Abstract: Economics provides insight into how entrepreneurship influences growth and development and, on the other hand, how the macro structure of a region or country impacts the type and abundance of entrepreneurship. Economic analysis provides insights for scholars, guides practitioners and policymakers. From a broader perspective, economic theories guide the understanding of human behaviors and the constant quest toward realization, comprehension and improvement of human condition. Moreover, behavioral economics combines insights of psychology, sociology and economics in trying to better understand and predict human decision-making. At the intersection of economic studies with social sciences, behavioral economics succeeds to demonstrate, using laboratory tests and experiments, that on a shorter term people are quite capable to perform profitable economic computations and adopt rational behaviors, but on a long term run they easily become fallible in performing rational mental accounting and are vulnerable to several factors such as emotions, certain mass-manipulation techniques, lack of self control or procrastination, etc. Extended research in the field of behavioral economics reports many other various behavioral anomalies that may have the ability to explain seemingly irrational and unpredictable responses of individuals, in general, and entrepreneurs, in particular – especially when finding themselves in conditions of risk, uncertainty or incomplete information. Furthermore, the elevated consistency of these abnormalities suggests that they are divergent only to our traditional models, but that they could otherwise be the norm. The present article seeks to explain how such insights from behavioral economics may help us better understand and enhance our perspective on entrepreneurship, what are some of the most frequent biases characteristic to entrepreneurial behavior and decision-making, accounting as most notable for the field of entrepreneurship, biases like overconfidence, optimism, mental accounting, anchoring, uncertainty, etc. Using Global Entrepreneurship Monitor (GEM) data 2011 to 2013 the current research also present a brief behavioral perspective on the Romanian entrepreneurial environment, the profile of the Romanian entrepreneur, the motivations and various other factors such as demographics, age, education, etc. that have an impact on the decision of becoming an entrepreneur. The paper also offers a few succinct explanations and suggestions on how recent findings in behavioral economics could boost the entrepreneurship driven behavior observed.

Keywords: Behavioral economics; entrepreneurship; judgmental biases;

JEL classification: D03, M21
environment.

1.1. Entrepreneurship in economics
Over the last period of time, a substantial amount of research in economics has focused on entrepreneurship. Reflection on the maximization in which individuals have to select between alternative employment options, authors like Wagner (2003), (Parker, 2004) and Lazear (2004, 2005) suggested entrepreneurs should be versatile players, able to perform many tasks without necessarily mastering any of them. Other major topics in which entrepreneurship has been studied relate to personal characteristics (Lévesque et al., 2002), allocation of talent (Michelacci, 2003), unemployment rates (Tervo, 2006) immigration (Fairlie and Meyer, 2003), networks and social capital (Minniti, 2004, 2005.). Casson, (2005) argues that, in many ways, entrepreneurial behavior represents a key factor to the growth and survival of firms in a volatile environment, mainly because entrepreneurial judgment is a necessary condition for success when making complex decisions in conditions of uncertainty.

In the same register, van Praag and Versloot (2007) conclude that, in the light of broader recent studies, entrepreneurs have a very important and distinct role in the economy. According to their findings, entrepreneurs contribute to productivity growth, allow job opportunities to appear, recognize, endorse and commercialize innovations and, as a result, generate positive regional spillovers. Further backing of their scientific research, they show that entrepreneurs also appear to be more satisfied than employees.

2. Research Focus and Methodology
This article explores how insights from behavioral economics may explain entrepreneurial behavior and how absorbing such findings may help us better understand and improve entrepreneurial efforts.

The primary purpose of the paper is to describe general concepts of behavioral economics and entrepreneurship and to demonstrate practical use of such research in individual decision-making processes by suggesting appropriate behavioral methods.

In accordance with this goal, a comprehensive literature review of the field, encompassing the most representative concepts and findings, is presented and a short analyses of Romanian entrepreneurial environment, based on the most recent available sets of data is conducted.

The structure of the paper is subordinated to these objectives. The first and second part briefly present research and evidence from recent literature confirming the high interest in the study of behavioral economics and entrepreneurship. The third part explains important concepts and ideas in the field of behavioral economics and the utility of knowledge and implementation of such results.

The practical part of the research consists of aforementioned brief analyses of the Romanian entrepreneurial environment, where it further describes behavioral insights methods and suggests ways for improving entrepreneurial behaviors and perception. In the end of the paper a conclusion summarizes the information presented and future research opportunities.

3. Insights on Behavioral Economics
Behavioral economics is a sub-discipline of economics which uses findings from psychology, sociology, anthropology and other social sciences in investigating how certain events take place in the economy, the concrete manner in which people adopt certain decisions and the possible motivations beneath them.

Another major focus of behavioral economics is studying the key drivers that may lead economic agents to sometimes undeniably irrational behaviors, often observed in different socio-economic environments or, in other words, why individuals sometimes “fail” to behave in a predictable rational way, as formally suggested by the standard economics
3.1. Changing the “homo economicus” paradigm
In the long history of the science, and especially during the neo-classical period, economists have many times tried to make predictions regarding the evolution of the market and, by this extent, the welfare of individuals and the evolution of economics and society. However, in the process of constructing these models, these issues had to be fairly simplified, or at least to a certain degree, so that they could be worked with and some assumptions had to be made.

One of the most important of these assumptions was the existence of a certain ideal individual, an “ultra rational” human being, who was permanently in the possession of perfect information, capable to perform all necessary economic calculus for maximization regardless his surroundings and who, in the end, make the best decisions based solely on his utility. This concept of “homo economicus” and its origins can be traced to the birth of modern economics, when the notion of economic utility was primarily defined.

For example, in the work of Walras (1874) who saw things as useful when they served a purpose irrespective of the morality or immorality of the deed or Jevons’ (1871) who saw value as depending entirely on the utility of the good and nothing else, stressing the value of mathematical modeling even in the absence of a way to validate it empirically.

In other words, the need of a behavioral approach appears each time when the normative and descriptive approaches clash or, in other words, what is expected from an individual to be a rational act in its ongoing strivings to maximize his utility, does not reflect in the observed economic behavior.

3.2. Behavioral economics – a novel approach to entrepreneurship
Among other various fields benefiting from this approach, behavioral economics has been particularly useful in providing insights on entrepreneurship. Significant behavioral economics research such as the concept of bounded rationality, judgmental biases, rule following, social norms, evolution, etc. have been successfully implemented and described in the growing amount of research on entrepreneurial behavior in economics and many effective entrepreneurial applications were drawn from of these principles over the last decades.

At the core of behavioral economics, a significant amount of studies suggest that human behavior and decision-making is often distorted by different kinds of heuristics and biases (Kahneman and Tversky, 1974). Studying and understanding these heuristics and biases can prove very useful when making entrepreneurial decisions.

Kahneman et al., (1982) explain, through a several research tests and experiments, the various ways in which human judgment deviates from rationality by defining a series of important biases.

Challenging the standard economic model, Simon (1955) appreciated that individuals do not possess unlimited capabilities in processing information and people generally apply the rule of thumb when making (economic) decisions as a way of conserving precious cognitive resources.

Further research identifies other examples of typical entrepreneurial judgmental flaws that can be encountered in situations characterized by reference dependent behaviors, like biases in probability perceptions and biases in self-perceptions (Schade and Koellinger, 2007).

Moreover, certain types of biases appear to be quite emblematic for entrepreneurial behavior. Knight (1921) agrees that this is, in part, due to the fact that exploiting business opportunities demands that entrepreneurs make decisions in complex situations without entirely knowing all relevant facts or probabilities of a future event that may occur. Reference-dependent behavior take into account all economic situations in which behavior is altered by a specific predetermined anchor, or point of reference, that influences
forthcoming behavior. Anchoring is a major heuristic in entrepreneurship when driving the time allocation decision between starting a new business and preserving a wage job. (Lévesque and Schade, 2005)

Ashraf et al. (2005) consider behavioral patterns based on different biases at core of the decision whether all working hours should be allocated to building new business, all to the existing wage job, or should be split between these two activities. Studies also show that people not engaged in a stable employment situation are more likely to attach higher subjective appreciation to the possible gains from a new business and lower subjective values to possible losses than individuals holding a career. (Ritsila and Tervo, 2002)

Other similar experimental studies depict entrepreneurs as less likely to be influenced by status quo bias, as for students and bankers. This is somehow predictable, as, by definition, entrepreneurial behavior tends to be more characteristic to individuals who diverge from the norm.

In (2007), Burmeister and Schade also found that biases in probability perceptions include judgmental flaws used to erroneously appreciate the probability of potential events, which often leads to a even more alternated assessment of perceived probabilities.

As a matter of fact, perception about one’s environment seems to be a crucial influential factor on individuals’ decision to start a business (Koellinger and Minniti, 2006).

Research in this area is able to demonstrate that people do indeed manifest certain inescapable biases when they attempt to estimate probabilities. This is done either by overestimating the importance of how well the available information fits into a certain model of the world they imagine, also known as a representativeness bias, or by the tendency to overvalue information which can be more easily retrieved by them, availability bias, or in some cases even information to which they have solely been (recently) exposed but is not necessarily relevant, anchoring bias (Tversky & Kahneman, 1974, p:1124-1131).

As a result of their observation the two economists have shown that not only do people make certain mistakes in interpreting data and probabilities but they make the same mistakes in a certain predictable manner. For example, people tend to overestimate small probabilities but to underestimate large values for probabilities (Tversky & Kahneman, 1981) with the extreme example being the risk aversion that people manifest when going from certainty to uncertainty (Kahneman & Tversky, 1979).

Moreover, biases in self-perceptions encompass the tendency of individuals to judge their own behavior, work and abilities less objectively then they would judge someone else's (Ariely, 2010). In his extended research on judgmental biases, Ariely offers several broadening perspectives on issues such as truth and relativity, procrastination, self-control, social norms, subjective self-evaluation, temptations and sensual arousal as determinant factors in the occurrence of certain irrational behaviors, providing us with plenty simple, but very meaningful explanations. His theories, arguments and keen observations, are in most often supported by various empirical tests and experiments carried out together with his team of fellow researchers and students from MIT’s Sloan School of Management.

Another interesting of field in behavioral economics introduces a time dimension to human evaluations and preferences. This concept states that people are biased towards the present and poor predictors of future experiences, value perceptions, and behavior.

As an example, when referring to self-control (for the sake of obtaining future benefits), Ariely asserts: if a group of individuals would have to choose between “getting a half box of chocolates now and getting a whole box of chocolates in one week”, they will most certainly choose “now” over “then”.

But if the same option would be presented slightly differently, in terms of giving to the group the opportunity to choose between “a half box of chocolate in a year and a full box of chocolates in a year and a week”, no doubt, most people will prefer to wait the extra week and get the full box of chocolate, because individuals tend to understand time and position themselves in relative terms. He shows how subjective self-evaluation can push individuals in exaggerating and overprizing the real value of their choices, actions or believes.
His disposition on relativity is that people make comparisons on a daily-basis, even when those particular comparisons are not entirely formed on a proper base. And that in the process of manipulating people, decoys are usually thrown in order to influence them more easily — a well-known example is how certain restaurant menus feature high-priced entrees, in order to allow mid-priced items to appear cheaper by comparison.

More to it, in his opinion, the phenomenon of anchoring and tagging (specific to geese) can be applied to human beings as well, when describing the process through which certain values are associated to different objects, even if completely arbitrary, and therefore, become attached of, eventually being used as a baseline for future subsequent decisions. The importance of perception and the relativity of the context and how it impresses on the way in which facts are interpreted has been studied by many other authors.

Another well-known bias describing people’s excessive confidence in their own judgments is the overconfidence effect, which occurs when subjective confidence in the own personal judgments is reliably greater than the objective accuracy of those judgments. For example, for certain types of questions, answers that people rate as "99% certain" turn out to be wrong 40% of the time (Lichtenstein et al, 1982).

Koellinger et al., (2007a) for example, show that most individuals manifest an overconfidence bias when reflecting about their own relative abilities and are often unreasonably optimistic about their future. In other similar studies the authors show even that entrepreneurs of different sex tend to have on a regular base different judgmental biases in self-perceptions (Koellinger et al., 2007b).

4. Entrepreneurial Behavior in Romania
As shown above, behavioral economics is a relatively new and very important turn from the direction of neoclassical economics. This is mainly due to the fact that the approach it makes towards the subject matter is less influenced by the assumption that had to be made in order to construct the model and more by the actual processes, which govern human behavior. Further on, the paper will move to examine the aspects of the Romanian entrepreneurial environment, motivation and other aspects such as age, education and gender that have an observable influence on the development of entrepreneurship in Romania.

Using Global Entrepreneurship Monitor (GEM) data collected in 2011, 2012 and 2013 the current research presents a behavioral perspective on the Romanian entrepreneurial features and explores how motivation, age and other factors may have influenced the entrepreneurial development of a post-communist economy like Romania's. A number of graphs indicate the hostile nature of the environment and the relatively limited opportunities matching the country's business environment in Romania. However, surprisingly little evidence exists about its impact on entrepreneurial behavior. The results suggest that Romania's institutional and legal environment is important in explaining its relatively low levels of entrepreneurship development, where the latter is measured in terms of both number of start-ups and of existing business owners.

In addition, the paper suggests that strong ties between businesses and state administration in the Romanian economy may provide greater opportunities for existing entrepreneurial insiders than for newcomers trying to establish a new venture. According to the available data sets in the case of Romania, the weakness and lack of trust in the "system" are detrimental to entrepreneurial activity and that, though motivation is important, it is not entirely able to offset these deficiencies and trigger healthy entrepreneurial behaviors.
5. Profile of the Romanian Entrepreneur
In the following section we will provide a brief description of the Romanian entrepreneur and his motivation.

![Figure 1: Distribution of entrepreneurs by gender](image)

Using the GEM data on the profile of the Romanian entrepreneur we can easily see that the data is heavily skewed in favor of men as they dominate in all three categories and, in terms of established entrepreneurs they are almost double the percentage of women. One thing which is interesting to see is the fact that the smallest difference is when it comes to entrepreneurial employees. This suggests that there is a type of pressure in women who choose the entrepreneurial path, however, if this is due to social factors or risk adverse behavior has yet to be adequately determined.

![Figure 2: Distribution of entrepreneurs by age](image)
Source: Entrepreneurship in Romania Country Report
When looking at the same GEM data, but accounting by age, it is very interesting to see the evolution of individuals. For starters, it is of note that there are very few entrepreneurs who start at a period later in their life, in fact, most of the early stage entrepreneurs are younger than 35 years old, with 45 being something of a maximum. This can easily be correlated with the data for established entrepreneurs whose percentage grows after 34 years with a peak between 45 and 54 years. This would suggest that those early stage entrepreneurs who have been successful tend to remain entrepreneurs instead of seeking employment elsewhere.

![Figure 3: Distribution of entrepreneurs by education](image)


From the distribution by education figure we can easily see that there is a strong link between education and entrepreneurial success. For starters, people who only have some secondary education rarely create their own company, only 8.6%, and even rarer still do they manage to have some degree of success, 6%. In terms of secondary degree or a post-secondary one, there is no difference when it comes to early stage businesses, however, the larger number of established entrepreneurs with a post-secondary degree would suggest that they are more successful in the long run. This holds true for those with a graduate degree who represent only 8.1% of the early stage entrepreneurs, even fewer than those lacking a secondary degree, but are 16% of the established ones. In terms of entrepreneurial employees, the data is as expected, the majority of them have a post-secondary degree with a few of them having only a secondary education and some with graduate experience.
It is very interesting to see the driving factors for entrepreneurs and to understand what has made them take on the risk of managing their own company. This is because, in Romania at least, it has not been as much a question of motivation as it has been of
necessity. From the above graphs we can see that, for most roughly 60% of the established entrepreneurs and just as many of the early stage ones, the need to obtain an income has been their main driving force or has contributed significantly. Furthermore, we can notice that, even though it is not the main motivation, the desire to increase their income is a factor for about 20% of established or early entrepreneurs. What is interesting is the fact that about 20% of established ones cite independence as a driving factor for their motivation but only 10% of the early stage ones. It would seem that the desire to improve their income is a motivator at the beginning, however, after achieving a degree of success, quite a few begin to value the ability to guide their own destiny more than they did at first.

6. Conclusion
Behavioral economics helps us better differentiate the various phenomena-taking place in real time and provide explanations for behaviors that may otherwise seem entirely puzzling and irrational. Ergo by directing our attentions towards some of the above research facts and numerous other interesting concepts in the field of a new emerging disciplines like behavioral economics and towards other psychology related fields, we can gain valuable insight and understanding on entrepreneurial behavior, how certain socio-economic organizations function, why some of the most complex systems fail and what are the mind paths that individuals follow in the process of decision-making and what stands as plausible solutions in addressing several judgmental biases of everyday entrepreneurial activity.

This article seeks to provide a brief review of recent research advances in entrepreneurship, to put them in the contexts of the entrepreneurship literature, and explain how the various behavioral contributions presented may be of use when trying to understand entrepreneurial behavior, in general, and Romanian entrepreneurial tendencies, in particular.

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