, it increases the chance of their children to become entrepreneurs by 45%, and the double when both parents are entrepreneurs. Furthermore, whilst looking at adoptive families, the authors find similar effects of parental occupation on their adoptive child's occupation, regarding post-birth factors, making the utero environment unlikely to have an influence on

entrepreneurship. Interestingly the authors pin down a few reasons why the post-birth factors have such influence. The first two revolve around the functional privilege entrepreneurial parents have over their children. Here, children tend to become entrepreneurs as they either inherit their parents' business or gain access to cheaper capital. These reasons are circumstantial rather than intrinsic to the character of the nurtured child. The third reason is through entrepreneurial education. Through the accumulated knowledge parents gain, is transferred general business human capital, which might create the potential of a promising career path in entrepreneurship. The fourth factor is the parental teaching of occupational or industry specific skills or tastes to their children. All of these are tested in the analysis; however, none seem to be significantly explanatory of intergenerational transmission of entrepreneurship. Lastly, they look at the impact of parents as role models. By basing their analysis on homophily which stipulates that individuals tend to bond with similar others, through gender for example, the academics look at the influence of mothers on their daughter and vice-versa for the males. They conclude that same sex role modelling does increase the probability of children engaging with entrepreneurship. The implication of this finding confirms the fostering role parents, and parental education plays in entrepreneurship.

Importance of Identity

Character plays a large role in occupational choice (Hannah & Avolio, 2011). The concept of "character profiles" is introduced in Wright and Quick's (2011) article on the role of character and ethical leadership. The concept outlines that certain individuals within certain professional roles possess a set of character strengths necessary for that role. Valour is mentioned as a value which will be required for a soldier or a fireman, but not for a dancer. Zhaou and Seibert (2006) are two academics who have tried to define the character profile of entrepreneurs using a meta-analytical approach. According to the five-factor model of personality, the authors run a series of tests, including comparisons between managers and entrepreneurs to determine the entrepreneurs' profile. The five personality traits are neuroticism, extraversion, openness to experience, agreeableness, and conscientiousness. Using the comparison between managers and entrepreneurs, the authors find that entrepreneurs score higher in the measures of conscientiousness and openness to experience, while scoring lower on neuroticism and agreeableness. Unfortunately, no difference was found for extraversion. The results of the analysis prove the existence of character profiles for entrepreneurship, where entrepreneurs do differ from managers, and others in general.

Behavioural characteristics are also studied in regard to their influence into the different natures of entrepreneurship (Tipu, 2016). In his study, Syed Tipu uses a case study approach to gain insight into the behaviours and thought frames related to success factors within the two natures of entrepreneurship as defined by Williams (2008). His results find that the behaviours of entrepreneurs are similar in terms of arrangements, willingness and ability cognition in necessity and opportunity driven entrepreneurship. One difference was exhibited as opportunity driven entrepreneurs experience counterfactual thinking[4], giving them a better-rounded insight into uncertainty and risk taking. On the other hand, necessity entrepreneurs seemed to be in closer contact to reality, with a lesser tendency to speculate and think counterfactually. Though these differences are mild, this is another example of the importance of identity in the realm of an entrepreneurial career.

Green, David, Dent and Tyshkovsky (1996) took matters into their own hand when trying to determine whether the psychological characteristics of entrepreneurs varied across borders, and socio-economic boundaries. They analysed a drastically different country, in terms of socio-economic background, to the ones where entrepreneurship is typically conceived, Russia, hoping to find large and significant variations. To their surprise, they found many similarities with western economies such as high scores in internal locus of control, need for achievement, and protestant work ethic[5]. Although their results didn't match the height of their expectations, the academics suggest that further research into the socio-economic influence of entrepreneurship should be conducted.

Three female academics from the University of Castilla-La Mancha in Spain did just that whilst studying the effect of institutions and their quality, social capital and income inequality on entrepreneurial innovation. From their empirical analysis, they find that countries with good institutions, boost entrepreneurship and entrepreneurial innovation, especially if the institution increases business freedom. Additionally, they find that higher income concentration leads to an increase in entrepreneurial innovation and that entrepreneurial innovation is also accelerated by the human and physical capital stocks and public sectors. Lastly however, entrepreneurship and entrepreneurial innovation seem to decrease in response to strong financial regulations. Therefore, the socio-economic environment has substantial effect on entrepreneurship.

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[4] Thinking about a past event that has not yet happened (Tipu, 2016)

[5] PWE reflects values and beliefs in work environments associated with Weber's theory of Protestantism and economic growth, e.g. belief in working hard, delayed gratification, etc. Furnham (1990)

Formal Education

Education is a measure that has long been observed in the economics fields, often associated to socio-economic outcomes such as earnings, job security, living habits and many more. In the optic of this paper, the effect of education and entrepreneurship education on entrepreneurial intentions will be monitored. In Oosterbeek, van Praag and Ijsselstein's (2010) article on the impact of entrepreneurial education on entrepreneurial skills and motivation, the academics use an instrumental variable approach to determine the effect of one over the other. The authors used survey data to compare the impact of a renowned entrepreneurship educational program on university students, in two different campuses, one serving as treatment and the other as control. By using relative distance to the campus', the results conclude that the effect of the program did not have the expected impact. This was shown in a few ways, one being that the self-assessed skills did not significantly increase. Furthermore, the entrepreneurial intentions significantly decreased following the program. Luckily, the external validity[6] of this experiment was leveraged to get higher internal validity[7], making this analysis specific to this experiment. The authors conclude that the entrepreneurial intentions might have decreased due to the discovery and reality of the hardships of the entrepreneurial lifestyle or what is needed to start a business, which is much daunting for young individuals.

Higher education also has its role in influencing entrepreneurship (van der Sluis et al., 2008). In their meta-analysis of empirical literature, van der Sluis and van Praag find that the impact of higher education on the tendency to engage in entrepreneurship is insignificant. This means that going into entrepreneurship is an arbitrary choice considering higher education. However, they also find that the return to a marginal year of education is 6.7% for an entrepreneur. Hence, although higher education is not a pathway into entrepreneurship, it does help entrepreneurs financially.

From the above, it seems that many character profiles and individual characteristics can be linked to the scoped definition of the entrepreneur (a self-employed business owner). From what is nature, and inherited though genetics, certain parts of the character can be predisposed. Therefore, the character of entrepreneurs, who are often described as sensation seekers, extroverts, individuals who like to experience events, opportunists and many more, can be studied (Shane et al., 2010; Nicolaou et al., 2009 & Nicolaou et al., 2008).

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[6] In this case: applying the treatment to the rest of the world, entrepreneurial education programs, schools…
[7] In this case: having a controlled experiment in a controlled environment.

Furthermore, the nurtured aspects of character profiles, through education, familial environments, and other environments also tend to influence career paths. To estimate the effect of nature and nurture on the tendency to become an entrepreneur in this analysis, confidence, through the variable of perceived capabilities (the ability to spot an opportunity and want to act upon it) and one's risk tendency, through the fear of failure rate, which are all characteristics acquired through nature or nurture, as discussed above will be compared to entrepreneurship rates through the TEA, using regression analysis.

Data

To study the associations between individual traits of character and entrepreneurial intentions, the Global Entrepreneurship Monitor (GEM) will be heavily solicited (GEM Global Entrepreneurship Monitor, 2022). The GEM is a global network whose mission is to promote entrepreneurship through the gathering of data, from entrepreneurs themselves. To fulfil their mission, in their 22 years of existence, the GEM has conducted over 200,000 interviews, in 115 economies and provided support to 200 funding institutions. Their work provides cross-country trends, giving insight into the nature of entrepreneurship. The Adult Population Survey (APS) which collects information about characteristics, motivations and ambitions of individuals starting businesses, will be the main source of data for this analysis. The GEM accesses data through the APS by gathering a large number of individual responses by economic region, at least 2000, ensuring the representativeness of the sample. The survey is conducted on a yearly basis, and the participation is voluntary, on individuals between the ages of 18 and 64. Since the core of the survey has been similar throughout its existence, it provides a valuable longitudinal perspective. The data used for this analysis will vary from 2001 to 2021 included.

The variables observed and of interest to this analysis are the following, retrieved from the GEM website:

Outcome variables:

The first outcome variable of interest will be **Total early-stage Entrepreneurial Activity (TEA)** Rate (v8). This measure comprises the actors who are nascent entrepreneurs, but also the owners and managers of existing businesses. With the survival rate of startups being close to 10%, with close to 25% failing within the first year, the TEA variable captures the highest share of entrepreneurial activity and intentions (Bryant, 2020). This measure will give all the necessary insight on entrepreneurship levels needed for the analysis.

Additionally, the outcome variable **Motivational Index** (v11) will also be called upon. As it describes the rate of opportunity versus necessity driven entrepreneurship, two different natures of entrepreneurship, it will help ground certain career and personality intentions and associate them to a particular type of entrepreneurship.

Explanatory variables:

Perceived Opportunities Rate (v4) is the percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who see good opportunities to start a firm in the area where they live. An essential measure for the understanding of the different types of entrepreneurs, opportunity driven/necessity driven, as defined previously.

Perceived Capabilities Rate (v5) is the percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who believe they have the required skills and knowledge to start a business. Self-confidence is a major personal characteristic for professional needs, and so often positively correlated with the tendency to engage with entrepreneurship (Asoni, 2011)

Fear of Failure Rate (v6) is the percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who indicate that fear of failure would prevent them from setting up a business. Opposed to self-confidence, the fear of failure rate gives an understanding of the risk profiles of the entrepreneurs.

Entrepreneurial Intentions Rate (v7) is the percentage of 18-64 population (individuals involved in any stage of entrepreneurial activity excluded) who are latent entrepreneurs and who intend to start a business within three years. This measure indicates the extent to which individuals are interested and motivated to become entrepreneurs.

Total early-stage Entrepreneurial Activity (TEA) Rate (v8) is the percentage of 18-64 population who are either a nascent entrepreneur or owner-manager of a new business. An all-encompassing measure for the entrepreneurship activity rate and essential to this analysis.

Motivational Index (v11) is the Percentage of those involved in TEA that are improvement-driven opportunity motivated, divided by the percentage of TEA that is necessity-motivated. This measure indicates the profile of entrepreneur, crucial in determining the type of entrepreneurship the individuals will interact with.

High Job Creation Expectation Rate (v14) is the percentage of those involved in TEA who expect to create 6 or more jobs in 5 years. Employment here might be an outcome of a business growth or expansion, but also a business goal and objective from the

entrepreneur. Since employees are fluid and can be replaced, it is a choice to employ rather than an obligation, translating the idea of career intentions well.

Innovation Rate (v15) is the percentage of those involved in TEA who indicate that their product or service is new to at least some customers AND that few/no businesses offer the same product. Yet again, this notion translates the idea of career intention. This is due to the willingness to innovate and to differentiate, which is not a given in entrepreneurship.

High Status to Successful Entrepreneurs Rate (v17) is the percentage of 18-64 population who agree with the statement that in their country, successful entrepreneurs receive high status. This measure gives an indication of the perceptions people hold of entrepreneurial lifestyles. It is a testament to the status of entrepreneurs in their respective economies.

Entrepreneurship as a Good Career Choice Rate (v18) is the percentage of 18-64 population who agree with the statement that in their country, most people consider starting a business as a desirable career choice. Here again, this variable expresses the extent to which entrepreneurship is viewed a good career choice, therefore initiating itself in a hierarchy of professional statuses.

Control variables:

To account for geographical and trends, the analysis will incorporate two control variables, the **country** (v1), and the **year** (v3), for each of the data point observations.

To give a visual overview of the data used for this analysis, table 1 below provides descriptive statistics. These include the variable codes, the number of observations, the mean and standard deviation for each variable. Additionally, the control variables are summarized in the appendix, in table 10.

Table 1 – Descriptive statistics of used variables

Variable	N	Mean	Std. Dev.
V4	1,034	41.96	17.16
V5	1,034	50.47	15.41
V6	1,033	35.28	9.61

V7	1,006	20.32	15.63
V8	1,034	11.66	7.72
V11	548	2.73	2.28
V14	1,031	21.86	11.48
V15	489	25.79	10.41
V17	911	70.18	11.23
V18	909	64.56	14.21

The first outcome variable of interest, the Total early-stage Entrepreneurial Activity (TEA) Rate (v8) is 11.66 % on average in our sample. Vanuatu in 2010 recorded the maximum level of TEA, with 52.11%, and Japan, in 2004 being the lowest ever recorded level of TEA. With a standard deviation of 7.72%, the data indicates that there is a skew to the right, meaning that many countries' TEA rates are low, around and below the mean, whilst it becomes rarer to find countries with very high TEA rates. Since there is such variety in the TEA rates, it will be of necessity to look at the countries effects on the analysed features. The second variable of interest is the motivational index (v11). With an average of 2.73, this means that there are 2.73 times more improvement driven entrepreneurs than necessity driven entrepreneurs. The standard deviation is quite large in this case (2.28), meaning there is again, quite the variation across countries. With a maximum of 19.5 and a minimum of 0.35, this data also seems to be skewed towards the right. More countries have average and slightly lower motivational indices, whilst there are less countries with higher indices, but these can reach quite the proportions. To integrate the country and yearly variations in the outcome variables and all others, it will be necessary to control for both country and year. This will allow for more internal validity in the results, nailing the influence of the independent variables to a greater extent.

Lastly, it can be said that the number of observations varies from one variable to another. In the case of motivational index (v11), it can be said that defining and distinguishing between opportunity and necessity driven entrepreneur can be a thin line. In

the case of this data, which is collected through surveys, many answers are nulled or left unanswered. This is also the case for the innovation rate (v15) for instance.

Methodology

To determine the effects of certain variables on others, multiple linear regression analyses (Ordinary Least Squared - OLS) will take place. The linear regression will help find estimators for the unknow parameters of the regression equation (Hayes & Matthes, 2009). The following equations are suggested:

(Sub Q.1) *What roles do perceived feats of identity play in an individual's tendency to engage with entrepreneurship?*

$$v8 = \alpha + \beta_1 * v4 + \beta_2 * v5 + \beta_3 * v6 + \beta_4 * v1 + \beta_5 * v3 + \varepsilon$$

The Perceived Opportunities rate (v4) is a variable that manages to capture an individual's ability to perceive opportunities. Whilst the level of opportunities can be determined by many factors including the level of business in an area, access to institutions and many more, the perceptive aspect of this measure gives an indication of the individuals propensity to create an opportunity. This ability to see opportunity is also determined by the environmental factors, meaning that for this variable to be as valid as possible, it would be necessary to control for location through country (v1) and year (v3). According to Bateman and Crant (1999), individuals can be categorised as people who make things happen, those who watch what happens and those who wonder what happened. The level of proactiveness is the differentiator when it comes to distinguishing between these personalities. The authors define proactiveness as being the change of things with an intended direction, a part of one's character. The Perceived Capabilities rate (v5) perfectly fits within the scope of the question as capabilities are at the core of one's professional identity. Finally, the fear of failure rate gives an indication as to the individual's risk profile. The interpretation of the model will be the following: "As β_1 is significant and positive, the perceived opportunities rate seems to increase an individual's tendency towards early-stage entrepreneurship by X, on average."

(Sub Q.2) *How do perceptions of the entrepreneurial lifestyle engage with our tendencies to engage with it?*

$$v8 = \alpha + \beta_1 * v17 + \beta_2 * v18 + \beta_3 * v1 + \beta_4 * v3 + \varepsilon$$

Both the variables of High Status to Successful Entrepreneurs Rate (v17) and Entrepreneurship as a Good Career Choice Rate (v18) capture the perception of the quality of entrepreneurship as a career. On the one hand, status is a social indicator that translates the value one has in their society (Wolff, et al. 2010). Therefore, a high status would indicate a high value to society, therefore admitting entrepreneurship as a valuable profession. On the other hand, the measure for good career choice speaks for itself, it is a measure of satisfaction for entrepreneurship. Understanding the relationship between these and the tendency to engage with entrepreneurship through TEA will help us determine to what extent the perception of entrepreneurship as a career pushes people into entrepreneurship. The interpretation of the model will be the following: "As β_1 is significant and positive, the high status to successful entrepreneur's rate seems to increase an individual's tendency towards early-stage entrepreneurship by X, on average."

(Sub Q.3) *How do career intentions interact with the willingness to become a necessity versus opportunity driven entrepreneur?*

$$v11 = \alpha + \beta_1 * v4 + \beta_2 * v7 + \beta_3 * v14 + \beta_4 * v15 + \beta_5 * v1 + \beta_6 * v3 + \varepsilon$$

The aim of this regression is to understand how the individual's career intentions captured through the Perceived Opportunities rate (v4), Entrepreneurial Intentions Rate (v7), the High Job Creation Expectation Rate (v14) and the Innovation Rate (v15) define the type of entrepreneurship one will engage with. The entrepreneurial intention rate is a measure that should indicate an individual's ambition to start a company, and therefore to become opportunity entrepreneurs, as opposed to being necessity driven. This is such as it is assumed that the intention to start a business comes with its planification, and therefore the understanding of where the market gap is and the strategic positioning of the entrepreneur. The High Job Creation Expectation Rate (v14) and the Innovation Rate (v15), through the same mechanism as the previously described variable are also measure indicating one's readiness to grow as entrepreneurs. The perceived opportunities rate gives a direct pathway into opportunity driven entrepreneurship. The interpretation of the model will be the following: "As β_1 is significant and negative, the entrepreneurial intentions rate seems to increase an individual's tendency towards necessity entrepreneurship by X, on average."

Results

Indeed, before regression analysis can occur, Edward Mansfield and Billy Helms (1982), two statisticians, warn that multicollinearity should be accounted for the independent variables. Multicollinearity could lead to a biased interpretation of the regression results, as it increases the variance of estimators, making the analysis unusable. Therefore, a correlation matrix for each model is constructed below. Furthermore, if the existence of strong correlations between independent variables exists, the academics suggest using the VIF test: an indicator which shows a measure for how many times the variance of the estimator (β) would be for multicollinear data rather than orthogonal data. The value of VIF = 1 indicates no correlation between variables. When it varies from 1 to 5, the VIF score indicates a certain moderate level of correlation between the selected variables, but not considered too severe for the interpretation of the model, requiring no attention. If the level exceeds 5, then the correlation is deemed too strong, emanating bias in the regression.

Table 2 – Correlation matrix for Model 1

	V4	V5	V6
V4	1.00		
V5	0.62	1.00	
V6	-0.11	-0.26	1.00

Form table 2, it seems that all independent variables are loosely correlated at the exception of v4 (perceived opportunities rate) and v5 (perceived capabilities rate), correlation r = 0.62. There are two possible explanations for this result, the first being that the measures are self-assessed. A self-assessment is conditional of the perception one holds the assessed subject. For example, a pessimist, or someone with a low self-esteem will tend to underestimate a self-assessment, making a low score in perceived opportunity lead to a low score for perceived capabilities. Secondly, capabilities and opportunities might inherently be correlated. Having the capability to spot an opportunity is a component of perceived capabilities that also belongs to the perceived opportunities rate. An example could be a person who possesses this capability will score higher in both measures. Hence, to determine whether this correlation will negatively affect this study, a VIF test is performed in table 3.

Table 3 - VIF scores for Model 1

	VIF	1 / VIF
V4	1.76	0.57
V5	1.65	0.60
V6	1.08	0.92

Table 3 indicates that all variables are to be considered in the analysis. This is because all the scores are below 2, and therefore too weakly correlated to consider the model biased.

Models 2 and 3 undergo the same testing for correlation in the below tables.

Table 4 – Correlation matrix for model 2

	V17	V18
V17	1.00	
V18	0.45	1.00

Table 5 – Correlation matrix for model 3

	V4	V7	V14	V15
V4	1.00			
V7	0.53	1.00		
V14	-0.10	0.09	1.00	
V15	0.07	-0.10	0.25	1.00

Both tables 4 and 5 show that the remaining independent variables in the analysis are lowly correlated. Table 8 and 9 in the appendix show the VIF results for each variable, which, according to our previous statement show that there are no multicollinearity issues that need adjustment.

The first regression measures the effect of perceived feats of identity on an individual's tendency to engage with entrepreneurship, answering the following question: *What roles do perceived feats of identity play in an individual's tendency to engage with entrepreneurship?*

Table 5 - Regression results model 1

	Coefficient	t-value	p-value
V4	.026***	2.14	0.033
	(.012)		
V5	.151***	7.82	0.000
	(.019)		
V6	-.012	-0.77	0.441
	(.016)		
Constant	3.764***	2.64	0.008
	(1.42)		

Notes: N = 1,033 with R-squared = 0.852; *significant at 10% level; ** significant at 5% level; *** significant at 1% level. The controls are added to the appendix, table 11.

From table 5, it can be observed that the perceived opportunities rate (V4), as well as the perceived capabilities rate (V5) both have a significant positive impact on the TEA rate. Indeed, an additional unit percentage of perceived opportunities seems to increase TEA by 0.026 % on average, whilst an increased unit percentage of perceived capabilities will have a 0,151% increase in TEA, on average. Since both coefficients are significant at the 5% level, it can be concluded that the perceived feats of character do correlate with the tendency to engage with entrepreneurship. The last coefficient from the table, the fear of failure rate (V6), is both negative and insignificant. This makes sense assuming that the fear of failure is a contrary to the ability to perceived self-capability. Though they are not exclusive, meaning that fear of failure could still be present if someone feels capable, it seems logical they affect TEA in opposite ways. On the one hand, being able to spot a gap in a market, and capitalise on the opportunity as well as the element of self-confidence will push individuals into entrepreneurship, which is aligned with Asoni's (2011) conclusions. Furthermore, the idea that entrepreneurs are risk takers, and therefore possess less fear of failing, also helps guide our conclusions to this part. From the controls, exhibited in table 11 in the appendix, a clear non-linear increasing trend shows that as the years have gone by, the level of TEA has been increasing, since 2001. Furthermore, the country control, exhibited in table 11, shows the potential variation form one country to another, in comparison to the United States (code: 1) which is the country of reference. For instance, Suriname's (code: 597) TEA is 10% lower that the US on average whilst Thailand (Code: 66) is 9% higher than the US on average.

Below are the results to the regression of the second question: *How do perceptions of the entrepreneurial lifestyle engage with our tendencies to engage with it?*

Table 6 - Regression results model 2

	Coefficient	t-value	p-value
V17	-.011	-.51	0.612
	(.022)		
V18	.073***	3.35	0.001
	(.021)		
Constant	6.94***	4.31	0.000
	(1.614)		

Notes: N = 908 with R-squared = 0.833; *significant at 10% level; ** significant at 5% level; *** significant at 1% level. The controls are added to the appendix, table 12.

Model 2 shows the extent to which the idea of entrepreneurship as a lifestyle, affects the level of entrepreneurship. Firstly, the High Status to Successful Entrepreneurs Rate (V17), is insignificant. This means that the status of associated to entrepreneurship does not correlate with the tendency to engage with entrepreneurship. Furthermore, Entrepreneurship as a Good Career Choice Rate (V18), is significant at the 1% level, meaning a percentage unit increase will increase TEA by 0.073% on average. Conclusively, in a given country, entrepreneurship as a good lifestyle will tend to see higher levels of entrepreneurship. Here again, an upwards trend of TEA is notices through the control variable of Year, in table 12. Furthermore, Vanuatu (code: 678) is noticeable in the controls for having an additional TEA level of 41%, compared to the US, on average.

The below table exhibits the results to the 3rd regression model, answering the following question: *How do career intentions interact with the willingness to become a necessity versus opportunity driven entrepreneur?*

Table 7 - Regression results model 3

	Coefficient	t-value	p-value
V4	.031***	3.11	0.002
	(.010)		
V7	-.019*	-1.65	0.100
	(.011)		
V14	.016	1.23	0.218
	(.013)		
V15	0.020*	1.67	0.095

	(.012)		
Constant	3.572***	4.06	0.000
	(.880)		

Notes: N = 487 with R-squared = 0.739; *significant at 10% level; ** significant at 5% level; *** significant at 1% level. The controls are added to the appendix, table 13.

From the above table, the perception of opportunities (v4) is the strongest explanatory variable in this model. It is significant at the 1% level, hence, a 1% increase in V4, leads to a 0.031 increase in v11 ratio, on average. The dependent variable describes the percentage of those involved in TEA that are improvement-driven opportunity motivated, divided by the percentage of TEA that is necessity-motivated. As a increase in the v11 ratio means a decrease of necessity driven entrepreneurship relatively to opportunity driven entrepreneurship, this result implies that v4 correlates with a higher number of opportunity driven entrepreneurs, on average. The Entrepreneurial Intentions Rate (v7), which describes the number of latent entrepreneurs who intend to build a business in the 3 coming years, seems to have a significant, at the 10% level, and positive impact on the dependent variable. Hence, a 1% increase in V7, leads to a 0.019 decrease in v11 ratio, on average. The implication of this result is that, in a given country, a latent entrepreneur whose intention is to create a business in the coming 3 years will tend to see more necessity driven entrepreneurship than opportunity driven entrepreneurship. The Innovation Rate (v15) is another significant coefficient in the regression. Here, a 1% increase in V15 leads to a 0.020 increase in the Motivational Index, on average. Therefore, an entrepreneur's intention to innovate and disrupt a market tends to exhibit a higher ratio of opportunity to necessity driven entrepreneurship. The High Job Creation Expectation Rate (v14) seems not to have a significant impact on the dependent variable. Since the p-value = 0.218, it can be concluded that the willingness to create jobs has no effect on the ratio of opportunity to necessity driven entrepreneurship. Once again, the yearly control shows an upward trend in the motivational index, showing a potential shift of necessity driven to improvement driven entrepreneurs along the years.

Discussion

In the last segment of this paper, the analysis of three OLS regression models was performed, with the aim of contributing to the discussion and topic: *The importance of character and identity in the creation of entrepreneurial lifestyles*. Indeed, the positive results, confirming the implication of certain feats of character and identity in the decision making to become an entrepreneur, are exposed. However, this analysis does seem to have its own limitations.

Firstly, the lack of individual observable and unobservable characteristics, enabling a tighter and more accurate control of the regressions is flagrant. Controlling age, gender, GDP per Capita per country, could have eliminated some amount of bias. Additionally, for the purpose of the natured effect of entrepreneurship, knowing whether a parent/relative is an entrepreneur could have been interesting control to integrate to the analysis. By omitting these control variables, the variations in the models due to the intrinsic differences in the data are overwhelmingly hard to interpret.

Furthermore, all three of the models are source of Omitted Variable Bias. This is such as there are missing explanatory variables, explaining the variation of the dependent variables, which could have an impact on the existing explanatory variables. Such variables could be the access to higher education, to capital, to entrepreneurial education, to size of the professional network and many more could have influenced the analysis. These variables are all measurable, however not available in the GEM dataset. Therefore, adding these to the APS survey would be a great improvement to this analysis. Alternatively, these data would have to be added individually by hand. The presence of such bias entails that the correlation coefficients can only be interpreted as such, leaving causality, the relationship between a cause and its effect out of the picture (Blalock, 1961).

Stemming from the data collection process of the GEM, this analysis is also exposed to selection bias. Though the GEM collects its data from “adults” in their respective countries, it has come to attention that many of these adults are somehow linked to the entrepreneurial field. In this case, an entrepreneur could be assessing his own perception of the entrepreneurial lifestyle, biased by its endogenous existence, therefore creating a biased measure. Due to the selection bias, this biased measure cannot be contrasted by non-entrepreneurs, making this bias a part of the analysis.

Another limitation to this study is due to the measurement of the overall measures. From country to country, definitions vary, specifically between necessity versus opportunity driven entrepreneurship. Opening a corner shop could be considered an opportunity when an

entrepreneur spots a market gap in his region, after spending a year in unemployment. A corner shop could also be considered as a necessity driven choice, given the entrepreneur has been unemployed for a year, needing the income. The interpretation of the term varies by country in this case but also by individual. Self-assessed motivation could be a good measure to control for this limitation, as ambition gives an indication of the extent the opportunity will be acted upon. It gives an additional insight into the nature of entrepreneurship.

This analysis gives a global view of the question at hand. However, it is clear that certain countries are represented more than other countries. Missing data for the countries of Kazakhstan, Uruguay and Morocco are frequent, whilst the United States and The United Kingdom are fully represented. As a rule, it seems that lower income countries are underrepresented, giving more space to higher income countries, making our results limited to interpretation.

Though the limitations of the analysis are existent, this global perspective of the many flows measured still give an indication towards the nature and exciters of entrepreneurship. From the first regression, the importance of the perception of oneself, whether through capability or the confidence to spot an opportunity are highlighted. These results are aligned with Zhaou and Seibert's (2006) character profiles for entrepreneurs, that stipulates that these will tend to exhibit more conscientiousness and openness to experience. Conscientiousness, which is heavily associated to awareness translates the concepts of opportunity recognition well. Openness to experience is described by the authors as being intellectually curious, and sensitive to beauty, as opposed to closeminded people, who tend to be more aware of their feelings. Here, a person who feels capable for themselves is one who can make abstraction of their feelings to pragmatically assess their capabilities. According to the first regression, this is also a characteristic present in entrepreneurs. Therefore, the aspect of who we are, associated to the idea with which we perceive of ourselves plays a large role in our occupational choice, especially in a rugged lifestyle such as entrepreneurship.

On top of the identity focus in career choice, this analysis finds that the type of entrepreneurship, necessity vs opportunity, is also occupied by different character profiles. Whilst Syed Typu (2016) said that opportunity driven entrepreneurs were prone to experience counterfactual thinking, this analysis finds similar results. Being innovation driven is significantly associated with higher share of opportunity driven entrepreneurs, which is proof of forward thinking. Planning for the future is the first step of counterfactual thinking as, in order to speculate about a past event that has not yet happened, requires the ability to vision

into the future. The third regression also shows that entrepreneurs who wish to create a business within three years increases the share of necessity entrepreneurs. Arguably, this could also be a testimony of forward thinking: planning business creation/expansion into the future. An explanation for this contrasting result could be that the line between necessity and opportunity entrepreneurship is very hard to paint. Whilst the definitions of the concepts are clear, everyone's experience is different. A person who finds themselves with no career options could find themselves pushed into entrepreneurship, whilst still entering through the recognition of an opportunity. One concept is not exclusive of the other, making them adamant to results such as the above third regression.

Lastly, there was little surprise in understanding the results of the second regression as the idea of entrepreneurs as high-status individuals and as a good career choice could not do anything but increase the entrepreneurial rates. Popularity of entrepreneurship transcends both the used variables of the second regression. As its etymology indicates, its prevalence to the public would only indicate a sense of admiration for the lifestyle, increasing the number of people who engage with it. Therefore, individual's perspectives as well as societal norms concerning entrepreneurship are useful to understand the number of people engaging with it.

Conclusively, this paper has added understanding to the idea of an entrepreneurial character profile. It must be recognised that this profile is vast and composed of many different characteristics. The idea of a job description for an entrepreneur is ludicrous, whereby everyone that does engage with it, defines their path it in whichever manner they wish. This meta-analysis has shown that within the ethos, certain characteristics do tend to push some into entrepreneurship. Furthermore, there are aspects of entrepreneurship that attract different character profiles, making the synergies between these hard to pin down. The review of the literature and data in this paper allows the reader to gain a social understanding of the entrepreneurial lifestyle, hopefully serving as a source of information and possibly motivation to engage or not into meaningful career decisions, involving or not, entrepreneurship.

Conclusion

Throughout this paper, a deeper and global picture of the elements of the character that play a role in the decision to become an entrepreneur have been discussed by answering the following question: *How do our self-expectations meet with the realities of entrepreneurial lifestyles?* Not only the elements of the character, but also the elements of entrepreneurship which stimulate certain character profiles into the different types of entrepreneurships. This enables the reader to familiarise themself with the entrepreneurial lifestyle, giving him/her the ability to assess whether their character suits the character profile of the entrepreneur. Furthermore, the regression analyses performed contribute to the academic literature as it has both consolidated and added the following results.

The role of self-identified character traits, notably the capacity to spot an opportunity and the capacity to feel capable, correlate positively with the tendency to engage with entrepreneurship. This is aligned with the findings of many character analyses for entrepreneurship including Zhaou and Seibert's (2006). This finding also embraces Nicalaou, Shane, Cherkas and Spector's (2009) paper about the heritability of opportunity recognition. This therefore contributes to the discipline of genoeconomics, as the heritability of a character trait which correlates with entrepreneurship may be an indication of the heritability of entrepreneurship.

This paper was not shy of indicating that many synergies between various factors play a role in the interaction between ethos and entrepreneurship. Having forward-thinking abilities such as the desire for innovation correlates with a higher rate of opportunity versus necessity driven entrepreneurs, whilst the want to create a business within 3 years correlates with a higher percentage of necessity versus opportunity driven entrepreneurs. These contrasting results both indicating that forward-thinking can play a role in both natures of entrepreneurship indicate that further research should be conducted into the differentiators of necessity and opportunity driven entrepreneurs.

The last contribution of this paper to the entrepreneurial academic literature is the inclusion of entrepreneurial lifestyle popularity measures on the level of entrepreneurship. Both the perception of entrepreneurship as a good career choice and the idea of entrepreneurs as successful both positively correlated with increased levels of entrepreneurship. While occupational choice has long been influenced by career popularity, as discussed above, then it will be interesting to know whether an increase in entrepreneur popularity within the

following years will increase the number of entrepreneurs, establishing a causal effect between these.

Having provided the reader with a comprehensive overview of the determinants of entrepreneurship, this paper has achieved its goal. However, it has also set a steppingstone for further research. The heritability of entrepreneurship has been exposed in many analyses, though usually through weak relationships, whilst trying to observe as many genes as possible. A possible axis for tackling this problem is to identify more phenotypic characteristics which correlate with entrepreneurship, such as Nicolaou et al. (2008) sensation seeking, by testing entrepreneurs' characters, as opposed to other professionals, and ideally their parents'. This data collection could then lead to estimations of the heritability of entrepreneurial traits, enabling the drawing of different entrepreneurial character profiles.

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Appendix

Table 8 – Control variables descriptive statistics

Variable	N	Min	Max
V1 (country)	1,034	1	995
V3 (year)	1,034	2001	2021

V1 is a country variable that has been constructed such that each country is allocated a number. E.g., 1 = USA.

Table 9 - VIF scores for Model 2

	VIF	1 / VIF
V17	1.26	0.79
V18	1.26	0.79

Table 10 - VIF scores for Model 3

	VIF	1 / VIF
V4	1.52	0.66
V7	1.51	0.66
V14	1.09	0.91
V15	1.03	0.97

Table 11 – Regression 1 full table

v8	**Coef.**	**Std.Err.**	**t-value**	**P>t**
v4	.0264163**	.0123643	2.14	0.033
v5	.1518472***	.0194297	7.82	0.000
v6	-.0123786	.016068	-0.77	0.441
v1				
7	-1.667732	1.23451	-1.35	0.177
20	-2.773494	1.235755	-2.24	0.025

27	-1.554882	1.063923	-1.46	0.144
30	-3.542497	1.095581	-3.23	0.001
31	-2.073147	1.032007	-2.01	0.045
32	-4.193575	1.135271	-3.69	0.000
33	-3.044357	1.112292	-2.74	0.006
34	-4.480979	1.027015	-4.36	0.000
36	-1.37901	1.114317	-1.24	0.216
39	-4.705011	1.063787	-4.42	0.000
40	-1.111038	1.283129	-0.87	0.387
41	-2.992282	1.065682	-2.81	0.005
43	-3.855794	1.406815	-2.74	0.006
44	-3.366817	1.000392	-3.37	0.001
45	-3.586512	1.211477	-2.96	0.003
46	-4.579329	1.093579	-4.19	0.000
47	-2.374354	1.116599	-2.13	0.034
48	-4.579628	1.121825	-4.08	0.000
49	-4.047989	1.054437	-3.84	0.000
51	11.53161	1.146712	10.06	0.000
52	.8293856	1.129629	0.73	0.463
54	1.5738	1.029926	1.53	0.127
55	4.350555	.9904671	4.39	0.000
56	7.46632	1.020733	7.31	0.000
57	8.25448	1.073933	7.69	0.000
60	-1.185477	1.300174	-0.91	0.362
61	.0729117	1.142143	0.06	0.949
62	1.175281	1.341422	0.88	0.381
63	4.031862	1.777268	2.27	0.024
64	1.983118	1.61737	1.23	0.220
65	.8780954	1.346298	0.65	0.514

66	9.263684	1.210523	7.65	0.000
81	-.5463179	1.30637	-0.42	0.676
82	1.194081	1.137595	1.05	0.294
84	4.323414	1.778625	2.43	0.015
86	5.169562	1.121099	4.61	0.000
90	-.7745424	1.234513	-0.63	0.531
91	-2.167505	1.127216	-1.92	0.055
92	-3.22467	1.761466	-1.83	0.067
98	-1.105105	1.119771	-0.99	0.324
101	.9778803	1.091953	0.90	0.371
212	-4.754524	1.342846	-3.54	0.000
213	-2.236549	1.759756	-1.27	0.204
216	-3.504846	1.754898	-2.00	0.046
218	-2.129103	3.291233	-0.65	0.518
221	19.52759	3.357843	5.82	0.000
226	10.09514	1.790834	5.64	0.000
228	13.02075	3.348898	3.89	0.000
233	15.33437	2.056599	7.46	0.000
234	18.41923	2.086463	8.83	0.000
237	13.60069	2.020889	6.73	0.000
244	16.89798	1.440255	11.73	0.000
246	1.10861	1.629198	0.68	0.496
249	9.7023	2.419017	4.01	0.000
251	-.1441991	3.305965	-0.04	0.965
256	14.68572	1.516714	9.68	0.000
260	21.39134	2.060958	10.38	0.000
261	7.128995	2.004246	3.56	0.000
264	9.79415	2.416101	4.05	0.000
265	13.53215	2.467414	5.48	0.000

267	13.13221	1.786339	7.35	0.000
351	-2.728189	1.217518	-2.24	0.025
352	-2.532551	1.315855	-1.92	0.055
353	-1.769831	1.028911	-1.72	0.086
354	1.248678	1.308855	0.95	0.340
357	-4.159603	1.51338	-2.75	0.006
358	-3.360795	1.115612	-3.01	0.003
359	-5.372609	1.794044	-2.99	0.003
370	1.408006	1.790224	0.79	0.432
371	1.265896	1.114989	1.14	0.257
372	3.033904	1.508345	2.01	0.045
374	5.808806	3.3077	1.76	0.079
375	-1.855936	2.424218	-0.77	0.444
381	-5.516617	1.996367	-2.76	0.006
382	2.513021	3.306408	0.76	0.447
383	-10.93934	3.30177	-3.31	0.001
385	-3.825376	1.01122	-3.78	0.000
386	-5.391666	1.009722	-5.34	0.000
387	-3.725841	1.3444	-2.77	0.006
389	-4.358367	1.405259	-3.10	0.002
420	-1.459751	2.007806	-0.73	0.467
421	-.7471577	1.218482	-0.61	0.540
501	1.288089	2.412839	0.53	0.594
502	6.743013	1.17534	5.74	0.000
503	1.994265	2.00025	1.00	0.319
506	.2501228	1.993085	0.13	0.900
507	4.112922	1.161259	3.54	0.000
582	7.642177	1.779095	4.30	0.000
591	17.30559	2.018881	8.57	0.000

593	12.86236	1.23621	10.40	0.000
597	-10.84459	2.389435	-4.54	0.000
598	1.704588	1.086662	1.57	0.117
676	7.057993	3.351592	2.11	0.035
678	37.57873	3.341636	11.25	0.000
701	.6710276	1.400894	0.48	0.632
787	-2.157871	1.349971	-1.60	0.110
809	8.251536	1.803327	4.58	0.000
852	-1.105177	1.593165	-0.69	0.488
868	1.207553	1.659621	0.73	0.467
876	.6581912	1.335342	0.49	0.622
880	5.313052	3.426344	1.55	0.121
886	-.3735291	1.258694	-0.30	0.767
961	7.383322	1.630637	4.53	0.000
962	-.9913508	1.765624	-0.56	0.575
963	-3.740782	3.306394	-1.13	0.258
965	4.112974	3.313399	1.24	0.215
966	-4.459247	1.420195	-3.14	0.002
967	13.1975	3.374503	3.91	0.000
968	-3.012275	2.008268	-1.50	0.134
970	-1.778969	1.991158	-0.89	0.372
971	-2.617921	1.244209	-2.10	0.036
972	-.9219263	1.127021	-0.82	0.414
974	-1.805943	1.410146	-1.28	0.201
995	-2.396418	2.392904	-1.00	0.317
v3				
2002	-1.641186	.8050642	-2.04	0.042
2003	-1.788202	.8427269	-2.12	0.034
2004	-1.432238	.8243355	-1.74	0.083

2005	-2.162597	.821851	-2.63	0.009
2006	-1.907812	.7961834	-2.40	0.017
2007	-2.386742	.8104712	-2.94	0.003
2008	-1.856258	.7982351	-2.33	0.020
2009	-2.162915	.7784894	-2.78	0.006
2010	-2.676962	.7658218	-3.50	0.000
2011	-.7065496	.7698181	-0.92	0.359
2012	-.6930435	.7510883	-0.92	0.356
2013	-.3598332	.7467217	-0.48	0.630
2014	-.098391	.7456836	-0.13	0.895
2015	.0858652	.7651049	0.11	0.911
2016	.153223	.7580658	0.20	0.840
2017	.4086236	.7806437	0.52	0.601
2018	.3620092	.799254	0.45	0.651
2019	-.0595204	.8474173	-0.07	0.944
2020	.6332193	.8584572	0.74	0.461
2021	.9052104	.8587756	1.05	0.292
_cons	3.76473	1.423964	2.64	0.008

Notes: N = 1,033 with R-squared = 0.852; *significant at 10% level; ** significant at 5% level; *** significant at 1% level.

Table 12 - Regression 2 full table

v8	**Coef.**	**Std. Err.**	**t**	**P>t**
v17	-.0111775	.0225323	-0.50	0.620
v18	.0733567***	.0267908	2.74	0.006
v1 7	-7.343698	.5266082	-13.95	0.000

20	-4.220903	1.208771	-3.49	0.001
27	-4.517361	.6896006	-6.55	0.000
30	-5.734316	.6792034	-8.44	0.000
31	-5.781092	.8392381	-6.89	0.000
32	-7.04097	.551229	-12.77	0.000
33	-6.963122	.5594213	-12.45	0.000
34	-6.617728	.656011	-10.09	0.000
36	-3.878177	.7829441	-4.95	0.000
39	-8.382392	.5867884	-14.29	0.000
40	-4.467964	.8074456	-5.53	0.000
41	-4.044482	.6616149	-6.11	0.000
43	-4.139572	1.423153	-2.91	0.004
44	-4.285054	.6335246	-6.76	0.000
45	-5.15329	.7431847	-6.93	0.000
46	-5.687849	.5620135	-10.12	0.000
47	-3.822772	.6926384	-5.52	0.000
48	-6.32812	1.312296	-4.82	0.000
49	-6.690313	.6649562	-10.06	0.000
51	13.21863	1.915322	6.90	0.000
52	.5552948	1.411227	0.39	0.694
54	1.942721	1.257023	1.55	0.123
55	2.498818	.944765	2.64	0.008
56	7.461626	1.778767	4.19	0.000
57	8.452937	1.20145	7.04	0.000
60	-4.314385	1.623769	-2.66	0.008
61	.0422176	.7855799	0.05	0.957
62	1.543293	2.379518	0.65	0.517
63	4.948097	1.214245	4.08	0.000
64	4.426499	1.263205	3.50	0.000

65	-3.126575	.970862	-3.22	0.001
66	6.085628	1.354715	4.49	0.000
81	-5.791357	.9309163	-6.22	0.000
82	-2.521623	.8798274	-2.87	0.004
84	3.632708	2.110247	1.72	0.086
86	1.377092	1.35615	1.02	0.310
90	-2.486713	1.086859	-2.29	0.022
91	-3.032883	1.022471	-2.97	0.003
92	-4.894822	2.421661	-2.02	0.044
98	-.5719675	.9991814	-0.57	0.567
101	.3901085	1.138382	0.34	0.732
212	-6.648067	1.831109	-3.63	0.000
213	-2.903136	3.002553	-0.97	0.334
216	-5.55763	1.410864	-3.94	0.000
218	-3.029584	.8214628	-3.69	0.000
226	13.9744	3.297334	4.24	0.000
228	16.00515	1.082509	14.79	0.000
233	18.7871	3.107819	6.05	0.000
234	22.75881	1.524406	14.93	0.000
237	13.42242	1.109501	12.10	0.000
244	18.44814	4.157812	4.44	0.000
246	3.009871	2.852821	1.06	0.292
249	11.96263	3.43795	3.48	0.001
251	1.828187	.6870407	2.66	0.008
256	17.28248	1.844517	9.37	0.000
260	25.78473	2.108997	12.23	0.000
261	4.916538	1.407902	3.49	0.001
264	12.60331	5.643639	2.23	0.026
267	15.17278	2.835051	5.35	0.000

351	-4.515723	.973358	-4.64	0.000
352	-2.795673	.761034	-3.67	0.000
353	-3.062553	.631497	-4.85	0.000
354	.4969413	.6389877	0.78	0.437
357	-6.427744	1.408365	-4.56	0.000
358	-4.271608	1.044233	-4.09	0.000
359	-8.48253	.6852717	-12.38	0.000
370	-2.848742	1.448186	-1.97	0.050
371	-.9744763	.8803966	-1.11	0.269
372	1.856204	1.36772	1.36	0.175
374	4.430065	.9556399	4.64	0.000
375	-6.193612	2.65235	-2.34	0.020
381	-4.824165	1.144533	-4.21	0.000
382	2.7935	.7498413	3.73	0.000
383	-9.070204	.6346646	-14.29	0.000
385	-5.063073	.7956175	-6.36	0.000
386	-6.36172	.6281884	-10.13	0.000
387	-5.784835	1.01191	-5.72	0.000
389	-5.343254	1.50911	-3.54	0.000
420	-3.600184	.9081152	-3.96	0.000
421	-1.611747	1.014242	-1.59	0.112
501	4.971575	7.969547	0.62	0.533
502	6.408136	1.439892	4.45	0.000
503	2.559845	1.451458	1.76	0.078
506	1.083013	1.249903	0.87	0.386
507	4.93291	2.184931	2.26	0.024
582	8.87968	2.304837	3.85	0.000
591	19.71417	3.727685	5.29	0.000
593	14.84419	2.109766	7.04	0.000

597	-9.694508	1.158224	-8.37	0.000
598	2.38307	.7444189	3.20	0.001
676	4.03016	1.26375	3.19	0.001
678	41.92999	.6918196	60.61	0.000
701	-.8975098	1.184044	-0.76	0.449
787	-1.210146	1.573175	-0.77	0.442
809	10.11399	4.772724	2.12	0.034
852	-5.140753	1.348841	-3.81	0.000
868	3.964298	1.609094	2.46	0.014
876	2.983241	1.811097	1.65	0.100
880	.1563545	.8491211	0.18	0.854
886	-5.318159	.6486799	-8.20	0.000
961	2.327104	.8857818	2.63	0.009
962	-1.98055	2.807468	-0.71	0.481
963	-4.350522	.9194017	-4.73	0.000
966	-2.144249	1.134708	-1.89	0.059
967	10.81406	1.009639	10.71	0.000
968	-4.571525	2.366673	-1.93	0.054
970	-3.339883	.9649737	-3.46	0.001
971	-3.301517	1.346881	-2.45	0.014
972	-3.646612	.747548	-4.88	0.000
974	-2.289747	1.468008	-1.56	0.119
995	-5.465264	.5961251	-9.17	0.000
v3				
2004	.5977029	.7234807	0.83	0.409
2005	-.0664241	.6399609	-0.10	0.917
2006	.2292939	.7594518	0.30	0.763
2007	-.0551745	.6419086	-0.09	0.932

2008	.3401385	.7089923	0.48	0.632
2009	.3476743	.7173597	0.48	0.628
2010	.022861	.5668825	0.04	0.968
2011	1.427421	.6865741	2.08	0.038
2012	1.391217	.5810626	2.39	0.017
2013	1.927148	.645944	2.98	0.003
2014	1.995443	.6293572	3.17	0.002
2015	2.499482	.6291091	3.97	0.000
2016	2.501115	.6229638	4.01	0.000
2017	2.760681	.7085207	3.90	0.000
2018	2.787364	.6685508	4.17	0.000
2019	4.013368	.7461935	5.38	0.000
2020	4.589834	1.050192	4.37	0.000
2021	4.781687	.8448748	5.66	0.000
_cons	6.947468	1.479706	4.70	0.000

Notes: N = 908 with R-squared = 0.833; *significant at 10% level; ** significant at 5% level; *** significant at 1% level

Table 13 – Regression 3 results

v11	**Coef.**	**Std. Err.**	**t**	**P>t**
v4	.0319893***	.0122273	2.62	0.009
v7	-.0194873*	.0093242	-2.09	0.037
v14	.0165033	.013474	1.22	0.221
v15	.0201226*	.0127159	1.67	0.095
v17	-3.248936	.6772458	-4.80	0.000

20	-3.38921	.7027902	-4.82	0.000
27	-3.044907	.5743931	-5.30	0.000
30	-1.948091	.7617737	-2.56	0.011
31	1.876125	1.109333	1.69	0.092
32	-1.125115	1.139223	-0.99	0.324
33	.0730634	.7731991	0.09	0.925
34	-2.297789	.6727378	-3.42	0.001
36	-2.417497	.6892081	-3.51	0.001
39	-1.650076	.6927867	-2.38	0.018
40	-2.886953	.6698599	-4.31	0.000
41	1.420395	.9929384	1.43	0.153
43	-1.293683	.6735727	-1.92	0.056
44	-1.191215	.5967365	-2.00	0.047
45	5.203851	.8106328	6.42	0.000
46	2.032686	1.158102	1.76	0.080
47	8.045784	2.520894	3.19	0.002
48	-1.812647	.974742	-1.86	0.064
49	-1.268034	.6702202	-1.89	0.059
51	-1.527763	.7638645	-2.00	0.046
52	-1.455568	.6910592	-2.11	0.036
54	-2.63738	.6211896	-4.25	0.000
55	-2.965197	.7381124	-4.02	0.000
56	-1.268074	.7133688	-1.78	0.076
57	-2.183367	.7885097	-2.77	0.006
60	.8672656	1.111734	0.78	0.436
61	-.5103307	.6849541	-0.75	0.457
62	-2.487344	.7372925	-3.37	0.001
63	-2.572605	.7425055	-3.46	0.001
65	1.213642	1.296677	0.94	0.350

66	-.0216152	.8594114	-0.03	0.980
81	-.9179293	.783853	-1.17	0.242
82	-1.627618	.7120722	-2.29	0.023
84	-1.837218	.8885583	-2.07	0.039
86	-3.150925	.6159726	-5.12	0.000
90	-2.877638	.6060494	-4.75	0.000
91	-3.042	.7246452	-4.20	0.000
92	-3.668729	.63092	-5.81	0.000
98	-2.940587	.6858571	-4.29	0.000
101	-1.093069	.6301361	-1.73	0.084
212	-2.590584	.6903688	-3.75	0.000
213	-2.553732	.7700236	-3.32	0.001
216	-1.678715	.947546	-1.77	0.077
218	3.487253	.7487422	4.66	0.000
221	-2.530826	.8350669	-3.03	0.003
226	-2.775027	.755299	-3.67	0.000
233	-3.135611	.8520718	-3.68	0.000
234	-3.298722	.8060744	-4.09	0.000
237	-3.661095	.7607173	-4.81	0.000
244	-2.989527	.7730575	-3.87	0.000
246	1.108266	1.696038	0.65	0.514
249	-3.010842	.7819859	-3.85	0.000
251	-1.508962	.7404653	-2.04	0.042
256	-2.73573	1.026493	-2.67	0.008
260	-3.596064	.9581059	-3.75	0.000
261	-1.837479	.8815197	-2.08	0.038
264	-3.236403	.7203084	-4.49	0.000
265	-3.073411	.9954983	-3.09	0.002
267	-2.564836	.7250089	-3.54	0.000

351	-1.298195	.7357518	-1.76	0.078
352	1.460922	1.174769	1.24	0.214
353	-2.245076	.604191	-3.72	0.000
357	-1.284506	1.37616	-0.93	0.351
358	-.0128446	1.190273	-0.01	0.991
359	-3.036297	.7097554	-4.28	0.000
370	-1.998844	.6515804	-3.07	0.002
371	-1.660959	.6999375	-2.37	0.018
372	-1.461082	.6555681	-2.23	0.026
383	-3.887003	.6591389	-5.90	0.000
385	-2.982552	.663177	-4.50	0.000
386	-.5989542	1.12368	-0.53	0.594
387	-3.352743	.7010819	-4.78	0.000
389	-3.678279	.652108	-5.64	0.000
420	-1.554247	.7144559	-2.18	0.030
421	-2.667059	.6455359	-4.13	0.000
501	.1223687	1.1808	0.10	0.918
502	-2.854489	.6668654	-4.28	0.000
503	-2.865229	.682074	-4.20	0.000
506	-1.31872	.800662	-1.65	0.100
507	-1.668538	.82569	-2.02	0.044
591	-1.973153	.6812007	-2.90	0.004
593	-3.060794	.7210736	-4.24	0.000
597	.5730428	1.766849	0.32	0.746
598	-2.267788	.6765665	-3.35	0.001
701	-3.445588	.7009281	-4.92	0.000
787	-2.206519	.7092112	-3.11	0.002
852	-1.030756	.5764817	-1.79	0.075
868	-.1162821	1.032204	-0.11	0.910

876	-3.537504	.7589163	-4.66	0.000
880	-3.357633	.8200827	-4.09	0.000
886	-1.359394	.7825707	-1.74	0.083
961	-2.390106	.8223001	-2.91	0.004
962	-2.345613	.6722753	-3.49	0.001
966	-2.89369	1.328976	-2.18	0.030
970	-3.49185	.6454007	-5.41	0.000
971	-1.532347	.8894356	-1.72	0.086
972	-1.74741	.6393868	-2.73	0.007
974	-.8649238	.8193414	-1.06	0.292
995	-3.745228	.6217878	-6.02	0.000
v3				
2012	-.2230818	.2825097	-0.79	0.430
2013	-.0526173	.2805337	-0.19	0.851
2014	-.0141962	.2880801	-0.05	0.961
2015	-.2688033	.3091386	-0.87	0.385
2016	.332121	.2974509	1.12	0.265
2017	.3025462	.3035636	1.00	0.320
2018	.0339154	.3006541	0.11	0.910
_cons	3.572472	.9267713	3.85	0.000

Notes: N = 487 with R-squared = 0.739; *significant at 10% level; ** significant at 5% level; *** significant at 1% level