СТОПАНСКА АКАДЕМИЯ „ДИМИТЪР ЦЕНОВ"

ГЛОБАЛНИ И РЕГИОНАЛНИ ИЗМЕРЕНИЯ НА МЕЖДУНАРОДНИТЕ ИКОНОМИЧЕСКИ ОТНОШЕНИЯ

ДВАДЕСЕТ И ШЕСТА СТУДЕНТСКА НАУЧНО-ПРАКТИЧЕСКА КОНФЕРЕНЦИЯ

СБОРНИК С ДОКЛАДИ

Свищов

2022

Стопанска академия „Димитър Ценов" - Свищов

Dimitar Tsenov Academy of Economics - Svishtov

ГЛОБАЛНИ И РЕГИОНАЛНИ ИЗМЕРЕНИЯ НА МЕЖДУНАРОДНИТЕ ИКОНОМИЧЕСКИ ОТНОШЕНИЯ

ДВАДЕСЕТ И ШЕСТА СТУДЕНТСКА НАУЧНО-ПРАКТИЧЕСКА КОНФЕРЕНЦИЯ

СБОРНИК С ДОКЛАДИ

Свищов
2022

GLOBAL AND REGIONAL DIMENSIONS OF INTERNATIONAL ECONOMIC RELATIONS

TWENTY-SIXTH STUDENT SCIENTIFIC AND PRACTICAL CONFERENCE

PROCEEDINGS

Svishtov
2022

Катедра „Международни икономически отношения" при Стопанска академия „Димитър А. Ценов" - Свищов организира през 2022 година своята двадесет и шеста студентска научно-практическа конференция на тема „Глобални и регионални измерения на международните икономически отношения", в пет тематични направления: *1) Международни инвестиции; 2) Международен туризъм; 3) Международен бизнес; 4) Международна интеграция и търговия; 7) Международно управление на хората.*

Пленарната сесия на конференцията се проведе на 20 май 2022 г. в дистанционен формат чрез платформата BigBlueButton и присъствено в Базата за обучение на Стопанска академия в с. Орешак, съвместно с представители на катедра „Международни икономически отношения" при Икономически университет - Варна и катедра „Икономика и международни отношения" при Русенски университет „Ангел Кънчев".

Програмен комитет:

- *Доц. д-р Здравко Любенов* – ръководител катедра „Международни икономически отношения", Стопанска академия „Димитър А. Ценов" – Свищов
- *Доц. д-р Георги Маринов* – ръководител катедра „Международни икономически отношения", Икономически университет – Варна

Рецензенти:

проф. д-р Веселина Димитрова
доц. д-р Галина Захариева
доц. д-р Здравко Любенов
доц. д-р Карина Саркисян-Дикова
гл. ас. д-р Александър Шиваров
гл. ас. д-р Галин Стефанов
гл. ас. д-р Даниела Илиева

Отговорник за процедурата по рецензиране, техническо оформление:

гл. ас. д-р Ивайло Петров

За всички представени за публикуване текстове се прилага процедура на двойно анонимно рецензиране.

Публикациите отразяват личните виждания на авторите. Авторите носят пълна отговорност за съдържанието на разработките, изразените мнения, използваните данни, цитираните източници, както и за езиковото оформление на текстовете. Условията и сроковете за приемане на текстове са посочени на страницата на конференцията на адрес: www.mioconference.eu

The Department of International Economic Relations at Dimitar Tsenov Academy of Economics - Svishtov organized its 26th Students' Scientific and Practical Conference in the field of International Economic Relations, entitled 'Global and Regional Dimensions of International Economic Relations', in five thematic sections: *1) International investment; 2) International tourism; 3) International business; 4) International integration and trade; 5) International people management.*

The Plenary Session of the Conference was held on 20 May 2022 in an unattended e-format through the BigBlueButton platform and at Academy's Training and Recreation Center in the village of Oreshak, together with representatives of the Department of International Economic Relations at the University of Economics - Varna and the Department of Economics and International Relations at Angel Kanchev University of Ruse.

Program Committee:

- *Assoc. Prof. Zdravko Lyubenov, PhD* - Head of the Department of International Economic Relations at Dimitar A. Tsenov Academy of Economics - Svishtov
- *Assoc. Prof. Georgi Marinov, PhD* - Head of the Department of International Economic Relations at University of Economics - Varna

Reviewers:

Prof. Veselina Dimitrova, PhD
Assoc. Prof. Galina Zaharieva, PhD
Assoc. Prof. Zdravko Lyubenov, PhD
Assoc. Prof. Karina Sarkisyan-Dikova, PhD
Head Assist. Aleksandar Shivarov, PhD
Head Assist. Galin Stefanov, PhD
Head Assist. Daniela Ilieva, PhD

In charge of the review process, technical layout:

Head Assist. Ivaylo Petrov, PhD

СЪДЪРЖАНИЕ / CONTENT:

ТЕМАТИЧНО НАПРАВЛЕНИЕ

МЕЖДУНАРОДНИ ИНВЕСТИЦИИ

THEMATIC SECTION

INTERNATIONAL INVESTMENT

НОРВЕЖКИ ПРЕКИ ИНВЕСТИЦИИ В РАЗВИВАЩИТЕ СЕ ДЪРЖАВИ ПРЕДИ ПАНДЕМИЯТА (2013-2018 Г.)

Илияна Денчева Христова
4 курс, бакалавър,
специалност „Международни икономически отношения",
Икономически университет - Варна

Резюме: Докладът анализира норвежките преки инвестиции в развиващите се страни, използвайки данните на ОИСР и Националния статистически институт на Норвегия. Въпреки ограниченията на данните, анализът дава някои полезни прозрения.

Докладът показва, че по-малко от 4% от общите норвежки преки инвестиции са в страни с ниски и по-ниски средни доходи. Освен това има малко съответствие относно това кои развиващи се страни получават големи преки инвестиции и кои държави са приоритетни в норвежката политика за развитие. В страните с ниски и средни доходи инвестициите намаляват, но данните са твърде несигурни, за да се направят някакви твърди заключения.

Ключови думи: Норвегия, Преки инвестиции, Развиващи се държави.

JEL: F21, F23, F36.

Въведение

Лидерите по света са си поставили амбициозни цели за устойчиво развитие. През 2015 г. те се споразумяха за три важни споразумения: 1. Целите за устойчиво развитие (Sustainable Development Goals, 2020); 2. Парижкото споразумение (United Nations, 2015) ; и 3. Програмата за действие от Адис Абеба (Addis Ababa Action Agenda of the Third International Conference on Financing for Development, 2015). Международният валутен фонд изчислява, че до 2030 г. развиващите се и нововъзникващите икономики ще трябва да инвестират 2,5 трилиона долара повече в инфраструктура, здравеопазване, образование и т.н. (Gaspar et al., 2019). След пандемията, ОИСР изчислява, че ще са необходими допълнителни 1000 млрд. долара инвестиции, за да се компенсира загубеното (OECD, 2020).

Преките инвестиции са жизненоважни за устойчивото развитие. Основните източници на финансиране за развитие са местното данъчно

облагане и частните спестявания, но чуждестранните парични потоци също могат да бъдат важни. Преките инвестиции и паричните преводи от чуждестранни жители могат да помогнат на страните с ниски и средни доходи да се развиват устойчиво (Moss & Fjeldstad, 2019). Целта на анализа е да направи преглед на обхвата и структурата на норвежките преки инвестиции в чужбина, със специален поглед върху развиващите се страни. Анализът е ограничен частично до портфейла от норвежки преки инвестиции в чужбина за периода 2013-2018 г. Това от една страна е за да се избегнат изкривяванията на тенденциите породени от пандемията и нейните ефекти, и от друга страна липсата на пълни данни за периода след 2018 г. Там където има налични по-нови данни, са включени в анализа.

1. Колко инвестира Норвегия в развиващите се страни?

Малка част от норвежките инвестиции са насочени към страни с ниски и по-ниски средни доходи. Те са средно около 1509 млрд. норвежки крони между 2013 и 2018 г. Само 3,5 млрд., или 0,23% от общите инвестиции, са отишли в страни с ниски доходи. Тези с по-нисък среден доход са получили 47,9 млрд., или 3,17% от общите инвестиции (виж Фиг. 1).

Фигура 1. Норвежки преки инвестиции в чужбина по ниво на доход/групи държави.
Средногодишно за 2013-2018 г., процентно разпределение
Източник: Национален статистически институт на Норвегия

Инвестициите в страни с по-ниски средни доходи изглежда намаляват. Делът на инвестициите в тях е намалял от 2013 г. до 2018 г. (виж. Фиг. 2). Необходими са повече данни и анализи, за да се определи защо преките инвестиции в страните с по-нисък среден доход са намалели през периода, но е възможно спадът на цените на петрола през 2014 г. да е фактор.
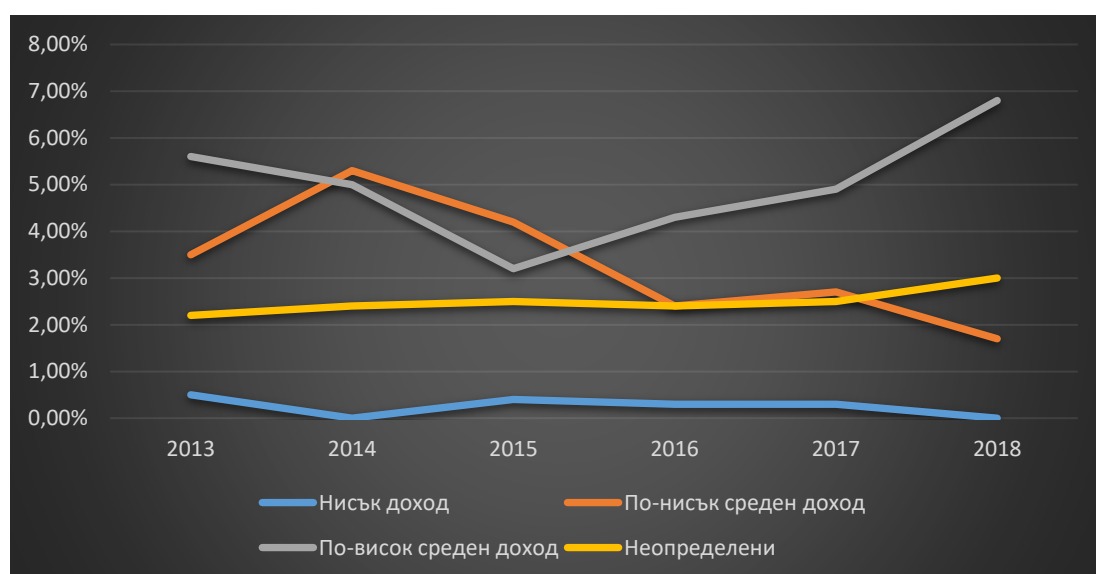
Фигура 2. Норвежки преки инвестиции в чужбина като процент по ниво на доход/групи държави. 2013-2018 г.
Източник: Национален статистически институт на Норвегия

Регистрирани са в периода норвежки преки инвестиции в 30 развиващи се страни. Като 82% от тези инвестиции отиват в Ангола, Алжир и Танзания (виж. Таблица 1).

Таблица 1. Преки инвестиции в развиващите се страни. Средногодишно за периода 2013-2018 г., милиарди норвежки крони

Страна	Инвестициите в млрд. норвежки крони	Двустранни отношения с Норвегия
1. Ангола	27,8	Непартньорска страна
2. Алжир	8,6	Непартньорска страна

3. Танзания	7,2	Страна партньор - дългосрочно сътрудничество за развитие
4. Либерия	3,2	Страна партньор - дългосрочно сътрудничество за развитие
5. Индия	2,3	Непартньорска страна
6. Колумбия	1,0	Страна партньор - дългосрочно сътрудничество за развитие
7. Непал	0,9	Страна партньор - дългосрочно сътрудничество за развитие
8. Индонезия	0,9	Страна партньор - дългосрочно сътрудничество за развитие
9. Виетнам	0,8	Непартньорска страна
10.Гана	0,7	Страна партньор - дългосрочно сътрудничество за развитие

Забележка: Включва всички страни с ниски доходи, всички страни с по-ниски средни доходи и две страни партньори на Норвегия в политики за развитие, които са страни с по-висок среден доход, Колумбия и Индонезия.
Източник: Национален статистически институт на Норвегия

Петролната индустрия е важен двигател за норвежките преки инвестиции в развиващите се страни. По отношение на политиката за развитие Норвегия и нейните партньори има малко съответствие. Само 21% от инвестициите в развиващите се страни са в партньори на Норвегия по политиката за развитие. Афганистан, Мали, Нигер, Палестина, Сомалия и Южен Судан на практика не са получили преки норвежки инвестиции през периода от 2013 до 2018 г., поне не са регистрирани такива в тези страни, но е възможно норвежки инвестиции все още да съществуват.

Големите норвежки компании инвестират сериозно в Азия и Латинска Америка. Норвегия има най-големи инвестиции в Бразилия от всички страни с ниски и средни доходи, средно 38 млрд. норвежки крони от 2013 до 2018 г., до голяма степен благодарение на операциите на Hydro. Други големи норвежки фирми работят в страни с по-висок среден доход. В Малайзия и Тайланд Telenor и Statkraft имат дъщерни дружества. Електроцентрали, управлявани от Statkraft, могат да бъдат намерени както в Турция, така и в Перу. Въпреки че всяка една от тези инвестиции има

значителни последици за икономическия растеж, за целите на този анализ се съсредоточаваме върху страните с ниски и по-ниски средни доходи.

2. Къде отиват общите преки инвестиции?

Норвежки граждани или компании, регистрирани в Норвегия, притежават средно преки инвестиции в чужбина на стойност около 1623 млрд. норвежки крони през периода 2013-2020 г. В абсолютни числа стойността на норвежките преки инвестиции в чужбина нарасна от около 1 100 млрд. норвежки крони през 2013 г. до около 1 867 млрд. норвежки крони през 2020 г., ръст от почти 68% през периода (виж. Таблица 2).

Таблица 2. Норвежки преки инвестиции в чужбина, 2013-2020 г.

Суми в милиарди крони							
Година / **Страна**	2013	2014	2015	2016	2017	2018	2019	2020
Норвегия	1112	1286	1613	1715	1679	1815	1899	1867

Източник: Национален статистически институт на Норвегия

Но ако се вземе предвид, че кроната отслабна значително по стойност през периода, средният растеж на година в долари, е сравнително умерен (виж. Фигура 3).

Фигура 3. Норвежки преки инвестиции в чужбина, 2013-2020 г. милиони долара
Източник: Национален статистически институт на Норвегия

Преките инвестиции на Норвегия са около 36% от БВП през 2013 г. и нарастват до около 55% от БВП през 2020 г.

Инвестициите през периода 2013-2018 г. са концентрирани в няколко развити икономики. Норвежците инвестират приблизително всяка втора крона в Холандия, САЩ или Швеция. През 2018 г. Националния статистически институт на Норвегия установи нарастваща концентрация върху няколко модерни икономики (Direkteinvesteringer Konsentrert Mot OECD-Land, 2018). През 2016 г. три от четири крони, инвестирани в Азия, отиват в Сингапур, финансовият център на региона.

Норвегия има най-много инвестиции в добивната промишленост, индустрията и ваканционни домове, но най-голям растеж във финансовите услуги и ИКТ. Добивната промишленост (руди, нефт и газ) получи най-много норвежки преки инвестиции, които представляват една четвърт от годишните преки инвестиции (виж. Таблица 3).

Таблица 3. Индустрии с най-големи инвестиции за 2013 и 2018 г

	Суми в милиарди крони		Промяна 2013-2018 г
Бранш	2013	2018	
Добивна промиш.	348	424	+22%

Индустрия	*205*	*266*	*+30%*
Ваканционни домове	*131*	*200*	*+53%*
Финансиране и застраховка	*95*	*192*	*+102%*
ИКТ	*65*	*136*	*+109%*

Източник: Национален статистически институт на Норвегия

Заключение

На практика няма норвежки инвестиции в много уязвимите държави, които Норвегия е избрала за страна партньор, показва анализът. Норвежките компании имат най-големи инвестиции в петролната индустрия в чужбина. Норвежката агенция за сътрудничество за развитие (Norad) управлява приблизително половината от общата помощ за развитие, с която разполага Норвегия. Те имат желание за по-добър диалог с различните актьори, за да се постигне в бъдеще по-устойчиво инвестиране. Най-важното е какво правят самите държави по отношение на данъчните приходи и частните спестявания, но паричните потоци от чужбина могат да играят решаваща роля. Норвегия може да даде значителен принос за устойчивото развитие в партньорските си страни чрез комбинация от помощ за развитие, преки инвестиции и трансфери от чуждестранни жители. На света липсват милиарди за постигане на целите за устойчивост, а пандемията рязко върна развитието. Необходими са по-голяма благотворителна организация и повече инвестиции, които създават стойност в развиващите се страни.

Използвани източници (References)

Addis Ababa Action Agenda of the Third International Conference on Financing for Development. (2015).

https://www.un.org/development/desa/financing/sites/www.un.org.dev
elopment.desa.financing/files/2021-09/AAAA_Outcome.pdf

Direkteinvesteringer konsentrert mot OECD-land. (2018, January 24).
Www.ssb.no. https://www.ssb.no/utenriksokonomi/artikler-og-
publikasjoner/direkteinvesteringer-konsentrert-mot-oecd-land

Gaspar, V., Amaglobeli, D., Garcia-Escribano, M., Prady, D., & Soto, M. (2019).
Fiscal policy and development: Human, social, and physical investment for
the sdgs. In *www.imf.org*. https://www.imf.org/en/Publications/Staff-
Discussion-Notes/Issues/2019/01/18/Fiscal-Policy-and-Development-
Human-Social-and-Physical-Investments-for-the-SDGs-46444

Moss, S., & Fjeldstad, E. (2019). Ingen utvikling uten jobbskaping-hvorfor vi
trenger mer "naeringsfremvikling" i afrika. In *www.civita.no*. Civita-notat.
https://civita.no/content/uploads/2019/08/Notat_21_2019.pdf

OECD. (2020, November 9). *Global outlook on financing for sustainable
development 2021 : A new way to invest for people and planet*. Www.oecd-
Ilibrary.org; OECD. https://www.oecd-ilibrary.org/sites/e3c30a9a-
en/1/3/2/index.html?itemId=/content/publication/e3c30a9a-
en&_csp_=8cdd8991f371dde0be547aab4112527a&itemIGO=oecd&itemC
ontentType=book#boxsection-d1e29

Sustainable Development Goals. (2020).
https://www.un.org/sustainabledevelopment/wp-
content/uploads/2019/01/SDG_Guidelines_AUG_2019_Final.pdf

United Nations. (2015). *Paris Agreement*. United Nations.
https://unfccc.int/sites/default/files/english_paris_agreement.pdf

NONLINEAR AUTOREGRESSIVE NEURAL NETWORKS FOR DEFLATION FORECASTING

Georgi Marianov Georgiev
Doctoral student
Major in Political Economy
"Angel Kanchev" University of Ruse

Abstract: The current research explores the possibilities of forecasting the negative tendencies of Consumer price index (CPI), which are usually rare events. Nonlinear autoregressive neural networks (NARNN) are used to predict the trends and values of CPI of three countries – Japan, Switzerland and Spain. Countries are selected this way, because they are completely different in their economic behavior – for Japan deflation and low inflation are typical, for Switzerland it is a well-known phenomenon but for Spain it is unusual. The developed models are based on a long period of time, consisting from 681 to 785 total values on a monthly basis, which means an interval from 56 to 65 years. The results do not coincide fully with the true values. However, the model often successfully predicts the trend in the near future.

Key words: CPI, NARNN, forecasting, deflation.

JEL: C45, C53, F20.

Introduction

Forecasting of economic variables is essential for bettering investment strategies both at micro- and macroeconomic level. Knowing the future values of the key indicators such as CPI is a perquisite for improving the decision-making process of all economic agents. Nowadays, and especially in the last decades the concern of deflation is renewed. This is due to the fact that it appears at a lot of countries and its' historical association is mainly related with episodes of financial crises, recession, stagnation and even depression. That is why deflation is often considered as one of the most harmful economic phenomena, even more dangerous than high rates of inflation. Looking back into the historical records the process is associated mainly with negative aggregate demand shocks, resulting in decline of real output and a high rate of unemployment. That could be seen most clearly during the Great Depression period. However, it should be mentioned that some deflationary episodes have been periods of economic development, mostly

during the time of silver and gold efflux from the colonies during the period of Great geographical discoveries and the industrial revolutions. It is not an aim of the report to distinguish between the so called "good" and "bad" deflation but it should be mentioned that deflation could be really a harmful event which is possible to wound totally the economy, because of the postponed consumption and the delay in producing new products through the lack of investments. That is why it is important to predict the future values of indexes which show us the tendency of the economy as a whole. Namely, one of them which is considered as universal is CPI. The problem is that it represents a random process, so the future movements of the index are very difficult to be forecasted. Before choosing to work with neural networks, a few empirical experiments with ARIMA methods (Tsay, R., 2010) were made but they were completely inefficient for the proposed data.

The thesis of the current paper is that the trend of such haphazardly values can be predicted and one of the most proper ways is using neural networks. It is very important to mention that the forecasting is based only on the CPI data and do not include relationship of CPI with other economic variables. The data is taken from the OECD data base.

1. Basic concept of neural networks.

Neural networks also known as artificial neural networks (ANNs) or simulated neural networks (SNNs) are a set of algorithms, that reflect the behavior of the human brain, allowing computer programs to recognize patterns and interpret sensory data through a kind of machine perception, labeling or clustering raw input (IBM, August 2020). The whole process represents biological neurons signal and thus the data is analyzed (Pathmind). The neuron could receive signals, transform them and transmit them. More precisely the signals are real numbers, and the transformation is a real function that effects on the weighted sum of the input signals. The weights represent the strength of the connections between each neuron. Neurons are grouped into layers, as a neural network is composed by an input layer, a zero, one or more hidden layers, and an output layer. The signal is

processed from the input to the output layer (when the network is an open-loop), and it is possible for the signal to circuit through the layers several times (when the network is a closed-loop) (Georgiev, S., Idirizov, B., 2020).

The current research is based on a particular type of neural networks – dynamic nonlinear autoregressive. These type of reasoning is used when forecasting of future values of a particular time series is required on the base of given past values of the same data:

$$y_t = f(y_{t-1}, y_{t-2}, \ldots, y_{t-fbD}). \qquad (1)$$

Such an approach is often applied in predicting the behavior of different parameters in economy, biology, physics, etc.

The calibration of the weights of the connections between the neurons is called training of the neural network. The training is conducted via measuring the differences between the "correct" solutions to the given problem and those (1) obtained at the output of the network, defined as an error. The purpose of the weight adjustment is to minimize the error. In this paper it is used a special case of this model, which is called supervised learning (Russel, S., Norvig, P., 2020).

The standard nonlinear autoregressive network is a three-layer neural network, with a sigmoid activation function of the hidden layer neurons and a linear activation function of the output layer neuron.

2. Empirical research.

2.1. Conducting the experiment.

The forecasting is conducted following the next steps, using Matlab software (Georgiev, S., Idirizov, B., 2020):

1. The data is normalized in such a way that the input values lie in the range $[-1,1]$, but this is done automatically by the software in order the neural networks predictions to be more efficient.

2. Similar to the previous procedure, different specifications of the neural networks $NARNN(fbD, hLS)$ are calibrated, iterating over the number of the feedback delays (1) $fbD = \overline{2, 12}$ and the number of neurons in the hidden layer $hLS = \overline{2, {}^2/_3 * fbD + 1}$ (Stathakis, D., 2009; Kihoro, J., et. al., 2004). At this stage, an open-loop network is used. Block division of the time series into training, test and validation subsets are applied. The Levenberg – Marquardt algorithm is used for training, and the mean square error is used as a performance criterion. Each specification is trained 5 times and the average performance is taken into consideration. Finally, the configuration with the lowest average performance indicator is selected.

3. After all the network with the best performance is transformed into a closed-loop network. It is trained 20 times and each time a forecast is made. The average of all forecasts is considered as the final forecast.

Finally, two efficiency increasing techniques are implemented in the algorithm to prevent the neural network from overtraining. Those combinations of parameters which lead to the best results are taken into consideration and each network configuration is trained several times, respectively with different random initial weights. This allows to study the performance of a particular network in a depth, without being misled by any accidental good result. The best configuration is converted into a closed-loop network, which is again trained a couple of times. This way efficiency of the network is guaranteed, and now the different instances "vote" for the predicted values and their "votes" are being averaged to obtain the final forecast. It is possible to weigh the network forecasts proportionally to their performance indicators, but this does not lead to a significant change in the results, as all representatives are instantiated from the best configuration (Georgiev, S., Idirizov, B., 2022).

2.2. Results.

2.2.1. Results for Switzerland – first data set.

Table 1. Time series prediction of CPI of Switzerland, basing on the data from January 1956 to August 2012

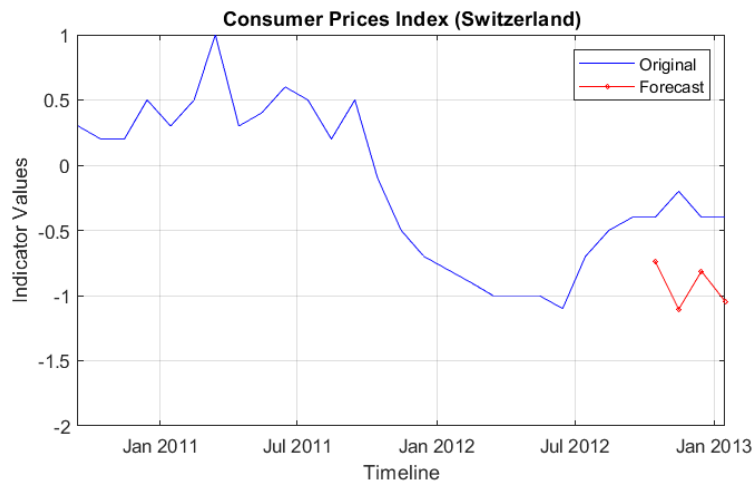| Best Feedback Delays	Best Hidden Layer Size	Time	True value	Forecasted value
1 … 12	*4*	*September 2012*	*-0.4*	*-0.7374*
		October, 2012	*-0.2*	*-1.1056*
		November 2012	*-0.4*	*-0.8138*
		December, 2012	*-0.4*	*-1.0429*

Source: Own calculations

Figure 1. Graphic of time series prediction of CPI of Switzerland, basing on the data from January 1956 to August 2012
Source: Own calculations

As it can be seen from Table 1 and Figure 1, the particular values are not forecasted absolutely correctly but the negative tendency of the CPI is predicted, despite the fact that at some points the difference between the real and forecasted values is bigger a few times. The smallest variance is 0.33 and biggest one is 0.9. It could be said that these results give a realistic concept of the behavior of the CPI for a short-term period. Taking into consideration the mentioned, it is possible to conclude that the artificial neural network is well trained and it gives results that are enough close to the realistic ones and they are a good base for improving the decision-making process. It should be also mentioned that the observed variance

between the predicted and real values is not so big and many times in the real world some of components of the general CPI fluctuate in a far bigger range, so the difference between the true and forecasted values is reasonable.

2.2.2. Results for Switzerland – second data set.

Table 2. Time series prediction of CPI of Switzerland, basing on the data from January 1956 to September 2020

Best Feedback Delays	Best Hidden Layer Size	Time	True value	Forecasted value
1 … 12	*9*	*October, 2020*	*-0.6*	*-1.2015*
		November, 2020	*-0.7*	*-1.6234*
		December, 2020	*-0.8*	*-1.2589*
		January, 2021	*-0.5*	*-1.5769*

Source: Own calculations

The conclusion is the same as the previous one by parity of reasoning. Here, it is interesting and unexpected that despite the fact that the synthetic neural network is trained with a larger quantity of data the difference between the real and forecasted values is not smaller. It is even bigger at some points. As a conclusion, it could be stated that the bigger amount of analyzed data does not mean more accurate prediction in this case. The true and forecasted values for the particular data set is visualized at Figure 2.
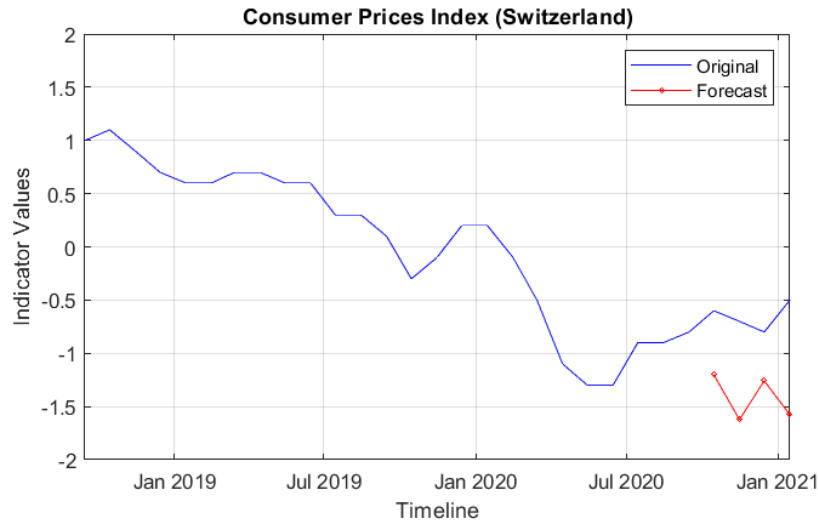
Figure 2. Graphic of time series prediction of CPI of Switzerland,

basing on the data from January 1956 to September 2020.

Source: Own calculations

2.2.3. Results for Japan – first data set.

Table 3. Time series prediction of CPI of Japan, basing on the data from January 1956 to November 2012

Best Feedback Delays	Best Hidden Layer Size	Time	True value	Forecasted value
1 … 12	*6*	*December, 2012*	*-0.1*	*-0.7583*
		January, 2013	*-0.3*	*-0.8516*
		February, 2013	*-0.7*	*-0.4784*
		March, 2013	*-0.9*	*-0.8087*

Source: Own calculations

As it can be seen from Table 3, again the particular values are not forecasted absolutely correctly but the negative tendency of the CPI is predicted. It is interesting that this time the difference between the two values (real and forecasted) is smaller – at some points the range is in the order of just a hundredth. More precisely, it comes about a variance between 0.09 and 0.65. This can be because of the fact that deflation is much more typical for Japan and during the

tested period there were more negative values of CPI which somehow affects the algorithm of the neural network and makes it more realistic. It is expected that having more negative values in the time series, it would be easier for the neural network to predict such values. That is normal because the mathematical model is more familiar with negative numbers and here deflation becomes not such a rare event that is for other time series, representing the history of CPI of other countries, and that is why it is easier to be forecasted.

Figure 3. Graphic of time series prediction of CPI of Japan, basing on the data from January 1956 to November 2012.

Source: Own calculations

2.2.4. Results for Japan – second data set.

Table 4. Time series prediction of CPI of Japan, basing on the data from January 1956 to May 2021

Best Feedback Delays	Best Hidden Layer Size	Time	True value	Forecasted value
1 … 8	*6*	*June, 2021*	*-0.5*	*-0.6969*
		July, 2021	*-0.3*	*-1.1898*
		August, 2021	*-0.4*	*-0.5474*

		September, 2021	-0.2	-0.2819

Source: Own calculations

The conclusion is the same as the previous one by parity of reasoning. It can be seen also at Figure 4. The more trained is the algorithm, the better results it shows. Here the difference is between 0.08 and 0.89 but it is more important to be mentioned that the difference is smaller at almost every point, at just one of them the difference is bigger but that is not significantly important because does not affect obstructive to the decision-making process.
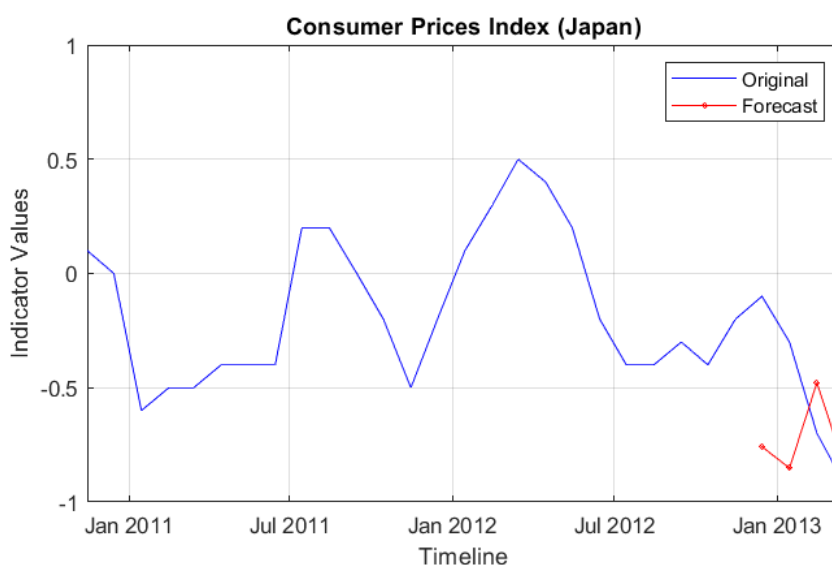

Figure 4. Graphic of time series prediction of CPI of Japan, basing on the data from January 1956 to May 2021.

Source: Own calculations

2.2.5 Results for Spain – first and only data set.

Table 5. Time series prediction of CPI of Spain, basing on the data from March 1955 to July 2020

Best Feedback Delays	Best Hidden Layer Size	Time	True value	Forecasted value
1 ... 12	*5*	*June, 2021*	*-0.5*	*-0.2648*
		July, 2021	*-0.4*	*-0.1084*

		August, 2021	-0.8	-0.0638
		September, 2021	-0.8	-0.1829

Source: Own calculations

As it can be seen from Table 5, the particular values are not forecasted absolutely correctly but the negative tendency of the CPI is predicted. The difference between the real and predicted values ranges from 0.24 to 0.72, which means that the decision-making process is not affected negatively. Again, it could be said that the results are very close to real data.

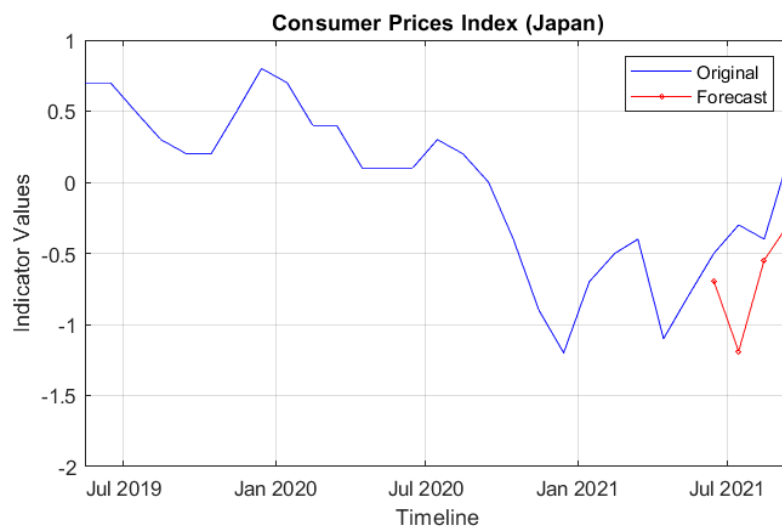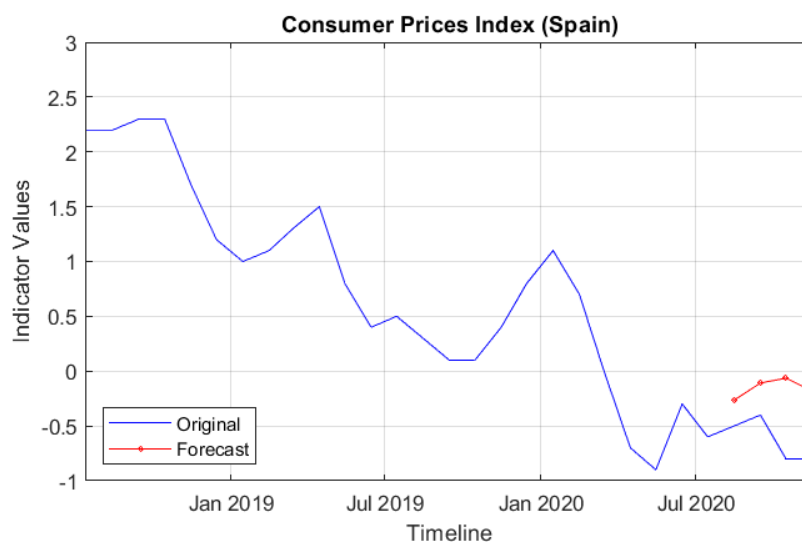*Figure 5. Graphic of time series prediction of CPI of Spain, basing on the data from March 1955 to July 2020.*

Source: Own calculations

Conclusion

It can be said that the accuracy of the applied mathematical model to the data for forecasting future values and tendencies is enough high. It should be also taken into consideration that the negative values from the time series, which represent the periods of deflation, so they are rare events, are not many and this additionally makes difficult forecasting of them. The experiments show also that the more negative values are in the times series, the better is the forecasting

model. The model is applied to five different times series – two of them are for Switzerland and Japan where deflation is considered to be more typical, and one is for Spain – where deflation is not met so often. The idea beside the samples is to test the neural network several times for different periods of one country and so to be able to make better predictions.

Future work may include developing a system of differential equations, which will further enhance the predictive accuracy of the forecasted values.

References

Georgiev, S., Idirizov, B. (2020). Predictive analysis and evaluation of the Bulgarian economy's most significant indicators. Proceedings of the University of Ruse and Union of Scientists, volume 59, 97-110.

Georgiev, S., Idirizov, B. (2022). TSA & DL predictive modelling of Bulgarian financial and economic indices as a part of EU. AIP Conference Proceedings, volume 2522.

Stathakis, D. (2009). How many hidden layers and nodes? International Journal of Remote Sensing, 30(8), 2133-2147.

Kihoro, J. M., Otieno, R. O., Wafula, C. (2004). Seasonal time forecasting: A comparative study of ARIMA and ANN models. African Journal of Science and Technology, Science and Engineering Series, 5(2), 41-49.

Russel, S., Norvig, P. (2020). Artificial Intelligence: A Modern Approach. Fourth edition, New Jersey: Pearson Education, Inc.

Tsay, R. (2010). Analysis of Financial Time Series. Third Edition, New Jersey, John Wiley & Sons, Inc.

IBM [Electronic resource]. Neural networks – https://www.ibm.com/cloud/learn/neural-networks.

Pathmind [Electronic resource]. A Beginner's Guide to Neural Networks and Deep Learning - https://wiki.pathmind.com/neural-network.

OECD [Electronic resource]. Inflation (CPI) - https://data.oecd.org/price/inflation-cpi.htm.

ТЕМАТИЧНО НАПРАВЛЕНИЕ

МЕЖДУНАРОДЕН БИЗНЕС

THEMATIC SECTION

INTERNATIONAL BUSINESS

ИКОНОМИЧЕСКО РАЗВИТИЕ НА СКАНДИНАВСКИТЕ ДЪРЖАВИ И ФИНЛАНДИЯ – РЕСУРСИ, ПРОИЗВОДСТВА И ВРЪЗКИ С ЕВРОПА

Величка Дианова Шипкалиева
4 курс, бакалавър,
специалност „Международни икономически отношения“,
Икономически университет - Варна

Резюме: Скандинавските държави и Финландия имат сходни характеристики и общи културни ценности и история. Жизненият стандарт е висок, иноватори са на различните пазари и са привлекателни за бизнеса, заради сигурността, която предлагат. Редица компании са създадени и днес са сред водещите в своите отрасли. Северните страни подържат преки отношения с Европа и се развиват благоприятно и в наши дни са важен пазарен фактор в икономиката на континента.

Ключови думи: Скандинавия, Северни държави, стабилност, сигурност.

JEL: F63, F13.

Въведение

Днес Северните страни са едни от най-богатите по измерен Брутен Вътрешен продукт на глава от населението. Също така са се конкурират чрез фирми и кадри по конкурентоспособност с цял свят.

Преди век и половина, обаче са изоставали икономически, затова и развитието им е станало с бързи темпове. Публичният сектор играе голяма роля, социалната политика е на високо ниво, правят се големи инвестиции в здравеопазването и образованието, данъците и огледално и доходите са високи, а държавата също участва значително в развитието на всяко ниво. Политиката на тези страни е насочена към подобряване на благосъстоянието на гражданите, чрез комбинация от умерена политическа намеса и свободни пазари. (Fellman, 2019a)

В наши дни основните цели са – устойчивото развитие, опазването на околната среда, модернизирането на икономиката и стабилност в всички отношения.

1. Минало и настояще

Държавите са малки, отворени икономики, добре интегрирани в регионалната и международната икономика. Всяка от петте - има различни икономически отношения с Европа, като Финландия в момента е единствената страна, която е приела еврото, докато Исландия и Норвегия не са членове на ЕС. По между си имат склочени споразумения и голям дял от преките чуждестранни инвестиции на всяка от тях идват от съседките и. Често срещан е и вносът и износът на едни и същи продукти от една държава към друга.

През 80-те години на миналия век, Финландия е била силно зависима от горското стопанство, единствената и индустрия, която е изнасяла продукция. Швеция и Дания са били развити по-добре и не са страдали от икономически шокове. Световната икономическа криза не подминава островната Исландия, която има проблеми с икономиката преди нея.

2. Ресурси и производства

Норвегия, Швеция и Финландия разполагат с големи количества горски ресурси и изнасят доста дървен материал, хартия и целулоза. Отделно Норвегия е богата газ и нефт от северно море, на водни ресурси и риболов, който е основен отрасъл за Исландия. Швеция е богата на желязна руда. Швеция разполага с желязна руда, произвежда стомана и различни резервни части, а Исландия с алуминий и също произвежда хидроенергия. Дания се отчита в селското стопанство и хранителната промишленост. За Финландия са важни производството на лекарства, телекомуникациите и електронната индустрия. (Susanna Fellman, 2019b)

3. Връзки с Европа

Дания, Швеция и Финландия са членки на Европейският Съюз и за тях важи свободното преминаване движение на стоки, услуги, хора и капитали. Заедно с Исландия, Норвегия и Лихтенщайн, които са част от Европейската

асоциация за свободна търговия участват в Споразумение за Европейското икономическо пространство (ЕИП). На трите държави се гарантира участието им в областта на култура научноизследователска и развойна дейност, образование, социална политика, околна среда, защита на потребителите и туризъм. (European Commission, n.d.)

Има някои особености относно търговията със стоки.

Относно земеделските продукти – налагат се мита при вноса и се субсидира износа. Начисляват се по референтни цени, договорени между двете страни в търговията.

Относно риболова – Норвегия и Исландия имат свои риболовни квоти. Исландия и Норвегия имат свои собствени риболовни квоти и запазват някои ограничения по отношение на собствеността в рибарството. Митата върху повечето бяла риба са премахнати, но не и тези върху морските продукти и други видове риба.

Също така стоките, които се внасят трябва да имат доказателство за произход, че идват от държана от ЕИП.

4. Местни компании лидери на световния пазар

Северните държави са откриватели на редица марки и световни компании.

Швеция е родина на СААБ (SAAB, n.d.) - марка автомобили известни по цял свят. Компанията е създадена през 1945г. в Тролхетан, Швеция и е дъщерно дружество на Saab AB. През 1946г. е проектиран първият автомобил, а от 1968 г. до 1995г. работи съвместно със компанията Скания – основана през 1891г, която е производител на тежки превозни средства, автобуси, камиони, влекачи, контейнеровози, самосвали, както и на дизелови двигатели. През 2010 година Scania въвежда екологичния стандарт Euro 6, чрез който намалят екологичните емисии на своите превозни средства. От 1978 г. до 1998 г. SAAB произвежда може би най-известния си модел 900.

Основните цели на компанията са – стабилност, сигурност и устойчивост.

Волво (Volvo Group, n.d.) – шведският автомобилен, автобусен и камионен производител започва своята дейност през 1926г. Днес седалището на компанията се намира в Гьотеборг. Първият автомобил е пуснат на пазара през 1927г, а с това си производство марката става известна извън пределите на Швеция след края на Втората Световна война. Първият автобус, наречен B1, е пуснат на пазара през 1934г. През 1999 г. Volvo Group продава Volvo Car Corporation на Ford Motor Company. Днес Волво произвежда и електрически автомобили, като целта на групата е да създава устойчиви транспортни и инфраструктурни решения за бъдещите поколения.

Спотифай (Spotify, 2022) е може би най-известната музикална стрийминг платформа, която се предлага в по-голямата част от Европа , както и в Северна и Южна Америка и Океания. Създадена е от двама предприемчиви шведи през 2006г. Чрез месечен абонамент, потребителите имат достъп до световна музика и подкасти. Той може да бъде безплатен и платен, като вторият позволява по голям набор от функции на потребителите.

Hennes & Mauritz AB (H&M, 2021) е компания за облекло за деца, жени и мъже, също така предлага аксесоари и обзавеждане за дома. Компанията е създадена през 1947г и седалище и се намира в Стокхолм. Онлайн търговията се развива от 1998г. насам. През 2013 г. стават първата в света модна компания, която стартира програма за събиране на стари дрехи във всички наши магазини и рециклиране. Магазините са известни в цял свят, разположени са на шестте континента. В България има 19 магазина. Дрехите са качествени и на достъпни цени.

Мебелният гигант – ИКЕА (IKEA, 2021) е известен в цял свят. Името идва от първите букви от името на основателя му - Ингвар Кампрад и първите букви на Елмтарид, фермата, в която той е израснал, в селото

Агунарид. Южна Швеция. Още от дете има предприемачески дух и основава ИКЕА през 1947г., когато е едва на 17г. През 1951г. излиза каталогът на компанията, за да може продуктите да се разпространяват и достигат до всички в Швеция. Цените са ниски и се пораждат съмнения за качеството на продуктите. За това се организира първият отворен пазар, където хората могат да усетят и тестват мебелите. След няколко години е създадена идеята за плоската опаковка и мебелите се изпращат в разглобен вариант, заедно с инструкции за сглобяване. През 1960г. отваря и първият ресторант на ИКЕА. През 1963г. компанията отваря първият си магазин извън Швеция - в съседна Норвегия. Най-големият магазин на ИКЕЯ се намира в Стокхолм и съществува от 1965г. По-късно още стотици магазини на 5 континента и продължава да следва основната си цел, а именно: качествени мебели, с красив дизайн на достъпни цени.

Ериксон (Ericsson, 2016) е телекомуникационна компания, основана през 1876 г. от Ларш Магнус Ериксон. През 2001г. започват да работят съвместно с японската компания Сони и създават мобилни и клетъчни телефони. Предлагат и поддържат 5G мрежа.

Финландия е родно място на Nokia Corporation (Nokia, n.d.) е една от най-известните финландски компания, световен лидер в областта на мобилните комуникационни технологии, водещ доставчик в областта на мобилните, фиксираните широколентови и IP-мрежи. Най-известна е със своите мобилни телефони и смартфони. Седалището на компанията се намира в Еспоо, близо до Хелзинки. Основана е през 1865г. Произвежда също и аксесоари и цифрови фотоапарати.

Карл Фазел основава своята компания 11 през 1891г., заедно с съпругата си, под формата на руско-френска сладкарница в Хелзинки. Продуктите с едноименната марка днес се изнасят в 40 държави. Шоколад, бисквити и печива са част от асортимента на компанията, която управлява обекти в Скандинавия, Русия и Прибалтийските държави. (FAZER, n.d.)

Най-известните конструктори идват от Дания. Историята започва през далечната 1932 година, когато Оле Кирк Кристиансен създава The LEGO Group12 в Дания, започвайки да произвежда дървени играчки. През 1958г. идва революционната идея за дървените тухлички. „ЛЕГО" е съкращение от датските думи „leg godt", които означават „да играем добре". През 2014 г. LEGO Group става най-голямата компания за играчки в света. (КОМСЕД Блог, 2017)

Якоб Якобсен пътува из Бавария след смъртта на баща си и през 1847г. създава пивоварна в покрайнините на Копенхаген, влагайки цялата си страст към естествено газираната напитка. Името идва от името на сина му – Карл и датската дума за хълм. След 21 години първата бира Карлсберг (Carlsberg Bulgaria, n.d.) поема към Великобритания през 1875г, а след това превзема световния, бирен пазар.

Якобсен основава Лаборатория Карлсберг, за да изучава процесите на пивоварството. През 1889г. започва износ на бирата за Азия, а оттам и в цял свят.

Лурпак (LURPAK, 2014) е датска марка масло, собственост на Arla Foods . Продава се в над 75 страни по света и възниква през 1901г., когато група датски млекопроизводители решават да създадат местно масло.

Датчаните са известни и със своите сирена, но норвежците им правят конкуренция с Ярлсберг (Jarlsberg, n.d.) . Полутвърдото сирене има коричка, покрита с жълт восък. Вътрешността е със златисто жълт цвят, осеяна с кръгли дупки с различни размери. Има мек, сметанов, пикантно-сладък вкус.

Произвежда въз основа на тайна норвежка рецепта от 1956 г. , която е известна на малцина. Названието Ярлсберг произхожда от името на бившия окръг Ярлсберг, където първоначално започва неговото производство. Сиренето се среща в няколко разновидности – Оригинал, Лайт, Пушено и Специална резерва, която зрее поне 12 месеца.

Днес Ярлсберг е третият по значимост експортен продукт на Норвегия. В САЩ, Ярлсберг е най-продаваното чуждо сирене на пазара.

Заключение

Скандинавските държави и Финландия се развиват и продължават да са водещи в Европа наред с Германия, Франция и Великобритания. Благодарение на социалните привилегии и високият жизнен стандарт остават предпочитани дестилации за емиграция и образование.

Използвани източници (References)

Carlsberg Bulgaria. (n.d.). Богата история - Carlsberg Bulgaria. Retrieved May 14, 2023, from Carlsberg Bulgaria website: https://www.carlsbergbulgaria.bg/za-nas/za-karlsberg-grup/bogata-istoriya/

Ericsson. (2016, March 15). About Ericsson - Corporate information. Retrieved May 13, 2022, from Ericsson.com website: https://www.ericsson.com/en/about-us

European Commission. (n.d.). Споразумение за Европейското икономическо пространство (ЕИП). Retrieved May 10, 1999, from trade.ec.europa.eu website: https://trade.ec.europa.eu/access-to-markets/bg/content/sporazumenie-za-evropeyskoto-ikonomichesko-prostranstvo-eip

FAZER. (n.d.). About Fazer. Retrieved May 13, 2022, from Fazer website: https://www.fazer.com/about-us/

Fellman, S. (2019a, May 28). The "Nordic model" of capitalism. Retrieved May 15, 2022, from nordics.info website: https://nordics.info/show/artikel/preview-the-nordic-model-and-the-economy

H&M. (2021). About Us. Retrieved May 15, 2022, from H&M Group website: https://hmgroup.com/about-us/

IKEA. (2021). About IKEA. Retrieved May 13, 2022, from IKEA website: https://about.ikea.com/en/about-us

Jarlsberg. (n.d.). THE ORIGINS OF JARLSBERG. Retrieved May 14, 2022, from Jarlsberg website: https://www.jarlsberg.com/about

КОМСЕД Блог. (2017, July 27). История на LEGO. Retrieved May 13, 2022, from КОМСЕД Блог website: https://comsed.net/blog/%D0%B8%D1%81%D1%82%D0%BE%D1%80%D0%B8%D1%8F-%D0%BD%D0%B0-lego/

LURPAK. (2014). Our Story. Retrieved May 15, 2022, from Lurpak website: https://www.lurpak.com/en/our-story/

Nokia. (n.d.). About Us | Nokia Corporation. Retrieved May 13, 2022, from Nokia website: https://www.nokia.com/about-us/company/

SAAB. (n.d.). About | Saab. Retrieved May 23, 2022, from Start website: https://www.saab.com/about

Spotify. (2022). Spotify — Company Info. Retrieved May 13, 2022, from Spotify website: https://newsroom.spotify.com/company-info/

Susanna Fellman. (2019b, June 13). Economic development in the Nordic countries. Retrieved May 9, 2022, from nordics.info website: https://nordics.info/show/artikel/economic-development-in-the-nordic-countries

Volvo Group. (n.d.). About Volvo Group. Retrieved May 13, 2022, from www.volvogroup.com website: https://www.volvogroup.com/en/about-us.html

ТЕМАТИЧНО НАПРАВЛЕНИЕ

МЕЖДУНАРОДНА ИНТЕГРАЦИЯ И ТЪРГОВИЯ

THEMATIC SECTION

INTERNATIONAL INTEGRATION AND TRADE

EU-CHINA TRADE RELATIONS

Luminița Miron
3rd year of study, Bachelor student
Major in International Relations and Political Sciences
Free International University of Moldova (ULIM)

Abstract: This accessible text offers a comprehensive analysis of the European Union (EU)-China relationship, as one of the most important in global politics today. Both are major players on the world stage, accounting for 30% of trade and nearly a quarter of the world's population. This text shows how, despite many differences in political systems and values, China and the EU have developed such a close, regular set of interactions at multiple levels: from political-strategic, to economic, and individual. This study provides an independent and concise overview of the major risks and opportunities in EU-China trade and investment relations. The analysis of China-EU trade relations is necessary to highlight the strategic importance of the two actors in the international system.

Key words: relationship, trade, analysis, China, EU, economy.

JEL: F10, F18.

Introduction

In the course of the 1980s and 1990s China emerged as a major player in the global economy, indeed no other country has ever expanded its role so rapidly. Its foreign trade increased explosively, from about $20 billion in the late 1970s to $475 billion in 2000. Formal relations between the European Union (EU) and China began in 1975 but took on greater significance only from the 1990s onwards with China's opening up and reform policy. Both sides declared a strategic partnership in 2003. Fifteen years after this declaration, EU-China relations are undoubtedly one of the most important relations in the world, given that the two sides account for about 30 per cent of world trade. Furthermore, despite important differences in political systems and values, China and the EU have developed a very dense and regular interaction at multiple levels, from political-strategic and economic to people-to-people dialogues. The trade and economic relation has always been the backbone of the China-EU relations.

1. Trade and economic relations between EU and China.

Prior to the initiation of economic reforms and trade liberalization nearly 40 years ago, China maintained policies that kept the economy very poor, stagnant, centrally controlled, vastly inefficient, and relatively isolated from the global economy. Since opening up to foreign trade and investment and implementing free-market reforms in 1979, China has been among the world's fastest-growing economies, with real annual gross domestic product (GDP) growth averaging 9.5% through 2018, a pace described by the World Bank as "the fastest sustained expansion by a major economy in history." Such growth has enabled China, on average, to double its GDP every eight years and helped raise an estimated 800 million people out of poverty. China has become the world's largest economy (on a purchasing power parity basis), manufacturer, merchandise trader, and holder of foreign exchange reserves (Morrison, W. M., 2019).

From the low point of 1989, Sino-European relations have improved significantly. They have blossomed since 1995, when most of the sanctions imposed by the EU after the Tiananmen Massacres of 1989 were lifted, and the political and economic relations became broader and deeper. At that time, there was quite a positive view from both sides of the relationship, with a belief that the few points of significant tension in EU – Chinese relations were vastly outnumbered by the positive aspects of cooperation. As the relationship progressed however, concern has grown in Europe about the economic consequences of China's rise and China's internal political situation (Sandschneider, E., 2002). In 2006, the Commission published a Communication on China, as well as a related policy paper on trade and investment, which made explicit a number of these concerns. This sharpened the European political message towards China, and reflected a sobriety that has replaced the earlier exuberance about China in Brussels. Nonetheless, the efforts to promote greater economic cooperation continued, leading to the establishment of the EU-China High Level Economic and Trade Dialogue.

In the last decade, it can be witnessed a unique widening and deepening of bilateral trade and economic relation between China and the EU, as the EU became the largest trading partner to China and China has also been the EU's second largest trading partner, as well as China-EU investment relation has gained paramount importance. The soaring China-EU trade and economic relation can be attributed to several factors, starting from China's accession to the World Trade Organization (WTO) since 2001, through the dramatic expansion of bilateral economic cooperation promoted by a large number of institutional forums, up to identifying common areas of global commitments, responsibilities and cooperation opportunities. Modern world trade has historically been characterized for being based in a set of rules of non-discrimination, transparency and openness, which are embodied by the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization (WTO) (Lardy, N. R., 2001). With the turn to the 20th century, there has been a decreasing enthusiasm for global trade. This has been mainly driven by the effects of the financial crisis, a misplaced blame to free trade for the effects of global technological change, the contentiousness around free trade agreements and the lack of systems in place to compensate losers. While prior to 2008 trade was mostly referred to as an essential, beneficial tool for promoting economic growth for all, the last decade has seen both a move from multilateralism to bilateralism and a rise in protectionist policies. In a context where economic globalization has created new demands on state governments while essentially reducing their capability to tackle them, global trading relations have been increasingly put under a nationalistic rhetoric and gradually weaponized.

In this context, China has emerged as a leading global power in international affairs, as seen by its formidable growth, domination of new technologies, the Belt and Road Initiative or the South China Sea territorial claims. This has been coupled with increased nationalism, authoritarianism at home and abroad, and a defense of the idea of capitalism with Chinese characteristics.

The European Union has therefore been found immersed in a world with a changing global trading landscape, a more assertive China, a more unilateral US and a US-China trade war. At the same time, it has developed a greater consensus on its economic relations with China, the foreign power being perceived as an ally and a systemic rival at once. While member states consider their relationship with China crucial and there is a will of greater economic engagement, there is also growing concern on the risks that overdependence with China might generate and an emerging awareness on the need to develop certain defensive mechanisms. In this context, the EU must ensure a positive sum approach to China, based on the necessity to engage the country and the possibility to reform global economic governance, prevails (Barilla, S. ,2021).

The European Union and China have an intense and multifaceted economic relationship. While the EU is today China's main trading partner, China is set to become EU's largest trading partner, currently only standing behind the United States. Trade between the EU and China has been increasing at an exponential rate since China's WTO accession, but the rise has been mostly fueled by EU imports from China rather than exports to China.

2. Bilateral trade flows.

Since China joined the WTO in December 2001, the EU's goods exports to China have grown on average more than 10 percent a year and service exports by over 15 percent a year. This has resulted in ample benefits for EU producers and consumers but, as imports from China have also grown rapidly, it has also caused some degree of disruption in EU labor and product markets. Currently, China is the EU's second largest export market behind the US. China's exports to the EU have grown even more rapidly and the EU is now China's largest trading partner and the second largest export market for Chinese goods. Since 2002, the EU's trade deficit with China has grown to $220 billion (Figure 1), equivalent to about 1 percent of the EU's GDP.
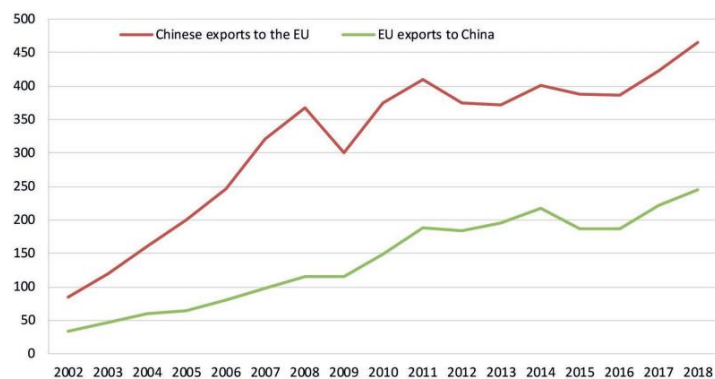
Figure 1. EU-China trade volume ($ billions)
Source: World Bank WITS (https://wits.worldbank.org/)

The widening of the bilateral trade deficit reflects a base effect: it has happened despite the EU's exports to China growing more rapidly than China's exports to the EU. Meanwhile, the EU's overall trade balance with the world has moved well into positive territory, while China's has moved from overall surplus to balance. As for any pair of trading partners, the trade relationship between China and the EU is best understood in a general equilibrium context, rather than from a narrow bilateral perspective (Sandschneider, E., 2002). The essential point is that even if China does not buy as much from the EU as it sells to the EU, the EU runs an overall trade surplus, and this is made possible to some extent by the EU's exports to third parties which have, in turn, seen their exports to China surge. Thus, from 2002 to 2017, the EU's trade deficit with China grew on average by about 9 percent annually, but the EU's trade balance with all countries excluding China grew on average by about 23 percent annually.

However, China is currently undergoing a major restructuring of its economic model. Policies that were employed in the past to essentially produce rapid economic growth at any cost were very successful. However, such policies have entailed a number of costs (such as heavy pollution, widening income inequality, overcapacity in many industries, an inefficient financial system, rising corporate debt, and numerous imbalances in the economy) and therefore the old growth model is viewed by many economists as no longer sustainable. China has

sought to develop a new growth model ("the new normal") that promotes more sustainable (and less costly) economic growth that puts greater emphasis on private consumption and innovation as the new drivers of the Chinese economy. Implementing a new growth model that sustains healthy economic growth could prove challenging unless China is able to effectively implement new economic reforms. Many analysts warn that without such reforms, China could face a period of stagnant economic growth and living standards, a condition referred to by economists as the "middle-income trap" (Morrison, W. M., 2019).

The COVID-19 crisis caused both exports and imports between the EU and China to fall in 2020, as shown in Figure 2. Imports reached a minimum of € 24.7 billion in March 2020. By December 2021 they had recovered to € 47.9 billion. Exports reached a minimum of € 14.9 billion in March 2020. By December 2021 they had recovered to € 17.9 billion.
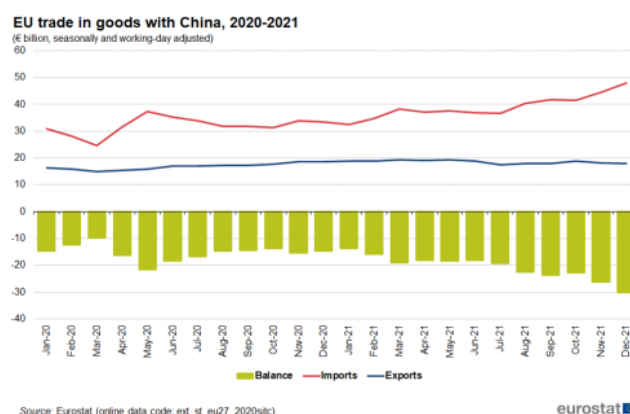
Figure 2. EU trade in goods with China, 2020-2021 (€ billion, seasonally and working-day adjusted)

Source: Eurostat (ext_st_eu27_2020sitc)

Figure 3 compares EU trade with China to EU trade with other non-EU countries. Between January 2020 and December 2021, EU imports from China increased by 55.2 % while imports from other non-EU countries increased by 18.6 %. EU exports to China increased by 9.9 % while exports to other non-EU countries increased by 4.4 %.
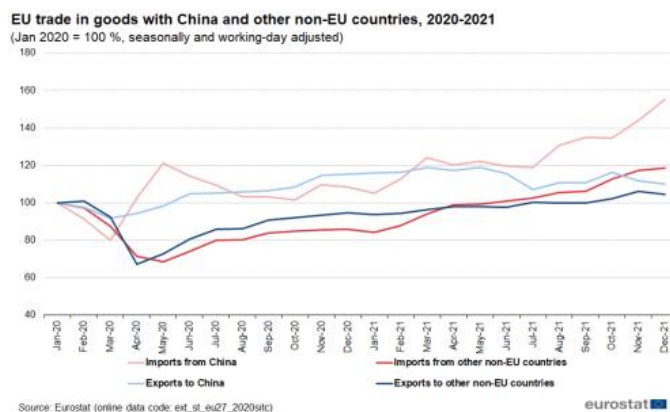
Figure 3. EU trade in goods with China and other non-EU countries, 2020-2021

Source: Eurostat (ext_st_eu27_2020sitc)

Conclusion

The large untapped opportunities for increased trade, investment and movement of people between China and the EU are evident, and these opportunities are likely to grow with China's rising weight. As the EU is in a relatively mature phase of its development, the growth opportunities of a closer relationship with China, and the boost that China can indirectly provide to Europe's traditional markets elsewhere, cannot be ignored. At the same time, the EU must insist that economic relations with China be based on as level a playing field as possible, or should aim for something close to 'competitive neutrality'.

Based on that premise, the EU should raise its level of ambition with respect to closer ties with China. That will require stepping up its efforts to understand China, to coordinate its approach to China internally, and to establish a prioritized list of actions and approaches. Concluding the negotiation by the agreed deadline of a bilateral investment treaty which includes market access provisions would be an important step. The EU has recently concluded trade agreements with major partners, including Canada, Japan, and, in principle, Mercosur. The EU has also been engaged in on-and-off negotiations of an FTA with the United States for at least the last six years, during which 15 rounds of negotiation of the Transatlantic Trade and Investment Partnership were concluded. The United States meanwhile is deeply engaged in negotiations with China that cover trade and investment

relations and reform of the Chinese economy. It is time for consideration to be given to what a China-EU economic/trade agreement might look like, not entailing negotiations but rather the launch of analytical work and exchanges between experts from both parties. Such a step is especially important as a form of insurance in a context in which the viability of the WTO as the overarching organizing framework for international trade is under serious threat. By taking a coordinated approach to China, the EU will bring a far greater weight to bear in negotiations than can its member states individually, and – in doing so – can avoid conflicts that might arise when members pursue divergent paths.

References

Barilla, S. (2021). EU-China trade and investment relations and Covid-19: old struggles or new challenges? *Australian and New Zealand Journal of European Studies*, 13 (2), 42-49. https://doi.org/10.30722/anzjes.vol13.iss2.15604

Lardy, N. R. (2001, May 9). Issues in China's WTO Accession. *Brookings*. https://www.brookings.edu/testimonies/issues-in-chinas-wto-accession/

Morrison, W. M. (2019 June 25). China's Economic Rise: History, Trends, Challenge and Implications for the United States. *Every CRS Report*. https://www.everycrsreport.com/reports/RL33534.html

Sandschneider, E. (2002). China's Diplomatic Relations with the States of Europe. *The China Quarterly*, 169, 33-44. https://doi.org/10.1017/S0009443902000049

BLUE ECONOMY: A NEW WAY TO SOLVE ENVIRONMENTAL AND ECONOMIC PROBLEMS

Nestan Varshanidze
2nd year of study, Master's student,
Major in Economics
Batumi Shota Rustaveli State University, Georgia

Abstract: This work was supported by Shota Rustaveli National Foundation of Georgia (SRNSFG) [grant number MR-21-1059]. This paper discusses the Blue Economy, which responds to the UN Sustainable Development Goals (Goal 1; 8; 14:15; 17). Thesis raises some problems which are related to the implementation of the blue economy policy. It describes resources of Georgia and mentions already implemented events. Paper is based on the references, reports, articles, journals and action plans published by the European Union, the World Bank, and the Food and Agriculture Organization of the United Nations. The main result of the thesis is to analyze the peculiarities and problematic issues of the blue economy.

Key words: Blue Economy, Ocean Economy, Sustainability, Georgia.

JEL: Q57; F64.

Introduction

Modern world faces many challenges related to sustainable economic solutions and management systems. The world's oceans, seas and water resources are of vital importance. It is a source of livelihood for billions of people. It is all involved in various economic activities. In the long run, resources are under anthropogenic pressure. It is critical for Georgia, as a country distinguished by its maritime and freshwater, be able to comprehend these processes.

What is the Blue Economy, and how does it work? You'll get ten different answers if you ask this question to ten different people. According to the World Bank, the Blue Economy is the "sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem." (Bank, 2017)

The main goal of the paper is to study the current situation and potential within the blue economy and to analyze problematic issues in the world and in

Georgia. The Blue Economy combines sectors such as coastal tourism, aquaculture, blue energy, blue biotechnology and seabed mining. For Georgia, as a Black Sea country rich in hydro resources, the implementation and introduction of the principles of the Blue Economy provides an opportunity for development. The first part of the paper raises a number of problems related to the conduct of Blue Economy policy. The second part describes the experiences of various countries and the challenges facing in Georgia. Conclusions are made based on the analysis of the previous material. The Author's views / position and recommendations are given.

1. The importance of Blue Economy principles.

The ocean is vast, covering 140 million square miles (363 million square km), equivalent to approximately 72 percent of the earth's surface. More than 600 million people (around 10 percent of the world's population) live in coastal areas that are less than 10 meters above sea level. Nearly 2.4 billion people (about 40 per cent of the world's population) live within 100 km (60 miles) of the coast. Oceans, coastal and marine resources are very important for people living in coastal communities. (Nations, 2017)

Blue Economy as a concept and blue economy as a strategy with defined and stated goals are still relatively new. The World Wide Fund for Nature (WWF) has created the document "Principles of Sustainable Blue Economy". The principles describe how all levels of government, both public and private, should govern a sustainable Blue Economy. The principles are in accordance with the United Nations Sustainable Development Goals; they are based on widely established business and organizational sustainable governance principles, and they are related to both green and circular economies. (Nature, 2020)

The Blue Economy strategy protects and conserves maritime resources, biodiversity, and ecosystems. Requires the use of renewable energy and clean technologies. Includes areas such as fisheries, maritime transport, waste management, marine renewable energy, tourism and climate change. One of the

most important elements of current world economic and industrial processes is the increased concentration of people and output in coastal areas. Coastal regions of the sea are quickly increasing as a result of the strengthening of international economic relations and the usage of the economic advantages of maritime transportation. The reality is that, as a result of community growth, the utilization of water resources in commercial activities is increasing.

When we examine the history of the development of individual civilizations, we may see elements such as the presence of water resources and closeness to the sea. For example, we can cite the ancient Egyptians, the Scandinavians, the initiators of great geographical discoveries and more. Civilizations have relied on the blue economy for centuries. The term "blue Economy" was first used in 1994 by Gunther Pauli in his book "Blue Economy 3.0". In the paper, he urges people and states to embark on new economic initiatives to change approaches to solving water problems.

In the future, the growth of the blue economy will be due to the increase in demand for marine goods and services, the scale of use of renewable resources and trade, as well as an indirect contribution to the development of other sectors of the economy. According to various estimates, many ocean-based industries will have the potential to exceed the global economic growth rate by early 2030 and the value added created in the sector will reach $ 3 trillion. (Unit, 2019)

2. Sharing world practices.

The blue economy is a novel idea that will be implemented on the European continent after the 2012 United Nations Conference on Sustainable Development in Rio de Janeiro. The term's definition is also dependent on diverse points of view, albeit it mostly depends on the World Bank's definition. EU policy in this area covers a wide variety of developing sectors. Sectors that produce jobs and have a high pace of innovation are given special attention. Specifically, Coastal tourism, aquaculture, blue energy, blue biotechnologies and seabed mining. Coastal tourism is characterized by a high rate of employment, which is also characterized

by a positive increase in value added. The blue economy of the European region employs more than 4 million people, accounting for 1.8% of the EU's total employment and 1.3% of GDP. (Bank, 2017)

One of the most comprehensive sources of data on the European continent in the field of blue economics is the EU Copernicus program (www.copernicus.eu). A special center was set up with the help of satellite systems. It provides maritime data free of charge to citizens, local and international organizations in real time. Operates since 2008. It is possible to view not only current data, but also forecast and data archives. Posts such information as salinity, temperature, currents, sea level changes, various substances and oxygen content, and more.

Most of the world's fishing volume, almost 90%, is produced in Asia. Aquaculture has one of the lowest employment rates in the blue economy, but is the largest economic sector in terms of cost of sales (51%). In this regard, the coastal regions of China make a significant contribution to the national economy. The Chinese coast covers 20% of China's area, where 40% of the population lives and produces 60% of GDP. The maritime economy is regulated by a national five-year plan. China pays special attention to marine ecology and environment. For the blue economy, China has a well-organized and standardized accounting system. In 2006, the Ocean Economy Accounting System (OEAS) was founded. China uses special industry classifiers for ocean industry and related activities, they are assigned unique codes. China is the world's largest exporter of seafood. The share of aquaculture in China's fish industry is growing steadily. (FAO, 2020)
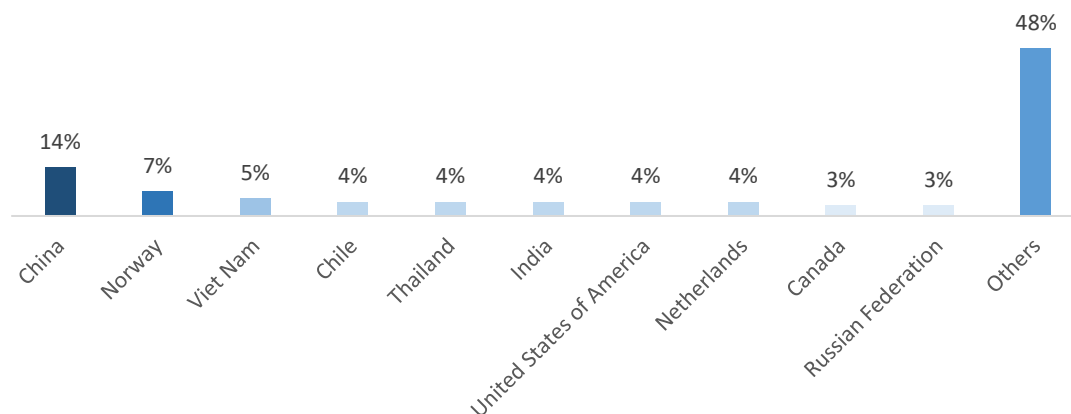
Figure 1. Top Exporters of Fish & Fish Products in Terms of Value, 2018
Source: FAOSTAT

In the Black Sea area, Turkey stands out for its dedication to blue economy principles. TUDAV (www.tudav.org/en) is a Turkish marine research foundation that was founded in 1996. The main reason for the creation was the study of fish migration processes and biodiversity. A necessary condition for the development of the cruise and coastal tourism or fishing sector is the protection of the sea from pollution. (Zeynep Kahveci, Aysu Bicer and Sena Guler, 2019)

3. Some facts about the blue economy of Georgia.

The Black Sea is the most inland European sea isolated from the world's ocean. Its area is about 422 thousand sq. Km. Six countries have access to the Black Sea - Bulgaria, Romania, Russia, Ukraine, Georgia and Turkey. It can be said that these countries have common interests (except Russia) in the issues of integration into Euro-Atlantic structures, security and the development of a common economic space. The Black Sea is classified as one of the world's most polluted seas. The condition of its ecosystems has recently deteriorated. The need for care for its health has increased. In this process, the importance of international collaboration should be highlighted. The Black Sea Protection Convention (also known as the Bucharest Convention) was founded in 1994 to safeguard the ecosystems of the Black Sea basin. Since 1992, Georgia has belonged to the Black Sea Economic Cooperation (BSEC) (entered into force in 1999). The organization's

mission is to assist political and economic efforts while also encouraging member integration.

Facts that describe the reality of Georgia:

- Georgia does not have a single registered fishing vessel (there are only a few licensees), therefore the number of fish caught cannot be accurately monitored.

- In Georgia, the demand for seafood is rising in line with the global trend. Especially the problem of providing products during the tourist season, when the local demand is supplemented by the demand of tourists for seafood. Experts in the field note that the consumption of fish in Georgia throughout the year is about 30,000 tons and 90-95% of it is imported.

Tourism is considered to be one of the most promising and rapidly developing sectors of the economy in Georgia. This is clearly evidenced by the increase in the number of tourists, recreational locations and types (especially maritime tourism). In parallel with these facts, we have a picture in which the number of international tourists entering the country of marine tourism via the port is 1.01%. Maritime transportation is one of the most important aspects of the blue economy (cruise direction). Today, there is no cruise on the Black Sea coast that includes Georgian resorts.

Should be considered a step forward in the direction of blue investments in Georgia opening of a fish processing plant in 2017 by the company Umali (a beneficiary of the co-financing program for agricultural products processing and storage enterprises). The firm sells up to 70 different products of fish to the Georgian market. 100% of the manufactured products are intended for the domestic market. They plan to completely replace the caviar imported from Russia. A total of $ 1500,000 was invested in the project. It is the first Georgian fish and seafood producer in Georgia and the largest fish processing plant in the Caucasus.

By the end of 2019, the state initiative "Enterprise Georgia" has added a new direction – fishing. Under the program, the state will co-finance and assist in the

development of this sector, which is reflected in the loan co-financing (for a period of 2 years and in the amount of GEL 150,000 to GEL 5 million) and ship leasing from GEL 100 thousand to GEL 5 million. Expected results are industry development, fleet upgrades, introduction of modern technologies, as well as an increase in fish species production and an increase in sales geography, which is uniquely related to the creation of new jobs.

Conclusion

Thus, the blue economy and its implementation / introduction as an active economic policy is a challenge for the whole world, including Georgia. Discussions, workshops and action plans (economic steps, environmental measures, innovative approaches, legislative support) are currently underway to perfect the concept of an inclusive, circular blue economy for both developed and developing countries in the context of sustainable development. There are no indicators of the effectiveness of the blue economy worldwide that describe the impact of both direct consequences and indirect benefits (social, environmental, etc.). The ocean, the sea, and water resources in general are the key drivers of the blue economy. That is why it is critical to protect water resources and to establish a comprehensive monitoring mechanism. This will be the true foundation for a long-term policy.

References

Bank, W. (2017). THE POTENTIAL OF THE BLUE ECONOMY. Retrieved from https://openknowledge.worldbank.org/bitstream/handle/10986/26843/115545.pdf?sequence=1&isAllowed=y

BPI. (2019). Enterprise Georgia A new component has been added - what the state has to offer to the marine fisheries industry. Retrieved from https://bit.ly/3vN2qH7

FAO. (2020). The State of World Fisheries and Aquaculture 2020. Retrieved from https://www.fao.org/3/ca9229en/ca9229en.pdf#page=92

Nations, U. (2017). Factsheet: People and Oceans. Retrieved from https://www.un.org/sustainabledevelopment/wp-content/uploads/2017/05/Ocean-fact-sheet-package.pdf

Nature, W. W. (2020). Principles for a Sustainable BLUE ECONOMY. Retrieved from https://unctad.org/system/files/non-official-document/ditc-ted-oceans-wwf-blue-economy-2016.pdf

Regions, E. C. (2019). Contribution of local and regional authorities to the development of the blue economy in the Mediterranean. Retrieved from https://op.europa.eu/en/publication-detail/-/publication/2dd88cc4-f168-11e9-a32c-01aa75ed71a1/language-en/format-PDF/source-131022954

Union, E. (2019). Regional Stakeholder Seminar on Blue Economy. Retrieved from https://blackseablueeconomy.eu/sites/default/files/rs_final_conclusions.pdf

Unit, E. I. (2019). The blue economy - Growth, opportunity and a sustainable ocean economy. Retrieved from https://impact.economist.com/perspectives/sites/default/files/images/Blue%20Economy_briefing%20paper_WOS2015.pdf

Zeynep Kahveci, Aysu Bicer and Sena Guler. (2019). Blue Economy means benefitting from seas efficiently. Retrieved from https://www.aa.com.tr/en/economy/blue-economy-means-benefitting-from-seas-efficiently/1508973

ТЕМАТИЧНО НАПРАВЛЕНИЕ

МЕЖДУНАРОДНО УПРАВЛЕНИЕ НА ХОРАТА

THEMATIC SECTION

INTERNATIONAL PEOPLE MANAGEMENT

HOW TO RESPOND TO THE MODERN LABOR MARKET CHALLENGES

Giorgi Abashidze
2nd year of study, Master's student,
Major in Economics
Batumi Shota Rustaveli State University, Georgia

Abstract: "This work was supported by Shota Rustaveli National Foundation of Georgia (SRNSFG) [grant number MR-21-224]". Nowadays, our daily lives are unimaginable without digital technology. We may confidently state that all processes around us have been digitized to some extent. Digital technologies have had a huge impact on education, creating a completely new idea of digital education, which is the creative use of digital tools and technology during teaching and learning, and is also known as Technology Enhanced Learning (TEL) or e-Learning. Education has been in the process of digitization for the last ten years. The pandemic, for its part, has accelerated this process and placed new demands on the education system and labor market. As a result, it is critical to evaluate the current stage of digitalization in the education system as well as the issues that the modern job market poses to the education system. The study evaluates the needs of today's labor market and defines the role of digital education.

Key words: Digital education; Job market; Technology Enhanced Learning; Skill gap.

JEL: I250; F290.

Introduction

Nowadays, new occupations need a wide range of digital technology-related skills and knowledge. As a result, the workforce must adapt to a rapidly changing digital world and learn new skills. According to the World Economic Forum, one-third of the talents we deem necessary in the workforce today will change over the next five years. One of the most difficult problems for people is to be continually in the learning process. Future workers, according to Forbes, should have the following qualities: creativity; emotional intelligence; analytical thinking; technology skills; active training; and acceptance of change. As a result, the fundamental difficulty for HRM (Human Recourse Management) is a scarcity of competent workers that cannot be substituted by automation or robotics.

Automation and robotics, as we can see, are compounding the problem and increasing the demand for skilled workers.

The paper discusses the possibilities of Digital Technologies in economics and education, and presents its role in the training of future qualified staff. Based on the research we can say that processing data and managing processes through it, should be one of the most important components of learning.

1. Digital transformation of job market and education.

All sectors of the economy have undergone significant changes in recent years, including the transition to a digital platform, changes in manufacturing processes, organizational relationships, forms of customer communication, and how customers receive products and services. The impact of digital technologies on the job market is also considerable. Today, it is impossible to imagine a relationship between an employer and a job seeker without the use of online employment platforms.

Digital technology has sped up and simplified the job-search process, which benefits both sides. In addition to making the hiring process easier, digital technologies generate new job opportunities by establishing wholly new jobs that replace existing ones. As a result, it creates demands on people with varying levels of knowledge and skill. The gig-economy[1] and gig-workers are formed by digital platforms, implying a framework in which long-term employees are uncommon. The time of employment involves the completion of a specific task for which a defined remuneration is provided. A gig - employee is a freelance contractor who willingly agrees to work for a company or numerous companies at the same time to fulfill a specific assignment, usually through the use of internet platforms. This enhances mobility, the person is no longer reliant on a single company or sort of employment, which improves efficiency. Both the employee and the employer benefit from the gig - economy. Neither the employer nor the employee is reliant

---

[1] Gig – economy - In a gig economy, temporary, flexible jobs are commonplace and companies tend to hire independent contractors and freelancers instead of full-time employees. A gig economy undermines the traditional economy of full-time workers who often focus on their career development (Investopedia, 2022).

on a single employer. Job markets are becoming far more flexible. The worker has the option of planning his or her own workday. Freelance platforms are a great example of this, where the employer posts an assignment and the freelancer completes it for a certain amount of money.

2. What does it means for education system?

Existing jobs are also being digitized. According to studies, today 8 in 10 middle-skill jobs[2] (82%) require digital skills (Burning Glass Technologies, 2021). The use of common software, such as spreadsheets and word processing, applications, Web Services, Data processing technologies, has a greater impact on the middle-skill job market. To a large extent, a job seeker without the ability to use this software won't even get the job. However, individuals in Office and Administrative Support, Business and Financial Operations, and Management do as well. Sales and related occupations, as well as Health Care Practitioners and Technical occupations, are not far behind and, correspondingly, require digital abilities. According to Burning Glass Technologies Digital middle-skill jobs represent roughly 38% of overall job postings (Burning Glass Technologies, 2021). Furthermore, digitally intense middle-skill professions are expanding faster than other middle-skill occupations, and digitally intensive middle-skill occupations pay more than non-digitally intensive middle-skill occupations.

As a result, the workforce is faced with the problem of providing training to adapt to a quickly changing digital world. This puts pressure on the educational system, which must be modified and adapted to meet the needs of the modern economy. It is vital to promote communication between the private and public sectors in order to improve education and meet the needs of the current market.

3. Ways to solve the problem.

---

[2] Middle – skill jobs - Occupations that typically do not require a bachelor's degree and pay above the national living wage.

We could think that artificial intelligence and automation are the solution to solving all of this. We've all heard about artificial intelligence and its ability to turn data into usable knowledge. Thanks to artificial intelligence, it is now possible to automate activities in all industries, from agriculture to finance. As more individual tasks become automatable through the use of AI and smart algorithms, jobs are being redefined and re-categorized. According to the McKinsey Global Institute, process automation will eliminate 30% of existing occupations (about 800 million jobs). Some industries, roles, and possibly entire workforce sectors will be eliminated, while others will be created. According to a Deloitte analysis, 800,000 jobs in England were lost due to automation and robotics over the last 15 years, but 3.5 million new, significantly higher-paying ones were created at the same time.

Automation will change not only the types of employment available, but also the amount and perceived worth of those positions. Machines can magnify the comparative advantage of individuals with problem-solving, leadership, EQ (emotional intelligence), and creativity by replacing workers doing regular, systematic jobs. According to the World Economic Forum, one-third of the talents we deem necessary in the workforce today will change over the next five years. the biggest threat has become Finding the skilled worker. The skills employers are looking for are problem-solving, adaptability, collaboration, leadership, creativity, and innovation, at the very top of the list.

Conclusion

We can clearly see that there is a shortage of skilled labor that cannot be replaced by automation and robots. Adaptability is required in corporations, educational institutions, individuals, and society to navigate the changes ahead. Even five years from now, it is impossible to foresee exactly which skills will be required, therefore people and organizations must be prepared to adapt — in any of the scenarios we envision. Inevitably, much of the responsibility will fall on the individuals. They will not only need to adapt to organizational change, but they will also need to be willing to learn new skills and gain new experiences

throughout their careers. Governments and organizations can and should do a lot to help by making training and retraining more accessible, as well as encouraging and rewarding adaptation and the vital and increasingly valued qualities of leadership, creativity, and innovation.

Routine task automation promotes higher specialization. This implies that workers with vital talents that firms require will be crucial. Finding and retaining employees with the necessary abilities will be a major challenge all over the world. They will be difficult to find and keep. That is why firms must pay close attention to the employee value proposition—the reasons why these great people were drawn to work with them in the first place. As a result, they must focus heavily on motivation.

Higher education must be reconsidered. Students should not only learn current technical and digital abilities, but also critical human skills such as active learning and various ways for becoming agile learners.

Another component of a reformed system should be on-the-job training. Organizations must invest in their employees' professional growth and create a well-defined system of lifelong learning. This demands both financial and time commitment, but it is the only way to keep a competitive workforce in times of fast change.

Accordingly, we can briefly outline the areas whose development is crucial in the education system:

- Creative and innovative thinking in education;
- Digitization of processes in universities;
- Compliance with market requirements;
- Technology-enhanced learning;
- STEM education.

References

Bernard Marr. (4 2019 г.). *The 10 Vital Skills You Will Need For The Future Of Work*. Retrieved from forbes.com:

https://www.forbes.com/sites/bernardmarr/2019/04/29/the-10-vital-skills-you-will-need-for-the-future-of-work/?sh=fe14a243f5bd

Burning Glass Technologies. (5 2021 r.). *Digital Skills Gap*. Retrieved from burning-glass.com: https://www.forbes.com/sites/bernardmarr/2019/04/29/the-10-vital-skills-you-will-need-for-the-future-of-work/?sh=fe14a243f5bd

Deloitte AI Institute. (2019). *From brawn to brains: The impact of technology on jobs in the UK*. Retrieved from Deloitte.com: https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/Growth/deloitte-uk-insights-from-brawns-to-brain.pdf

James Manyika, Susan Lund, Michael Chui, Jacques Bughin, Jonathan Woetzel, Parul Batra, Ryan Ko, and Saurabh Sanghvi. (11 2017 r.). *Jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages*. Retrieved from www.mckinsey.com: https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages

McKinsey Global Institute. (11 2017 r.). *jobs lost, jobs gained: What the future of work will mean for jobs, skills, and wages*. Retrieved from mckinsey.com: https://www.mckinsey.com/featured-insights/future-of-work/jobs-lost-jobs-gained-what-the-future-of-work-will-mean-for-jobs-skills-and-wages?fbclid=IwAR0r_KKt4qWL0VUM_R2Wxmv7yBF-1dptY5XF_myxW977M4BQeqp2KQ4bCq4

Mckinsey global institute. (2018). *An executive's guide to AI*. Retrieved from mckinsey.com: https://www.mckinsey.com/~/media/McKinsey/Business%20Functions/McKinsey%20Analytics/Our%20Insights/An%20executives%20guide%20to%20AI/Executives-guide-to-AI

Organisation for Economic Co-operation and Development. (10 2019 r.). *OECD Future of Education and Skills 2030*. Retrieved from www.oecd.org: https://www.oecd.org/education/2030-project/teaching-and-learning/learning/skills/Skills_for_2030_concept_note.pdf

Organisation for Economic Co-operation and Development. (3 2021 r.). *OECD Digital Education Outlook 2021*. Retrieved from read.oecd-ilibrary.org: https://read.oecd-ilibrary.org/education/oecd-digital-education-outlook-2021_589b283f-en#page4

PricewaterhouseCoopers. (2018)*. Justine Brown. Workforce of the future, The competing forces shaping 2030,* Retrieved from www.pwc.com: https://www.pwc.com/gx/en/services/people-organisation/workforce-of-the-future/workforce-of-the-future-the-competing-forces-shaping-2030-pwc.pdf?fbclid=IwAR03pLtrMvnpsbfZCGLPH4QsnHMtKLB8-RTolJLipuIdIfotvKtRTKrwbtU

LEADERSHIP STYLES OF FEMALE MANAGERS

Denitsa Valentinova Valeva
4th year of study, Bachelor student
Major in International Economic Relations
University of Economics - Varna

Abstract: The proportion of women in top executives posts worldwide increased to 31% in 2021, the highest level ever recorded, and ninety percent of organizations worldwide will have at least one woman in a senior leadership position according to Thornton report (2021). Although women account for almost half of all employees in the EU-27 (46%), they are still under-represented among managers (35%). Therefore, the primary aim of the proposed study will be to identify the leadership styles of female managers by conducting a literature review on the relevant business research findings. Concluding by providing guidance and recommendations to women managers on how to recognize their strengths as transformational leaders.

Key words: female managers, leadership styles, transformational leadership.

JEL: F00, F53, F66.

Introduction

The global workplace has changed dramatically as a result of the coronavirus pandemic. It has caused millions of people to work from home. It has exposed supply chain flaws, prompted businesses to evaluate critical survival considerations, and highlighted the mid-market as the beating heart of many industries and a critical component of keeping economies running. Women in business, their opportunities, and the obstacles they confront in the future months and years have all been impacted by these seismic upheavals. Many organizations are adopting more flexible, hybrid working environments, which appears to be causing irreversible shifts in the corporate landscape. In the last decade, progress toward greater diversity and inclusion, notably gender parity in senior management, has been slower than it should have been. As a result, the primary goal of the proposed research is to identify the leadership styles of female managers through a review of previous business literature.

1. Women in leadership.

The promotion of women in management positions has become increasingly important over recent years (Setia, Romadhona, Firdausi, & Abdullah, 2021). The demands on leadership are constantly increasing as people face various difficulties in their professional, personal, business, political and religious areas of life. Critical needs of society deserve immediate leadership development attention (Ceil, 2012). In such circumstances, women have come to the fore and have assumed several leadership roles that meet the demands of society.

Today women take on complex and varied roles to fulfill their responsibilities and play a vital role in the development of any organization. Initially, the role of women as traditional housewives was not recognized because society didn't admit the level of leadership skills required to manage family affairs (Celi, 2012). Nevertheless, today women have stepped out of their traditional guise and are making important decisions as business leaders to bring about change.

This is evidenced by the steady growing percentage of female managers in the business environment. According to Eurostat (2022) the percentage of woman managers in EU-27 is 35% with only progressive tanning over the last 5 years. Figure shows the data on the percentage of female managers in the EU-Member States for the last quarter of 2021, where Bulgaria showing a 6% decrease compared to the previous year, which could be due to the effects of the pandemic and the declined labor force rate.
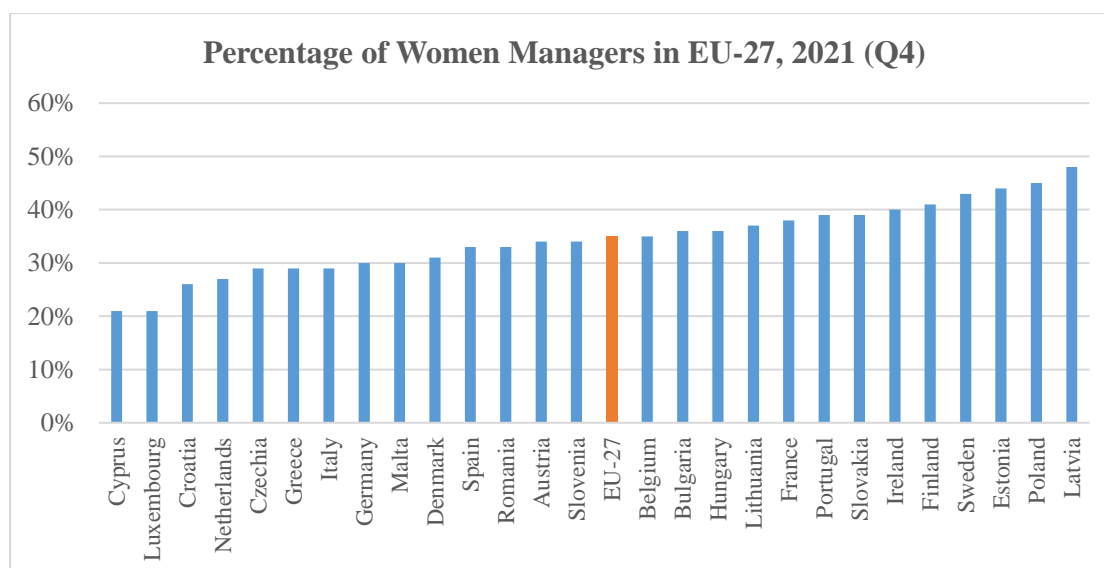
Figure 1: Percentage of Women Managers in EU-27, 2021 (Q4)
Source: Eurostat, 2022

2. Leadership styles.

Leadership style is defined as a set of traits, behavioral tendencies, and characteristic methods of an individual who occupies a leadership position. The construct is also viewed as a set of preferences, values, beliefs, and norms. The managerial style also represents the refraction and transformation of a leader's knowledge, skills, and personal attitudes into leader-specific behavioral repertoires operationalized into behaviors and ways of acting both in the profession and in life (Rusinova et al., 2002). The leadership style combines the individual characteristics of the leader and the requirements of the situation in which the professional activity is carried out. It can be changed, adjusted, and improved under the influence of new knowledge and skills. The leadership style is influenced by the individual characteristics of the leader, the dominant motives and attitudes, the specifics of group relations, the requirements of the respective role in the organizational hierarchy, the specific situation and the characteristics of subordinates (Rusinova et al., 2002).

Transformational leadership style, according to Bass (1985), stresses individual attitude development and promotes motivation growth. Transformational leadership behavior is built on community and group loyalty

and is based on tight and friendly working connections, according to the exchange theory between leaders and members (Setia, Romadhona, Firdausi, & Abdullah, 2021). Furthermore, transformational leadership focuses on building trust in the connection between followers and the leader, as well as motivating followers by showing the trait of a self-sacrificing leader, according to the article (Cremer & Knippenberg, 2005).

Transactional leadership style, according to Bass (1985), stresses an exchange system between leaders and members, i.e., giving rewards or discipline based on performance, also known as contingent rewards. When opposed to transformational leadership, transactional leadership is typically considered less productive (Setia, Romadhona, Firdausi, & Abdullah, 2021).

3. Leadership styles of female managers.

When it comes to leadership styles, does gender make a difference? Is there a distinction between male and female executives? If so, what are the female leadership style or styles that the most effective female leaders possess?

Caliper, a Princeton New Jersey-based management consulting company, and Aurora, a London-based organization that promotes women, undertook year-long research in 2005 that discovered several indicators that separate female leaders from males when it comes to leadership qualities:

"Women leaders are more persuasive, assertive and willing to take more risks than male leaders ... Women leaders have an inclusive, team-building leadership style of problem-solving and decision making ... These women leaders can bring others around to their point of view ... because they genuinely understand and care about where others are coming from ... so that the people they are leading feel more understood, supported and valued." (Caliper, 2005)

This research suggests that women have specific personalities and motivational qualities when it comes to leadership. They use a collegial, open, consensus-building style to leadership.

Therefore, many studies have marked males as transactional leaders, whereas women have been portrayed as transformational leaders (Bass, 1998; Bass, Avolio, & Atwater, 1996; Maher, 1997; Rosenbusch & Townsend, 2004). Male leaders are more prone to use management by exception (active and passive) to demonstrate transactional leadership, whereas female leaders are more likely to participate in contingent reward behaviors (Eagly, Johannesen-Schmidt, & van Engen, 2003).

Women have been seen to display transformative leadership via individual appreciation more frequently than males. Women leaders rated themselves much higher on intellectual stimulation than their male colleagues, according to Bycio, Hackett, & Allen (1995). Alban-Metcalfe and Alimo-Metcalfe (2000) created the Transformational Leadership Questionnaire (TLQ) and presented their findings as follows: "Women were shown to comprehend transformational leadership better than males, whereas men were found to grasp transactional leadership better." Overall, women are more likely than males to define their leadership style as transformative. Furthermore, women are more likely to be described as having a transformational approach by their direct reports, whereas males are more likely to be classified as having a transactional style.

Conclusion

As the focus on women in leadership positions continues to grow, it is important to understand what qualities and support mechanisms are needed to improve the quality of women's leadership. Women in leadership can increase the engagement of their subordinates by demonstrating their qualities as transformational leaders.

Taking all of these considerations into account, organizations and senior management need to provide women leaders with the appropriate soft and hard infrastructure related to transactional activity between subordinates and women leaders. Furthermore, women leaders adopt transformational leadership behaviors by implementing flexible management practices for their teams. This is

supported by the fact that women leaders positively influence employee engagement.

References

Alban-Metcalfe, R. J., & Alimo-Metcalfe, B. (2000). The transformational leadership questionnaire (TLQ-LGV): a convergent and discriminant validation study. *Leadership & Organization Development Journal*, *21*(6), 280–296. https://doi.org/10.1108/01437730010343077

Bass, B. M. (1985). *Leadership and Performance beyond Expectations*. New York: Free Press.

Bass, B. M. (1998). *Transformational Leadership : Industrial, Military, and Educational Impact*. Mahwah, Nj.: Lawrence Erlbaum.

Bass, B. M., Avolio, B. J., & Atwater, L. (1996). The Transformational and Transactional Leadership of Men and Women. *Applied Psychology*, *45*(1), 5–34. https://doi.org/10.1111/j.1464-0597.1996.tb00847.x

Bycio, P., Hackett, R. D., & Allen, J. S. (1995). Further assessments of Bass's (1985) conceptualization of transactional and transformational leadership. *Journal of Applied Psychology*, *80*(4), 468–478. https://doi.org/10.1037/0021-9010.80.4.468

Caliper. (2005). The Qualities that Distinguish Women Leaders. Retrieved May 14, 2022, from Calipercanada.com website: https://www.calipercanada.com/portfolio/the-qualities-that-distinguish-women-leaders/

Ceil, C. (2012). Women in Leadership. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.2051415

Cremer, D., & Knippenberg. (2005). Cooperation as a function of leader self-sacrifice, trust, and identification. *Leadership & Organization Development Journal*, *26*(5), 355–369. https://doi.org/10.1108/01437730510607853

Eagly, A. H., Johannesen-Schmidt, M. C., & van Engen, M. L. (2003). Transformational, transactional, and laissez-faire leadership styles: A meta-analysis comparing women and men. *Psychological Bulletin*, *129*(4), 569–591. https://doi.org/10.1037/0033-2909.129.4.569

Eurostat. (2022). Employment by sex, age, professional status and occupation (1 000) [Data set]. In *Europa.eu*. European Commission. Retrieved from European Commission website: https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do#

Maher, K. J. (1997). GenderRelated Stereotypes of Transformational and Transactional Leadership. *Sex Roles*, *37*(3), 209–225. https://doi.org/10.1023/A:1025647811219

Rosenbusch, K., & Townsend, C. (2004). The Relationship of Gender and Organizational Setting to Transformational and Transactional Leadership Skills of Selected College Student Leaders. *Journal of Leadership Education*, *3*(3), 4–20. https://doi.org/10.12806/v3/i3/tf1

Rusinova, V., Stoitsova, T., Pencheva, E., Vassileva, L., Hristova, A., & Zhylyova, S. (2002). Psychological analysis of leadership styles. *Psychological studies*, *2*, 41–50.

Setia, D. P. B., Romadhona, M., Firdausi, N., & Abdullah, T. (2021). The Influence Of Women Leaders And Their Leadership Style On Employee Engagement Through Talent Management As Mediating Variable. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, *12*(3), 3377–3388. https://doi.org/10.17762/turcomat.v12i3.1599

Thornton, G. (2021). *Women in Inclusion Business 2021 - A window of opportunity*. Grant Thornton International. Retrieved from Grant Thornton International website: https://www.grantthornton.global/en/insights/women-in-business-2021/

ГЛОБАЛНИ И РЕГИОНАЛНИ ИЗМЕРЕНИЯ НА МЕЖДУНАРОДНИТЕ ИКОНОМИЧЕСКИ ОТНОШЕНИЯ

СБОРНИК С ДОКЛАДИ

ДВАДЕСЕТ И ШЕСТА СТУДЕНТСКА НАУЧНО-ПРАКТИЧЕСКА КОНФЕРЕНЦИЯ

НА КАТЕДРА „МЕЖДУНАРОДНИ ИКОНОМИЧЕСКИ ОТНОШЕНИЯ" ПРИ
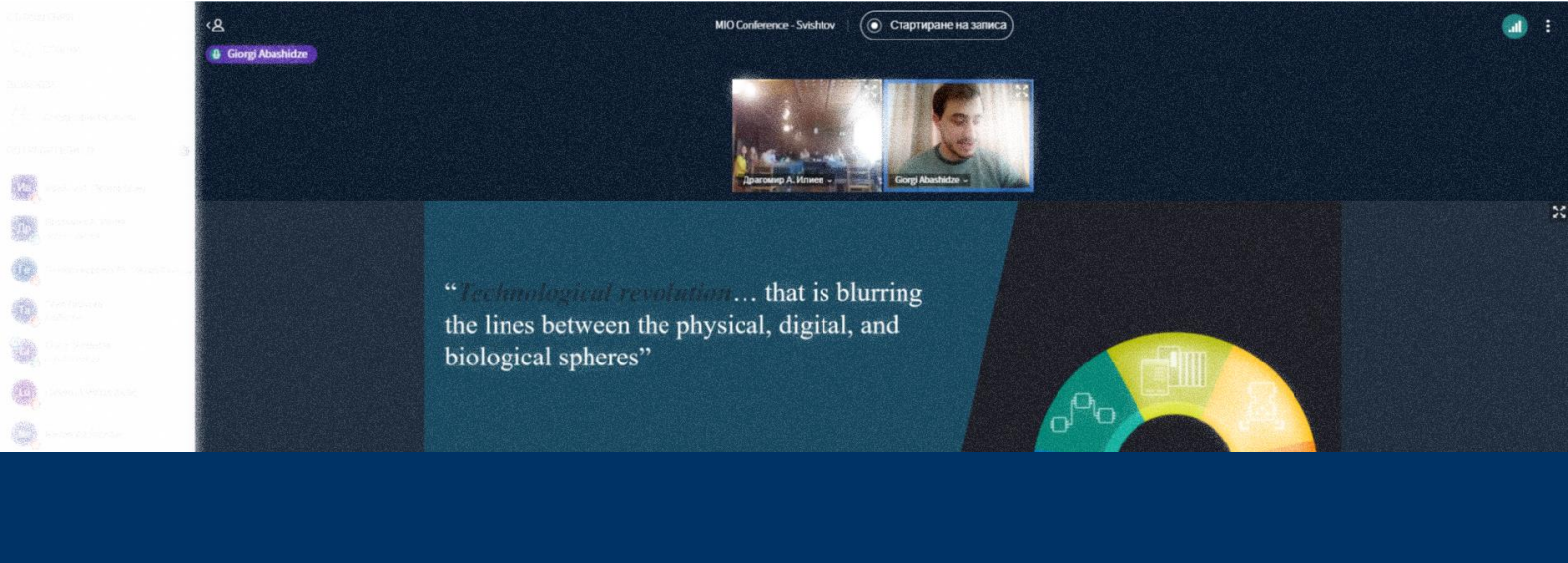
СТОПАНСКА АКАДЕМИЯ „ДИМИТЪР А. ЦЕНОВ"

СВИЩОВ, 2022

www.mioconference.eu

ГЛОБАЛНИ И РЕГИОНАЛНИ ИЗМЕРЕНИЯ НА МЕЖДУНАРОДНИТЕ ИКОНОМИЧЕСКИ ОТНОШЕНИЯ
СБОРНИК С ДОКЛАДИ
Свищов, 2022

GLOBAL AND REGIONAL DIMENSIONS OF INTERNATIONAL ECONOMIC RELATIONS
PROCEEDINGS
Svishtov, 2022

www.mioconference.eu