

ANALYZING OF HEALTHCARE EXPENDITURES IN THE UNITED KINGDOM AND THE UNITED STATES OF AMERICA

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ABSTRACT

In the light of Welfare State Literature, both the United Kingdom (UK) and the United States of America (USA) are categorized as Liberal Welfare Regime by Esping-Andersen, whose classification is widely accepted in the literature, and other researchers. But as a significant difference, whereas the UK has a universal free healthcare system contrary to typical Liberal Welfare State Regime, the US doesn't have a universal healthcare system and furthermore, the healthcare system is mostly based on private insurance schemes. Moving from that point, health expenditures in the UK and the US has been compared and analyzed since the conditions create a significant comparing chance. This study's main argument is based on the claim of even though the US health expenditures are about two times higher than the UK (per capita and as a rate of GDP) health system in the UK is financially more efficient than the US in terms of better public health outcomes and quality. In order to do so, the study analyzes the quantity and quality of healthcare expenditures in both countries by using literature, World Health Organization and different rating systems and furthermore both systems are discussed by 8 selected public health outcomes. The study concludes that the UK's National Health Service (NHS) is giving better quality of service with almost two times lesser financial resources in terms of public health outcomes and some policy recommendations have been made.

Keywords: Welfare state, health, health policy, health expenditures, The United Kingdom, The United States

BİRLEŞİK KRALLIK VE AMERİKA BİRLEŞİK DEVLETLERİNDE SAĞLIK HARCAMALARININ ANALİZİ

ÖZ

Refah Devleti literatürü kapsamında hem Birleşik Krallık (BK) hem de Amerika Birleşik Devletleri (ABD), başta literatürde sınıflandırması çokça kabul gören Esping-Andersen ve diđer araştırmacılar tarafından “Liberal Refah Devleti” olarak sınıflandırılmaktadır. Fakat iki ülke arasında önemli bir fark vardır: Birleşik Krallık’ta ücretsiz ve genel bir sağlık sigortası varken ABD’de sağlık sistemi çoğunlukla özel sigortalara dayalı olarak ve ücretli olarak yürütölmektedir. Bu noktadan hareketle bu çalışma kapsamında, iki ülkenin benzer refah sistemlerine sahip olmasının son derece önemli bir karşılaştırma imkanı vermesinden ötürü BK ve ABD’de yapılan sağlık harcamaları karşılaştırılmakta ve analiz edilmektedir. Bu çalışmanın ana argümanı, ABD’nin sağlık harcamalarının Gayri Safi Yurtiçi Hasıla içindeki oran ve kişi başına düşen harcama miktarı olarak BK’de neredeyse iki kat yüksek olmasına rağmen BK’daki sağlık sisteminin ABD’ye göre, kamu sağlığı çıktıları ve kalite açısından mali olarak daha iyi işlediđi üzerine kurulmuştur. Bu çerçevede öne sürölen argümanın incelenmesi için her iki ülkedeki sağlık sistemlerinden yapılan harcamalar, literatür, Dünya Sağlık Örgütü ve bazı öteki değerlendirme sistemleri incelenerek niceliksel ve niteliksel açıdan analiz edilmiş ve bunun ötesinde seçilmiş 8 kamu sağlığı çıktısı çerçevesinde değerlendirilmiştir. Çalışmanın sonucunda BK’de Ulusal Sağlık Hizmeti (NHS) sisteminin ABD sağlık sistemine göre neredeyse iki kat az maliyetle daha kaliteli hizmet verdiđi sonucuna ulaşılmış ve bazı politika önerileri yapılmıştır.

Anahtar Kelimeler: Refah devleti, sağlık, sağlık politikası, sağlık harcamaları, Birleşik Krallık, Amerika Birleşik Devletleri

1. INTRODUCTION

Health expenditures as a part of social security expenditures provide an inclusive growth in the society by incentivizing humanitarian development and social cohesion. Beyond that, those types of expenditures are very essential to have a healthy population and human capital while they can help to build social peace and social solidarity. Also they are good determinants of development level of a country and social policy of a country for its citizens as healthcare is one of the most essential human rights as stated in Universal Declaration of Human Rights, Article 2. (United Nations, 2018). Health is also an input for sustainable development, as sustainable development in a society cannot be achieved when there is a high prevalence of debilitating illness and poverty; having a healthy population is not possible without a responsive health system. Especially universal health coverage is a good tool for poverty reduction (Boyacıoğlu, 2012).

The United Kingdom (the UK) and The United States of America (the US) have strong historical, economic, sociological and legal ties to each other and both countries are classified as Liberal Welfare Regimes in terms of welfare state literature. On the other hand, one of the key differences between two countries is, whereas the UK has an extensive National Health System (NHS), the US does not have a similar one. This phenomenon gives a chance to spur a comparative analysis between two countries and gives an extensive opportunity to scrutiny how would a free universal healthcare system operate under a tax based Welfare State Regime. Moreover, the topic is a good opportunity to analyze the argument of neo-classical and neo-liberal economics approach based on the market would operate cost-efficient itself and state intervention is not a desired option.

According to Organization for Economic Co-operation and Development's (OECD) latest data available, health expenditures including government/compulsory and voluntary schemes in the UK was 9.7% of GDP whereas it was 17.2% of GDP in the US for 2016. Similarly, per capita health expenditures including government/compulsory and voluntary schemes in the UK were 4.192 the US dollars whereas it was 9.892 the US dollars for the same year, which is more than two times (OECD, 2018). Since both countries are highly developed, this comparison triggers the question of whether health expenditures are made effectively in the US and how those expenditures make a difference in terms public health outcomes and quality.

The main ideology behind neo-classical and neo-liberal economic thought asserts that the private sector would be more effective than the public sector in terms of healthcare since the private sector is looking for profit and thus it would minimize costs while maximizing profits. However, even though the US is a liberal

market economy, the healthcare in the US operates around two times higher in terms of health expenditures against the UK's National Health Service's (NHS) public universal healthcare system. Thus, the main argument of this study is *“Even though the US health expenditures are about two times higher than the UK (per capita and as a rate of GDP) health system in the UK is financially more efficient than the US in terms of better public health outcomes”*.

In that light, this study raises those questions and seeks the answers: Is the quality and outputs of the healthcare system in the US is much higher than the UK? If that is the case, is it on the hands of a small privileged number of people? Contrary to what neo-classical and neo-liberal market economy ideology asserts, is the UK's health system doing a better job in terms of financial efficiency in terms of public health while it is also covering more people? How are essential public health indicators for both nations? In order to answer those questions, this study will analyze the UK and the US health systems in terms of public health outcomes and quality, possible advantages and weaknesses for each system by using secondary sources including published academic studies, research reports, international institutions' reports, rating systems of WHO and other institutions.

Beyond this point, the study also determines 8 indicators of public health in the UK and the US in the light of related literature to give a detailed overview of both systems in terms of public health outcomes, overall condition of the population and quality of the healthcare system. Those indicators are selected as coverage of health systems, life expectancy, mortality, probability of dying, adult risk factors, perceived health, skipping of medical treatment due to costs and waiting times. Those criteria have been selected after analyzing of OECD and WHO comparative health data and public health indicators.

2. THE UK AND THE US IN TERMS OF WELFARE STATE LITERATURE

The structure of the states and their welfare perspective is a determinant of a country's expenditures including the health. Furthermore, sociologic, economic and political approaches constitute social security systems and those factors differentiate in each country's approach. Therefore, every country has its unique social security and health system. In that regard, it is a necessity to analyze welfare history and regime of a country in order to reveal its current welfare and health system's dynamics.

After The Great Depression in the world, Keynesian economic policies had the dominance all around the world. The main concept of Keynesian economic policies assert that state should interfere in times of economic crises and raise the

level of fiscal expenditures in order to ease the intensity of the crises. On the contrary, classical and neo-classical economic theory asserts the market could balance itself and interference would not ease the situation, contrary it could only worsen it. Keynesian economic policy and welfare state concept were dominant approach after The Great Depression until petroleum crises in 1973. During that time, the world and especially European countries enjoyed the welfare state and social expenditures to a great extent. In this era of history, middle class had its golden age before another big economic recession.

After the petroleum crises in 1973, the welfare state, social state and social policy approaches started to decline and their power and effects started to fade. Especially European Social Policy lost its acceleration and as a consequence of the globalization, international competition has been intense and it led taxes to lower levels. Similarly, labor costs there were attempts to lower costs. All those factors contributed to lower social expenditures (Grimmeisen and Heinz, 2004). Nowadays, it is still possible to observe the effects of the globalization and decline of the welfare state and it is a necessity to analyze welfare state regimes for better understanding of the social and health policies around the world.

There is no single definition of the welfare state in the literature; various researchers in the literature had analyzed welfare state in the scope of different definitions and classifications. One of the most accepted classification in the literature is Gosta Esping Andersen's welfare state classification. According to Esping-Andersen there are 3 classifications of welfare state regimes:

- a. Liberal Welfare State Regime (examples: the USA and the UK)**
- b. Conservative or Continental European Welfare State Regime (examples: France, Germany or Belgium)**
- c. Scandinavian or Social Democrat Welfare Regime (examples: Sweden or Denmark) (Özdemir, 2005).**

This classification of Esping-Andersen analyzes welfare state regimes according to the level of expenditures for social programs and the level of redistribution of income. In addition, this classification takes into account whether entire population is covered or not and whether people could support themselves or not in the scope of social assistance programs without actually working. Additionally, coverage of social programs and de commodification of labor are another inputs of Esping-Andersen's classification (Gökbunar et al., 2008).

This classification can be seen from the Table 1 below:

Table 1: Classification of Esping-Andersen's Welfare State

Regime Type	Liberal	Conservative	Social-Democrat
Foremost Examples	The US, The UK	Germany	Sweden
Philosophical Foundation	Classical Liberalism	Conservative Social Politics	Socialism/Marxism
Social Rights	Need-Based	Contribution Based	Universal
Welfare Measures	Mixed Services	Transfer Payments	Public Services
Benefits	Flat Rate Payments	Contribution Based	Redistributive
Institutions of Social Policies	Market (Hereditary)	State (Occupational)	State (Inclusive)

Source: (Özdemir, 2005).

As it can be seen from the table, in terms of Liberal Welfare Regime, benefits are not inclusive for the impoverished population and the income level is taken into account. According to Esping-Andersen, liberal welfare state only provides income based social protection and the main ideology asserts that market dynamics should not be interfered and it's not the market which makes individuals but, but their choices based on lack of foreseeing and savings. In Continental European or Conservative Welfare Regime, social transfers are made to the greater part of the population, social differences are minimized by redistribution of the income and additionally the social role of family, and religious groups are emphasized. Lastly, in Scandinavian or Social Democratic Regimes, the entire population is covered by the social programs without considering the level of persons' contribution (Esping-Andersen, 2006). Whereas a universal system is operated, providing full employment is seen one of the main aims of the state itself. (Gökbunar, 2008). Hall and Soskice also classify both the UK and the US as a part of liberal market economies among other market based capitalist economies (Hall and Soskice, 2001).

There are other researchers as well who are classifying different welfare regime types. Leibfried adds to South European Welfare Regimes as a different category. According to Leibfried, the countries in the southern part of Europe, which are called "Latin Belt Countries" and include Italy, Spain, Portugal and Greece, should be classified differently since the social welfare transfers are limited in practical terms even though they have strong constitutional welfare rights. South European Welfare Regimes have fragmental income protection systems, underdeveloped and partial benefits provided by the state authorities and the need for supporting of family and religious institutions come to the forefront characteristically. In this system, full employment concept is not institutionalized and women employment rate is relatively low and social security systems are fragmental (Toprak, 2015).

Fenger also proposes that post-communist European states, which were a part of Soviet Bloc, should be classified differently. According to this, Bulgaria, Croatia, Czechia, Hungaria, Poland and Slovakia is determined as post-communist European countries and those countries include both Conservative Welfare Regime and Social Democrat Welfare Regime characteristics. On the other hand, Estonia, Lithuania and Latvia are classified as old Soviet Bloc countries because of high women employment rates, public sector's dominance in the economy, high growth rates and high inflation (Fenger, 2007).

Regarding that, both the UK and the US is determined as Liberal Welfare Regimes and furthermore, NHS in the UK is a tax-based universal health system whereas the US does not have a similar one; it prepares good conditions to analyze and compare a possible universal healthcare system in a Liberal Welfare Regime and its consequences. Besides that, it also makes possible to compare two liberal market economies, which has two different health policy approaches.

3. THE SIGNIFICANCE OF HEALTH EXPENDITURES

Before comparing health expenditures in the UK and the US, it is a necessity to reveal, why those expenditures are significant and one should take into consideration those type of expenditures. First of all, health expenditures as a part of social security expenditures are good indicators of welfare. Social security provides an inclusive growth in the society by incentivizing humanitarian development and social cohesion. Besides that, social security expenditures act like an automatic stabilizer in the economies and protect citizens, especially the ones who are the bottom of income levels, in time of crises and other hardships (Norton et al., 2001), (OECD, 2012). Social security expenditures also raise citizenship and solidarity among different members of the society and prevent possible conflicts among the society (ILO, 2014).

An equal society can only be achieved by income equality and that is the key concept to have a peaceful community and social peace. Thus, all countries in the world implement specific policies to reduce intense income inequality since market failures often make it necessary to intervene by the state authorities. One of the most essential policy tools is social security expenditures (Gürler Hazman, 2013). Empiric studies show a clear correlation between income equality and social security expenditures as social security expenditures help to build an equal society (ILO, 2014).

Health is also an input for sustainable development. Sustainable development in a society cannot be achieved when there is a high prevalence of debilitating illness

and poverty, having a healthy population is not possible without a responsive health system. Especially universal health coverage is a good tool for poverty reduction. Furthermore, healthy people are more likely to be efficient at assimilating knowledge, have stronger productivity, and an intergenerational effect through lower birth weight (Boyacıoğlu, 2012). The empiric studies in the literature shows that those types of expenditures alleviate poverty in both developed and developing countries (Çelikay and Gümüş, 2014).

The concept of health expenditures contributing to economic development comes from the idea of the health led growth hypothesis. According to that hypothesis, health is considered as a capital and it is expected that investments on health would increase in labor productivity. Consequently, income level increases and flowingly wellbeing of the population increases as well (Piabuo and Tieguhong, 2017). Bloom and Canning emphasizes that when labor is healthy, their motivation to improve new skills and knowledge is higher since they expect to enjoy long-term benefits (Bloom and Canning, 2000). On the other hand, when the labor force is consisted of workers with poor health, it is expected affect productivity adversely; which underlines the reasons of disparity in development in different regions of the world. Fifty percent of divergence in economic growth between developing countries and developed countries is attributed to ill-health and low life expectancy (Piabuo and Tieguhong, 2017).

Income level of a country has a significant role on spending levels made by governments and households. But it is not the sole factor since there are many differences in terms of health expenditure among countries which have a similar level of income (Xu and et al., 2011). Especially universal health coverage requires that “all people have access to needed promotive, preventive, curative and rehabilitative health services, of sufficient quality to be effective, while also ensuring that people do not suffer financial hardship when paying for these services”(McPake, 2008). In order to achieve that object, it’s a crucial point that healthcare systems should not be based on substantially on financing through patients’ out-of-pocket payments since those type of payments can ingest high levels of income can impoverish some individuals and deepen the extent of poverty (McPake, 2008).

Health expenditures are growing in both developed countries and developing countries over time, which restrains governments financially, and it is not an easy task to deliver utmost quality of healthcare whereas facing financial constraints. In that regard, governments, policy makers and researchers search for more cost-efficient policies while improving the efficiency of the healthcare systems. There are number of reasons for increasing healthcare expenditures. There is a consensus in the literature that technology is the major determinant of health expenditure (Zuckerman

and McFeeters, 2006), (Nghiem and Connelly, 2017), (Piabuo and Tieguhong, 2017). Growth of health insurance and decline in cost-sharing, income growth, lagging productivity in health services, aging of the population, administrative expenses, consolidation of the health care market, direct-to-consumer advertising, cost and prevalence of specific diseases can be seen other factors which are leading to increase of the health expenditures (Zuckerman and McFeeters, 2006).

Finally yet importantly, social security is an essential human right beyond its economic and social advantages. Universal Declaration of Human Rights, Article 2, 22 and 25 clearly state that everyone has social security rights and everyone should be protected against circumstances in the life beyond their control (UN, 2018) Health expenditures are also a part of WHO's Millennium Development Goals (MDG) as 3 of 8 MDGs are related to health: to reduce child mortality; to improve maternal health and to combat HIV/AIDS, malaria, and other diseases (WHO, 2019). Similarly, health is among the goals of UN's Sustainable Development Goals (SGD), the UN sees it as ensuring healthy lives, and promoting the well-being at all ages is essential to sustainable development (UN, 2019).

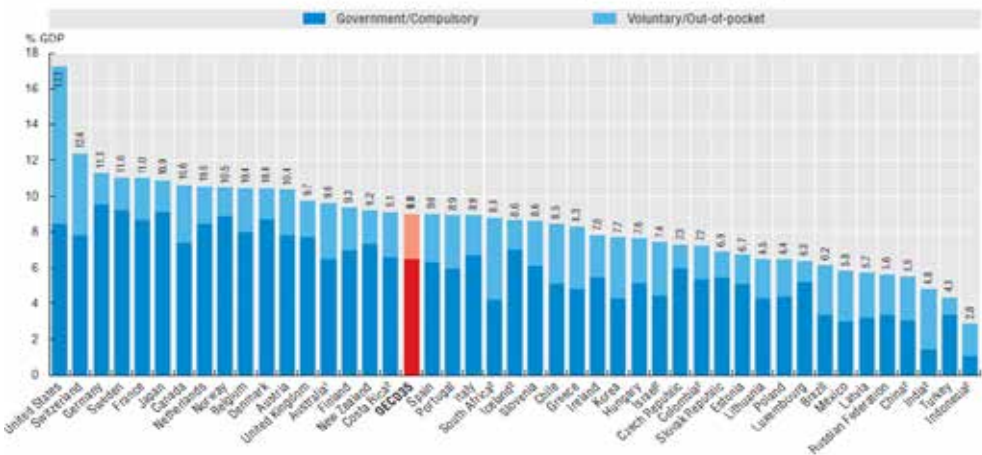
4. COMPARISON OF HEALTH EXPENDITURES IN THE UK AND THE US

The UK's NHS was born in 1948 by the UK Health Secretary Aneurin Bevan with an ambitious plan: *to bring good healthcare to all people of the UK*. In that regard, hospitals, doctors, nurses, pharmacists, opticians and dentists are brought together under one umbrella organization to provide services that are free for all citizens with the central principles of availability to all, tax base financed (NHS, 2018). Today NHS still operates around those principles.

On the other hand, despite numerous historical, economic, sociological and legal similarities, the US has a system that it is almost contrary to NHS; there is no universal healthcare system in the US. Unlike in the UK, operating a national health service, a single-payer national health insurance system, or a multi-payer universal health insurance fund, the U.S. health care system can be defined as a hybrid system (AFL-CIO, 2018). As stressed before, even though healthcare system in the US is mainly based on private sector and market dynamics, it has the highest healthcare expenditures in the world. Graph 1 below shows health expenditures in OECD countries as a share of GDP for 2016 or nearest year. It can be seen that, the US spent 17.2% of GDP to health whereas the UK 9.7% of GDP. When OECD average is concerned, which is an average of 35 countries; it is similar to the UK's rate of 9%.

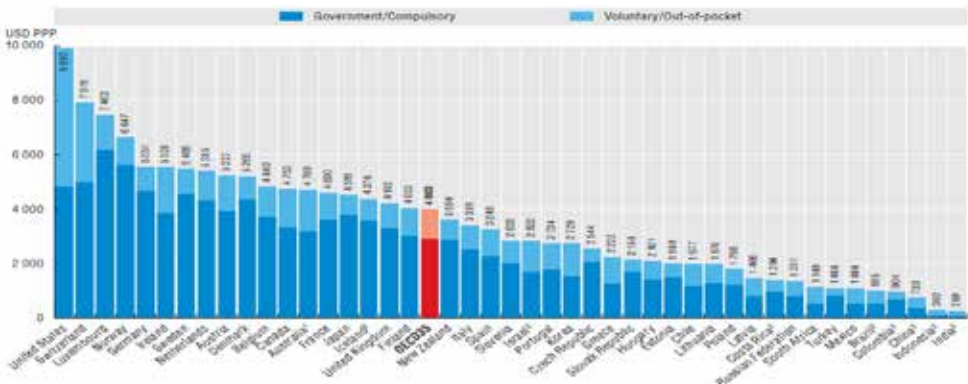
It is quite striking to see that even though the countries, which are spending more than OECD average, are mostly social welfare European countries, which rely on public healthcare systems. Even Switzerland, which is the closest follower of the US spend almost 5% less than the US. Another interesting point is even though public health expenditures of the US are similar to other countries; there is a significant private health care expenditure (voluntary/out of pocket), which is almost half of the total expenditures in the US.

Graph 1: Health Expenditures in OECD countries as a share of GDP (%-2016 or nearest year)



Source: OECD, Health at a Glance, 2016.

Graph 2: Health Expenditure per capita in OECD Countries (\$-2016 or nearest year)



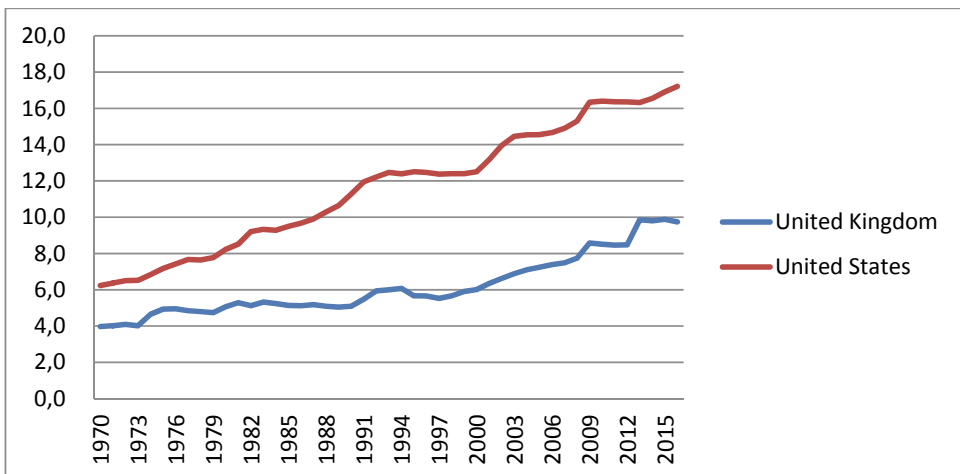
Source: OECD, Health at a Glance, 2016.

Similarly, per capita health expenditures can be seen in Graph 2 above. According to the graph, per capita health expenditures including government/compulsory and voluntary schemes in the UK were 4.192 the US dollars, which is slightly more than OECD level whereas it was 9.892 the US dollars, which is more than two times.

It is also important to look on the development of historical perspective of health care expenditures between the UK and the US. This can be seen on the Graph 3 below. The historical data shows that both countries experience a tremendous increase of health expenditures between 1970 and 2016. The share of GDP in the UK and the US in 1970 was actually quite similar; around 4% for the UK and around 6% for the US. However, while health expenditure in the US increased more than around 3 times in 2016, it only increased around 2 times in the UK. This dramatic shift can be observed in the Graph 3.

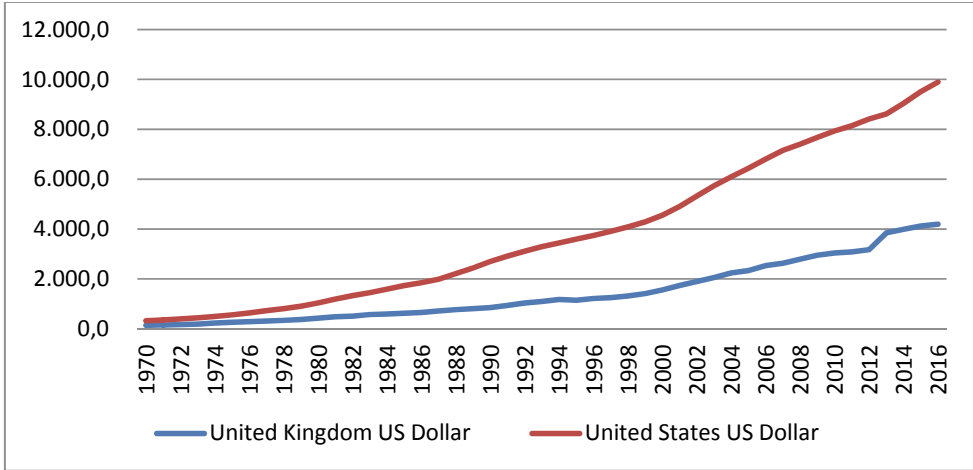
Graph 4 below visualizes this dramatic change even in a more striking way; both countries experienced a steep increase due to health expenditures, but however, the expenditures in the US in 2016 are around 2.5 times higher than the UK. On the other hand, the increase trend is linearly accelerates from the beginning year of data; in the US, the expenditures increased around 30 times from 1970 to 2016 per capita while it was around 28 times for the UK between 1970 and 2016.

Graph 3: Historical Health Expenditures as a Share of GDP in the UK and the US (1970-2016)



Source: OECD Statistics (2018), <http://stats.oecd.org/>

Graph 4: Per Capita Historical Health Expenditures as a Share of GDP in the UK and the US (1970-2016-PPP)



Source: OECD Statistics (2018), <http://stats.oecd.org/>

5. ANALYZING OF HEALTH CARE EXPENDITURES IN THE UK AND THE US FOR SELECTED PUBLIC HEALTH OUTCOMES

As it was shown before, the US health expenditures are about two times higher than the UK both for per capita and as a rate of GDP and historically the gap between two countries is getting higher. Therefore, one can naturally think that the US should have better health outcomes since the expenditures made is significantly higher. This part of the study will seek answers about this phenomenon by analyzing certain outputs of health for the both countries. In order to fulfill that purpose, the question of quality should be addressed. In the literature, there are different types of rating systems, which intend to reveal national health systems' quality and effectiveness.

One of the first rating system performed by WHO in 2000 for 195 countries. According to WHO's rating, the UK took 24th place for performance on health level and 18th place for overall performance whereas the US took 72nd for performance on health level and 37th place overall performance. The criteria determined as 50% of health (25% overall or average, 25% distribution or equality), 25% of responsiveness (12.5% overall or average, 12.5% distribution or equality) and 25% of fair financial contribution (distribution or equality) (WHO, 2000).

Schneider et al (2017) conducted a research including 11 selected high-income countries, which are The US, Switzerland, Sweden, France, Germany, Netherlands, Canada, The UK, New Zealand, Norway and Australia. Survey data used in the research are drawn from the 2014, 2015, and 2016 Commonwealth Fund International Health Policy Surveys. The analysis is based on 72 indicators that measure performance in five domains important to policymakers, providers, patients, and the public: Care Process, Access, Administrative Efficiency, Equity, and Health Care Outcomes. The UK performed first one in overall score out of 11 countries while the US performed as the last one. While the UK was 1st in care process, 3rd for access, 3rd for administrative efficiency, 1st for equity and 10th for health outcomes, the US ordinarily had 5th, 11th, 10th 11th and 11th which scores are far from the performance of the UK's NHS (Schneider et al. 2017).

Another recent empiric research conducted in the light of Global Burden of Diseases, Injuries, and Risk Factors Study 2016 data, 32 causes from which death should not occur in the presence of effective care to approximate personal health-care access and quality by location and over time used to rate countries' healthcare quality (GBD, 2016). The rating system assesses personal health-care access and quality with the Healthcare Access and Quality (HAQ) Index for 195 countries. According to HAQ Index, The UK takes 23rd place 90 score points out of 100 whereas the US takes 29th place with 89 score points out of 100 (The Lancet, 2018). Similarly, Bloomberg's 2019 Healthiest Country Index, nations based on variables including life expectancy while imposing penalties on risks such as tobacco use and obesity is graded. The Index also takes into consideration environmental factors including access to clean water and sanitation. In the study, the UK took 19th place with the score of 84.28 out of 100 whereas the US was only able to 35th spot by getting 73 point out of 100 (Miller and Lu, 2019), (Thornton, 2019).

Apart from empirical research, the perception of the citizens also can be another determinant of healthcare quality. According to US News survey "2019 Best Countries" report, more than 20,000 global citizens from four regions has been surveyed to assess perceptions of 80 countries on 75 different metrics. In the research the UK performed as 10th country in terms of Best Health Care System while the US performed as 19th(Radu, 2019). Beyond empiric data and research, the perception of the people also based that NHS system of the UK is outperforming the US Healthcare System.

The literature and different rating systems by different institutions conclude that the UK's health system not only outperform the US system but also it offers more service quality. In addition to the studies above, the next part of the study will also analyze both systems' performance based on the quantity and quality of

healthcare by 8 selected public health outcomes to carry the discussion further with details. Those outcomes are coverage of health systems, life expectancy, mortality, probability of dying, adult risk factors, perceived health, skipping of medical treatment due to costs and waiting times. Those indicators have been selected after analyzing of the literature above, OECD and WHO comparative health data and public health indicators.

5.1. Healthcare Coverage

The coverage of healthcare is an important factor as much as healthcare expenditures since it is the direct determinant of beneficiary numbers. Also it promotes equity and ensures the health of labor capital as stated before. As it can be seen from Table 2 below, in terms of total public and primary private health insurance coverage, entire population in the UK is covered by NHS while the US health system covers 90,9% of the population in 2015. Nevertheless, it is important to note that after introduction of Affordable Care Act in 2010, the coverage significantly rose from 84%. When government/social health insurance coverage is analyzed, the similar trend can be seen in the US; the coverage rate rose from 26% to 35.6% for 2015. It is also important to note that total private health insurance exists in the UK as well, but only around 10% of the population, which is significantly low when compared over 60% levels in the US (OECD, 2018).

Table 2: Healthcare Coverage in the UK and the US (%)

				Year	2009	2010	2011	2012	2013	2014	2015
Variable											
Healthcare Coverage	<u>Total public and primary private health insurance</u>	<u>Total public and primary private health insurance</u>	% of total population covered	The UK	100	100	100	100	100	100	100
				The US	81,3	84	84,9	85,3	85,5	88,5	90,9
	<u>Government/social health insurance</u>	<u>Total health care</u>	% of total population	The UK	100	100	100	100	100	100	100
				The US	26,4	30,8	31,8	32,6	33	34,5	35,6
	<u>Private health insurance</u>	<u>Total private health insurance (PHI) coverage</u>	% of total population	The UK	11,7	11,1	10,8	10,8	10,7	10,5	10,6
				The US	62,3	60,6	60,6	60,3	60,1	61,6	62,9

Source: OECD Statistics (2018), <http://stats.oecd.org/>

5.2. Life Expectancy

Life expectancy is another good indicator for health since the health system in a country is directly affecting the longevity of life. According to the data of OECD, life expectancy at birth in the UK was 81,4 years whereas it was 78.8 years in the US, which is lesser. The life expectancy in both countries has been increasing between 2010 and 2014. This could be observed in Table 3: Life Expectancy and Mortality in the UK and the US. Mortality

Mortality is also one of the good indicators of the public health and quality of the healthcare system. Mortality in the UK and the US can be observed from Table 3: Life Expectancy and Mortality in the UK and the US. According to Table 3, deaths per 100 000 population listed for different diseases. When all causes of death are analyzed, the latest comparable data in 2013, deaths per 100 000 population in the UK was 898.9 for the UK whereas it was only slightly more than the US, which is 821.3.

When the breakdown of the data is analyzed, it can be seen that both countries have stronger and weaker sides. Some of the data converges though; mortality rates for neoplasms and diseases of the respiratory system in the UK is significantly higher than the US which mainly leads the mortality rates in the UK to higher levels than the US. The other data breakdown for causes of mortality is quite similar and can be seen in detailed in the Table 3.

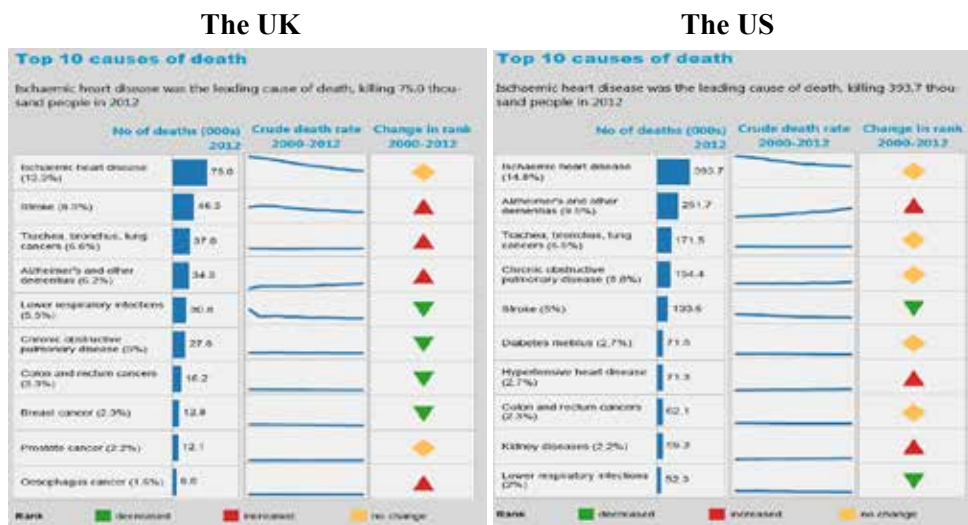
Top 10 causes of death can be seen on Table 4 below. According to WHO's data, there are similar and different types of diseases in both countries. In the UK, deaths from 4 categories decreased, deaths from 4 categories increased and deaths from 2 categories unchanged while in the US deaths from 2 categories decreased, deaths from 3 categories increased and deaths from 5 categories unchanged from 2000 to 2012. Therefore, the UK was just slightly more successful to decrease deaths from top 10 causes of deaths or maintain the same levels than the US, but on the other hand, there are increasing numbers in the four categories in the UK as well. Consequently, it is possible to conclude that two systems operate similarly in terms of top 10 causes of death in their respective societies. In addition, it should be noted that even though there could be a relationship can be defined between causes of death and healthcare system, there can be many other specific factors as well.

Table 3: Life Expectancy and Mortality in the UK and the US

				Year	2010	2011	2012	2013	2014	
Variable		Measure	Country							
Mortality	Life expectancy	Total population at birth	Years	The UK		80,6	81	81	81,1	81,4
			The US		78,6	78,7	78,8	78,8	78,9	
	Causes of mortality	All causes of death	Deaths per 100 000 population (crude rates)	The UK		894,9	873	893,3	898,9	..
				The US		798,2	807,1	810	821,3	824,5
	Certain infectious and parasitic diseases	Certain infectious and parasitic diseases	Tuberculosis	The US		9,5	10,1	9,4	9,8	..
				The US		21,8	22,1	21,8	22,3	22,1
	Certain infectious and parasitic diseases	Certain infectious and parasitic diseases	HIV-AIDS	The US		0,6	0,5	0,5	0,5	..
				The US		0,2	0,2	0,2	0,2	0,2
	Neoplasms	Neoplasms	Neoplasms	The US		0,4	0,3	0,4	0,3	..
				The US		2,7	2,5	2,3	2,2	2,1
	Endocrine, nutritional and metabolic diseases	Endocrine, nutritional and metabolic diseases	Endocrine, nutritional and metabolic diseases	The US		256,8	257,8	260,3	258,6	..
				The US		190,7	189,9	190,4	189,8	190,8
	Endocrine, nutritional and metabolic diseases	Endocrine, nutritional and metabolic diseases	Endocrine, nutritional and metabolic diseases	The UK		13,6	12,2	12,5	12,4	..
				The US		32	33,7	33,7	34,5	35,4
	Endocrine, nutritional and metabolic diseases	Endocrine, nutritional and metabolic diseases	Diabetes mellitus	The UK		9,8	9,2	9,2	9,1	..
				The US		22,3	23,7	23,5	23,9	24
	Mental and behavioral disorders	Mental and behavioral disorders	Mental and behavioral disorders	The UK		37,8	55,8	63,9	67,4	..
				The US		39,1	43,6	47,1	49,5	47,4
	Mental and behavioral disorders	Mental and behavioral disorders	Dementia	The UK		34,4	53,9	62	65,4	..
				The US		35,1	39,5	42,9	45,1	42,9
	Mental and behavioral disorders	Mental and behavioral disorders	Alcohol use disorders	The UK		1,4	1,2	1,2	1,1	..
				The US		2,1	2,1	2,2	2,4	2,5
	Mental and behavioral disorders	Mental and behavioral disorders	Drug use disorders	The UK		1,5	0,2	0,2	0,3	..
				The US		0,6	0,6	0,6	0,6	0,7
	Diseases of the nervous system	Diseases of the nervous system	Diseases of the nervous system	The UK		33,2	33,7	38,3	40,3	..
				The US		45,7	46,5	46,6	48	52
	Diseases of the circulatory system	Diseases of the circulatory system	Diseases of the circulatory system	The UK		285,4	252,3	253,2	249,2	..
				The US		253,7	251,4	250,8	253,3	253,6
	Diseases of the respiratory system	Diseases of the respiratory system	Diseases of the respiratory system	The UK		121,2	120,8	125,5	130	..
				The US		76,8	79,8	78,4	82,6	81,1
Diseases of the digestive system	Diseases of the digestive system	Diseases of the digestive system	The UK		47	44,5	44,1	43,5	..	
			The US		29,5	30,2	30,3	31,1	31,7	
External causes of mortality	External causes of mortality	External causes of mortality	The UK		32,6	33,3	32,6	34,7	..	
			The US		59,4	61	61,5	61,9	63,5	

Source: OECD Statistics (2018), <http://stats.oecd.org/>

Table 4: Top 10 Causes of Death in the UK and the US (2000-2012)



Source: WHO (2018) Country Profiles, <http://www.who.int/countries/en/#U>

5.3. Probability of Dying

Probability of dying between relevant exact ages for a person experiencing the 2012 age-specific risks throughout their life can be seen in Table 5. It shows that the US has more probability of dying for all age-specific mortality risks throughout the life for both sexes. One of the reasons the UK outperform the US could be a universal health care system, which ensure reachability of healthcare and preventive healthcare policy.

Table 5: Probability of Dying in the UK and the US (2012)

Probability of Dying (2012)	Sex	The UK	The US
Before Age 15, All Causes	Male	3%	4%
	Female	2%	3%
Before Age 70, All Causes	Male	32%	38%
	Female	22%	27%
Between Ages 15 and 49, from Maternal Causes	Female	0%	1%
Between Ages 30 and 70, from 4 Major Non-communicable Diseases (NCDs)	Both Sexes	12%	14%

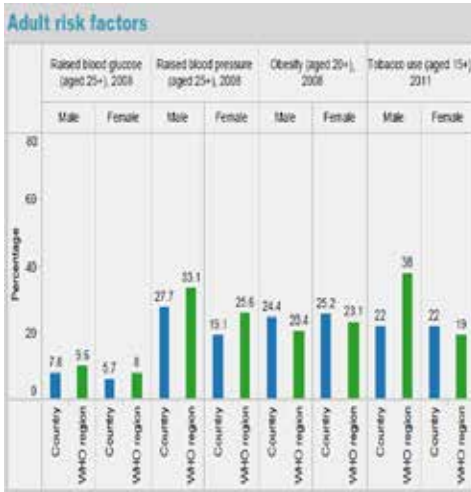
Source: WHO (2018) Country Profiles, <http://www.who.int/countries/en/#U>

5.4. Adult Risk Factors

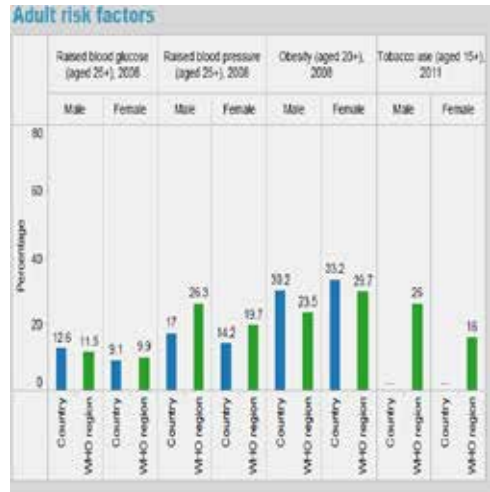
Table 6 shows adult risk factors in the UK and the US. It can be seen that, for the comparable 3 categories, the UK is outperforming the US in raised blood glucose and obesity risks for the last related available years of data while the US is outperforming the UK about raised blood pressure for the last related available years of data. It is interesting to observe that while both countries are doing a better job than their respective WHO region averages, both countries are worse than WHO region averages in terms of obesity.

Table 6: Adult Risk Factors in the UK and the US (2008)

The UK



The US



Source: WHO (2018) Country Profiles, <http://www.who.int/countries/en/#U>

5.5. Perceived Health

Perceived health is also another good indicator of the population and it shows how people see themselves. The data for the UK and the US can be seen on Table 7. According to the table, the people in the US see themselves healthier than people in the UK even though there is no universal healthcare system and coverage is lesser. When perceived health status is examined according to the income quintile, the result does not change for the UK and the US. But however, people who are in the highest income quintile see themselves significantly healthier than people who are in the lowest income quintile. It should also be noted that after introduction

of Affordable Care Act (ACA) in 2010, perceived health status has not changed significantly in 5 years even though it is still better than the UK; in fact, the UK has seen a significant decrease for the same years.

Table 7: Perceived Health in the UK and the US (2010-2014)

				Year	2010	2011	2012	2013	2014
Variable	Measure	Country	Country						
Morbidity	Perceived health status	Good/very good health, total aged 15+	the UK	79,4	77,5	74,7	73,7	70	
			the US	87,6	87,3	87,5	87,5	88,1	
		Fair (not good, not bad) health, total aged 15+	the UK	14,8	16,8	17,1	18	21	
			the US	9,2	9,6	9,4	9,4	9	
		Bad/very bad health, total aged 15+	the UK	5,8	5,7	8,2	8,4	9	
			the US	3	2,9	2,9	2,9	2,8	
	Perceived health status by socio-economic status	Good/very good health, total aged 15+, Income quintile 1 (lowest)	the UK	70,3	69,4	64,3	64	61,5	
			the US	74,3	73,4	73,4	73,2	74,6	
		Good/very good health, total aged 15+, Income quintile 5 (highest)	the UK	90,7	88,4	88,8	88,9	83,9	
			the US	96	95,6	96,2	96,2	96,3	

Source: OECD Statistics (2018), <http://stats.oecd.org/>

5.6. Skipping of Medical Treatment due to Costs

Skipping of medical treatment due to costs in the UK and the US can be seen on Table 8 and Table 9. As naturally expected, the advantage of having a universal healthcare system shows itself about this outcome. In the UK, skipping rates of consultation for age-sex standardized rate per 100 patients is 2,4% for 2010 and increased to 4.2% in 2016 while the same rates are 24.1% and 22.3 % for the US which are tremendously higher.

Table 8: Skipping of Consultation due to Costs in the UK and the US

Indicator		Consultation Skipped Due to Costs			
Gender		Total			
Periods		2010	2013	2016	
Age Group	Value	Country			
16 years and over	Age-sex standardized rate per 100 patients	The UK	2,4	2,2	4,2
		The US	24,1	27,7	22,3
	Upper confidence interval	The UK	3,6	3,1	5,8
		The US	26,4	30,4	24,6

Source: OECD Statistics (2018), <http://stats.oecd.org/>

When skipping of medical tests, treatment or follow-up due to costs in the UK and the US is analyzed there are similar results which are shown in Table 9. In the UK, age-sex standardized rate per 100 patients is 3% for 2010, decreased to 2.7% in 2016 while the same rates are 23%, and declined to 19.8 % for the US. Such a big divergence in the data shows how a free universal healthcare system can affect people's decisions in terms of healthcare and the financial burden on the population can lead that people can avoid costs even though they are aware of the consequences.

Table 9: Skipping of Medical Tests, Treatment or Follow-up due to Costs in the UK and the US

Indicator		Medical Tests, Treatment or Follow-Up Skipped Due to Costs			
Gender		Total			
Periods		2010	2013	2016	
Age Group	Value	Country			
16 years and over	Age-sex standardized rate per 100 patients	The UK	3,0	2,5	2,7
		The US	23,0	21,3	19,8
	Upper confidence interval	The UK	4,2	3,7	3,9
		The US	25,4	23,8	22,1

Source: OECD Statistics (2018), <http://stats.oecd.org/>

5.7. Waiting Times

Waiting times are also a very important aspect of a healthcare since some early diagnoses can save lives, waiting period can affect the success of a treatment and it can drive treatment costs upwards as well. Table 10 below shows waiting time of more than four weeks for getting an appointment with a specialist for 2013. The data also shows surprising results since waiting times are lesser in the UK even though it has a tax based universal health care coverage, which means more people are covered by the public health system, and it is a public system. Normally it would have been expected that the private insurance scheme would give the population of the US to have lesser waiting times.

This result is also contrary to the neo-classical and neo-liberal economics schools that market would give better results than the public system and state intervention to the market would lead to worse results than the private sector. When it comes to health, it is a necessity to underline that health of the population is a public good and thus a public approach can create significantly better health outcomes with the lesser financial sources.

Table 10: Waiting time of more than four weeks for getting an appointment with a specialist (2013)

Indicator			Waiting time of more than four weeks for getting an appointment with a specialist
Gender			Total
Periods			2013
Age Group	Value	Country	
16 years and over	Age-sex standardized rate per 100 patients	The UK	18,3
		The US	25,3
	Upper confidence interval	The UK	23,5
		The US	29,0

Source: OECD Statistics (2018), <http://stats.oecd.org/>

CONCLUSION

This study intends to seek an answer to a very crucial research question; financial performance of a universal public healthcare system in a liberal market economy and liberal welfare regime in terms of public health outcomes. In the light of the literature, various health quality rating systems including WHO's and selected public health outcomes, historical and recent data on both systems, it is possible to

conclude that even though the US health expenditures are about two times higher than the UK (per capita and as a rate of GDP) the health system in the UK is more efficient in terms of quality and quantity.

As the data and evidence shows, an almost pure private sector market approach to the health policy does not necessarily mean health spending would be optimum and quality would be greater. On the contrary; as the UK is spending significantly lesser financial resources, a lot more of the population is covered by the healthcare system, people have more years of expected life at birth, less probability of dying for all age-specific mortality risks throughout the life. The UK health system also outperforms the US in terms of raised blood glucose and obesity risks, much lesser people than the US skipping of medical treatment due to costs and waiting time of more than four weeks for getting an appointment with a specialist is shorter.

On the other hand, American people perceive themselves healthier than the people living in the UK do. The US data about deaths per 100.000 population for defined diseases has slightly better results but very close to the UK data; raised blood pressure as an adult risk factor and the US is more successful to decrease deaths from top 10 causes of deaths or maintain the same levels than the UK. But it is very important to underline the differences are too far from explaining around two times higher health expenditure figures both per capita and as a rate of GDP.

When development level of both countries concerned, such a big difference in terms of health expenditure is not an easy phenomenon to explain, specifically when public health and public benefit outcomes at stake. Thus, it is important to underline that having some of the best cutting-edge technology or best physicians in the world as in the US example would not necessarily mean having optimum level of health expenditures with desired public health outcomes. Besides, health is a vital area that with the absence of good coverage of health, many diseases can spread to society. Moreover, it can drive expenditures upwards since early diagnosis can save many lives and help to protect human capital and prevent excessive health expenditures. Therefore, availability and reachability of healthcare system is vital and it can be said that a universal healthcare system helps protect both the individual and the society. Consequently, this study shows that a significantly market-based approach to the healthcare system would not necessarily deliver more cost-effective health care system even in a liberal welfare regime. In fact, the US healthcare system is the most expensive one in the world among all welfare regimes defined in the literature.

It should be noted that the UK's NHS system is not a flawless organization with the perfect healthcare results: NHS has its own financial problems threatening

its own sustainability and existence (See more information: (El Gingihy, 2016), (Syal, 2016), (Triggle, (2018)). The recent developments in the health policy shows that it is vital for policymakers in the UK to develop better government finance choices. It should be also noted that ongoing Brexit process could trigger migration levels and expenditure levels can vastly change in the future according to the path of Brexit, especially according to the deal and no-deal options now that after December 2019 elections, Brexit is expected to happen soon. However, since this study has concentrated historical data and the health expenditures has already been made for the health system; the conclusion of the study would remain unaffected. However, the future implications of Brexit and its possible effect to the health policy and the path of health expenditures in the UK undoubtedly will be a crucial point for the future studies.

It is important to note that when modern social security systems started to operate in the starting of 20th century, demographics and economics of the nations were much different from today and healthcare technology since the starting of the century evolved rapidly and very costly. Therefore, new financial constraints emerging nowadays as a result of demographic changes while level of expected years of life is increasing and rapid technological changes requiring more resources than ever in the human history. In this health policy climate, health expenditure policy certainly should require complex policies choices to meet future needs without keeping in mind that access to healthcare is a very essential human right and it is one of the best determinants of a developed society if it's not the best one.

On the other hand, challenges for the US policy makers are two sided; while the policymakers need to cover more people in the system by expanding the protection floor, they also simultaneously need to make healthcare more affordable which is not an easy task at all. Especially shrinking middle class and raising inequality in the US makes the challenge even more intense. ACA drove coverage levels upwards dramatically; however; reversing of ACA is one of the future perspectives for the US health policy and it is widely discussed in the public discussions reverse ACA, which can undoubtedly significantly decrease the coverage of the system and contribute to worsen public health outcomes.

This phenomenon shows that the US health policy has a long way ahead to cover its all population with affordable and reachable healthcare. Especially the active involvement of the society, discussion of possible other healthcare models, approaching to the healthcare system with a public good character and benefit approach while raising awareness of the US community could be good starting points to raise the effectiveness of healthcare expenditures both quality and quantity wise. Beyond that, this study shows that a universal and free healthcare program

is possible and effective even in a liberal welfare system and it can be affordable and reachable, bring certain public health benefits with significantly lesser financial sources contrary to what has been asserted by classical and neo-classical economic thoughts. In fact, it is quite striking to observe the US, as a liberal welfare regime, is spending the most in the world among other welfare regimes defined in the literature, which means that the market mechanism is not always delivering optimum results with optimum financial results in the health policy.

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