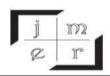


yönetim ve ekonomi arastırmaları dergisi

journal of management and economies research



Cilt/Volume: 21 Sayı/Issue: 1 Mart/March 2023 ss./pp. 172-186 O. Sultanov http://dx.doi.org/10.11611/yead.1225807

COMPARATIVE ANALYSIS OF THE BANKING SYSTEM LIBERALITY LEVEL

Orkhan SULTANOV (Ph.D.C.) *



ABSTRACT

The main goal of this research is to create an economic model, more specifically an index that considers characteristics of the latest prudential innovations and changes and allows scholars and practitioners to assess the level of government intervention in the commercial banking system at the global level. Regulatory instruments that allow central banks to intervene to the monetary system and fully or partially determined by the central banks are taken as the object of the study. The subject of the research involves the assessment of government intervention or regulatory intervention in the commercial banking system. An entirely new methodology and results of comparative analysis presented so that academicians and policymakers may use or comment on further study.

Keywords: Liberalism, Dirigisme, Government Intervention, Central Banks Intervention, Economic Freedom, Banking Regulation, Commercial Banking Regulation.

Jel Codes: 023, G18, G21.

1. INTRODUCTION

Whereas economic liberalization and government intervention have been matter of many debates for long years, its measurement and finding the optimal level of intervention are still in the interest of empirical studies. To put it more correctly, in economic theory there is still a lack of proper measurement models to define the rate of public intervention. Therefore having an all-inclusive economic tool to define optimal rate of government intervention bear political, practical and scientific importance.

The term of economic liberalization often confused as domestic application of decontrol mechanisms. Apparently, it has to do something with decontrol mechanisms but not limited with it. Having proper schemes to ensure economic stability and supervision on the efficiency of the liberalisation is also a must for sustaining healthy economy. Having a robust banking system with a sound controls in place serve to the well-being of a national economy. Hence, the liberalization of banking system is expected to accelerate market reforms domestically and advance the economic integration of the country into global level. On the contrary, banking system liberalization should happen in the way that would protect internal market. It happens liberalization of banking system and protecting domestic market are mutually exclusive and conflicting issues. Having advanced public regulation

Makale Geçmişi/Article History

^{*} Ministry of Science and Education Republic of Azerbaijan, Institute of Economics, Department of Domestic Fiscal Policy And Public Finances, Baku/ Azerbaijan. E-mail: sultanovorxan@gmail.com

system may ease the situation to some extent.

The market-oriented approach to the regulation of the banking system was reflected for the first time in the Basel Accord (Basel I) that was introduced in 1988. After this historical event, considered a leap from the banking regulation perspective, the banking system's regulation has entered its evolutionary process and stepped towards further perfection with each new Accord. Although each new accord has incurred serious modifications, it has almost preserved the basic principles of the previous documents. According to Basel I the banks of 12 member countries of the Bank for International Settlements (BIS) operating internationally have had to hold total capital equivalent to 8% of their riskweighted assets since 1992. The fundamental target of Basel norms is to form capital reserves in proportion to risks undertaken by banks. Because the rapid development and complexity of financial markets resulted in the emergence of more complicated financial instruments after a short period of implementing the norms, the capital adequacy framework established by the Basel I is found to be too straightforward in the context of mixed transactions. The Basel Committee on Banking Supervision had already disclosed its "Core Principles" containing the minimum requirements for the supervision of banks in 1997 before the implication of the Basel I by G10 and some other developing countries. The document also contains guidelines about the authorities that responsible institutions for regulating banks should have.

The studies done by international organizations, think tanks, and research institutes on evaluating the intervention of government into the different fields of economy can be considered preliminary comparative assessments conducted in this field. "Index of Economic Freedom" prepared by the Heritage Foundation and The Wall Street Journal, the "Economic Freedom Index" and the "Human Freedom Index" annually published by the Fraser Institute, the World Bank's "Doing Business", "The Global Competitiveness Report" by World Economic Forum, "Social Progress Index" by Social Progress Imperative nonprofit organization can be great examples on how to evaluate the liberality level of economy. However, the phenomenon of measuring the level of government intervention in the banking system is not found in any research. Besides, all of these methodologies asses the countries vertically from "the best" to "the worst" and vice-versa.

In our study we are going to horizontally asses the countries to clearly see the rightness and leftness of the economies. Practicality of this study is that we put forward an entirely new methodology to quantify the level of public intervention into banking sector. To make it more clear, this research only covers commercial banking regulations. So, all results presented below is the indication of only commercial banking side not a whole banking system. Measurement of commercial banking sector liberalization (dirigisme) among countries may give economists and politicians a clue on the direction

Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research

¹ The index was suspended on September 16th, 2021, after an independent audit revealed the distortion of 2018 and 2020's data by World Bank officials.

as well as extention of interventions to maintain balanced monetary system.

2. LITERATURE REVIEW

Cohen (2010) specified that public economic interventions has been a main discussion subject of political economy. Almost all well-known economists varying from Marxist to Keynesians in one way or another addressed the role of public authorities regulation and economic performance. From globalisation perspective, Abdymanapov et al. (2016) discussed finding proper balance between global economic integration and protection of domestic economy along with shedding a light into government intervention. The effectiveness issue of the liberalization of economy discussed from the very early stages of creation and formation of economic theory in Acemoglu and Robinson (2013) and scientific research of Ahmed, Greenleaf and Sacks (2014) is the continuation of such theoretical formation.

Bumann, Hermes and Lensink (2013) and Carrieri, Chaieb and Errunza (2013) described economic liberalization as mandatory to increase productivity as well as the development of society. In parallel, it fosters efficient functioning of internal economy, strenghthening its security and is in the great interest of empirical economic analysis. Hill (2010) mentioned that liberalization phenomenon opens a path for a stable and comprehensive market mechanisms progress which realize itself in broad sense. This very specific characteristic of the economic liberalization impact on the domestic economy has a very necessary feature to act as an invisible productive enforcement. Therefore, this process look at the first sight like a zero sum game where liberalization created no economic value.

Muzaffarli (2014) put forward the "Index of Leftness (Rightness) of Economy" – IL(R)E methodology for the very first time in the book of "Socialness of the economy in right-winged and left-winged systems". This index enables a mathematical assessment of government intervention in various areas of the economy. Muzaffarli and Ahmadov (2017) defined economic and social forms of government's model-shaping intervention in the economy. Later, Muzaffarli (2019) succeeded in taking certain indicators with further improvement into account in his IL(R)E methodology. In his book of "IL(R)E – 2017: Classification of world countries by economic models" N.Muzaffarli presented the latest results of his methodology while covering 95 countries in his study.

Gulaliyev et al. (2016) studied the relationship between human development index and economic freedom in Turkiye and Azerbaijan. Comparative analysis of economic development pillars of Azerbaijan and Turkiye performed by the authors by using newly introduced method of Index of Leftness (Rightness) of Economy. The findings of authors proved that the economy of Azerbaijan is more liberal compared to Turkiye. Being inclined to the "right" only means less regulated Azerbaijani economy compared only to Turkiye. Additionally, it meant Turkish policymakers was using more "left" economic regulation and studied parameters tend to fluctuate over time. They suggested that the main solution for Turkiye's economy at that time is to soften public intervention in parallel with more focus on the parameters of human development index.

Muradov (2017) applied IL(R)E methodology for the first time after being introduced by N.Muzaffarli. He evaluated that to which extent different countries intervene in the education system and expressed his suggestions in his research called "Construction of the knowledge-based economy: possibilities of liberal and dirigiste models" using IL(R)E methodology.

Abdullayeva and Hashimova (2017) introduces Liberality Index of Pension System (LIPS) with the application of IL(R)E. According to authors LIPS can be considered as an indicator of the dominance of the government over the pension system. Authors considers liberal pension system as a system which is fully controlled by private pension fund and no government owned funds exist in the market or no authority make any barriers for their activity.

Abdullayeva (2021) enhanced the abovementioned research in her dissertation thesis on the topic of "Improvement of state regulation of the social protection system in the Republic of Azerbaijan" and for the first time she introduced the "Liberalism (Dirigisme) Index of the Social Protection System – IL(D)PS that measures intervention of government in the social protection system, using a more advanced approach. She compared the results of 30 countries. Azerbaijan with 0.757 score became the most dirigiste country whereas Denmark with 0.205 point became the most liberal countries according to the study.

Allahverdiyeva (2022) has revealed an entirely new index for measuring government regulation in the information economy. Although government regulation in the information services sector covers several aspects from the availability of information for citizens to the management of mechanisms of information circulation in the information society she only used 4 indicator in her study. In her thesis called "Measuring information services liberalism degree and assessment of its economic consequences" she measures how liberal are the governments in mass media, electronic and postal services as well as the advertisement sphere regulation. Based on these indicators, the author presented a single integral index: Index of Liberalism (Dirigisme) of Information Services – IL(D)IS. According to her results among 32 countries Malta is leading the list with 0.192 while Denmark is on the bottom of the list with 0.334 points.

3. METHODOLOGY

For the first time, the horizontal assessment of government intervention in the economy was conducted by professor N. Muzaffarli at the Institute of Economics of the Azerbaijan National Academy of Sciences. The non-complex mathematical methodology proposed by him stands out with its flexibility, as well as its practicality. Opportunities that this applied pragmatism creates lead to widespread use of the proposed methodology by other researchers and scholars help to determine whether the government intervention in many different fields of the economy is leftist or rightist.

Mentioned earlier, in his "Socialness of the economy in right-winged and left-winged systems"

book Muzaffarli (2014) introduced the "Index of Leftness (Rightness) of Economy" – IL(R)E methodology. The mentioned index was calculated based on 6 sub-indices listed below:

- 1. Public finance sub-index (PF) express redistribution of country's tax income through budget expenditures;
- 2. Price regulation sub-index (PR) denotes the degree of public intervention in setting prices;
- 3. Foreign Trade sub-index (FT) evaluates the liberalization of foreign trade by import and export tax and duties;
- 4. Licensing sub-index (L) measures difficulty of licensing over 4 parameters including number of activities require licensing, list of licensed activities, duration and rules for licenses;
- 5. Employment Regulation sub-index (ER) shows the strictness of employment procedures of country;
- 6. Minimum Wage sub-index (MW) indicate the share of government-set annual minimum wage.

All these sub-indices and the final index vary between 0 and 1 as a result of calculations. Indicator "0" shows the extreme rightness of the economy, where government make no intervention. In contrast, indicator "1" means the extreme leftness of the economy, in other words, the economy is entirely controlled by the government. In addition, all sub-indices consist of lower-rank sub-indices and calculated based on them. Sub-indices and lower rank sub-indices were indexed by the formula of based on their characteristics and natures.

$$\frac{(V_i - V_{min})}{(V_{max} - V_{min})}\tag{1}$$

However, employment regulation sub-index and all three lower-rank sub-indices of the foreign trade sub-index were brought to the range of 0-1 by the formula considering their characteristics.

$$\frac{(V_i - V_{max})}{(V_{min} - V_{max})} \tag{2}$$

In the calculations, V_{min} represents the observed, possible, or probable minimum indicator, while V_{max} represents the observed, possible or probable maximum indicator, and V_i shows the current result for each sub-indices. The results obtained for each sub-indices are finalized by the formula with assigning different weights to the indicators.

$$IL(R)E = 0.30 \times PF_i + 0.14 \times PR_i + 0.14 \times FT_i + 0.14 \times L_i + 0.14 \times ER_i + 0.14 \times MW_i$$
 (3)

To bring the results for 10 point scale one simply need to multiply the final result to 10, for 100 point scale shold be multiplied by 100.

<u>Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research</u>
Cilt/Volume: 21 Sayı/Issue: 1 Mart/March 2023 ss./pp. 172-186
O. Sultanov http://dx.doi.org/10.11611/yead.1225807

N.Muzaffarli (2014) specifically mentions IL(R)E methodology only takes modelcreating economic tools into account. He claims that modelcreating instruments posses below features:

- 1. Quantitative;
- 2. Bidirectional;
- 3. Can be a topic for political debates.

Obviously quantitative charasteristics of any instruments mean that we can easily measure and compare the final results. Bidirectionality of it allow researchers to define the direction of the policy. This direction can be "up and down" or "left and right". Finally, being political debatable implies that an instrument is controlled by government according to their political interests. Rationally, all these features are correlated with each other. As government take leftist approach that is in line with its political course it should be measurable so that public can easily show the results of this policy. Moreover, if the results are not reasonable enough it can be criticized by politicians. These features limit the scientific analysts as they are obliged to vividly chose the indicator for their potential models.

4. DATA AND RESULTS

This study covers 10 different countries. Data related to the indicators collected from various sources including website of countries' central banks' as well as open data sources like CEIC database. The main limitation about the study is the indicators. As complex international banking regulation put much of its focus on investment banking it limits our ability to pick up modelcreating commercial banking regulating tools. Hence, below indicators chosen because of its modelcreating nature so that one can easily use this indicators to analyse the government policy. Second main limitation is data availability. It is hard to collect data for all 4 indicators. There is no database that contains all the dataset for the purpose of this study. Thus this preliminary study contains only 10 countries where data for all 4 indicators are available. Third limitation is about the calculation of the optimal average. As countries policy tends to change over time so does the data. This makes it hard to find optimal average for indices as it changes over time to time. Thereby, moving average used instead of optimal average point.

Before looking at the final integral index – IL(D)BS results, it is possible to make specific interpretations about the situations in the countries for each indicator separately by looking at the calculation rules and results of its sub-indices. These explanations will form an overall idea about the results of the final index.

The Charter Capital sub-index (CC) reflects the minimum authorized capital required based on the relevant legislation of the countries when obtaining a license to perform banking activities. The minimal charter capital requirement can be considered as a mechanism that facilitates or complicates entry into the banking system. When this requirement is high, a decrease in the number of investors that want to perform banking activities can be observed, and when it is the opposite, an increase will be

detected. Nevertheless, using charter capital as a digit for comparison among countries is a rough mistake from an economic point of view and can cause misinterpretations. The fact that this requirement is high in Japan does not at all mean that it is dirigiste compared to Azerbaijan. As Japan has a relatively larger economy, to differ from the requirement of a country with a smaller economy like Azerbaijan is normal. A more realistic and unbiased comparison is possible only after adjusting this indicator to the size of the countries' economies. For this purpose, the charter capital requirement for each country was converted into US dollar equivalent and divided by the country's GDP in US dollar equivalent. This ratio allows a more realistic comparison between countries by containing the amount of the minimum authorized capital requirement relative to GDP. Then the obtained ratio was indexed with the first formula and CC index was developed. It is obvious that this ratio is relatively small compared to GDP. For this purpose Vmax = 0,001 and Vmin = 0 is accepted. Indeed, since some countries do not impose any nominal capital requirements for entry into the banking system, the minimum indicator is taken as 0.

Table 1. Results of the Charter Capital Sub-Index

№	Country	CC Index
1	Japan	0.001
2	Turkiye	0.002
3	Russia	0.003
4	China	0.008
5	India	0.019
6	South Korea	0.039
7	Kazakhstan	0.112
8	Uzbekistan	0.144
9	Azerbaijan	0.538
10	Georgia	0.955

Source: Calculations of the author.

The most liberal country in terms of minimal charter capital requirement is Japan, while the most dirigiste country is Georgia. The moving average of the sub-index is 0,182. Two countries are located to the left from the moving average, and eight countries are located to the right. Azerbaijan is one of the 2 countries located to the left from the center with an indicator of 0,538. In other words, it is the second most dirigiste country among the studied countries. The average value of the sub-index for high-income countries is 0,020, while for middle-income countries, it is 0.041, and for low-income countries, it is 0,332.

The Reserve Requirement sub-index (RR) is the part of the total capital of commercial banks that must be kept as a reserve, determined by the central banks. The indicator is expressed as a percentage of total capital. The growth of interest has a shrinking effect on commercial banks' capital base, which negatively impacts their profitability. Therefore, the most liberal country is the country that does not require reserve funds from banks. With this logic, Vmin = 0 is accepted. However, it is clear that keeping all the bank's capital as a reserve does not fit into a rational sense. During data collection for this study, the highest required reserve ratios were 73% in Venezuela and 41% in Argentina. Considering these Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research

figures as the maximum would have shifted the research's results to the right, which means that most of the countries are liberal and results of the study will be biased. Still, the actual view can be completely different. In some countries, such unusual reserve requirements may be related to various shocks that occur in countries' economies at that moment and they were not included in the calculation and considered as statistical outliers. Reserve requirement in more than 95% of the existing countries in CEIC (2022) database do not exceed 15%. Thus, Vmin = 15 is accepted for index calculation.

Table 2. Results of the Reserve Requirement Sub-Index

№	Country	RR Index
1	Azerbaijan	0.033
2	Japan	0.053
3	Kazakhstan	0.133
4	Russia	0.200
5	Uzbekistan	0.267
6	India	0.300
7	Georgia	0.333
8	South Korea	0.467
9	Turkiye	0.533
10	China	0.540

Source: Calculations of the author.

Among the studied countries of reserve requirement the most rightist country is Azerbaijan, while the most leftist country is China. The moving average of the sub-index is 0,286. Five countries are located to the left from the moving average, yet the other five countries are situated to the right from the moving average. Azerbaijan is the first country located to the right from the center with 0,033 index. In this indicator, our country achieved surpassing even a developed economy like Japan. The lowest reserve requirement is in Azerbaijan with 0,5%, so that our country is very close to the extreme right-wingness, 0 point in this sphere. For high-income countries average value of the sub-index is 0,260, while for middle-income countries it is 0,291, and for low-income countries it is 0,293. In other words, as the income level decreases, countries tend to sharpen the reserve requirement.

Interest Rate sub-index (IR) is the rate determined by central banks for commercial banks and considered as refinancing rate. This instrument is one of the main tools for central banks to provide commercial banks with funds, as well as one of the important tools in defining economic warming and cooling. Thus, higher interest rate has a diminishing effect on the loan income of commercial banks. This is the main factor that leads to the refusal of economic actors to borrow expensive loans from banks and lowers the credit margin and results in the income loss of banks by tightening their credit portfolio. When considered as a classic measurement mechanism, a simple comparison of the central bank interest rate does not provide a clear vision on whether the government has hardened or softened its policy. So, as a first step in forming the interest rate sub-index, the current interest rate is divided by the last 10-year-average interest rate for assessing what the current discount rate signals in comparison to the past. If the obtained result is greater than 1 it shows the central bank following tough interest rate policy

compared to the last 10 years and vice-versa it means the opposite. Thereby for index calculation Vmin = 0 and Vmax = 2 are taken. Vmax means that the current interest rate can be up to 2 times larger than the last 10-year-average rate. The final result of this sub-index implies which country's interest rate policy has been more liberal than the others in the previous 10 years. An exceptional case was observed while calculating the interest rate sub-index. Because the interest rate in Japan was 0% between 2012 and 2017 and -0,10% since 2017, this country is at the point of 0, in other words, it has set in the extreme liberal position. Since Japan uses its monetary policy instruments to encourage foreign trade, especially export, the discount rates are kept at the lowest level.

Table 3. Results of Interest Rate Sub-Index

No	Country	IR Index
1	Japan	0.000
2	Turkiye	0.180
3	China	0.391
4	Russia	0.468
5	India	0.473
6	Azerbaijan	0.526
7	Uzbekistan	0.591
8	Kazakhstan	0.749
9	South Korea	0.749
10	Georgia	0.779

Source: Calculations of the author.

As mentioned before, Japan is the country with the most liberal interest rate policy among the other researched countries with an extreme score of 0, while Georgia is the country with the strictest interest rate policy scoring 0.779 based on the calculations. The moving average of the sub-index is 0,491. Five countries are located to the left from the moving average, and five are located to the right from the center. Azerbaijan is the first country located to the left from the center with a value of 0,526. The average sub-index result for high-income countries is 0,375, while for middle-income countries it is 0,536, and for low-income countries it is 0,510. Although the average outcomes of middle and low-income countries do not support the hypothesis about the interest rate's dependence on countries' income level, I believe that it will be confirmed as the more data included to the study.

The leverage ratio sub-index (LR) is an indexed indicator of leverage ratio requirements set by central banks. The leverage ratio is calculated with dividing the bank's Tier 1 capital to the sum of its on-balance assets and off-balance liabilities. Higher the leverage ratio means banks should save more Tier 1 capital or assets and liabilities must be less than the current Tier I capital as much as the determined ratio. Alternatively, banks are obliged to enter less operational agreement to sustain determined ratio. This is a clear example of the form of the government's modelcreating intervention modelcreating intervention. It should be noted that the minimum leverage ratio is defined as 3 by the Bank for International Settlements. Therefore, Vmin = 3 was accepted for calculating the sub-index. As the observed maximum leverage ratio is never exceeded 6 for systemically important banks, Vmax =6 was accepted.

Table 4. Results of Leverage Ratio Sub-Index

№	Country	LR Index	
1	Russia	0.00	
2	Japan	0.00	
3	South Korea	0.00	
4	Turkiye	0.00	
5	Kazakhstan	0.00	
6	Azerbaijan	0.33	
7	China	0.33	
8	India	0.33	
9	Uzbekistan	0.33	
10	Georgia	0.67	

Source: Calculations of the author.

Table 4 summarize the results of LR index. Really interesting pattern observed as countries are divided into 3 groups according to this indicator. The first group of countries resides at the extreme 0, while the second bunch of countries clustered at 0,33, and the last group sets at the point of 0,667. The reason behind is quite simple. First group of countries determine LR as 3 which in our case is equivalent of 0. Second group assign LR as 4 and this equals to 0,33 in LR index. Others set the higher ratios so that they belong to the last group of countries. Because Georgia is the only country that applies the strictest leverage with a leverage ratio of 5, among the studied countries, it located at the leftmost point of 0,667. Five of the researched countries scored 0, while four of them scored 0,33 and one of them scored 0,667. The moving average of the sub-index is 0,200. Five of the countries are located to the left from the moving average, and the other five are located to the right. Azerbaijan is located to the left from the center with the result of 0,33. The average value of the sub-index is 0 for high-income countries, while for middle-income countries it is 0,111 and for low-income countries it is 0,333.

Index of Liberalism (Dirigisme) of Banking System – IL(D)BS is an integral index that reflects the level of intervention in the banking system by central banks or other relevant regulatory authorities. Despite of its preliminary version the index allows to assess government intervention in the monetary system and future improvements will serve to advance the results of the index. Moreover, IL(D)BS will be able to contribute to the improvement of IL(R)E by integrating it into IL(R)E in the future. The final integral index was calculated by the formula and the results of the index are represented in the tables below.

$$IL(D)BS = 0.30 \times CC + 0.30 \times RR + 0.20 \times IR + 0.20 \times LR$$
 (4)

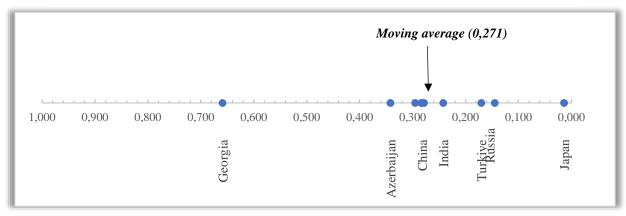
While defining the weights of the final integral index, practicality and importance of the subincidices were taken into account. However, in the future, in case of accessing to a large dataset mathematical optimization of the applied weights can be performed.

Table 5.Results of IL(D)BS

№	Country	IL(D)BS
1	Japan	0.014
2	Russia	0.144
3	Turkiye	0.170
4	India	0.242
5	South Korea	0.278
6	China	0.282
7	Kazakhstan	0.283
8	Uzbekistan	0.295
9	Azerbaijan	0.342
10	Georgia	0.659

Source: Calculations of the author.

Scale 1.Leftness-Rightness of Economies by IL(D)BS



Source: Calculations of the author.

Table 6.Distribution of Countries with Different Income Level by IL(D)BS

	Number of countries within the intervals			
Range of IL(D)BS	High-income countries	Middle- income countries	Low-income countries	All countries
0.001 - 0.200	1	1	1	3
0.201 - 0.400	1	2	3	6
0.401 - 1.000	-	-	1	1
Average of IL(D)BS	0.146	0.237	0.342	0.271
Minimum of IL(D)BS	0.014	0.144	0.170	0.014
Maximum of IL(D)BS	0.278	0.283	0.659	0.659
Total number of countries	2	3	5	10

Source: Calculations of the author.

Table 5, table 6 and scale 1 present the final results for IL(D)BS. The moving average of the index is 0,271. Four countries are located to the right from the average while six countries are located to the left. Japan has the least intervention in the banking system with a value of 0,014. Russia, Turkiye and India are following Japan and belong to the liberal economies from commercial banking regulation perspective. Georgia is the country with the hardest regulation of the banking system with a score of 0,659. By scoring 0,342 Azerbaijan is able to surpass only Georgia in the list. South Korea leads the list

of the dirigiste countries that are located to the left from the average with 0,278 point. China, Kazakhstan, and Uzbekistan come after South Korea in the list and are attributed to the group of countries with the dirigiste banking system.

5. CONCLUSION

For the first time, the initial methodology that allows to measure government intervention in the banking system has revealed with this study. Within the limits of this study one may conclude that lesser the government intervention on the banking system, higher the income of a country. Furthermore, results can be interpreted as higher-income countries tends to minimize the interventionist policy in the banking system. It may be a sign of effective resource allocation and management. It is expected that the methodology will consider all aspects of the regulation of banking system with its further improvement in the future and more advanced results will be obtained by applying optimal weights with the help of mathematical optimization methods.

Additionally, one may be very careful while interpreting the results of IL(D)BS. This methodology only compares country from the perspective of other country. It means countries are liberal or dirigiste only in comparison to other countries. IL(D)BS cannot be applied to a single country and this result alone means nothing in case of lack of enough data about other countries. Analysis of IL(D)BS results may serve as a sign for policymakers to decide direction and extent of public intervention into economy. Central banks may decide to apply more rightist or leftist measures to bring the banking sector indicators into desired level.

The features of IL(D)BS and nature of the data should also be taken into account during interpretation. It should be noted that there is not an extreme liberal or extreme dirigist country in practice. Take for example, Japan sits in the extreme liberal point in IR sub-index or 5 countries are extreme rightist according to LR sub-index but it does not necessarily mean that they will be in 0 or 1 in IL(D)BS. In practice, one country may demonstrate very exceptional economic performance when government take the lead while in other country it may bring down to economic stagnation. So, having Japan leading the IL(D)BS final result list is not the indication of it's well-balanced monetary policy or Georgia does not posses the weak banking sector compared to others. It only shows the public interventions direction and current situation. Application of leftist policy must be needed in a certain geography and it can only be considered by policymakers. It is out of the scope of the IL(D)BS methodology to considers geopolitical as well as all aspects of banking policy.

Lastly, IL(D)BS covers only commercial banking regulatory framework which means investment banking is not within the limits of it. Accordingly, users of IL(D)BS only make hypotheses about commercial banking system of countries. One should be very careful while interpreting the results as it does not mean whole banking sector and only compares commercial banking indicators. Moreover, indexing methodology only takes modelcreating tools into account. Modelcreating mechanisms should Yönetim ve Ekonomi Araştırmaları Dergisi / Journal of Management and Economics Research

posses the features like measurability, bivectoriality and political debatability as mentioned earlier. IL(D)BS is not an exception and it also takes modelcreating regulatory instruments into account. This in mind, the main lack of IL(D)BS is nonmodelcreating regulatory instruments which should be considered during decisionmaking.

REFERENCES

- Abdullayeva, R. ve Hashimova, V. (2017) "İS(S)İ 2015: İqtisadiyyatın Liberallıq Potensialı", Bakı: Elm və Bilik Nəşriyyatı.
- Abdullayeva, R. S. (2021) "Azərbaycan Respublikasında Sosial Müdafiə Sisteminin Dövlət Tənzimlənməsinin Təkmilləşdirilməsi", Bakı, Accessed: http://economics.com.az/images/fotos/avtoreferatlar/2021/Resmiyye_avt_az.pdf (20 June 2022).
- Abdymanapov, S. A., Toxanova, A. N., Galiyeva, A. H., Abildina, A. Sh. ve Aitkaliyeva, A. M. (2016) "Development of Public-Private Partnership in the Republic of Kazakhstan", IEJME-Mathematics Education, 11(5): 1113-1126.
- Acemoglu, D. ve Robinson, J. A. (2013) "Why Nations Fail: The Origins of Power, Prosperity and Poverty", London: Profile Books.
- Ahmed, F. Z., Greenleaf, A. ve Sacks, A. (2014) "The Paradox of Export Growth in Areas of Weak Governance: The Case Of The Readymade Garment Sector in Bangladesh", World Development, 56: 258-271.
- Allahverdiyeva, L. A. (2022) "İnformasiya Xidmətlərinin Liberallıq Dərəcəsinin Ölçülməsi və Iqtisadi Təsirlərinin Qiymətləndirilməsi", Bakı, Accessed: http://economics.com.az/images/fotos/avtoreferatlar/2022/LeliAvtoreferatAZ.pdf (20 June 2022).
- Basel Committee on Banking Supervision (1998) "International Convergence of Capital Measurement and Capital Standards", Accessed: https://www.bis.org/publ/bcbs04a.pdf (1 May. 2022).
- Basel Committee on Banking Supervision (2006) "Basel II: International Convergence of Capital Measurement and Capital Standards", Accessed: http://www.bis.org/publ/bcbs128.pdf (1 May. 2022).
- Basel Committee on Banking Supervision (2010) "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems", Accessed: http://www.bis.org/publ/bcbs189.pdf (1 May. 2022).
- Bumann, S., Hermes, N. ve Lensink, R. (2013) "Financial Liberalization and Economic Growth: A Meta-analysis", Journal of International Money and Finance, 33: 255-281.

- Carrieri, F., Chaieb, I. ve Errunza, V. (2013) "Do Implicit Barriers Matter for Globalization?", Review of Financial Studies, 26: 1594-1739.
- CEIC (2022) Reserve Requirements By Central Banks Or Other Relevant Authorities Across Countries, Accessed: https://www.ceicdata.com/en/indicator/reserve-requirement-ratio (20 June 2022).
- Cohen, J. N. (2010) "Neoliberalism's Relationship With Economic Growth in the Developing World: Was It the Power Of The Market or the Resolution Of Financial Crisis?", MPRA Paper 24527, University Library of Munich, Germany, Accessed: https://mpra.ub.uni-muenchen.de/24527/ (20 June 2022).
- Gulaliyev, M. G., OK, N. I., Musayeva, F. Q., Efendiyev, R. J., Musayeva, J. Q. ve Agayeva, S. R. (2016) "Economic Liberalization and Its Impact on Human Development: A Comparative Analysis of Turkey And Azerbaijan", International Journal Of Environmental & Science Education, 11, NO. 17: 9753-9771.
- Hill, R. V. (2010) "Liberalization and Producer Price Risk: Examining Subjective Expectations in the Ugandan Coffee Market", Journal of African Economics, 19(4): 433-458.
- McCartney, M. (2015) "Economic Growth and Development: A Comparative Introduction", London: Palgrave Macmillan.
- Muradov, A. (2017) "İS(S)İ 2015: İqtisadiyyatın Liberallıq Potensialı", Bakı: Elm və Bilik Nəşriyyatı.
- Muzaffarli, N. ve Ahmadov, B. (2017) "İS(S)İ 2015: İqtisadiyyatın Liberallıq Potensialı", Bakı: Elm və Bilik Nəşriyyatı.
- Muzaffarli, N. ve Ahmadov, B. (2018). "Effect of the Model-shaping Forms of Government Intervention in the Economy on the Economic Growth", China Finance and Economic Review, 7, No.1.
- Muzaffarli, N. (2019) "İS(S)İ 2017: Dünya Ölkələrinin İqtisadi Modellər Üzrə Təsnifatı", Bakı: AMEA İqtisadiyyat İnstitutu.
- Muzefferli, N. (2018) "İS(S)İ 2016: İqtisadiyyatın Liberallıq-Dirijistlik Səviyyəsi", Bakı: Elm və Bilik Nəşriyyatı.
- Muzaffarli, N. (2014), "İqtisadiyyatın Sosialyönlüyü Sağçı və Solçu Sistemlərdə", Bakı: ŞərqQərb Nəşriyyat Evi.
- Sally, R. (2013) "Asia's Story of Growing Economic Freedom by Razeen Sally. Cato Institute. Policy Analysis", 725: 1-12, Accessed: http://object.cato.org/sites/cato.org/files/pubs/pdf/ pa725-revised.pdf (20 June 2022).
- Swaminathan, S., Aiyar, A., Debroy, B., ve Bhandari, L. (2014) "Economic Freedom of the States of India 2013", New Delhi: Friedrich Naumann Foundation and Cato Institute

Hakem Değerlendirmesi: Dış bağımsız.

Çıkar Çatışması: Yazar çıkar çatışması bildirmemiştir.

Finansal Destek: Yazar bu çalışma için finansal destek almadığını beyan etmiştir.

Teşekkür: -

Peer-review: Externally peer-reviewed.

Conflict of Interest: The author has no conflict of interest to declare.

Grant Support: The author declared that this study has received no financial support.

Acknowledgement: -