



Analysis and Countermeasures of Market Economy under the Background of “Information Asymmetry”

Muye Li

Beijing Normal University-Hong Kong Baptist University United International College

*Corresponding author. Email: catherine02106@icloud.com

ABSTRACT

In a market economy, the balance between demand and supply will be realized through the spontaneous adjustment of the "invisible hand" of price, thus realizing the optimal allocation of resources. But sometimes, due to "market failure", relying on the market alone cannot achieve the optimal allocation of the market. Therefore, "information asymmetry" is one of the main causes of "market failure". This paper adopts survey method and literature research method to analyze causes of asymmetry, negative effects of information asymmetry, and solutions. Through the analysis of this paper, the author finds that the emergence of information asymmetry will have a variety of negative effects on market transactions and bring moral hazard. The government can solve the information asymmetry problems by introducing policies and using high-tech methods.

Keywords: *Information Asymmetry, Private Information, Public Information, The “Invisible Hand” of Government, Countermeasures*

1. INTRODUCTION

Information asymmetry has existed since the beginning of human trading, has become more prominent in the information age, and will certainly continue to exist in the future. For example, civilization came into being because of writing, which is the simplest form of information. People who can read and write will have an advantage in the information asymmetry. In ancient times, science and technology were underdeveloped and limited by geography and physics, so the collection, transmission, processing, and interpretation of information were still relatively elementary. But in today's world, messages travel in milliseconds or even microseconds.

People have entered the information world, a world of information explosion, a world dominated by information. But it has also entered an era of information asymmetry. So what are the effects of information asymmetry on the market, and what are we doing to mitigate these problems? With the arrival of the new economic era, information plays a more prominent role in the market economy than ever before and will play a more important role. The study of information asymmetry can find the defects in the market system and point out that the complete market economy is not natural and reasonable, and the complete free market mechanism may not bring the best results for the market economy, especially in investment,

employment, environmental protection, social welfare, and other aspects. At the same time, it also emphasizes the importance of the government in the economic operation, and appeals to the government to strengthen the supervision of the economic operation, so as to make the information as far as possible from asymmetry to symmetry, thus correcting some bad effects caused by the market mechanism.

2. INTRODUCTION TO INFORMATION ASYMMETRY

2.1. The definition of information asymmetry

Information asymmetry refers to the difference in the content and quantity of information received by both parties. In traditional economic theory, it describes that both buyers and sellers can obtain all market information free of charge, that is, everyone in the market can obtain complete information. Commodities are regulated by the "invisible hand" of the market and fluctuate around their value. When the price of a commodity is adjusted so that the quantity supplied equals the quantity demanded, the market achieves an optimal allocation, and the transaction is realized. This is the ideal transaction realization. However, in the current real market, it is impossible for most buyers and sellers to obtain complete

market information, and the acquisition of information also requires a certain cost. If one party pays more, they will have access to more comprehensive information, so they will have an advantage in the transaction. But for the other party, it is not conducive to his interests and development. This kind of imbalance problem is universal in the capital market! Because the problem of information asymmetry often appears, it will have a certain negative impact on the market, and even hinder social development. Therefore, the study of information asymmetry is very urgent, people must minimize the impact of information asymmetry on the market so as to ensure the stable operation of the market.

2.2. Reasons for information asymmetry

Firstly, information asymmetry is the inevitable result of people's specialization in the market, and it is a common phenomenon in the economy. An important aspect of the increasing productivity of human society is the increasingly precise division of labor. But at the same time, the continuous precision of the division of labor means that people only know the knowledge of their own specialty, relatively little knowledge of other specialties, and only know how to use commodities. Therefore, consumers know less information than producers of goods, and information asymmetry results.

Secondly, everyone in the market can't know everything, and everyone knows only a limited amount of information. On the one hand, the limited knowledge of the trader is determined by the limited resources he has at his disposal. On the other hand, everyone is bound by rationality, i.e., numeracy, decision making, and so on [1].

3. THE INFLUENCE OF INFORMATION ASYMMETRY

3.1. Market transaction

The impact of information asymmetry on the market is most directly reflected in the efficiency of market transactions. Information asymmetry leads to the game between buyers and sellers, which affects market transaction efficiency.

Due to information asymmetry, both sides of the transaction constantly engage in psychological contests for their own economic interests, which greatly prolongs the transaction time and leads to low market transaction efficiency [2]. When referring to the efficiency of market transactions, people must have to mention the information that affects the efficiency of market transactions, which can be roughly divided into two types. One is "public information," which is all public information that is available to everyone. For example, a product's appearance, shape, color, and other obvious public information. The other is "private information", which tends to be on the seller's side, such as the intrinsic

quality and cost of a product. Therefore, in the presence of private information, the information obtained by both sides of the transaction is not equal, that is, "information asymmetry". A simple example is a buyer who wants to buy a car and is satisfied with public information about the car. If there were only "public information", the process would be very smooth and fast. However, due to the existence of "private information", buyers need to spend time and money to understand the "private information" of the car and re-decide whether to buy the car. This leads to a decrease in transaction efficiency.

3.2. Increased transaction costs

Information asymmetry makes buyers face more uncertainty when making decisions, which leads to an increase in transaction costs.

Under normal circumstances, for the work duties and nature of the agents, their work should all follow the idea of the principal. In actual work, some agents carry out their work without really considering the vital interests of the principal, intentionally concealing the information that is harmful to them, and exaggerating the information that is beneficial to them. For example, concealing the shortcomings of the product, using advertising to carry out unrealistic propaganda, etc., thus causing a discrepancy between the agent's work and the client's intention [3]. In this case, the party with less information will want to master more "private information" to safeguard its own legitimate rights and interests. Thus, a large amount of time and money are spent on collecting "private information", which leads to an increase in transaction costs and has a negative influence on market transactions. This kind of asymmetric exaggeration of market information and false product information makes some businesses only consider immediate interests, give up long-term interests and demand high profits from consumers. The liquidity of illegal peddlers strengthens this information asymmetry. At the same time, it also reduces consumers' desire and satisfaction to buy goods, hindering the sound development of society [4].

3.3. Moral hazard

The emergence of "information asymmetry" has brought a series of negative effects to the market, and moral hazard is one of them. Moral hazard is due to the greater risk of opportunistic behavior. For example, people engaged in economic activities to maximize their own interests at the expense of others, or people transfer the risk to others to maximize their own interests [5]. The author believes that moral hazard exists in the case of information asymmetry, but it is not universal. In the case of information asymmetry, adverse selection exists in the insurance market. Adverse selection refers to the distortion of market resource allocation caused by information asymmetry. The theory of adverse selection

was first proposed by Akerlof in his 1970 model of the used car market! "Adverse selection" in the used car market results from the asymmetry of quality information between buyers and sellers. The seller knows the "true quality" of the car, while the buyer only knows the "average quality" of the car. They are willing to pay only for the average quality of the car, but sellers with above-average quality will choose not to trade. Only below-average sellers enter the market! The result is a drop in the quality of used cars on the market, which leads to a further drop in the price buyers are willing to pay, and so on [6].

But the adverse selection is not a universal behavior. To begin with, when making choices, people generally take a comprehensive consideration and cannot always be opportunists [7]. Like adverse selection, people engaged in economic activities in the market have a certain moral basis and moral bottom line. So moral problems should be the exception, not the rule. Rational people seek to maximize long-term benefits, not just short-term ones. The cost of moral hazard is huge. The first is the material cost. For example, when people buy car insurance, both sides will pursue the minimization of losses rather than the maximization of benefits after accidents. Insurance companies also seek to minimize losses because some of the costs of an accident cannot be covered by money. After the accident, the communication between the parties and the insurance company also has costs, such as time cost. Taken together, the implied costs of moral hazard are enormous. At the same time, because of the existence of cost, it will effectively limit people to do immoral things and regulate their own behavior.

4. SOLUTIONS TO SOLVE INFORMATION ASYMMETRY

4.1. *The government's solution to information asymmetry*

For the negative impact caused by "information asymmetry", the government needs to carry out social regulation, that is, to protect the rights and interests of the information inferior party, and to regulate the information superior party accordingly. The main areas include consumer protection, product quality, service quality, the media, occupational safety protection, etc. [8]. The government has a "visible hand", and the relevant personnel of the government should give full play to the functions of the government so as to better solve the problems caused by "information asymmetry". The reason why the government can better solve these problems can be concluded from its nature: on the one hand, the government is a public power organ, and publicity is its basic characteristic. It has the basic duties of promoting economic development, maintaining fair trade, and promoting fair competition. Only by solving the problem of "information asymmetry" can the

government perform these duties well. On the other hand, because the government is mandatory, the government has some advantages that the market does not have. The government has the organs that can execute violence, such as the police, courts and other judicial organs, law enforcement systems and tools, which provide a very important guarantee for the compulsory regulation of the market. The government can also adjust to the problem of "information asymmetry" through publicity and other means to create public opinion. Government departments have a very strong ability of publicity. They directly or indirectly influence people's thoughts and regulate people's behaviors through publicity and other ways.

The government regulates the market with its visible hand. First, the government will provide everyone in the market with an information public good: a mechanism to search for and provide information. In today's world, the average level of information is not high, and the acquisition of information mainly depends on the government and information agencies. It is not easy to form a more perfect and extensive access to information through social groups. Moreover, the economic situation of each country and each enterprise is different, so it will be more difficult to realize the information network of non-governmental intervention. Therefore, it is more necessary to play the role of the government in constructing open information networks, and collecting and providing information. The government can transform "private information" such as enterprises and markets into "public information" by means of human resources, financial resources, and network information technology, so that the distribution of market information tends to be symmetrical [9]. By turning "private information" into "public information", uninformed people in the market can be turned into informed people. For example, consumers can obtain all "private information", which helps them make more accurate judgments. As a seller, the disclosure of "private information" can improve service quality and effectively reduce the loss caused by adverse selection and moral hazard. Thus, ensuring the orderly development of market economy.

Second, the government can make laws to compel producers to disclose information to consumers. Because producers know more "private information" than consumers, and because producers will inevitably hide information in order to maximize their own interests. So, the government thinks from the position of consumers and requires manufacturers to provide consumers with enough information on different goods and services. For example, for the production of drugs in China, the Chinese government requires the manufacturer to provide enough information on the drug formula, production date, expiry date, applicable population, method of use and other aspects.

4.2. Using high technology to solve information asymmetry

In the new era, information quality will become a key factor that directly determines economic development. Accurate, comprehensive, and timely information is more important, but there is widespread information asymmetry in actual economic activities.

To solve information asymmetry except through government's "invisible hand", people can use new technologies as a quick and efficient way to solve information asymmetry in the era of the Internet technology's rapid development. For example, blockchain technology, big data technology, and artificial intelligence techniques have been widely recognized and received in the world, so people should solve the problem appropriately according to the development of the technology introduction of modern technology. Blockchain is a decentralized database, with distributed storage data, point-to-point transmission, consensus mechanism, encryption algorithm and other computer modes, which are characterized by decentralization, transparency, anonymity, and traceability mechanisms. Decentralized and transparent distributed bookkeeping can solve information asymmetry in the financing process, timestamp and consensus mechanisms can protect data security from infringement, and smart contracts can improve efficiency and strengthen supervision [10].

5. CONCLUSION

The phenomenon of information asymmetry is widespread and will cause many problems, especially in the economic and financial fields, which require more information. The mechanism of the market itself can solve a small part of this. However, most of the problems still cannot be solved or effectively solved. In order to avoid the inefficiency and damage caused by information asymmetry, the government needs to guide both sides of the market transaction to find solutions to these problems. At the same time, investment in new technologies should be accelerated in the new era, such as the application of blockchain technology, big data technology and artificial intelligence, which can effectively deal with information asymmetry and improve the efficiency of economic operations. In the process of market development, all parties are making continuous efforts to reduce the negative impact of "information asymmetry" on the market.

This paper only analyzes the impact of information asymmetry on market transactions and does not generalize all aspects of the economic field. The future research will continue to analyze the negative and positive impacts of information asymmetry on the economic field.

REFERENCES

- [1] Minghui, L., Causes, results, and governance of information asymmetry. Technical and economic, (1), 2018, p. 62.
- [2] Yejin, L., Influence of "Information Asymmetry" on Market transactions and countermeasures. Northern Economy, (2), 2007, p. 138.
- [3] Xin, L., The Impact of "Information Asymmetry" on capital Market and Countermeasures. Management and Technology of Small and Medium-sized Enterprises, 2019, p. 116.
- [4] Qiang, S. Min, Z., The Harm of Market Information Asymmetry. Shopping mall Modernization, (497), 2007, p. 189.
- [5] Juan, L. Guanghua, L. Jinchun, C. Shujie, C., Moral Hazard caused by information asymmetry in financial market. Economic Perspectives, (9), 2021, p. 126.
- [6] Xin, Y., Research on information Asymmetry in Technology Market. Information Science, (4), 2011, p. 516.
- [7] Guiwu, S., Reanalysis of Several Problems in Information Asymmetry Market. Innovation, (3), 2014, p. 56.
- [8] Di, X., The economics of Government Regulation., 2003, p. 123.
- [9] Zhong, W., On Government regulation of Information Asymmetry Market. China Information Industry, 2006, p. 42.
- [10] Kaiyin, L., Behavior Analysis of economic agents under information asymmetry. Hot spot perspective, 2021, p. 127.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

