The comparison of behavioral and mainstream economics

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The main question of this paper concerns the comparison of behavioral and mainstream economics. The concept follows a straight line from different approaches and ideas of various authors stating their opinion on behavioral economics as well as mainstream economics.

Mainstream economics is defined as the maximization of an individual’s utility function, whereby the utility is a function of quantity of goods or services (McDonald, 2008), the basis of this concept tries to explain human behavior on the fact that people’s consumption is important to them.

In comparison to mainstream economics, behavioral economics focuses on psychological foundations trying to explain people’s behavior on the marketplace (Camerer, 2002).

Some benefits and challenges of behavioral economics: such as the fact that it tries to explain behavior not only rationally but includes psychological aspects or the challenge of various approaches of practitioners of behavioral economics will be discussed as well.

For the final comparison seven principles of Dawnay and Hetan (2005) will be used, which is the most understandable and easy applying criteria. These are as follows: Behavior of other people matters, meaning that we are influenced by other people; habits, which are hard to change; doing the right thing, namely, if we fail we are disappointed; expectations, including perceptions of how others should behave; loss aversion, involving the fact that humans try to avoid losses; computation problems, meaning that probabilities are hard to calculate by hand; and involvement and effectiveness, refereeing to the fact that people who are involved in different activities are more motivated.

These seven principles help to compare mainstream and behavioral economics. Nevertheless a lot of different approaches and considerations of theories heavily influence the final comparison as it does not simplify the result.

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List of Abbreviations

BE – Behavioral Economics

BF – Behavioral Finance

EE – Experimental Economics

ET – Evolutionary Theory

ME – Mainstream Economics

PE – Psychological Economics

XE – X-Efficiency Theory

Introduction

As there are no major publications on behavioral economics in comparison to the conventional or standard economic model this paper should identify the main differences of the two approaches.

The idea of presenting the results of the comparison is to apply all mentioned theories and create a comparison of many strands. Therefore it was decided that simple principles will be used for the final comparison of behavioral economics and mainstream economics.

Presentation of the Problem

The main question of this paper which will be answered, are:

What is behavioral economics?

What are the benefits and challenges of behavioral economics?

What can be understood by the standard economic model?

What other concepts or ideas are involved in behavioral economics?

What are the similarities and differences between behavioral and conventional economics?

Concept

In order to understand how the work was carried out a short introduction of the concept will be given in the following paragraphs.

First, different definitions of authors will be presented so as to give a brief access to the field of BE. This includes history and basic concepts as well as what BE tries to do. Methods, benefits and challenges will be discussed in the subsequent chapters. In the section of approach of comparison, theories are explained with which a comparison between ME and BE is possible. As in the previous chapter it was discussed that BE and ME differs this will be shown in the chapter of differentiation. Seven principles will be stated which will be used for the final comparison.

The next episode will be focusing on the comparison itself as well as the research results including the seven principles mentioned in the previous chapter.

The last section is concerning the final conclusion and limitations and restrictions of the work.

In the appendix two main questions about the topic including short answers can be found.

Review of Literature

In the following paragraphs a short summary will be given, on what can be understood by conventional, mainstream or standard economics and behavioral economics. Furthermore the question on what are the main aspects and principles of these approaches will be answered.

Conventional, Mainstream or Standard Economics

Conventional Economics, Mainstream or Standard Economic Model is defined as the principle of an individual who tries to maximize a utility function, in which utility is a function of the quantity of goods and services consumed by that individual (McDonald, 2008). It provides explanations of behavior and is based on the fact that people's own consumption is very important for them.

The standard or also called neoclassical economic analysis assumes that humans are rational and behave in a way to maximize their individual self-interest (Dawnay and Shah, 2005). As this rational assumptions leads to powerful analysis it also has its shortcomings which can end up in an unrealistic analysis or policy-making. Therefore it is important to include behavioral concepts which will be discussed in the next sessions.

Behavioral Economics

Behavioral Economics (BE) increases the explanatory power of economics by providing it with more realistic psychological foundations (Camerer, 2002). According to Mullainathan and Thaler (2000) it is a combination of psychology and economics that investigates what happens in markets in which some of the agents display human limitations and complications. As can be seen from both given definitions behavioral economics is concerned about the human aspect in decision making as well as economic issues which are relevant.

History and Evolution of Behavioral Economics

Adam Smith was one of the first supporters of the idea of including human behavior in economic models (Upson, 2010); whereas in the 18th century it was disregarded, due to the fact that a more rational approach was taken. However in the mid of nineteen hundred a deeper and clearer understanding of psychology impacts was recognized.

The Theory of Moral Sentiments, which has been written in 1759 by Adam Smith, who is known for the concept of the invisible hand and his book the wealth of nations, examines “ psychological principles of individual behavior that are arguably as profound as his economic observations” (Camerer and Loewenstein, 2002).

The reason why economists are now more focused on behavioral economics, in contrast to the standard economic model, is that they have realized that conventional models are dogmatic and might not be realistic (Rubinstein, 2005). It also could be a result of the new research focus and the search of new directions in research in order to explain human's behavior.

Basic Concepts

Upson (2010) mentioned three basic ideas in behavioral economics: First the rule of thumb principle, second the framing problem, and third market inefficiencies. These principles will be explained below.

Rule of Thumb

People refuse rational thoughts and behave according to the rules of thumb meaning that they act according to the principle that you get what you paid for. Nevertheless, even cheaper products can sometimes be as good as more expensive ones but people perceive it as superior and buy the more expensive goods.

Framing Problem

When people face a problem their thoughts are affected by the presentation of the problem. This means that if stores advertise a product differently people will act in diverse ways. For example, most humans perceive a 75% discount of the original price more generous than a discount of $3, 00 when not knowing the original price. Therefore the presentation of this discount can affect the decision of where to buy which product.

Market Inefficiencies

The third idea in behavioral economics according to Upson (2010) is that outcomes can be explained if they differ to the prior expectations. Market efficiency is defined as prices which reflect all information available about a stock. Therefore every investor has the same knowledge. In contrast, market inefficiency is concerned about happenings that doubt the idea of market efficiency. Therefore investors could sell overvalued stocks, buy undervalued stocks and can gain a lot of money in a non-rational way.

What Behavioral Economics tries to do

Predictions and useful theoretical frameworks which can be applied by economists can be used in different kinds of economic or even non-economic behaviors which the neoclassical approach describes. The main target of BE is persuasion which increases the fortification of economic analysis improving theoretical insights, indicating better policies and providing appropriate predictions of field phenomena (Camerer and Loewenstein, 2002).

Methods of Behavioral Economics

Generally the methods used in BE are similar or even the same as in other areas of economic. Initially experiments were used in order to distinguish certain behaviors from standard ones due to the fact that the experimenter has enough control.

Nowadays behavioral economists introduce other methods which are already employed by economists. A number of new contributions and new aspects of BE relies on field data and field experiments (Gneezy and Rustichini, 2002), brain scans (McCabe et al., 2001) and computer simulations (Angeletos et al., 2001).

Benefits of Behavioral Economics

BE tries to involve more aspects of human behavior in order to predict outcomes as well as to explain different kind of behaviors (Camerer, 2002). Moreover it relies on ME analysis and thus generates theoretical insights which are valid throughout a long time.

Therefore it can be seen from the paragraphs involving various disciplines, concepts and approaches that some challenges might occur due to the fact that a large number of differing ideas come into play.

Challenges of Behavioral Economics

As already discussed in previous sections it is difficult to define BE or even find one prefect way of application. This is for the reason that different minds have different attitudes and viewpoints. Hence there are some challenges witch results from these facts.

According to Prelec and Levy (2006) BE is not perceived as a standalone theory, meaning an alternative psychology theory. To a greater extend it is seen as a rejection of the known model of “ if” conditions which is concerned about the fact that the only criteria of evaluating an economic model is the marketplace itself. Moreover the two authors state that behavioral economists depart from the “ as-if” approach by using psychological plausibility.

Approach to Comparison

The aim of this section is to define different parameters in order to compare BE and mainstream economics (ME). Therefore the key dimensions which are related to its approach of science have to be identified. According to Tomer (2007) the most important dimension to distinguish BE and ME are as follows: Narrowness, rigidity, intolerance, mechanicalness, separateness and individualism. These will be explained in the following paragraphs.

Narrowness

As narrowness is important for the comparison dimensions it will be discussed first. If a method or its scope of substantive inquiry is restricted by an economic discipline one can say that the economic discipline is narrow or high in narrowness if it is severe. If the questions that are investigated are limited in terms of socio-economic issues, or if historical or institutional aspects are involved, are excluded, narrowness might be high.

Rigidity

An economic discipline is high in rigidity, which differs from narrowness in terms of flexibility, if it has a strong attachment to a particular form of narrowness. This embraces that the ability of flexibility, concerning methods which are used, is lacking.

Intolerance

Intolerance is defined as the unwillingness to recognize and respect differences in opinions or beliefs (Princeton, 2010). Under this aspect one can see that intolerance in terms of methods used would, lead to a non open minded approach towards other economic sciences.

Mechanicalness

The degree of mechanicalness refers to the extend someone leads his principles, meaning that disciplines are high in mechanicalness if they behave as machines. On the other hand, meaning that the lower the mechanicalness is, the more practitioners try to see the economy as an " organic, holistic, evolving, human entity" (Tomer, 2007).

Separateness

Separateness appoints to the fact that the discipline can stand alone and is not related or dependent on other disciplines.

Individualism

If a concept is seen as a result of behavior and events of individuals it is high in individualism. On the contrary, low individualism implies that the aspect is laid on individuals which are part of a collectivity or social group which behavior and motivators differ from an individual one.

Comparison Dimensions in Use

When using these six comparison dimensions a widespread map can be drawn in order to locate the discipline between others. In the next session mainstream economics will be examined by using the prior mentioned characteristics.

Comparison Dimensions in Mainstream Economics

Colander (1991) examined that mainstream economics apply different forms of mathematical modeling to the elimination of empirical analysis and ideas as well as history, institutions and policy. There it can be seen that different authors focus on narrowness associated with mainstream economics on a formal mathematical model. According to Thaler (1996) rationality, self-interest and self-control should be included when dealing with economic aspects which are not discussed in mainstream economics. Therefore mainstream economics' narrowness is an unquestioning acceptance of these three assumptions.

Rabin (2002) noted that mainstream economics does not include findings of BE and is therefore inflexible or rigid.

Scientists should be tolerant to other scientists' views and opinions (McCloskey, 1994). McCloskey stated on the matter of intolerance that mainstream economics is even more arrogant than physicists.

The mechanicalness of mainstream economics is discussed by Veblen (1898) who stated that perspectives which are human and evolutionary in mainstream economics are lacking.

According to Hausmann (1992) mainstream economics has a high degree of separateness from other social science disciplines, i. e. the methodological commitment is in progress.

The last point which concerns individualism is described by Hausmann (1992) by little attention which is given to social and group behavior and motivators, mainstream economics is therefore more concerned with self-interested individuals.

Behavioral Economics and its strands

As BE is part of theories which are bounded together (Camerer, 2007), different works of individual practitioners should be considered before a comparison between BE and ME can be formulated. Eight different theories of BE will be shortly discussed.

Herbert Simon

Simon’s approach is “ low in narrowness, not rigid, tolerant, low in mechanicalness, very low in separateness and much less individualistic than ME” (Tomer, 2007). This means that he researches the degree of how rational and self-interested decisions are taken. Simon was tolerant regarding the use of other models. In his opinion economics should not be separated from other sciences.

Georg Katona

Psychology is the most important part in this approach. Interviews and surveys were used to gather data in order to gain knowledge about behaviors and attitudes. Therefore no mathematical model was used.

Psychological economics (PE)

Camerer, Fehr, Kahnemann, Laibson, Loewenstein, Rabin and Thaler are the main practitioners of PE. It includes cognitive psychology and according to Camerer and Lowenstein (2002) its research follows four principles. Namely, first the identification of ME’s models, second identification of contradictions of the model, third use these contradictions in order to identify alternative solutions in terms of theories, fourth construction of models of economic behavior applying these new assumptions, afterwards test them and branch new implications.

ME uses more mathematical models than PE, the latter is more flexible and pragmatic, more tolerant and less mechanical than ME.

Harvey Leibenstein and X-Efficiency (XE) Theory

The theory was first introduced in an article in 1966 by Harvey Leibenstein. One of the main followers who did a lot of research on this approach as well is John Tomer.

The main idea of XE theory is to question the rationality assumption, namely the idea of people maximizing. No mathematical model is used to describe the theory. It cannot be seen as completely separate approach due to the fact that it is laid on different assumptions of ME. Leibenstein’s achievements rely on individuals who are self-interested but not rational.

George Akerlof and behavioral macroeconomics

This approach is based on behavioral macroeconomics in terms of psychology and sociology. ME is more narrow than Akerlof’s attitude to economics. He is open to research questions and no formal mathematical model is used. His work is not mechanical due to the fact that sociology and psychology aspects of behavior matter.

Richard Nelson, Sidney Winter and the Evolutionary Theory (ET)

Winter and Nelson have been pioneers in this kind of field of studies. The approach is based on biology, namely Darwin’s notion of natural selection in order to survive. This is then applied to firms. ET is low in narrowness and open to other research methods, not using any mathematical models.

Behavioral Finance (BF)

BF is concerned with approaches of psychology which tries to explain variations in stock markets. Therefore it can be seen as a strand of BE. Outcomes of markets and investment decisions of individuals can be influenced by the structure of information and the characteristics of the market participants. This concept includes mathematical methods in terms of finance but is pragmatic and flexible by using other models. Because of that, the degree of rigidity is low and tolerance is important due to the fact that social science approaches are used.

Vernon Smith and Experimental Economics (EE)

As the term EE already indicates in this concept laboratory experiments are included. The findings of these tests show that outcomes of markets are more rational than we would have expected by the lack of rationality of individuals.

This theory is less narrow than ME and does not involve mathematical models. Its rigidity is relatively low due to the style of the experiments which are flexible and pragmatic. Mechanicalness is low by reason that humans are involved in these tests which cannot be compared with machines.

Comparisons of Theories

As can be seen on the table below, a short summary is given by Tomer (2007) including all above mentioned criteria and theories. The author mentions that ME is high in every of the six dimensions of comparison. On the contrary, the strands of BE are more located on the right side meaning that they are more tolerant in many aspects. Moreover Tomer emphasized that BE is “ distinctly different from ME” (2007).

Figure 1: Comparison of ME and BE strands

Behavioral Economics differs from Mainstream Economics

Mainstream economics is traditionally conceptualizes by calculating and ignoring the behavior which was studied by social psychologists. Thaler and Mullainathan (2010) argued that the standard model is more relevant and easier to formulate. BE modifies three traits of the standard economic model which are unbounded rationality, unbounded willpower and unbounded selfishness. Already in 1955 Simon criticized the idea of people having unlimited information available. He invented the concept of “ bounded rationality” meaning concept formation of how people’s ability to solve problems look like.

Loss aversion and mental accounting are two other important aspects concerning BE according to Thaler and Mullainathan (2010). A suitable example of these two phenomena is given by Camerer et al (1997). A study of New York’s taxi drivers explains the dilemma of paying fees for the car and leaving the choice of how long to work to the drivers themselves. The authors of the study found out that in contrast to theory which would expect that drivers would quit working on bad days and work longer on good days; in reality it is the other way round.

The second vulnerable principle of mainstream economics is that self-control is often missing even if people know what is best for them.

The last matter concerns selfishness of people, namely self-interest is people's primary motive. Individuals are not willing to contribute to public goods if their private welfare is not improved (Thaler and Mullainathan, 2010).

Comparison and Research Results

After evaluating all above mentioned strands, theories, approaches and concepts it is really difficult to select the appropriate and most useful ones in order to be able to implement a comparison.

Therefore it was decided on the most comprehensive and easiest understandable concept and ideas of Dawnay and Hetan (2005), which have implemented and applied a concept of seven principles. Moreover this approach is relatively new and thus most relevant.

Seven Principles used for the Final Comparison

Seven principles of Dawnay and Hetan (2005) will be used for the final comparison of behavioral and mainstream economics. These criteria seem to be the easiest to understand by an audience which is not familiar with the definitions and dimensions of behavioral or mainstream economics. Therefore these seven aspects will be covered in more detail in the next paragraphs.

Principle 1: Other people's behavior matters

This first principle refers to the esteem or belonging need of Maslow's hierarchy of needs (1943) where he stated that people need to respect themselves as well as to be accepted by others and gain recognition. Therefore people's behavior is influenced by other behaviors due to the fact that they want to belong to a group as well as they ask themselves how would a person of my social group react on a certain event. Moreover according to Dawnay and Hetan (2005) social learning is a process of learning how to behave by taking other's behavior as a role model. If the person is an authority or a person people trust or respect, they are even more open for influence.

As ME is not concerned about behavior of other people this principle has no effect on ME.

Contrary for BE, who's motivator are behavior of others. Theories which are related to psychology include social learning (learn by observing what others do), social proof (look at others to see how to behave), social identity theory (social identity comes from groups we associate with), and key influencers (open to influence from authority people, or people we like).

Principle 2: Habits

No cognitive effort is needed if we do something out of habit. Daily routines can quickly become habits such as what to have for breakfast. But even if we think about changing our behavior we do not change. This is because of potential barriers of changing habits and hassles which are associated with that changing. The old habit can even be reinforced if people get a rewarded feeling, e. g. of traveling to work by car, just because it is more comfortable and easier than going by public transportation.

According to ME people try to maximize their utility rationally. Thus this principle is not valid for the neoclassical economic approach.

In terms of social norms, psychologists have agreed on the concept of past behavior frequencies influence current behavior. Therefore habits are hard to change when it has been repeated very often, there are strong related rewards and if the reward comes soon after the action was taken. On the other hand human think consciously about something if the action is complex, the consequences of the actions are important and there is enough time and knowledge to do so. Also visualizations can help to change behavior, e. g. cues such as visible recycling facilities which make it easier to recycle in comparison to throwing things away.

Principle 3: Do the Right Thing

The third principle states that people are motivated to do the right thing. Moreover people feel bad if they try to do the right thing and fail. An offset can be induced by a punishment, e. g. a fine, because after this punishment the feeling of payoff and a peace of conscience is given. On the other hand, we may accept a fee or punishment while continuing with the bad behavior.

Also the fairness factor should be mentioned here, because the sense of fairness leads us to punishment of others if their behavior is not what we expect it to be.

According to neoclassical economics or ME, financial costs and benefits would be added up in order to expect encourage after rewards and discourage after financial fines.

On the other hand, BE accepts that particular motivators, which let us do actions or activities for our own reward, and external motivators which let us do things for extrinsic reasons. Also fairness is important for behavioral economists. Humans will contribute to any activity more if they perceive a higher fairness.

Principle 4: Expectations

Behavior is influenced by people's self-expectations. They have perceptions about expectations and about other people's behavior as well. If the behavior does not fit to beliefs, attitudes and values, people might adjust these before changing their behavior. Moreover it is more important who states values, attitudes and beliefs. If it is a whole group with high levels of social capital makeing a commitment, the influence will be much larger.

As preferences are given in the analysis of ME, neoclassical practitioners would not include any concept of self-expectation or commitments.

Contrary to ME, BE relies on the fact that our behavior is influenced by others. Namely, we will change our behavior if it does not fit to our attitudes. Moreover Dawnay and Hetan (2005) stated that humans have three views of themselves: actual, ideal and ought-self, meaning the duty how we have to be. Also three views of what others think of us, adding up to a number of six distinct types of self-concept.

Principle 5: Loss-Aversion

Two biases are known, when speaking about loss aversion. First, people will try to avoid losses which can be attached to high risks but at the same time, in order to gain something, only small risks are taken. The second bias concerns the concept of ownership. If people understand something as their own it will gain some extra value.

ME expects people to have a preference for risks rather than for loss or gain. Human’s willingness to pay is assumed as being the same as willingness to accept, meaning that selling something which they own, for the same price as they would buy it.

BE practitioners include the fact that people will put more effort into preventing a loss than willing to gain. Moreover they discovered the effect that willingness to pay is not the same as willingness to accept which they call the endowment effect.

Principle 6: Computation Problems

Probabilities are hard to be computed by hand and therefore can influence the decision on a problem. Seven biases are mentioned by Dawnay and Hetan (2005).

Salience: overestimation of likelihood of events, e. g. something which can be imagined easily; something with a short-lived extreme experience; something recently experienced. Therefore things that happen often are also underestimated.

Discounting: underestimation of relevance of distant future events. Choosing short-term rewards over long-term rewards.

Framing: influence of presentation of outcomes when deciding between two actions. Often combined with loss aversion.

Defaults: Influence of defaults set by authorities

Intuition: Intuitive answers, which are more likely to be wrong, will be used instead of thinking about it with a simple mathematical question. Nevertheless, if the outcome has an importance value, deliberate thinking will be engaged in order to evaluate the situation or event.

Fundamental attribution error: The feeling of having control over a situation is very important for humans. Therefore if something happens to someone else, it must be their fault.

Price can signal value: if something is offered for free, people will not value it the same as the same product or service which has a monetary price.

For ME computation problems are not relevant as it is assumed that people have enough information and are capable of calculations and complex choices to be done.

In general, it can be said that people act on the principle of calculating on the rule of thumb basis, meaning that they are affected by the above mentioned biases.

Principle 7: Involvement and Effectiveness

When people have the feeling of control, they are highly motivated to shift things to the better. Nevertheless, if there is too much information they get the impression of helplessness and inaction. On the other hand, if there are too many choices which can be taken, an overwhelming feeling will arise and people do not know what to choose.

As ME expects people to act rationally, more information will be considered as optimal in order to make the best choice possible.

More Information and choices can lead to overwhelming feelings or reduce self-effectiveness. Moreover a research stated that in Swiss cantons people were happier if they had an increased ability to participate in different activities.

Conclusion

After briefing all these theories, concepts, ideas and approaches and comparing the standard or ME model and BE, it must be said that there are still some restrictions and limitations on definitions and determining factors concerning the main idea of BE. Nevertheless a few authors tried to overcome these problems and created their own theories and conception of what they understand under BE.

Some of the limitations and restrictions will be discussed below before a final conclusion on how to compare ME and BE will be carried out.

Limitations and Restrictions

First of all, the outcome of the paper as well as the whole comparison was limited in terms of simplicity due to the fact that BE is not yet very well researched and explored. Therefore many different authors define it differently as well as they emphasize on completely different aspects and ideas. This can also be seen in the part of literature review, where it was tried to summarize the major concepts of the main practitioners of BE.

Furthermore the seven principles which were used for the final comparison of ME and BE can be interplaying and therefore interact with each other. Moreover it would be necessary to research on this phenomenon in order to detect