

# BULLETIN OF ECONOMIC THEORY AND ANALYSIS

Journal homepage: <a href="https://dergipark.org.tr/tr/pub/beta">https://dergipark.org.tr/tr/pub/beta</a>

# **Asymmetric Information and Privatization of Health Care**

Songül DEMİREL DEĞİRMENCİ Değirmenci Attps://orcid.org/0000-0003-0982-0796

**To cite this article:** Demirel Değirmenci, S. (2024). Asymmetric Information and Privatization of Health Care. *Bulletin of Economic Theory and Analysis*, 9(1), 171-184.

Received: 02 Dec 2023

Accepted: 30 Dec 2023

Published online: 29 Feb 2024



©All right reserved



# Bulletin of Economic Theory and Analysis

Volume 9, Issue 1, pp. 171-184, 2024 https://dergipark.org.tr/tr/pub/beta

## **Asymmetric Information and Privatization of Health Care\***

### Songül DEMİREL DEĞİRMENCİ<sup>a</sup>

<sup>a</sup> Öğr. Gör. Dr., Hitit Üniversitesi, Sungurlu MYO, Yönetim ve Organizasyon Bölümü/İşletme Yönetimi Programı, Çorum, TÜRKİYE

https://orcid.org/0000-0003-0982-0796

#### **ABSTRACT**

In the 21st Century, knowledge is seen as a commercial meta. Via knowledge we obtain reputation and the power in everyday life, and, knowledge is a source of profit in the commercial life. Accessing information has become easier through, the mass media becoming widespread. However, in some complex products or services, superficial information may not be enough to differentiate effectively among the choices and make a good decision. Buyers and sellers should have the necessary knowledge about the goods on the market, the costs, the profit and the quality factors in order for the market to function effectively. Buyers and sellers should also have the same level of information so that health care could become a marketable service in a perfectly competitive market. This situation, which is known in health economics, will be examined through knowledge and asymmetric information issues within the scope of the study.

#### **Keywords**

Asymmetric Information, Commercialization, Health

**JEL Classification** H001, I102, P001

**İLETİŞİM** Songül DEMİREL DEĞİRMENCİ ⊠ <u>songuldemirel66@gmail.com</u> ∃Hitit Üniversitesi, Sungurlu MYO, Yönetim ve Organizasyon Bölümü, Çorum, Türkiye.

<sup>\*</sup> Çalışmanın bir bölümü, "Commercialism Of Knowledge, Asymmetric Information And The Health Service" adıyla V. European Conference on Social and Behavioral Sciences, St Petersburg, Russia – September 11-14, 2014'te düzenlenen etkinlikte sunulmuş ardından özet olarak yayınlanmıştır.

# Asimetrik Bilgi ve Sağlık Hizmetinin Özelleştirilmesi

#### ÖZ

21. yüzyılda bilgi ticari bir meta olarak görülüyor. Bilgi sayesinde günlük yaşamda itibar ve güç elde edilir, ticari hayatta ise bilgi bir kazanç kaynağıdır. Kitle iletişim araçlarının yaygınlaşmasıyla bilgiye erişim kolaylaştı. Ancak bazı karmaşık ürün veya hizmetlerde yüzeysel bilgiler, seçimler arasında etkili bir şekilde ayrım yapmak ve iyi bir karar vermek için yeterli olmayabilir. Piyasanın etkin bir şekilde işleyebilmesi için alıcı ve satıcıların piyasadaki mallar, maliyetler, kâr ve kalite faktörleri hakkında gerekli bilgiye sahip olmaları gerekmektedir. Sağlık hizmetinin tam rekabet piyasasında pazarlanabilir bir hizmet olabilmesi için; alıcı ve satıcıların aynı düzeyde bilgiye sahip olmaları gerekmektedir. Sağlık ekonomisinde bilinen bu duruma, çalışmada bilgi ve asimetrik bilgi konuları üzerinden bakılacaktır.

Anahtar Kelimeler Asimetrik Bilgi, Özelleştirme, Sağlık

**JEL Kodu** H001, I102, P0013

#### 1. Introduction

When the history of civilization emerging along with the development of humanity is examined it will be seen that there are a number of characteristic features shaped by circumstances within each period. Post-industrial society was characterized as information society or knowledge society and today information has become a significant strategic factor.

When we look at the last thirty years of world economic system it is seen that neo-liberalism the new name of liberal economic policies has been on the rise again due to several reasons. Services carried out by the state during Keynesian economic policies period and social state practices period are abandoned to market again through various methods. In this context, it is observed that health service has adapted to the process by means of reforms. While the service was sometimes directly purchased from the market (private health institutions) the state shaped service according to market based factors (outsourcing, total quality management, performance).

Health service has a different significance and value than other types of services due to its nature. In the study the characteristics distinguishing health service from other types of services and the discussions on whether the market or state should provide the service will not be included. After reviewing the literature regarding the emergence of information and asymmetric information the use of asymmetric information in health service will be emphasized.

#### 2. Method

In this study, qualitative research approach, a detailed and thorough data collection method was used. Literature review on the history of asymmetric information was conducted. In the study a profound examination was carried out by focusing other types of services in the marketisation process of health service which is a current phenomenon by using the case study method.

#### 3. Literature Review

#### 3.1. Information as an Economic Value

Although Aristotle was the first to classify knowledge in west, Bacon defined the knowledge as set of methods that could be revealed by individual intelligence (Tekin, 2014: 49). Transition from an agricultural society to industrial society introduced an effective change and renaissance. Today, almost a knowledge explosion is experienced; knowledge has ceased to be an instrument and it has become a fundamental production factor (Tekin, 2014: 61).

As Michel Foucault, today's one of most important philosopher, states; knowledge cannot be separated from power regimes (Steven& Douglas, 1998: 71). The fact that knowledge is source of power is only possible by obtaining the information that others do not possess. Power is in need of information and this knowledge difference enables that the persons possess information gain legitimate advantage over the other persons. Ultimately, possessing knowledge in general would lead to power of person with information over ignorant person. It could guide and motivate the person for action in social relationships by turning person into leader and influencing other individuals (Bakan& Büyükmeşe, 2010: 74). It should be kept in mind without question that possessing knowledge will not be able to guide individual in every case since knowledge is not only focus of power (Balcı, 2014: 1).

The relationships of the ones demanding and supplying information with the amount of knowledge used was positioned as an economic value in which relationship of manufacturer and consumer of goods with the amount of goods manufactured and consumed. Information is produced to be sold and it is consumed to be evaluated in a new production process. In fact, information always occupied a position in economic analysis. Information is a direct production factor (Özcan, 2008: 8-9).

Both buyer and seller have to have information about the goods and services in order to have a perfect competitive market. Symmetry conceptually expresses similarity and equality between two objects in terms of framework, power and measurement. When these two objects carry out an economic exchange operation, asymmetric information occurs if one of two parties has relatively more information (Mutlu& Işık, 2005: 55). The situation in which one of economic agents has more information than other party is expressed by "asymmetric information" concept in economics. The party possessing more information in cases where asymmetric information is effective among economic agents that are interacting gains an unfair advantage. Therefore, it is impossible to perform economic activities effectively in cases where asymmetric information is (Karahan, 2006: 151).

Material and moral earnings obtained as a result of information and expertise superiority of one party on goods and services that are subject to commercial activity against other party is referred as asymmetric information income (Şimşek& Karakaş, 2006/2007: 24). Knowledge-based activities become more asymmetric starting from the utilization of vital tools and services that grow day by day and become specific as a result of division of labour and specialization (Bauman, 2004:18-20).

#### 3.2. History of Asymmetric Information

From the 18th century, important economics like Adam Smith, A. Marshall, Weber, Sismondi and J.S. Mill were able to see the effects of (incomplete) information on economy. The first significant ideas regarding the use of information in economic life was used by F.A Hayek, member of Austrian Economy School, in market socialism discussion in 1930s and 1940s (Yay, 2004: 24-27). The core of the criticism against socialist system is as follows; a market in which prices could occur cannot be formed since the means of production are not owned by different persons. The prices should be known for economic calculation. Although centralized administration knows the production technique and order of preference for consumption goods, prices of consumption goods cannot be found since there is not a market for production inputs; in that case neither the effective distribution of production inputs nor the knowing of consumer demand would be possible (Kazgan: 2006: 363).

The market is regarded as process in Austrian School and the information is obtained through the changes within this process. According to Hayek, market is a process that is in

continuous change and this process involves unplanned and unexpected changes as well. In this respect, information cannot be collected in a single source and it is impossible for central authority to know the information that all individuals have (Sarıçoban, 2012: 164). Thus, Hayek confronts the argument claiming that collectivist economies could operate effectively as well (Kazgan, 1997: 346). In particular he responded claiming that the temporary, ephemeral, local characteristics of information cannot be reconciled by centralized authority (Yay, 1993: 59-60). The state of information including time dimension which is fragmented, scattered and concentrated in different places (local) is referred as "practical information" (Oğuz, 2000: 63-67).

As the market failure view weakened in the 1970s, economists came up with new arguments. Stiglitz's "efficiency wage" hypothesis, Williamson's "self-interested behaviour" and Akerlof's "lemon markets" model are some of these arguments (Yıldırım, 2019: 220). Asymmetric information problem systematically entered into economics literature with the article of G.A. Akerlof called "The Market for Lemons: Quality, Uncertainty and Market Mechanism (1970)" for the first time in technical sense. The concept which was initially correlated on the basis of "adverse selection" and "moral hazard" in second hand car (lemon) markets and insurance sector later became observable in almost every area of life for several times together with other contributions. Thus, according to perfect competition market approach of neoclassical theory assuming that producer and consumers have complete information claims suggesting this situation is a market failure became evident (Sarıkaya, 2002: 99).

In 1970s economists created new market failure arguments since previous period market failure arguments such as public goods and externalities weakened. They introduced New Keynesian Approach in which they tried to change microeconomics in order to enable derive macroeconomics phenomena out of microeconomics principles against the criticisms of new right economists. This quest includes the "efficient wage" hypothesis of Stiglitz, "lemon markets" model of G. Akerlof, "manipulative behaviours" thought of Oliver Williamson and others. However, market failures in the sectors were examined by putting more emphasis on asymmetric information (Alp& Karakaş, 2008: 216).

Akerlof's lemon markets model basically refers to the market disruption caused by the fact that one of the parties has more information than the other, that is, the information hidden before the exchange between the parties or the contract is signed due to the adverse selection. In this sense, there is clear uncertainty about the quality of the goods and services trade taking place in a situation where ambiguity is high. Particularly dishonest attitudes of people who are inclined to sell low-quality goods and services cause the markets to fail. If dishonest trading drives honest trading out of the market, it comes out as a cost of dishonesty. Thus, the cost of dishonesty will affect not only the buyers, but also the cost in the form of reduction or elimination of legally conducted trade. Contrary to the assumption of perfect competition by the neo-classical economics, this situation may cause a market disruption (Alp, 2010, s. 186).

It has been more than a quarter century over these discussions. Today, neo-liberalism is substituting for Keynesianism, Socialism and social state. Neo-liberalism which is a new phase in the history of capitalism began with economic crisis experienced in 1974-75, demonstrated a rapid development with the disintegration of the Soviet bloc in 1980s and became an indisputable dogma around the world throughout the 1990s (Yaşar, 2010: 269).

# 3.3. Distortive Effect of Asymmetric Information on Perfect Competitive Market in Neoliberal Period

Market is a network of exchange comprised by buyers and sellers. Full operation of market mechanism based on private ownership and competitiveness depends on the absence of significant obstructions for market entry or exits. The product in question should ne homogenous (standardized) and the number of buyers and sellers of the product should be more so that the decision of buyers and sellers will not affect the total demand, supply and price of the product. All buyers and sellers need to have complete and accurate information and they need to be able to become aware of any change in market conditions. Only then a fully competitive product and service market would be formed. Rationality which is another principle market economy is based on, depends on the view that economic agents behave rationally. Producers and consumers carefully assess all available information and make preferences that will protect their personal interest when they are taking decisions.

It is an important factor to have "complete information" in theories carried out with the assumption that economic agents act within perfect competitive market conditions. However, it is impossible to have complete information in the markets except in exceptional circumstances. In this case, the distortion of ideal market structure is inevitable. On the other hand, the difficulties that occur in the perception of possessed knowledge by the persons that do not possess same

knowledge causes a power problem between people with or without knowledge which will form the adverse selection and moral hazard that are two basic approaches of asymmetric information. In this way, we will not address that dimension of 'asymmetric information' problem which distorts the structure of market and means that one of the economic parties has more knowledge compared to other. Different environments and business communities hinders the optimal realization of information symmetry; and the information symmetry between the ones having more access to information and the ones having less success to information is distorted. As a result of this differentiation occurring in different ratios for different markets one of the parties is superior to the other (Ünsal, 2007: 139-141). Asymmetry in the knowledge will bring incomplete competition. In such cases, it is put into words that the state should become involved in order to reduce the cost, increase efficiency and maximize the social benefit (Gelegen, 2019:23). It is accepted that the state should intervene in the economy with the aim of ensuring more effective use of resources, eliminating the deficiencies of the price mechanism and removing the obstacles to competition (Öztürk & Bayraktar, 2009:74). However, the New Public Administration Approach, which was voiced in the public under the influence of neoliberal policies after the welfare state period, advocated the transfer of all other goods and services, including health care, to the private sector due to the influence of globalization. It is noteworthy that public hospitals have adopted private sector-specific management models. The community health centres that carry out primary health care services have been replaced by the family medicine system (Sırakaya, 2015: 75-76).

#### 3.4. Asymmetric Information in Health Services

Information asymmetry exists in almost all areas. We can see information asymmetry in many areas such as banking, auto mechanic, insurance, technology products. However, people can learn about the product or service they want to purchase in a detailed way. This could be automobile, a computer or comprehensive insurance... But none of them bears risky, thorough and multi-dimensional information as the field of health service.

Advances in medicine along with the progresses in science increased the profoundness and specialization in health service. Health education is a long and expensive process. Health services emerge as complex market segment that cannot be analysed by only observing from outside or learning generally accepted information. In this case, significant information asymmetry factor between service receiver and service provider stands out. The fact that one of the parties has much

more information about the goods or service provides the opportunity to influence and direct the other party and leads to a reduction in competition conditions and customer satisfaction. It is assumed that level of information gap between patient and physician would decrease through providing more information to patient. It is considered that the negative effects of information asymmetry would decrease after treatment based on the information level of patient (Özcan& Taş, 2013: 822-823).

Health service includes activities about prevention of diseases and improving the level of public health as well as diagnosis, treatment and rehabilitation of diseases. (Ateş, 2011: 2). People pay a specific time and price to get this service. It is believed that the existence of asymmetric information occurring within the market balance hinders the formation of market efficiency. Patients usually do not know which treatment will be applied for how long and which cost to them due to this significant information difference. Therefore, a situation in favour of service provider occurs (Özcan& Taş, 2013: 822-823).

Asymmetric information facilitates that the doctor and hospital appearing in the supply side of the health service market to direct the attitudes and behaviours of patient appearing in demand side. These attitudes and behaviours could usually lead to overuse of resources and increase in expenditures in the health service market. Ultimately, the patient decides how much and how health service will be used and doctor may increase the health expenses with a motive to maximize its profit as well (Bilgili& Ecevit, 2008: 203). The fact that decisions on patient's hospitalization time, medication to be prescribed and duration of this medication and all other decisions are taken by health care providers eliminates the initiative of patients. When individuals could not discuss the size of services to be provided, they cannot negotiate and control the health services (Bilgili& Ecevit, 2008: 203). Healthcare providers may work with the motivation to get paid more and make a profit. This will pave the way for various abuses in the partial or complete privatization of health services and the billing of the service fee by the health professionals (Çevik&Yüksel, 2021:98). For this reason, both the practices of privatization and the system to be established must be supervised with very strict rules. As a matter of fact, it is observed that the most intense privatization practices have been experienced in health services and health expenditures have constantly increased in the last two decades (Ağır&Tıraş, 2018: 653-654). In cases where privatization practices have a good income distribution and all segments of society are able to purchase health services, possible problems will be minimized. In the marketization of health services, the uncertainty of demand is quite different from other services due to the excess of medical knowledge of healthcare personnel and the conditions of supply (Karabulut, 2001: 39).

In our country, it is understood that there has been intense privatization of health services since 2002, when the implementations of Health Transformation Programme (HTP) started. Subcontracting, employment of contracted personnel, family medicine system have been established and public-private cooperation practices have been brought into action. As a result of all these, it is observed that the poor community have difficulty in benefiting from the health service, their beneficiary contributions are high, debt in health premiums and out-of-pocket expenditures of the public to benefit from health services have been increasing (Gelegen, 2019: 97-98). Expenditures are mostly incurred by poor communities in rural areas (Yereli et al. 2014: 293). Out-of-pocket payments for health care, which arise as a result of privatization, disrupt equality. In order to remedy this situation, a progressive taxation style in which high income segments of society are charged more taxes and lower income segments of society are less taxed is recommended. (Demirel Değirmenci, 2020: 374). Therefore, privatization practices indicate that the system to be established should be supervised with very strict rules (Ağır&Tıraş, 2018: 653-654). Those who will carry out the inspection should be officials who know where the level of health care should be. In fact, those who benefit from health services do not have qualified knowledge to measure and evaluate the quality of the service unless there is an illness that occurs after the health service.

Interrogation of an individual regarding a health service provided by a doctor or quality of a legal service provided by a lawyer cannot be carried out thoroughly. Individual has only a sense of satisfaction or dissatisfaction as a result of the service provided. This results from lack of information related to service field received by individual and a clear asymmetry of information towards the expert providing service to individual.

To prefer a doctor lacking the knowledge and experience as a result of reverse selection in terms of consumer leads to loss of well-being. The sector providing the service cannot be questioned and there is no possibility and capability of a patient on questioning the knowledge of the doctor providing health service to patient. Although a physician specialized on the same subject has diagnosed much more different for the same patient compared to other physician no healthy

criticism or comparison can be done since the psycho-sociological analysis of that moment between patient-physician could be unknown (Ünsal, 2007: 139-141).

Raising the awareness of the ones using health services will be insufficient in solving the problems since the advances in medical field will continue. We should not expect from a patient to close the information gap by trying to understand the issue through questions such as; is the procedure- that could be anything ranging from a simple injection to organ transplantation- to be applied necessary? What are the adverse effects of this procedure? What are the unintended consequences of this procedure? When another service provider explains the same treatment method for the same health problem question marks over minds disappears but sometimes a completely different diagnosis and treatment method could occur as well. This situation will deepen the confidence crisis of customer (patient) to receive the service. The provided service could reveal spiritual and material consequences. An unnecessary operation, x-ray, prosthesis would be the greatest harm that can be given to a patient (consumer) (Özcan& Taş, 2013: 822-823). The fact that correction of a medical mistake requires a medical intervention could increase material and spiritual costs (Ünsal, 2007: 139-141).

There is no doubt that people have been satisfied with accessing health service more easily and receiving health service in physical places getting better each passing day recently without considering the cost of these services. However, the key issue is to establish satisfaction by means of performing the right treatment at the right and right place. Thus, the resources will not be wasted to receive health service (Özcan& Taş, 2013: 822-823).

#### 4. Conclusion

At present, although it is easy to reach the information it has actually been more difficult to reach the complete information due to increasing specialization. This situation which prevents the formation of a fully competitive market dynamics raises the problem of asymmetric information. The size of the asymmetric information problem may pose more serious effects than other sectors. Health care professionals may use information for beneficial purposes whenever they desire since they have more information compared to patients. Asymmetric information between the ones supplying health service focusing on human life and the ones demanding health service is more important than other sectors. Intangible damages will occur as well as pecuniary loss. Efforts of patients on reaching full knowledge will increase the level of welfare. Further to that point, health

care is different from other goods and services, and there is a problem of asymmetric information in its marketing. Considering the health service, which is included in the privatization practices of the state, there are problems in the utilization of resources, the formation of prices and the access of the entire public to the service. In today's world where there will be market disruptions, it seems essential for the state to intervene in the economy. In our country, where health services are mostly provided by the state, the share of public should not be reduced in comparison with the private sector.

#### References

- Ağır, H., & Tıraş, H. H. (2018). Evaluation of health expenditure types in Türkiye. Kahramanmaraş Sütçü Imam University, Journal of the Institute of Social Sciences, 15 (2), 643-670.
- Alp, S., & Karakaş, A. (2008). Hayek's economic approaches to asymmetric information theory: a comparative analysis. *Journal of Liberal Düşünce*, 5 (52), 215-230.
- Alp, S. (2010). Austrian school information theories and evaluation of Akerlof's lemon market model within the framework of e-commerce. *Osmangazi University, Journal of Faculty of Economics and Administrative Sciences*, 5 (1), 175-190.
- Atabey, S. E. (2012). Health systems and health policy. Gazi Bookstore.
- Ateş, M. (2011). *Health systems*. Beta Basım Printing Publishing Distribution Incorporated Company.
- Bakan, İ., & Büyükmeşe, T. (2010). A comparison of current and future situation regarding leadership "types" and "sources of power": a field study based on the perceptions of educational institution managers. *KMU Journal of Social and Economic Research*, 12 (19), 73-84.
- Balcı, A. (2005). *Transformation of the knowledge-power relationship*. August 8, 2014 from http://web.sakarya.edu.tr/~kaymakci/makale/ bilgiiktidar.pdf.
- Bauman, Z. (2004). Sociological thinking, Ayrıntı Publications.
- Best, S., & Kellner, D. (1998). *Postmodern theory*, (Translated by Mehmet Küçük), Ayrıntı Publications.
- Bilgili, E., & Ecevit, E. (2009). Problems related to asymmetric information in the health services market and proposed solutions. *Hacettepe Journal of Health Administration*, 11(2), 201-228.
- Çevik, A., & Yüksel, C. (2021). Health services in the context of the relationship between semipublic goods and asymmetric information. *Dicle University Faculty of Economics and Administrative Sciences Journal*, 11 (21), 85-107.
- Demirel Değirmenci, S. (2020). *Reform in health care: a review on basic health care (BHC)*, Ankara University, Institute of Social Sciences, Political Science and Public Administration, Department of Management Sciences, Unpublished Dissertation.
- Gelegen, K. (2019). The effect of the Privatization Process on the field of health services in Türkiye, Trakya University, Institute of Social Sciences, Department of Health Management, Unpublished Postgraduate Thesis.
- Karabulut, K. (2001), Privatization in the health sector, *Atatürk University Journal of Economics and Administrative Sciences*, 15 (1-2), 31-39.

- Karahan, Ö. (2006). Effectiveness of asymmetric information and monetary policy. *Celal Bayar University The Faculty of Economic and Administrative Sciences Journal of Management and Economics*, 13 (2), 151-163.
- Kazgan, G. (1997). Evolution of economic thought or political economy. Remzi Bookstore.
- Sarıçoban, K. (2012). Austrian school of economics, its representatives and methodological principles. *Journal of Law and Economic Research*, 4 (1), 157-165.
- Sarıkaya, M. (2002). Asymmetric information- about power and institutional regulation. *Cumhuriyet University Faculty of Economics and Administrative Sciences Journal*, 3 (2), 99-110.
- Sırakaya, İ. R. (2015). Evaluation of family medicine practice in terms of new public administration: A study in Sakarya province. Sakarya University, Institute of Social Sciences, Unpublished Postgraduate Thesis.
- Şimşek, S., & Karakaş, A. (2007). Asymmetric information- about power and institutional regulation. *TÜHİS Journal of Labor Law and Economics*, 20(4-5), 21-27.
- Mutlu, A., & Işık, A. K. (2005). Introduction to the health economy. Ekin Bookstore.
- Oğuz, F. (2000), The role of practical knowledge in market processes: an assessment of the austrian contribution, *Journal of Economic and Social Research*, 2(2), 59-74.
- Özcan, K. (2008). Intellectual capital: theory development and new perspectives, Gazi Bookstore.
- Özcan, S., & Taş, Y. (2013). The effect of information asymmetry on patient satisfaction in the health sector: an application in the Yalova oral and dental health center, International Conference on Eurasian Economies, 822-831.
- Öztürk, N., & Bayraktar, Y. (2009). The role of the state in the prevention of defective competition, Journal of Social Sciences Research, 2, 74-93.
- Ünsal, M. E. (2007), Introduction to Economics, İmaj Publishing.
- Yaşar, G. Y. (2010). Neoliberal transformation in Turkish health policy: A critical evaluation, Özkal Sayan, İ. (Yay. Haz.). *On Management for Prof. Dr. Kurthan Fişek (pp.265-295)*, Ankara University KAYAUM Publications No:7.
- Tekin, M., K. Güleş, H. & Öğüt, A. (2014), *Technology management in the age of change*. Gazi Bookstore.
- Yay, T. (1993). Economic thought in F. A. Hayek: Hayek and Keynes-Keynesian debate, Ezgi Bookstore Publishing.
- Yereli, A. B., Köktaş, A. M. & Selçuk, I. Ş. (2014). Factors affecting catastrophic health expenditures in Türkiye, *Journal of Socio-Economics*, 22(22), 276-293.

Yıldırım, İ. (2019). Asymmetric information: situation, drawbacks and measures in politics and bureaucracy after financial markets. *Journal of Anadolu Bil Vocational School*, 14(55), 217-230.