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Application of an identity economic framework into social media markets
Identitás közgazdaságtani keretrendszer alkalmazása közösségi média piacon

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1. Introduction

Economic theory has a special place in the world of social sciences. It has very rigorous methodological foundations, which rely heavily on mathematics and econometric analysis. In order to satisfy the rigorous requirements of the methodology, the theoretical models are often very precisely specified. This approach has its many advantages and also drawbacks. The field of behavioral economics focuses on one of its drawbacks. Which is the question whether economic actors are rational, or not rational? It has long been established that economic actors are not fully rational, and also the extent and way in which they diverge from perfect rationality has been studied heavily. This paper adds to the theoretical literature in the topic, by conducting a literature review and adding new theoretical elements to it.

In the first part of the paper, I describe how the theory of rationality has evolved historically in economic thinking. Decision-making is a central notion when thinking about rationality. I present how decision-making in economics has been assumed to happen from the time of Adam Smith (1776), through Neumann-Morgenstern (1953), Herbert Simon (1955), Kahnemann & Tversky (1979) and finally Gigerenzer (2013). Gigerenzer opens up the possibility to think about social interactions, and more specifically identities. I present how identity economics has evolved in the last decade and became a fresh innovative field of economics. To describe identity, I rely on the works of Akerlof (2010) and Garai (2017).

After the review of relevant theoretical background, I turn to the research question of my paper. My goal is to apply the identity economic framework presented by Akerlof (2010) to a specific market problem. Therefore, my research question is: *Is it possible, and if yes in what way to apply an identity economics framework to a specific market, in the case of this research to the social media market?* Based on my literature review, the field of identity economics is so fresh that applying its ideas to a market hasn't been precisely researched. I aim to fill this gap with my analysis. The methodology I rely on is literature review and structuring. Furthermore, as I mentioned above, I use the identity framework of Akerlof (2010) as a central part of the methodology. First, I define the specific market of the analysis which is media markets, more specifically the market of social media. I modify earlier media market models to create my own theoretical model of social media markets. For the earlier models, I use the works of Gentzkow (2014, 2017). Once, I have this I turn back to the identity framework and apply it to the theoretical model of social media.

I find that the most important problem when applying identity theory to a market is that markets are always about solving an equilibrium problem, and a market in this sense doesn't have an identity itself. Therefore, in order to use the identity framework, one has to turn from the general equilibrium problem of the market to specific areas of the market, where social context and interactions can be found. In the case of social media markets, I identify this social interaction to happen at the consumer side. While using the services of social media a consumer takes on both the identity of a content reader and provider. Based on these identities, the consumers connect and interact with each other. The finding of the specific social media market case is that the norms for both identities will be to express their own beliefs and ideologies. By using the services of social media, the users can gain identity utility from having the chance to express themselves. This helps to explain a disequilibrium state of the social media markets, which is presented in the paper based on Zuboff (2019).

The paper adds to the theoretical literature by finding potential ways and obstacles for the further applications of identity theory into economic analysis. Chapter 2 presents the theoretical background about decision-making, rationality and identity theory. Chapter 3 describes the case study of this paper, and presents the created theoretical model of social media markets which include identity, and also shows the results of this model. Chapter 4 brings attention to the necessity of empirical research and proposes research questions. Chapter 5 discusses the findings of the general research question: how can we apply identity theory to a market? Chapter 6 concludes.

2. Theoretical background

2.1. Decision-making

Social sciences have long been trying to figure out a way to handle the decision-making process of humans in different situation, since it's a fundamental and underlying question of how societies function. In the next chapter, I'll present a brief historical review of how the approach to this issue has been evolving more or less over the past two centuries. The review is not intended to detail every aspect of scientific development, but rather to focus on the key ideas and issues which are relevant to the research question.

When talking about decision-making processes, first we have to clarify what we mean by that? In order to have a fulfilling theory of how people make decisions, we must assume that there is some kind of a pattern which drives them during the decision-making process. In this

paper I'll define this pattern as "rationality", and the questions changes to: what is considered to be rational, in what circumstances and what changes rationality?

I will start from the perspective of neoclassical economics. According to neoclassicists, two theories are relevant for the rational decision-making process. The first is the rational choice theory, which originates from the work of Adam Smith (1761). The theory assumes that when people face economic decisions, they make a decision by conducting a cost-benefit analysis. The second related theory is the expected utility theory, which is traced back to the work of Neumann & Morgenstern (1953). They add the possibility of uncertainty to the problem and write down the expected utility function, which describes how people make decisions with different possible outcomes. This requires precise knowledge about probabilities and utilities of outcomes. Furthermore, basic microeconomic theory has a strong belief in markets forces, in the sense that a) violations of rational behavior are punished, b) violations only occur in insignificant choice problems, c) transaction costs punish for using wrong rationality (Hirshleifer, 2005).

These ideas are still only one half of the human decision-making problem. Herbert Simon has been a great pioneer in advocating the need for the use of psychology in economic decision-making processes (Simon, 1955; 1990). "Bounded rationality" is his famous term which means that people make decision based on two factors: one is their cognitive abilities, the other is the environment. The neoclassical approach only deals with the cognitive abilities, and even with that just partially. An important development for the cognitive abilities was prospect theory and the idea of heuristics, developed by Daniel Kahneman and Amos Tversky (1979). It adds to the earlier neoclassical theories the recognition that humans have many flaws when they try to make decisions according to expected utility theory. Kahneman & Tversky conclude that people are bad at guessing and evaluating probabilities. By heuristics, they mean the observable patterns about how people make mistakes about it.

At this point, I can finally bring together the Herbert Simon's two sides of the theory which he called "bounded rationality". For decades, the majority of economists have focused only on the limitations of cognitive abilities, hence the rise of heuristics. Already Kahneman and Tversky have realized the issue that decision-making is neither a completely rational process in the sense of homo economicus, and it is neither a completely intuitive process in the sense of making decisions based on heuristics (Kahneman, 2013). It is rather somewhere in between the two extremes.

It was the German psychologist, Gerd Gigerenzer who turned his attention to the issue of the environment, the other side of Simon's "bounded rationality" theory. Gigerenzer's main insight was that it is the surrounding, the context, the environment what determines which kind of decision-making approach will be the most effective in a certain situation (Gigerenzer, 2013). In some cases, it is intuitive decision-making which leads to the best outcome. In other cases, the decisions-making is most effective when it is done based on the findings of rational-choice theory.

The purpose of the theoretical review presented above was to pave the way to arrive to the importance of social interactions. So far, I have established the idea that people make decisions based on different kinds of rationalities and the optimal way of decision-making depends on the environment and the context of the specific situation.

2.2. Methodological individualism or social psychology

In order to proceed with the theoretical foundations of the paper, I have to include another underlying notion of social sciences, which is "methodological individualism". It essentially means that the basic unit of social analysis is the individual. This also implies that when we think about decision-making processes, we should first think about the perspective of the individual.

First, I present arguments for methodological individualism and explain why it has been at the core of economic analysis for so long. Since the time of Adam Smith, most of the neoclassical economic analysis has been focused on the individual and not on any other social entity. Kenneth J. Arrow, one of the great fathers of the neoclassical general equilibrium theory argues (Arrow, Methodological Individualism and Social Knowledge, 1994) for why methodological individualism is an essential part of the analysis. He states that "a market would appear to an economist to be an obvious illustration of a social situation as an interaction among individuals" (Arrow, 1994 p3). This clearly illustrates the extremely strong belief of neoclassicals in the market, and market forces. It implies that the market in itself is a powerful enough social institution that it describes the social connections and interactions well-enough.

However, in this paper I would like to present an alternative view of social interactions, which originates from social psychology. The underlying idea is that people have a dynamic relationship with the environment around them. They are constantly in an interaction with each other and therefore their relationships are constantly changing. Based on this idea, the main assumption of the approach is that transactions happen because people want to build a social

identity for themselves. In other words, people are constantly in a dynamic relationship with each other and the environment and they consume with the goal of building a position for themselves, which position can be called “identity”.

I would like to point out that this idea contradicts the approach of methodological individualism. In methodological individualism and expected utility theory, the consumers main goal is to maximize their well-being by maximizing a utility function. In the case of social identity theory, the individual is not trying to maximize their well-being by maximizing a personal utility function, but instead by looking for a “potentially likable social position” for themselves (Garai, 2017).

To balance the contradiction between the two approaches to individual decision-making, I draw the connection between them. One might say that the idea of “potentially likable social positions” could be simply implemented into the individual utility function, through different variables. This might be true. The end-results of searching for the “likable positions” can be written in a functional form to maximize utility. Nevertheless, the difference lies in the general approach of the two theories. While on one hand social psychology is interested in understanding the inner workings of why people make the decisions they make, on the other hand economics is focused on analyzing the outcomes of the decisions. In the case of an economic transaction (a simple purchase), the social psychologists might say that the consumer makes the purchase because they wish to build their identity with the purchase in a certain way. The economist would analyze how much of the person’s income is spent and what it tells about his spending preferences and by that what is the possible surplus they generate through the surplus.

Furthermore, it is important to point out that the theory of social interactions is to be understood and interpreted in the context of modern societies. The so called “Robinson Crusoe economy” is a famous concept of the general equilibrium theory by Arrow. The results of the equilibrium theory might be perfectly correct in the case of the Robinson Crusoe economy derived from the point where we look at Crusoe as a fictional, schizophrenic person who takes the role of the “representative consumer” and “representative supplier” at the same time (Arrow; Debreu, 1954). Yet, in a modern society the relationships and potential connections between people are much more complex and layered than this. This lets us believe that it is indeed an oversimplification of the world to just leave out this part of societal functioning and it would be helpful for economic analysis to implement more of the ideas of social interaction theory into its own system of concepts.

2.3. How do social interactions work and how do they connect to the economy?

The question of how the process of building a social position and then turning it into real transactions actually happens still remains a relatively unexplored area economics. There is however a limited amount of research in the topic, to turn to.

There is a connection between the environment and the individual, and transactions can be ordered into these connections. The key question is how these connections take place, shape or change? There are an infinite number and types of connections around us. Some of them are deeper and closer, more personal ones, while some others are simpler such as meeting with a seller in a shop or a colleague at work. An important factor which shapes connections is *identity*. It means how one looks at themselves in general and more importantly within the context of society? How one thinks of themselves in relation to other people? In the words of Nobel-laurate economist George A. Akerlof (2010, p. 6), identity is “how people think they and others should behave; how society teaches them how to behave; and how people are motivated by these views, sometimes to the point of being willing to die for them”.

Identity is not a new term in social sciences. It has been part of many disciplines, such as social psychology, sociology or anthropology. On the other hand, economics which is another main field of social sciences, originates from completely different assumptions and ideas. Therefore, the issue at hand is based on the realization, that economics hasn't properly taken into account the findings and results of other social sciences, specifically identity theory. By doing so it could potentially formulate a much more precise and accurate theory of how our economies function in modern societies. This process has to take place at the core of economics, which is microeconomics. The exact theoretical question is how to incorporate identity into microeconomic foundations?

In order to implement “identity” into economics one must understand the meaning of identity. For that purpose, I have to introduce another term, which is human capital. Garai (2017) writes in a revolutionary book that consumption means nothing but investment into the human capital. He writes that at the end of the 19th century human capital was so relevant for the economy, that it had to be produced accurately and also accounted for the cost of production. What it means is that as the industrial revolution reached a widespread effect in society, human capital was essential for the functionality of it. In other words, humans were needed for companies to work, for machines to be operated, and so on. However, if we look at humans as a form of capital, we must also start to think that it cannot be free. Human capital has a cost,

just as other forms of capital. As Garai writes, it has a cost of production, in the sense that human capital has to be produced and this production has a cost. In order to answer what the cost is, we must first define what the production of human capital means? This is where social psychology and identity become relevant. (Garai, 2017)

We can formulate the assumption that human capital is based on a person's identity. It is an assumption and therefore it is necessary to state its limitations. Namely, that human capital can be understood in many different other ways. It can be understood as a sum of personal attributes, physical or mental abilities, or as the output which is produced by one employee. The assumption that identity is the basis of one's human capital, assumes that all of those other attributes are part of an identity. A more detailed psychological description of identity is however won't be part of this paper.

On the other hand, I focus on how identity is built within a consumer society and how it is related to the economy. Garai (2017) describes how general market dynamics connect to identity. He uses the model which describes human activity as a commodity, which is similar to the typical job market models. A human has their own time and he can split it between working when they earn wage, and free-time when they don't earn money but gain the feeling of "well-being". However, the human activity is a commodity without an effective price. The price is psychological rather than economical. The price refers to the idea which I have already introduced, the cost of production of human capital. During this process of different kinds consumptions, the human capital or as a similar but not completely equivalent term, the human activity is created. This then becomes essential to the functionality of the economy. The balance between producing human capital and paying wages for its use in the economy is called a socio-psychological condition for the human, in a post-capitalist system, according to Garai. (Garai, 2017)

To summarize Garai's (2017) findings, I can argue that identity is the central element of human capital. Human capital is used in modern economies. Human capital has to be produced, and it has a cost, just as with other forms of capital. The production of human capital happens through the process of consumption. The cost of consumption is the cost of human capital production. What does consumption mean? Consumption can be understood quite literally, but it's important to emphasize certain aspects of it. Such are, schooling, parenting, generational wisdom, media.

2.4. Microeconomic foundations

Earlier studies embedded social difference and norms into a model of utility (Akerlof & Kranton, 2000, 2002, 2005). Inserting these into the utility function is a great idea, however the question emerged: where do these norms and divisions come from, and more importantly how could they be measured in order to use them in economic models? In order to answer this question, I turn to the book titled “*Identity Economics*” by Akerlof and Kranton (2010). The book uses the same methodological approach which I have described in Garai’s (2017) work. It not only tries to incorporate the idea of identity into the already existing methodological framework and models. Rather, it aims to fundamentally change and modify the old microeconomic methodology in order to incorporate identity into it. The book develops a methodology where identity is not only represented as different tastes in a consumer’s utility function, but where tastes vary with social context. This is consistent with how I questioned the notion of methodological individualism earlier in this paper. The main reason why the authors have considered this innovation necessary is because the simple implementation of tastes and norms into the utility function builds completely on the assumptions of methodological individualism. It assumes that the most essential unit of society is the individual and therefore our analysis should be based on that. However, as I have pointed out, it ignores the fact that humans are social beings and therefore their activities have to be thought of in a social context. (Akerlof, 2010)

Akerlof defines three concepts to describe identity, which are: *social categories, norms and ideals, identity utility*. Social categories represent different groups of society, which people divide themselves and others into. They can be based on more general things, such as age, gender or employment for example. It can also be very specific such as two certain groups in a firm for example. The social categories are very closely related to the norms and ideals. The norms and ideals always belong to a certain social category, to a group of people. Akerlof describes norms as “people hold an ideal of who they should be and how they should act” (Akerlof, 2010 p. 11). A norm or ideal refers to the “exemplary characteristics and behavior of that social category”. Identity is the general word which binds social categories and norms together. Identity is what defines which social category one will belong to and according to which norms and ideals they will behave. (Akerlof, 2010)

After having established social groups and norms I now turn to the point where I include it precisely into an economic analysis based on microeconomic foundations. Microeconomic foundation means that it first describes the motivations and incentives of individuals. It starts

by turning to the individual utility function just as earlier methods have done. The difference is that with the two new terms introduced we can do that by taking social context into consideration. Writing the utility function happens in two parts. The first one is the standard way of doing it: defining tastes for goods and services. The second one is where social context is included. Each individual is assigned to a social group based on their given identity. Based on the previous logic, norms and ideals can be assigned to the group where the individual belongs. Then the third term of identity, “identity utility” is introduced. When the individual’s choices are in consent with their group’s norms, they gain identity utility. On the other hand, when their actions are confrontational to the norms, they lose identity utility. Identity utilities have an external effect too which have to be considered. The behavior of someone can affect the identity utility of another. An example of that might be, that if someone is breaking the norms and rules of a certain social group, then the rest of the group members will lose identity utility. (Akerlof, 2010)

The utility function extended with the notion of identity utility is an extremely powerful tool. This concept can be understood and used for a wide spectrum of economic analysis. It does not contradict the mainstream neoclassical approach to economics, but adds to it on a fundamental level. The question arises: how exactly can a researcher use this framework? People don’t make conscious choices about their identity, neither the exact effect of their consumption on their identity utility. However, as economists we can argue that in our modelling, we can apply the terminology to analyze the outcomes.

It is connected to the idea of rationalism. At the beginning of the paper, I have come to the conclusion that rationality is a context-dependent term, and it might change in every situation for every individual what can be considered rational (Gigerenzer & Sturm, 2011). When we model identity utilities, we still assume that people behave rationally. However, by including the new terms into the utility function we extend the scope of rationality and make it dependent on the social context, and the individual as well. This is the main underlying assumption for why we can apply the terminology into modelling, even though people do not make conscious decisions about their identities nor their identity utilities. (Akerlof, 2010)

To conclude, for a researcher to apply this methodology to a case study, they have to go through the steps which I described above. First, they have to specify the social groups which will be selected for the model. Afterwards, they have to describe the norms and ideals of the groups which are included in the analysis. Finally, they have to define a mechanism through which the terms can be implemented into a utility function as identity gains/losses. This enables

a researcher to create a theoretical model, which can be used to analyze a wide range of economic questions. Akerlof (2010) presents four different areas where the model can be of great use, such as education, organizations, minorities and gender in workspace. In the next part of my paper, I will apply this methodology to create a model for the analysis of the movie streaming industry.

3. An identity model for social media markets

The aim of this paper is to analyze and structure already available literature in the topic of identity economics with the purpose of using its methodology to apply it to a market-specific problem. In the next section of the paper, I will turn to the application of the methodology of identity economics, as described by Akerlof (2010).

3.1. Definition of the media market

The specific-market which I aim to apply the methodology to is the media market. In this section of the paper, I first present an overview of the market. I define what I consider to be the elements of it. Afterwards, I turn to the analysis of the question of why identity is a relevant issue in the case of media? Furthermore, based on this relevance I build the basis of my approach for how identity can be applied to the market.

So far, I have been using the term “media” in a very general sense, however for the purpose of model building it has to be defined clearly. Media can be understood differently in academic literature, in common-knowledge, or even the representation of it in media itself. In my research, I will understand media as an essential element of our democratic societies to function. This is related to the classic theory of separation of powers, which includes legislative, executive and a judiciary part (Montesquieu & Carrithers (ed.), 1977). This idea has been extended by Burke, who claimed that the free press is an essential fourth part of a democratic society, which serves the purpose of informing citizens in an objective way (Schultz, 1998). Taking on Burke’s idea, I will define media as an essential form of democracies, which serves the purpose of providing information to the people. I purposefully leave out the objective part. This definition focuses solely on the functional element of media, without taking into consideration the aesthetic choices of its creators, or consumers. In simpler terms, it can be said that I define media as providing news. It doesn’t include films, television, or any other forms of online or offline media sources.

This definition of media can serve as the broad definition for a media market. A further narrowing of media markets is that I focus on social media. I would like to emphasize, that even though social media has many other purposes and functions than providing news information to its users, I will understand social media platforms first of all as a provider of information. Kietzman et al (2011) uses the widely accepted definition for social media; “is a group of Internet-based applications that builds on the ideological and technological foundations of Web 2.0, and that allows the creation and exchange of user-generated content” (crossref Aichner et al, 2021). I selected this specific definition out of various academically accepted ones, because it emphasizes the role of identity in a social media context. However, for the purpose of my research, I alter the definition by changing the last term of “creation and exchange of user-generated content” to “creation, exchange and consumption of user-generated news content”. The consumption term allows for a passive consuming of social media content, and the added “news” term reflects on the general goals of media, which I have defined in the previous paragraph.

In order to use these barriers of media in an economic sense, I must define the participants of the market and the goods and services which are produced in the market. Social media users can be assigned into two main groups; individual and organizational users. The group of organizational users includes all news provider entities, such as the online available version of newspapers or other kinds of journalistic companies. Furthermore, it includes non-journalistic institutions which provide any kind of news content online, such as governments, or academic organizations for example. The other group includes individual users. A special characteristic of them is that they represent both the supply and the demand side of the market. This group can be ordered into five clusters, which are; social pioneers, observers/watchers, content creators, engagers, and game lovers (Kurtulus, Özkan, & Öztürk, 2015). The definition of goods and services which appear on a social media context is much simpler. Since, the goal of my paper is to analyze news content, therefore I will select a “post” as the unit of measurement and analysis. One unit of consumption means the reading of one post, and the same is true for one unit of production which is writing/creating one post.

3.2. The features of digital content creation

In order to understand how social media content is made and how it affects the users, I present some key facts and dynamics about the market they are in. Several great sources of literature have already explored the ways and patterns of how digital transformation affects

companies (Weill & Woerner, 2015; Porter & Heppelmann, 2015). From the many insights, the new marketing capabilities are the most relevant. It means that companies have

- a) new ways to segment and customize,
- b) new customer relationships, providing continual value,
- c) to focus on systems not discrete products.

Furthermore, I'd like to point out one more characteristic of online platforms, which is bundling. The key idea behind it is that companies don't sell single products. Rather, they sell a bundle of them, which can be understood as a full social media page which includes simple posts, videos, podcasts, even movies, etc. (Smith & Telang, 2019). The key idea is that posts are never sold alone. It refers back to the idea that due to the possibilities of digital technologies, the company has "new ways to segment and customize", which in practice means that every single subscriber might be presented a different main platform of social media, different recommendations, in fact completely different content. These mechanisms of digital content creation are important, because they describe the features of how content can be provided and consumed on a social media platform.

3.2.1. Surveillance capitalism

I would like to bring attention to a very central and important issue in the type of connection between social media firms and its users. I highlight that earlier, when setting the outlines of the social media market I understood social media as a platform which allows a media content to appear between providers and consumers of the content. Now I turn to the connection between the social media firm and its users. In this logic, I refer to a different market: between the users of social media as consumers and the social media firms as suppliers of a service. This is a type of service is called a platform-based business model (Van Alstyne, Parker, & Choudary, 2016).

The issue is the problem of personal data exploitation, and the so-called surveillance capitalist system which was first introduced by Zuboff (2019). Since the objective function of a social media company is to maximize the time users spend on their platform, their motive will be to tie them to the platform as much as its possible. This is so far a normal goal of any kind of marketing. However, since in an online environment a vast amount of personal user data is generated, the companies have the chance to exploit it through the personalized content creation and get the users attached to the services. (Zuboff, 2019)

The exploitation of personal data is relevant for the analysis of this paper, because it allows to determine another key feature of the model. Namely, that the price of online social media consumption is not measured in the classic terms of currency. Based on the extensive findings of Zuboff (2019), I will extend my model by stating that the price of online social media consumption is paid by the user's personal data. It is mostly relevant for individual users, who represent the biggest percentage of all users. Furthermore, I would like to point out that I do not consider this to be a conscious consumer decision made by users. Even though it can be considered to be a common knowledge in today's society that social a media site collects data about its users, the users themselves rarely know about how it is used, and even less they know about how it serves the business interests of the social media company. Because of this, they tend to pay a much higher price for the consumption of these services. Meaning that they give up too much of their personal user data in exchange for the chance to use the platform. Based on these findings, I can formulate a hypothesis to the original research question of the paper; *When considering the equilibrium of a social media platform-market in the sense as it has been described above, the current state of the market is not at an equilibrium point, because of an information asymmetry, in which consumers tend to make consumption choices without the full knowledge of the price they pay for the service.*

3.3. Model framework

it. I will rely on the work of Matthew Gentzkow in setting the formalized logical framework of the model for the market which I have specified in the previous sub-chapters. Using this framework, I will extend Gentzkow's model with the identity methodology of Akerlof (2010).

Gentzkow (2017) describes the task of the supply side of media, specifically with the intention of the work of newspapers as "deriving articles from costly signals they receive from the world, and they also have a prior idea about what's better or worse". This quotation implies two things, which are just as much relevant for social media as for classic newspapers. One is that in order to provide content, in other words the production of news has a cost. The cost is the price of collecting, gathering, organizing and then presenting information. Every individual or professional news organization who is present on social media does this process. A key difference between social media and journalism, is that individual users are often much less precise about the methodology which they use for this production process, therefore the news content they provide might be considered less reliable. The other implication is that every news provider has prior ideas about the content they present. This is a strong assumption which says,

that there is essentially no completely objective reporting or journalism. It is an important notion, which includes the chance to discuss identity within the framework of the model.

Gentzkow (2017) describes the consumer decision problem too. They face a trade-off. On one hand they have an incentive to consume true information. On the other hand, they “receive psychological gains” if they read news which correspond with their prior ideas about the subject of the news. A crucial element of Gentzkow’s model, is that it allows the consumers to change and correct their beliefs with time. After a certain event, and having read news about it, they have the chance to change their prior beliefs based on how the actual event turned out – a typical example of it would be that people have a prior idea about who they want to vote for at an election, and they consume news about the campaign. After the election they have the chance to evaluate how the winning candidate performed and change their beliefs based on the outcome.

For a more detailed logical formulation of the previous ideas, I turn to another paper by Gentzkow (2014). In Gentzkow’s model on the supply side when a newspaper enters the market, it first decides to choose either Republican or Democratic affiliation. For this decision to make, it considers the i) demand of the potential readers, ii) the response of other entering newspapers, iii) and also the effect of affiliation choice on subscription and advertising prices. Based on these decisions, Gentzkow writes the profit function which is the essential optimization problem for a supplier. The consumer’s decision problem is also formalized and put into a utility maximization problem (Gentzkow, 2017).

Let’s translate Gentzkow’s model into the specifications of this paper, namely into a social media environment. The first and biggest difference is that Gentzkow sets up the model for local areas of the United States. The social media market doesn’t have these kinds of limitations, and it can be considered borderless in that sense. Another simple difference is that while Gentzkow considers one article to be a unit of product, I consider one post to be a unit. Furthermore, for the purpose of the identity model I change the business aspect of it, which means the pricing logic. Based on the logic of Zuboff (2019) as described in an earlier chapter, I will consider the price of social media consumption to be paid by personal data.

Finally, I put together all of the necessary elements which I have gathered in this chapter about social media and media markets into a theoretical model of this research:

1. There are two levels of the analysis and two markets.

2. The first market is the market of social media services. The supplier is the social media firm. The demand refers to the users. Social media firms operate as a platform business model.
3. There is an information asymmetry between the users of the platform and the social media firm itself, based on the issue of personal data exploitation.
4. The users have two groups: organizational and individual users. In this paper, I focus on the individual users.
5. The second market structure connects the supply and demand for news which appear on social media. The suppliers of news are called *providers*. The consumers of news are called *readers*.
6. Individual users of the platform can take the role of both *provider* and *reader* of news.
7. Providers act according to a profit maximizing behavior. Readers act according to a utility maximizing behavior.

This general framework is summarized in a simple *Figure (1)*.

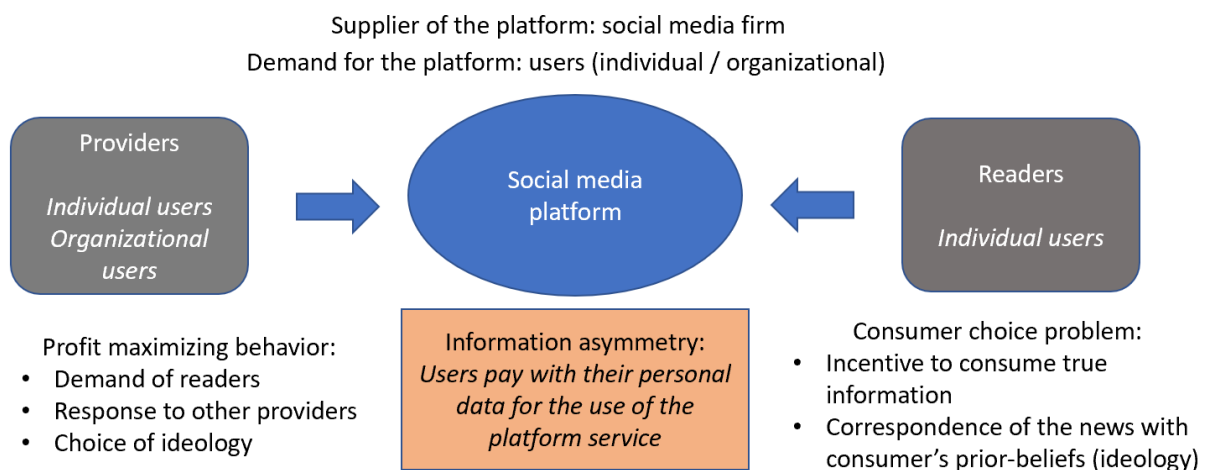


Figure 1: Complete model of the social media market, source: own work

3.4. Identity elements

Now I turn to the identity elements of the model. Since my research is based on literature review and theoretical work, most of the components of identity have already been introduced. What the added value of this section is that I implement the findings of *Figure 1* according to Akerlof's (2010) identity framework. The goal of it is to find a mechanism for the hypothesis about the disequilibrium caused by asymmetric information on the platform market. Once again, the observed issue is that the users of social media platforms pay for the use of it with

their personal data, however they are not fully aware of it. Therefore, the question to answer: how can the market function at such a disequilibrium point?

In the first step, I define the social groups which form the basis of the identities included in the analysis. As I have pointed out earlier, the users of a social media platform can function as a provider and reader of content. I claim, that these two positions of a user are different identities in the world of social media. An important note is that it is only true for the individual users, not for organizational users. *Figure 1* shows that on the supply side there are organizational users as well. I do not include them in the current identity model. One feature of these two identity groups is that they are very easily substitutable, meaning that one user can easily change from one identity to the other. Basically, an individual user is a provider and a reader at the same time.^s It is an important difference to some of the more rigid and commonly-known identities such as male/female, nationality, sexuality, etc. However, this doesn't make it any less relevant for the analysis. Since the point of identity analysis is to determine potential identity gains of certain activities compared to the standard behavior of that identity.

This brings me to the second part of the analysis, which is to describe the social norms and ideals of the two identity groups. These norms are also taken from the already set up market model. The provider's goal is to maximize some kind of profit function, similarly as in Gentzkow (2014). Gentzkow included advertising prices and newspapers prices in the model besides the affiliation choice. I focus only on the latter. In my model, the provider is not a firm itself, but an identity representation of an individual user. Therefore, their goal is not profit making in a financial sense, but to maximize their profits regarding their ideology. When an individual user creates social media content, their goal is not to aim for objective reporting but to voice their opinion about a certain issue. Even though this might not always be true and there are individual users who aim for objective reporting, I will use this as an assumption of the model, which can be considered to be the norm for this identity group: maximize the effect of voicing their ideologies.

The norm of the other identity group, the readers is much simpler. It can be written as a maximization problem based on how Gentzkow (2017) describes it. He describes it as a trade-off between wanting to read true information about the world, but also wanting to certify themselves about their own beliefs and ideologies. These two forces can be assumed to be the norms.

In order to proceed with the analysis, it is important to compare the norms of the two identity groups. We can conclude, that both group's norms include the element of wanting to voice/read about their own ideologies. The difference is that besides this common norm, the reader group might also have an incentive to read true and unbiased information as well. I note, that I haven't identified any incentives for the providers to create unbiased news information.

The third part of the framework is to answer the question of what kind of identity gains can we derive from this setup? Based on Akerlof (2010), an identity gain mostly originates from the action when one individual of a certain identity group decides to act according to another identity group's norms. These actions can have an identity gain/loss effect on the individual themselves and also it can have externalities on other affected people. I have identified one simple mechanism of identity gain, which logically originates from the social norms presented above. The mechanism:

- *In case a consumer decides to change their identity and act as a provider, they can increase their identity utility by providing content which promotes their own beliefs and ideologies.*

3.5. Results

A result of the identity gain mechanism is that individual users who can take on the positions of both identity groups will be incentivized to create content and not only consume it. The key result is not the distinction of the identity groups, but rather the norms which have been attached to them. The main observation is that the norms for both the provider and the reader group are the same in one aspect: the goal to voice their beliefs and ideologies.

To understand the relevance of it, I turn to the social media market. As a reminder, this is the first type of market in the theoretical framework. It doesn't refer to the market for news, which appear on social media. It refers to the market between the social media firm (as supplier of service) and the users of the platform (as demand for the service). If the social media platform firm understands that its users essentially want to voice their own ideologies and beliefs about the world, it can consciously act according to it and create options which allow this. The firm will be incentivized to do it, because their business model relies on collecting personal data. Turning the personal data into revenue streams, the social media firm can finance its operation (Zuboff, 2019). The way to collect more personal consumer data is to increase the activity on the platform as much as possible. If the users have an identity incentive to act in both positions

(reader/provider) on the news market of the platform, they will spend more and more time on it.

Using the logic of identity economics, I could build a model which explains why there is a chance for a market with heavy information asymmetry to still exist. If we take into consideration only the financial and economic aspects of the consumer decision problem, the result is not so obvious. However, if we supplement it by the identity elements, and consciously think about what kind of identity gains/losses might arise from the activity on the market, we can understand the motives much better. We could argue, that social media markets are in fact not at a disequilibrium point, only if we analyze it with an incomplete model, which doesn't consider to identity.

4. Proposal for empirical research

My paper builds completely on literature review and theoretical modelling. The reason for this is the lack of available resources and possibilities, which wouldn't allow me to conduct proper empirical research in the topic and design an experiment. I decided not to superficially cover it with the limited options I had. However, experiments and empirical grounding are essential to the development of the field of behavioral economics. Because of it, I would like to point out how the theory which I have built in this paper could be further evolved and empirically researched. There are many different parts of the theory which alone are worth for a full research paper to investigate.

One aspect is the distinction between individual and organizational users in the model. I aimed at incorporating this idea into current literature on social media behavior, however none of the groups and clustering which I have found describe precisely this type of distinguishing logic. The existence of the two groups is not an interesting question, since it is perfectly clear by definition that there are these two types of social media users. However, their behavior and how they approach social media activity, their presence on the platform can be completely different. In my model, I mostly focus on the individual users, but by having more empirical data about how individual and the organizational users relate to each other, could potentially add a lot to the theory.

Another element which would be obviously relevant to test is the identity part of the model itself. As with the previous case, the distinction between the identity groups is clearly relevant, and by definition we can observe that users appear on social media both as a content consumer and producer. However, what's a more interesting issue is whether the social norms which I

have attached to these groups hold up in reality? I have used Gentzkow's (2014, 2017) media market model as a basis for these norms, and assumed that the norms and ideals of these groups follow an individual profit/utility maximization problem. Even though I truly believe that this is a reasonable assumption based on the market logic described above, it has to be tested.

What kind of experiment would fit this problem? It is worth it to elaborate a little on the special case of experiments in identity economics. Classic economic experiments usually test an economic theory and look for answers in financial or monetary incentives. In order to do this, the experimenter has to strip away the social context and according to methodological individualism, focus on one subject of the analysis. However, as I have described in the theoretical background, identity economics builds on the idea that humans are social beings, and they have to be understood in a social context. Therefore, the experiment itself also has to have a social context (Akerlof, 2010). The experimenter has to create social divisions, and interactions between subjects. It can be set in a laboratory or real-life environment both. In the context of social media identities, it would be a central question to control for the social effects on individual subjects which might cause the emergence of the described social norms. In other words, what are the social reasons for people wanting to voice their opinion and belief so much?

A main question of such an experiment is how to properly assign the participants into the two identity groups (reader/provider)? In real life, the two identity groups are not easily distinguishable, since social media users act as readers and providers at the same time. In the case of a laboratory experiment, the participants shall be assigned to the two groups and asked to perform only specific tasks which normally happen at either the reader or provider sites. For an example a subject in the reader groups shall be asked to scroll through a number of posts, read them and in the end, answer questions which reflect on how satisfied they were with the posts. On the other, a provider shall be asked to pick 2-3 specific topics from a list of potential themes. After picking the topics, pick several posts which are related to the topic, but all are written in a different style. Some of them are more biased on purpose, some of them aim for more objective reporting. Some include ideological influences heavily, some less heavily. After selecting the posts, the subject is asked to answer questions about how fulfilling they felt to have the chance to post.

5. Discussion – application of identity theory to markets

The results of the model, presented in chapter 3.5. still don't give a full answer to the research question of the paper. The research question was: *Is it possible, and if yes in what way*

to apply an identity economics framework to a specific market, and in this exact case to the media market? In this section I would like to describe the process of my work, with the goal of drawing conclusions about it, which can be useful for further research in the field of identity economics.

I have formulated the research question of wanting to apply the identity methodology to a market because I was genuinely interested in it. Media and its markets all over the world are a fascinating spectacle today which affect our lives and societies in various ways. On the other hand, the emerging new field of identity economics seems progressive, innovative and seems to have a high potential for revolutionizing economic thinking. Furthermore, the identity methodology described by Akerlof (2010) is not specifically designed to apply it to markets. Some of the examples which Akerlof mentions are in essence market environments, such as the identity economics of organizations which is embedded in the labor market environment. However, I have realized that the goal of it is not on applying the theory to *the market*, but to apply it *to the individuals who are present in a market or other environment*. I found it to be a very interesting challenge to use the theory for a whole market. This is the contribution of this paper to the current literature of identity economics: a theoretical analysis of identity framework to a specific market.

There are essentially two types of problems which are known to economics. One is an equilibrium problem and the other is an optimization problem. In a market environment, the economist is always looking for a market equilibrium point. In order to do that, the economist analyzes the individual optimization problems of the market participants. Namely, the profit maximization of the firm, and the utility maximization of the consumer. Realizing that identity economics is always about the social context, I had to find a segment of this economic market logic which allows for the social interaction between its participants. I have found that in the social media the user experience, in other words the consuming of the social media service itself is the part of the market where social interaction happens. The way it happens is in the form of providing and reading content.

To answer the original research question, I have come to the conclusion that it is in fact possible to apply identity theory to markets. However, markets don't have identities therefore in order to successfully apply it, the key aspect is that one has to find and pinpoint the elements of a market where social interactions actually happen. Afterwards, there is a chance to describe the social groups, norms and identity gains of that specific social area of the market.

6. Conclusion

The paper starts with a detailed theoretical introduction on how the problem of decision-making in economics has changed over time. It comes to the conclusion that the notion of rationality is a key aspect and in order to answer how humans make decisions we have to have a reasonable idea about what can be considered rational in a specific situation? The general conclusion about this problem comes from Gigerenzer (2011), who formulates the idea that rationality can be different things and therefore it is a changing concept. People have to select what type of rational thinking best fits the situation and context they are in.

Then, I moved to the issue of methodological individualism as an underlying concept of social sciences. I contradict it with the idea of social interaction theory, which originates from social psychology. For my analysis, the main finding of social psychology is that people are constantly in dynamic interactions with each other and the environment. During the interaction they are trying to build their identities, and in fact this is what leads them to consumption and economic transactions. I describe identities and their theoretical relation to economics based on two main sources Garai (2017) and Akerlof (2010).

After the theoretical background I turn to the specific research question of the paper. How can the framework of identity economics methodology, according to Akerlof (2010) can be applied to a specific market? I select the social media market to be the subject of the analysis. I define the elements and borders of the market, as well as the participants and services included in it. I create a theoretical model for social media, which includes two market layers. The first is the market for the social media platform. It is supplied by the social media firm, and demanded by the users of the platform. This first market is at a disequilibrium, because users pay a high price for the service, in the form of giving up personal data. The second market is the news information market, which appears on the platform of social media. The users of the platform are both the providers and readers of the news content. The behavior of providers and readers is modeled after models which describe newspaper markets.

I form a research hypothesis: it is possible to include identity into this model, and it will be able to describe why there is a disequilibrium at the social media market. I include identity elements (social groups, social norms, identity gains) into the model. After having included the identity elements, I describe the mechanisms, through which they can affect the whole model. The identities of a providers and reader have similar social norms, and therefore they can gain identity utility by acting in the roles of both identity groups. This mechanism can be exploited

by the social media firm. The firm can create incentives for the user to stay active on the platform as much as possible, in either the position of a reader or provider. This answers why the disequilibrium of a social media market can still exist. If I consider identity gains, the model can be considered to be in an equilibrium state.

Identity economics is a young field of economics which is currently being shaped in many different ways. I believe that it has enormous potential to add to economic thinking, which in the end can lead to much better models of the economy. Besides the scientific interest in these models, they could be extremely useful in both business decisions and policy-making. Further research is essential for the theory to develop and get to a point where it can be effectively used for these purposes. I hope to have the chance to develop my research and extend it with the empirical analysis which I have proposed in Chapter 4.

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