Društvo ekonomistov Maribor

EKONOMIJA 2023

Posvetovanje o inflaciji, plačah, pokojninah in pričakovanjih

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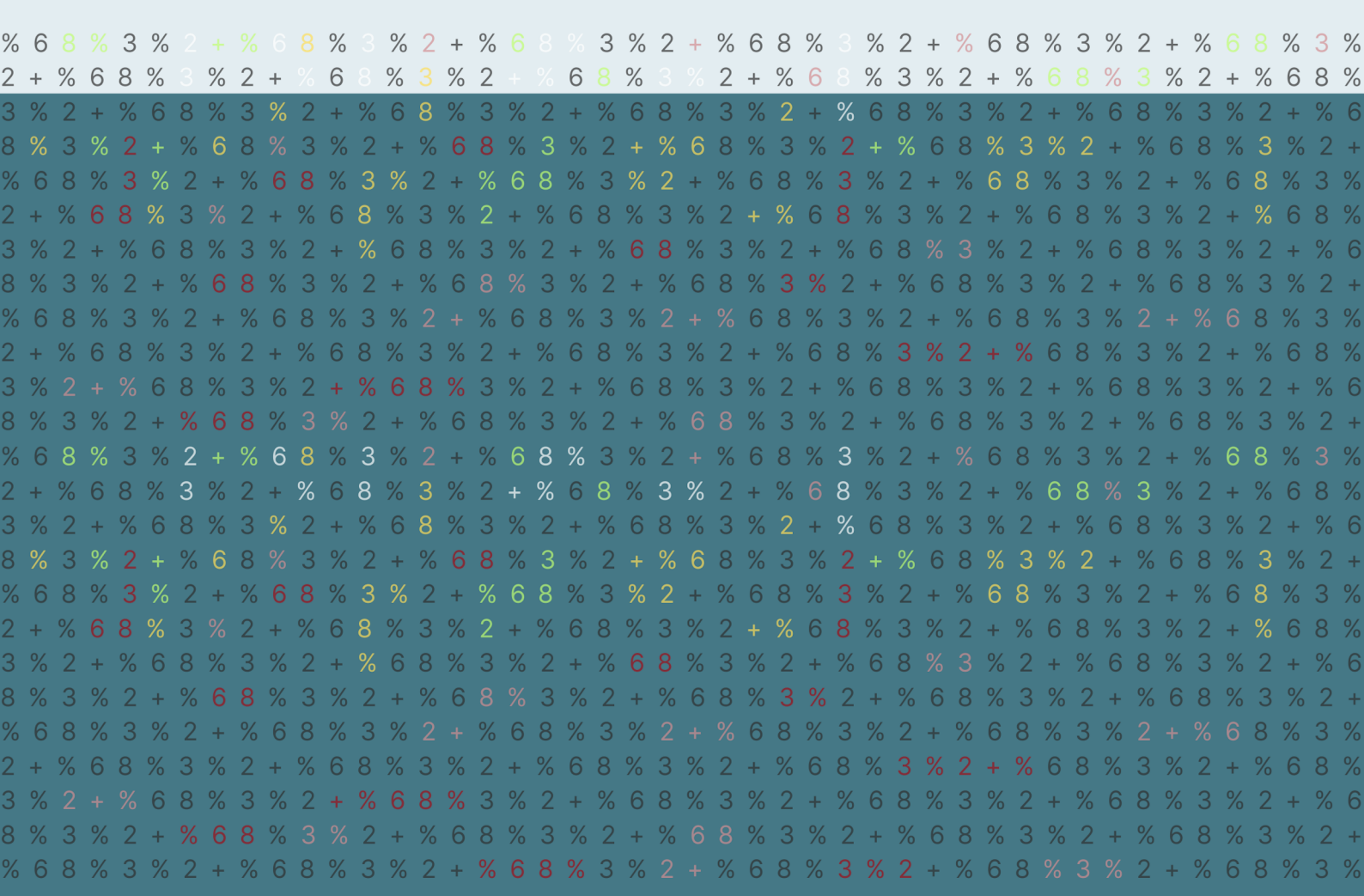
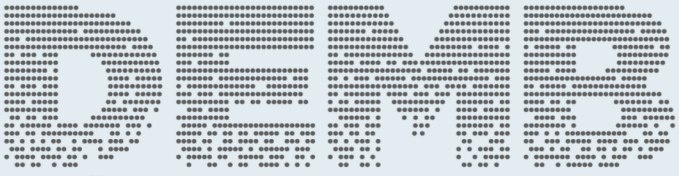
Doc. dr. Dejan Romih (ur.)





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EKONOMIJA 2023

Posvetovanje o inflaciji, plačah, pokojninah in pričakovanjih

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Predgovor

Ekonomija 2023, Posvetovanje o inflaciji, plačah, pokojninah in pričakovanjih, je bilo posvetovanje ekonomistov v Mariboru, ki ga je organiziralo Društvo ekonomistov Maribor (ki ga vodi red. prof. dr. Žan Jan Oplotnik) v sodelovanju z Ekonomsko-poslovno fakulteto Univerze v Mariboru (ki jo vodi red. prof. dr. Polona Tominc).

Namen posvetovanja je bil govoriti o inflaciji, plačah, pokojninah in pričakovanjih, ki so aktualna tema v Sloveniji in drugih državah (članicah evrskega območja). Izkazalo se je, da je bila tematika zanimiva ne samo za člane društva, ampak tudi druge, ki so se udeležili posvetovanja, kar je dober znak.

Izkušnje učijo, da posvetovanje, ki ga vsako leto organizira Društvo ekonomistov Maribor, ni pomembno samo za društvo in fakulteto (univerzo), ampak tudi za mesto (ob Dravi), v katerem imata obe organizaciji svoj sedež. Člani društva smo ponosni, da je tudi posvetovanje Ekonomija 2023 potekalo v Mariboru in da se ga je kot uvodni vabljeni predavatelj udeležil mag. Matjaž Večernik s Holdinga Slovenske elektrarne, d. o. o, Ljubljana, ki je predaval o dejavnikih cen električne energije v Sloveniji in tujini.

Na tem mestu se zahvaljujem vsem, ki ste sodelovali na posvetovanju in pomagali pri organizaciji dogodka.

Doc. dr. Dejan Romih (ur.)

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The impact of monetary policy uncertainty on the inflation rate and the interest rate in Japan*

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Abstract: There is a large literature on the impact of monetary policy uncertainty on the economy. In this paper, we use two vector autoregressive models to analyse the impact of monetary policy uncertainty on the inflation rate and the interest rate in Japan. Using monthly data from January 1987 to April 2023, we find that monetary policy uncertainty has a negative impact on the interest rate. We also find that monetary policy uncertainty has no impact on the inflation rate.

Keywords: inflation rate, interest rate, Japan, monetary policy, uncertainty

* This paper was language edited and proofread by artificial intelligence.

1 Introduction

Monetary policy uncertainty is not a new phenomenon. In recent years, however, it has attracted the attention of policymakers (Beckmann & Czudaj, 2023; Çekin et al., 2020; Chiang, 2021; Funashima, 2022; Gu et al., 2022; Husted et al., 2020; Kurov & Stan, 2018; Lastauskas & Nguyen, 2023). Bauer et al. (2022) defined monetary policy uncertainty as uncertainty about (future) monetary policy and its impact on the economy. There is a large literature on the impact of monetary policy uncertainty on the economy (Beckmann & Czudaj, 2023; Çekin et al., 2020; Chiang, 2021; Funashima, 2022; Husted et al., 2020; Kurov & Stan, 2018; Lastauskas & Nguyen, 2023). In this paper, we examine the impact of monetary policy uncertainty on the inflation rate and the interest rate in Japan.

Arbatli Saxegaard et al. (2022) have developed a monetary policy uncertainty index for Japan, which we use in this paper. With this index, we can measure and monitor monetary policy uncertainty in Japan, the second largest economy in Asia and the fourth largest in the world. Measuring and monitoring monetary policy uncertainty is important because an unexpected increase in the monetary policy uncertainty index can have a negative impact on the economy and the shock can be transmitted from one country to another (Chiang, 2021; Gabauer & Gupta, 2018; Lastauskas & Nguyen, 2023).

We selected Japan because it is located in East Asia, which includes China, Mongolia, North Korea, South Korea and Taiwan. Studies show that a possible Chinese invasion of Taiwan could have a negative impact on the region, including Japan. Romih (2023) found that an unexpected increase in the geopolitical risk index can have a negative impact on the Taiwanese economy. This is also likely to be true for the Japanese economy.

This paper is important because it addresses an issue that is relevant given the geopolitical situation in the region and in the world. We must realise that the deterioration of the geopolitical situation in the Taiwan Strait can cause an increase in monetary policy uncertainty in Japan. Bouri et al. (2023) found that an unexpected increase in the geopolitical risk index can cause an increase in the inflation rate. One reason for this is that geopolitical tensions can cause concerns about supplies.

2 Methods

In this paper, we use two vector autoregressive (VAR) models to examine the impact of an increase in the orthogonalised shock to the monetary policy uncertainty index for Japan, developed

by Arbatli Saxegaard et al. (2022), on the inflation rate and the interest rate in Japan. We use monthly data from January 1987 to April 2023 and the Cholesky decomposition. We obtained data on the employment rate, the Nikkei index, the consumer price index and the interest rate from https://fred.stlouisfed.org/ and the monetary policy uncertainty index from https://www.policyuncertainty.com/.

The *p*-lag vector autoregressive (VAR(*p*)) model can be specified in the form

$$\boldsymbol{x_t} = \boldsymbol{b} + \boldsymbol{A_1 x_{t-1}} + \boldsymbol{A_2 x_{t-2}} + \cdots + \boldsymbol{A_p x_{t-p}} + \boldsymbol{u_t}, \qquad t = 1, 2, \dots, T, \tag{1}$$

where $\boldsymbol{x_t} = (x_{1t}, x_{2t}, \dots, x_{nt})'$ is a $(n \times 1)$ vector of time series variables, $\boldsymbol{b}$ is a $(n \times 1)$ vector of constants, $\boldsymbol{A_i}$, $i = 1, 2, \dots, p$, are $(n \times n)$ coefficient matrices and $\boldsymbol{u_t}$ is a $(n \times 1)$ vector of white noise process. *p* denotes the number of lags of the variable vector $\boldsymbol{x_t}$ used in the model (Zivot & Wang, 2006).

3 Results

First, we use a 5-variable VAR(1) model with the following variables: the employment rate (*er*), the monetary policy uncertainty index (*mpui*), the first difference of the natural logarithm of the Nikkei index (*D.ln_nikkei*), the first difference of the natural logarithm of the consumer price index (*D.ln_cpi*) and the interest rate (*ir*). The vector $\boldsymbol{x_t}$ in equation (1) can be written as

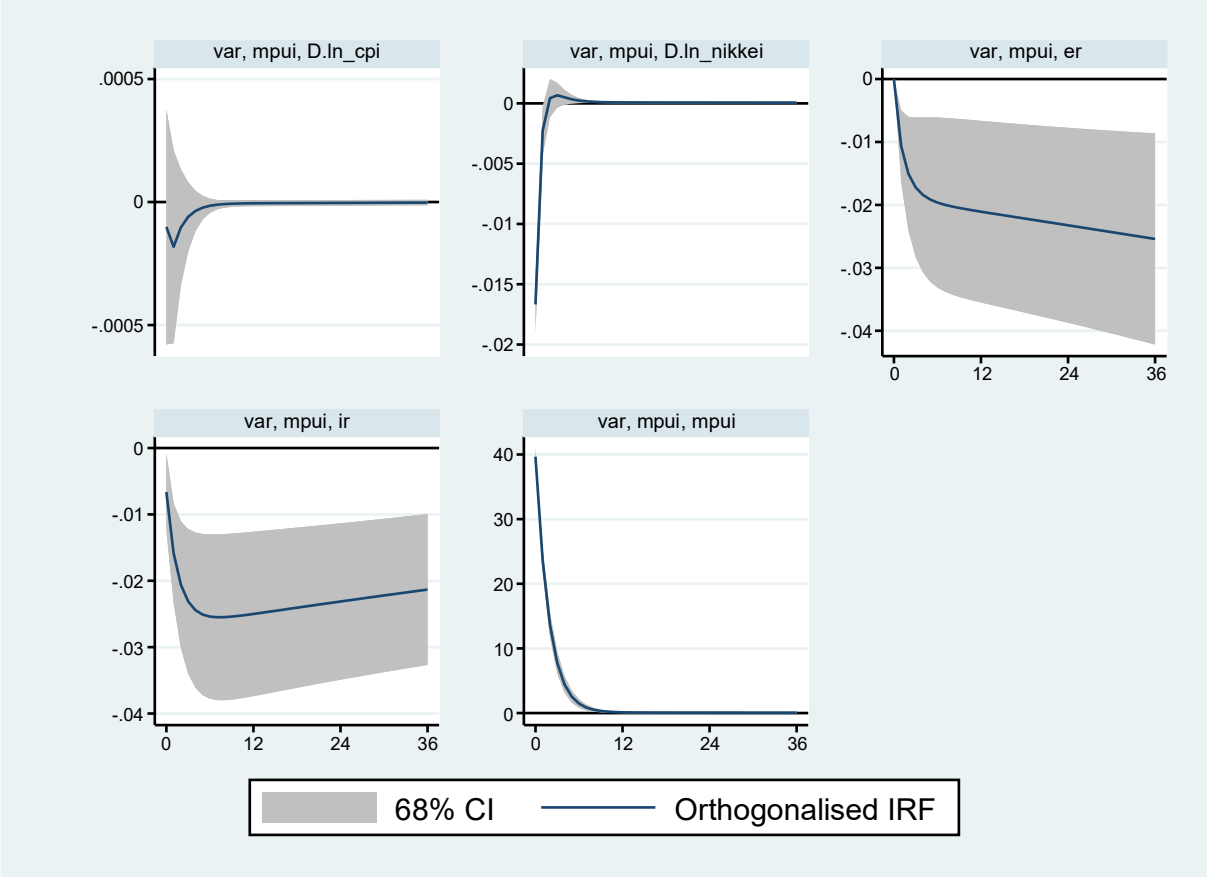
$$\boldsymbol{x_t} = (x_{1t}, x_{2t}, x_{3t}, x_{4t}, x_{5t})' = (er_t, mpui_t, D.ln\_nikkei_t, D.ln\_cpi_t, ir_t)'.$$

In this case, two variables (*er*, *ir*) are non-stationary. The statistics for the selection of the lag order can be found in Figure A.1 in the Appendix. As a special case of equation (1), our 5-variable VAR(1) model can be written as follows

$$\begin{bmatrix} x_{1t} \\ x_{2t} \\ x_{3t} \\ x_{4t} \\ x_{5t} \end{bmatrix} = \begin{bmatrix} b_1 \\ b_2 \\ b_3 \\ b_4 \\ b_5 \end{bmatrix} + \begin{bmatrix} a_{11}^1 & a_{12}^1 & a_{13}^1 & a_{14}^1 & a_{15}^1 \\ a_{21}^1 & a_{22}^1 & a_{23}^1 & a_{24}^1 & a_{25}^1 \\ a_{31}^1 & a_{32}^1 & a_{33}^1 & a_{34}^1 & a_{35}^1 \\ a_{41}^1 & a_{42}^1 & a_{43}^1 & a_{44}^1 & a_{45}^1 \\ a_{51}^1 & a_{52}^1 & a_{53}^1 & a_{54}^1 & a_{55}^1 \end{bmatrix} \begin{bmatrix} x_{1t-1} \\ x_{2t-1} \\ x_{3t-1} \\ x_{4t-1} \\ x_{5t-1} \end{bmatrix} + \begin{bmatrix} u_{1t} \\ u_{2t} \\ u_{3t} \\ u_{4t} \\ u_{5t} \end{bmatrix}, \tag{2}$$

for $t = 1, 2, \dots, T$. $b_i, i = 1, 2, \dots, 5$ and $a_{ij}^1, i, j = 1, 2, \dots, 5$, are the corresponding coefficients of the vector $\boldsymbol{b}$ and the matrix $\boldsymbol{A_1}$.

Figure 1: Graphs of the orthogonalised impulse–response functions for the first VAR(1) model



Notes: The horizontal axis of each graph is in units of time and the vertical axis of each graph is in units of the variable. Each graph shows the impact of an innovation over a 36-month period.

Source: Own calculations.

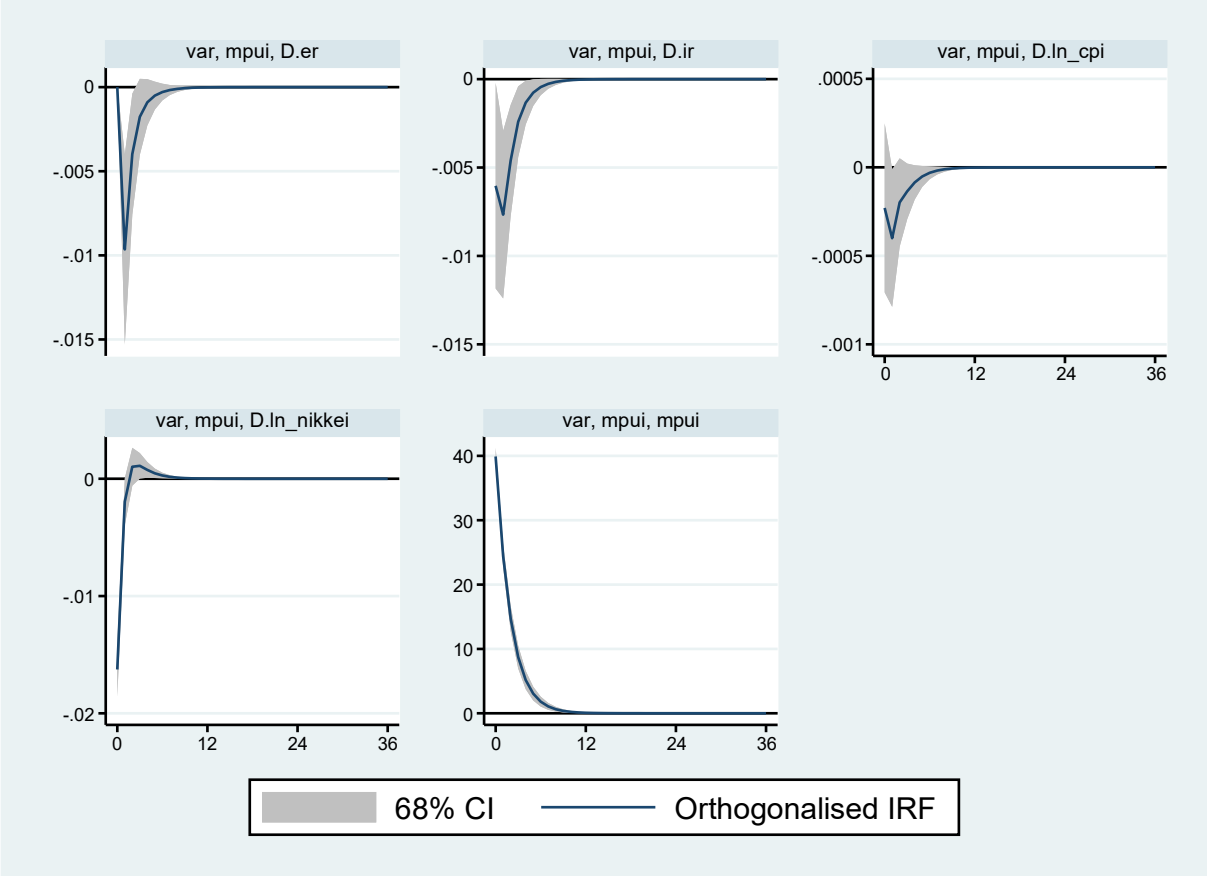
Figure 1 shows that an increase in the orthogonalised shock to *mpui* causes a decrease in *D.ln_cpi*, but this is not statistically significant. It also shows that an increase in the orthogonalised shock to *mpui* causes a decrease in *D.ln_nikkei* that is statistically significant over a short period of time. Furthermore, Figure 1 shows that an increase in the orthogonalised shock to *mpui* causes a decrease in *er* that is statistically significant over a longer period of more than 36 months. This is also true for *ir*.

Second, we use a 5-variable VAR(1) model with the following variables: the first difference of the employment rate (*D.er*), the monetary policy uncertainty index (*mpui*), the first difference of the natural logarithm of the Nikkei index (*D.ln_nikkei*), the first difference of the natural logarithm of the consumer price index (*D. ln_cpi*) and the first difference of the interest rate (*D.ir*). The vector $\boldsymbol{x_t}$ in equation (2) can be written as

$$\boldsymbol{x_t} = (x_{1t}, x_{2t}, x_{3t}, x_{4t}, x_{5t})' = (D.er_t, mpui_t, D.ln\_nikkei_t, D.ln\_cpi_t, D.ir_t)'.$$

In this case, all variables are stationary. The statistics for the selection of the lag order can be found in Figure A.2 in the Appendix.

Figure 2: Graphs of the orthogonalised impulse–response functions for the second VAR(1) model



Notes: The horizontal axis of each graph is in units of time and the vertical axis of each graph is in units of the variable. Each graph shows the impact of an innovation over a 36-month period.

Source: Own calculations.

Figure 2 shows that an increase in the orthogonalised shock to *mpui* causes a decrease in *D.er* that is statistically significant over a short period of time. It also shows that an increase in the orthogonalised shock to *mpui* causes a decrease in *D.ir* that is also statistically significant over a short period of time. Furthermore, Figure 2 shows that an increase in the orthogonalised shock to *mpui* causes a decrease in *D.ln_cpi*, but this is not statistically significant. It also shows that an increase in the orthogonalised shock to *mpui* causes a decrease in *D.ln_nikkei* that is statistically significant for a short period of time.

4 Discussion

The results show that an unexpected shock to the monetary policy uncertainty index has an impact on the interest rate, but not on the inflation rate. In the case of the interest rate, the impact is negative, which in other words means that the interest rate decreases. In addition, the shock also has a negative impact on the stock market index and the unemployment rate. The latter is interesting as the data for the US suggests that an unexpected shock to the monetary policy uncertainty index has a positive impact on the unemployment rate, which in other words means that the unemployment rate increases. This suggests that there are differences between countries that need to be taken into account by policy makers.

5 Conclusion

This paper offers a new insight into the relationship between monetary policy uncertainty on the one hand and the inflation rate and the interest rate on the other. The data for Japan show that monetary policy uncertainty has an impact on the interest rate, which is in line with our expectations. However, they also show that monetary policy uncertainty has no impact on the inflation rate, which is not in line with our expectations. We had expected monetary policy uncertainty to have an impact on both variables.

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Appendix

Figure A.1: Lag order selection statistics for the first VAR(1) model (screenshot)

Lag-order selection criteria

Sample: 1988m2 thru 2023m4 Number of obs = 423

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-2036.15				.010689	9.65081	9.66971	9.69865
1	402.392	4877.1	25	0.000	1.2e-07*	-1.76072*	-1.64729*	-1.47367*
2	417.239	29.695	25	0.236	1.2e-07	-1.71271	-1.50477	-1.18646
3	436.549	38.619	25	0.040	1.3e-07	-1.68581	-1.38335	-.920349
4	453.639	34.18	25	0.104	1.3e-07	-1.64841	-1.25143	-.643742
5	467.55	27.823	25	0.316	1.4e-07	-1.59598	-1.10449	-.352108
6	514.898	94.696	25	0.000	1.3e-07	-1.70164	-1.11563	-.218565
7	526.553	23.311	25	0.559	1.3e-07	-1.63855	-.958019	.083736
8	554.298	55.489*	25	0.000	1.3e-07	-1.65153	-.876478	.309966
9	568.9	29.203	25	0.256	1.4e-07	-1.60236	-.732795	.598337
10	582.612	27.426	25	0.335	1.5e-07	-1.54899	-.584909	.890911
11	593.644	22.064	25	0.632	1.6e-07	-1.48295	-.424349	1.19616
12	605.216	23.143	25	0.569	1.7e-07	-1.41946	-.266338	1.49886

* optimal lag
Endogenous: er mpui D.ln_nikkei D.ln_cpi ir
Exogenous: _cons

Source: Own calculations.

Figure A.2: Lag order selection statistics for the second VAR(1) model (screenshot)

Lag-order selection criteria

Sample: 1988m2 thru 2023m4 Number of obs = 423

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	266.674				2.0e-07	-1.23723	-1.21832	-1.18939
1	398.923	264.5	25	0.000	1.2e-07*	-1.74432*	-1.6309*	-1.45727*
2	413.602	29.356	25	0.249	1.3e-07	-1.69552	-1.48758	-1.16926
3	433.421	39.638	25	0.032	1.3e-07	-1.67102	-1.36856	-.905559
4	450.333	33.824	25	0.112	1.3e-07	-1.63278	-1.2358	-.628111
5	497.108	93.551	25	0.000	1.2e-07	-1.73573	-1.24424	-.491861
6	505.025	15.835	25	0.920	1.3e-07	-1.65497	-1.06895	-.171886
7	535.041	60.032	25	0.000	1.3e-07	-1.67868	-.998152	.043603
8	546.429	22.776	25	0.591	1.4e-07	-1.61432	-.839275	.347169
9	563.06	33.261	25	0.125	1.4e-07	-1.57475	-.705185	.625947
10	571.527	16.935	25	0.884	1.5e-07	-1.49658	-.532498	.943322
11	584.313	25.571	25	0.431	1.6e-07	-1.43883	-.380229	1.24028
12	604.179	39.731*	25	0.031	1.7e-07	-1.41456	-.261435	1.50376

* optimal lag
Endogenous: D.er mpui D.ln_nikkei D.ln_cpi D.ir
Exogenous: _cons

Source: Own calculations.

The impact of inflation on short- and long-term inflation expectations in the United States*

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Abstract: Expectations play an important role in the economy. In this paper, we examine the impact of inflation on short- and long-term inflation expectations in the United States. Using a vector autoregressive model, we find that an increase in the orthogonalised shock to the inflation rate causes an increase in short- and long-term inflation expectations, which is an additional argument for maintaining price stability.

Keywords: inflation, expectation, shock, United States, vector autoregressive model

* This paper was language edited and proofread by artificial intelligence.

1 Introduction

In recent years, many economists (e.g. Braggion et al., 2023; Schafer, 2022) have examined the impact of inflation on inflation expectations and vice versa. In this paper, we examine the impact of inflation on short- and long-term inflation expectations in the United States, adding to the literature on this topic.

The fact is that the economic situation can have an impact on the expectations of economic agents, which can be realistic, optimistic or pessimistic. This also applies to inflation expectations (Alturki & Olson, 2022; Armantier et al., 2021; Kučerová et al., 2023). After 2020, the inflation expectations of economic agents have increased, which is due to a mixture of supply-side and demand-side factors (Höynck & Rossi, 2023; Kilian & Zhou, 2022). This paper provides an insight into this topic and is organised as follows: In section 2, we describe the methods. In section 3, we describe the results. In section 4, we discuss the results, and in section 5, we draw a conclusion.

2 Methods

In this paper, we use a vector autoregressive (VAR) model to examine the impact of an increase in the orthogonalised shock to the inflation rate on inflation expectations in the United States. We use monthly data from January 1990 to June 2023. The data for the consumer price index, one-year expected inflation rate, three-year expected inflation rate, and unemployment rate are from the Federal Reserve Bank of St. Louis, and the data for the Wu-Xia federal funds shadow rate are from the Federal Reserve Bank of Atlanta.

The VAR model is a widely used econometric model that assumes all variables are endogenous. The model expresses each variable as a linear function of its own lagged values and the lagged values of the other variables in the model. To estimate the VAR model, the equations are estimated separately using ordinary least squares (Kennedy, 2018). Hansen (2022) provides a comprehensive and rigorous overview of VAR models.

The *p*-lag vector autoregressive (VAR(*p*)) model can be specified in the form

$$\boldsymbol{y_t} = \boldsymbol{c} + \boldsymbol{\Pi_1 y_{t-1}} + \boldsymbol{\Pi_2 y_{t-2}} + \cdots + \boldsymbol{\Pi_p y_{t-p}} + \boldsymbol{\epsilon_t}, t = 1, 2, \dots, T, \quad (1)$$

where $\boldsymbol{y_t} = (y_{1t}, y_{2t}, \dots, y_{nt})'$ is a $(n \times 1)$ vector of time series variables, $\boldsymbol{c}$ is a $(n \times 1)$ vector of constants, $\boldsymbol{\Pi_i}$, $i = 1, 2, \dots, p$, are $(n \times n)$ coefficient matrices and $\boldsymbol{\epsilon_t}$ is a $(n \times 1)$ vector of white noise process. *p* denotes the number of lags of the variable vector $\boldsymbol{y_t}$ used in the model (Zivot & Wang, 2006).

As a special case of equation (1), a 5-variable VAR(3) model can be written as follows

$$\begin{bmatrix} y_{1t} \\ y_{2t} \\ y_{3t} \\ y_{4t} \\ y_{5t} \end{bmatrix} = \begin{bmatrix} c_1 \\ c_2 \\ c_3 \\ c_4 \\ c_5 \end{bmatrix} + \begin{bmatrix} \pi_{11}^1 & \pi_{12}^1 & \pi_{13}^1 & \pi_{14}^1 & \pi_{15}^1 \\ \pi_{21}^1 & \pi_{22}^1 & \pi_{23}^1 & \pi_{24}^1 & \pi_{25}^1 \\ \pi_{31}^1 & \pi_{32}^1 & \pi_{33}^1 & \pi_{34}^1 & \pi_{35}^1 \\ \pi_{41}^1 & \pi_{42}^1 & \pi_{43}^1 & \pi_{44}^1 & \pi_{45}^1 \\ \pi_{51}^1 & \pi_{52}^1 & \pi_{53}^1 & \pi_{54}^1 & \pi_{55}^1 \end{bmatrix} \begin{bmatrix} y_{1t-1} \\ y_{2t-1} \\ y_{3t-1} \\ y_{4t-1} \\ y_{5t-1} \end{bmatrix} +$$
$$+ \begin{bmatrix} \pi_{11}^2 & \pi_{12}^2 & \pi_{13}^2 & \pi_{14}^2 & \pi_{15}^2 \\ \pi_{21}^2 & \pi_{22}^2 & \pi_{23}^2 & \pi_{24}^2 & \pi_{25}^2 \\ \pi_{31}^2 & \pi_{32}^2 & \pi_{33}^2 & \pi_{34}^2 & \pi_{35}^2 \\ \pi_{41}^2 & \pi_{42}^2 & \pi_{43}^2 & \pi_{44}^2 & \pi_{45}^2 \\ \pi_{51}^2 & \pi_{52}^2 & \pi_{53}^2 & \pi_{54}^2 & \pi_{55}^2 \end{bmatrix} \begin{bmatrix} y_{1t-2} \\ y_{2t-2} \\ y_{3t-2} \\ y_{4t-2} \\ y_{5t-2} \end{bmatrix} + \quad (2)$$
$$+ \begin{bmatrix} \pi_{11}^3 & \pi_{12}^3 & \pi_{13}^3 & \pi_{14}^3 & \pi_{15}^3 \\ \pi_{21}^3 & \pi_{22}^3 & \pi_{23}^3 & \pi_{24}^3 & \pi_{25}^3 \\ \pi_{31}^3 & \pi_{32}^3 & \pi_{33}^3 & \pi_{34}^3 & \pi_{35}^3 \\ \pi_{41}^3 & \pi_{42}^3 & \pi_{43}^3 & \pi_{44}^3 & \pi_{45}^3 \\ \pi_{51}^3 & \pi_{52}^3 & \pi_{53}^3 & \pi_{54}^3 & \pi_{55}^3 \end{bmatrix} \begin{bmatrix} y_{1t-3} \\ y_{2t-3} \\ y_{3t-3} \\ y_{4t-3} \\ y_{5t-3} \end{bmatrix} + \begin{bmatrix} \varepsilon_{1t} \\ \varepsilon_{2t} \\ \varepsilon_{3t} \\ \varepsilon_{4t} \\ \varepsilon_{5t} \end{bmatrix},$$

for $t = 1, 2, \dots, T$. We set $n = 5$ and $p = 3$ in equation (1). $c_i, i = 1, 2, \dots, 5$ and $\pi_{ij}^k, i, j = 1, 2, \dots, 5, k = 1, 2, 3$, are the corresponding coefficients of the vector $\boldsymbol{c}$ and the matrices $\boldsymbol{\Pi_1}, \boldsymbol{\Pi_2}$ and $\boldsymbol{\Pi_3}$, respectively.

Selecting the appropriate lag length *p* is a crucial step when applying VAR models. The selection of the lag length hinges on information criteria that take into account the model's fit and complexity. Zivot and Wang (2006) recommend estimating the VAR(p) model for $p = 1, 2, \dots, p_{max}$, and selecting the lag length $\hat{p}$ that minimizes certain information criteria. The three commonly used information criteria are Akaike (AIC), Schwarz-Bayesian (BIC), and Hannan-Quinn (HQIC). According to Lütkepohl (2005), if consistency is important, it is better to use the BIC or HQ information criterion. However, AIC is preferred for small sample sizes and selects the correct order for a higher percentage of models in small samples.

Lütkepohl (2013) notes that VAR models are traditionally employed for stationary variables. Nevertheless, Enders (2014) has questioned whether non-stationary unit root variables should be differenced within a VAR model. Enders posits that differencing may overlook pertinent information regarding the co-movement of the variables. Lütkepohl (2013) specifies VAR models in levels and does not take into account potential cointegration. The author argues that it is feasible to use VAR models in levels without ascertaining the cointegration structure.

In the VAR modeling approach, impulse responses play a crucial role. By utilizing impulse response functions (IRFs), one can determine the response of future variable values in the model to a shock – defined as a one-unit increase in one of the VAR residuals (Stock & Watson, 2001). Typically, IRFs are plotted alongside confidence intervals and interpreted as statistically (in)significant changes in a variable over the observed period.

3 Results

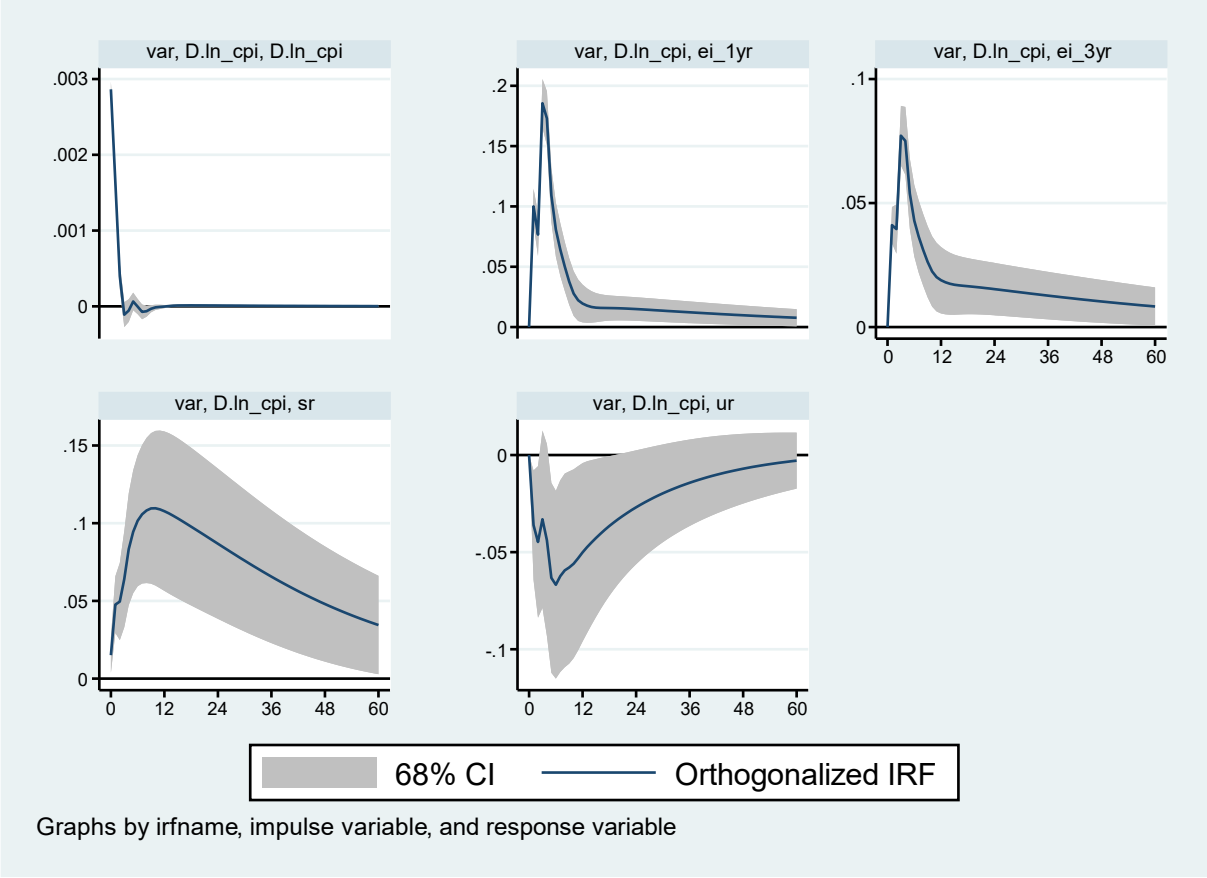
We use a 5-variable VAR(3) model with the following variables: the first difference of the natural logarithm of the consumer price index (*D.ln_cpi*), one-year expected inflation rate (*ei_1yr*), three-year expected inflation rate (*ei_3yr*), Wu-Xia shadow federal funds rate (*sr*) and unemployment rate (*ur*). The vector $\boldsymbol{y_t}$ in equation (2) can be written as

$$\boldsymbol{y_t} = (y_{1t}, y_{2t}, y_{3t}, y_{4t}, y_{5t})' = (D.ln\_cpi_t, ei\_1yr_t, ei\_1yr, sr_t, ur_t)'.$$

The statistics for the selection of the lag order can be found in Figure A.1 in the Appendix.

In this section, we analyse the orthogonalised impulse-response functions that measure the impact of an increase in the orthogonalised shock to *D.ln_cpi* on itself and other endogenous variables (see Figure 1). We are particularly interested in the impact of an increase in the orthogonalised shock to *D.ln_cpi* on *ei_1yr* and *ei_3yr*.

Figure 1: Graphs of the orthogonalised impulse–response functions for the VAR(3) model



Notes: The horizontal axis of each graph is in units of time and the vertical axis of each graph is in units of the variable. Each graph shows the impact of an innovation over a 60-month period.

Source: Own calculations.

Figure 1 shows that an increase in the orthogonalised shock to *D.ln_cpi* also causes a short series of increases in *sr* that are also statistically significant over a short period of time. In addition, Figure 1 shows that an increase in the orthogonalised shock to *D.ln_cpi* also causes an increase in *ei_1yr* that is statistically significant over a long period of time, which is also true for *ei_3yr*. Figure 1 also shows that an increase in the orthogonalised shock to *D.ln_cpi* causes a decrease in *ur*.

We have also conducted Granger causality Wald tests (see Figure A.2 in the Appendix). As explained by Brooks (2019), these tests assist in identifying if changes in one variable (y_1) result in changes in another variable (y_2). If y_1 causes y_2, then the lags of variable y_1 would be statistically significant in the equation for y_2. If this is the case, but not vice versa (meaning the lags of variable y_2 are not statistically significant in the equation for y_1), then y_1 is referred to as the Granger-cause of y_2 or there exists a one-way causal link from y_1 to y_2. We test the null hypothesis that the coefficients of the specified lags of variable y_1 are all equal to 0. If causal links exist in both directions, we refer to it as bidirectional Granger causality.

We are particularly interested in whether *D.ln_cpi* Granger-cause *ei_1yr* and *ei_3yr*. The results of the Wald tests show that *D.ln_cpi* Granger-cause *ei_1yr*, which is also true for *ei_3yr*, consistent with our earlier results.

4 Discussion

Based on data for the United States, we find that an unexpected increase in the inflation rate causes an increase in inflation expectations, which is consistent with the literature. This means that there is a causal relationship between the two phenomena that needs to be taken into account by policy makers, as other authors also emphasise (e.g. Braggion et al., 2023; Nasir & Huynh, 2024; Schafer, 2022). Nevertheless, monetary history teaches us that price stability is a prerequisite for economic stability and vice versa (Dräger et al., 2023). Research (Chua & Tsiaplias, 2024; Dräger et al., 2023; Gründler, 2023; Pfajfar & Žakelj, 2014) shows that inflation has an impact on the behaviour of economic agents. In times of high inflation, for example, households buy cheaper goods, discounted goods, etc.

5 Conclusion

The evidence from the United States suggests that inflation has a positive impact on short- and long-term inflation expectations. Therefore, it is important for the Federal Reserve to ensure short- and long-term price stability. The results of this study add to the literature on this topic and emphasise the importance of price stability for the economy. However, further research is needed to examine the relationship between inflation and inflation expectations during periods of low and high inflation.

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Appendix

Figure A.1: Lag order selection statistics for the VAR(3) model (screenshot)

Lag-order selection criteria

Sample: 1991m2 thru 2023m6 Number of obs = 389

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-221.858				2.2e-06	1.16636	1.18656	1.21731
1	1761.12	3966	25	0.000	9.4e-11	-8.90036	-8.77918	-8.59468
2	1831.75	141.26	25	0.000	7.4e-11	-9.13497	-8.9128	-8.57457
3	1912.12	160.73	25	0.000	5.6e-11*	-9.41963*	-9.09648*	-8.6045*
4	1930.86	37.491	25	0.052	5.8e-11	-9.38748	-8.96334	-8.31762
5	1949.61	37.488	25	0.052	6.0e-11	-9.35531	-8.83019	-8.03072
6	1975.52	51.822	25	0.001	5.9e-11	-9.36	-8.73388	-7.78068
7	2002.42	53.807	25	0.001	5.9e-11	-9.36978	-8.64269	-7.53574
8	2023.66	42.473	25	0.016	6.0e-11	-9.35044	-8.52235	-7.26166
9	2044.12	40.914	25	0.023	6.2e-11	-9.32708	-8.39801	-6.98357
10	2064.66	41.09	25	0.022	6.3e-11	-9.30417	-8.27412	-6.70594
11	2085.78	42.237*	25	0.017	6.5e-11	-9.28422	-8.15318	-6.43126
12	2102.69	33.827	25	0.112	6.7e-11	-9.24264	-8.01061	-6.13495

* optimal lag
Endogenous: ur ei_3yr ei_1yr D.ln_cpi sr
Exogenous: _cons

Source: Own calculations.

Figure A.2: Results of the Granger causality Wald tests (screenshot)

. vargranger

Granger causality Wald tests

Equation	Excluded	F	df	df_r	Prob > F
ur	ei_3yr	2.2017	3	382	0.0874
ur	ei_1yr	.82394	3	382	0.4813
ur	D.ln_cpi	.7445	3	382	0.5261
ur	sr	4.0497	3	382	0.0075
ur	ALL	2.463	12	382	0.0042
ei_3yr	ur	2.6226	3	382	0.0504
ei_3yr	ei_1yr	22.529	3	382	0.0000
ei_3yr	D.ln_cpi	27.804	3	382	0.0000
ei_3yr	sr	3.9456	3	382	0.0086
ei_3yr	ALL	11.398	12	382	0.0000
ei_1yr	ur	5.0113	3	382	0.0020
ei_1yr	ei_3yr	18.206	3	382	0.0000
ei_1yr	D.ln_cpi	50.133	3	382	0.0000
ei_1yr	sr	1.2303	3	382	0.2984
ei_1yr	ALL	18.532	12	382	0.0000
D_ln_cpi	ur	.52979	3	382	0.6621
D_ln_cpi	ei_3yr	.22689	3	382	0.8777
D_ln_cpi	ei_1yr	.2456	3	382	0.8645
D_ln_cpi	sr	.19423	3	382	0.9003
D_ln_cpi	ALL	.64676	12	382	0.8018
sr	ur	2.8004	3	382	0.0398
sr	ei_3yr	1.9782	3	382	0.1167
sr	ei_1yr	.73936	3	382	0.5291
sr	D.ln_cpi	2.875	3	382	0.0361
sr	ALL	2.4592	12	382	0.0042

Source: Own calculations.

Vpliv inflacijske pismenosti pripadnikov generacije Z na njihova kratko- in dolgoročna inflacijska pričakovanja

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Povzetek: V tem prispevku raziskujemo vpliv inflacijske pismenosti pripadnikov generacije Z na njihova kratko- in dolgoročna inflacijska pričakovanja, pri čemer uporabljamo podatke, ki smo jih dobili z anketiranjem do- in podiplomskih študentov ekonomije in poslovanja. Rezultati kažejo, da inflacijska pismenost anketirancev negativno vpliva na njihova kratkoročna inflacijska pričakovanja, ne vpliva pa na njihova dolgoročna inflacijska pričakovanja, kar je koristna informacija za oblikovalce politike na ravni države in skupine držav Evropske unije z evrom kot denarno enoto.

Ključne besede: generacija Z, inflacija, pismenost, pričakovanje, Slovenija

1 Uvod

V tem prispevku raziskujemo vpliv inflacijske pismenosti pripadnikov generacije Z na njihova kratko- in dolgoročna inflacijska pričakovanja, pri čemer uporabljamo podatke ankete o inflacijski pismenosti in inflacijskih pričakovanjih, ki smo jo izvedli med pripadniki generacije Z. Izkazalo se je, da je o vplivu inflacijske pismenosti ljudi na njihova inflacijska pričakovanja zelo malo napisanega, kar nas preseneča glede na aktualnost problema. Namen tega prispevka je tako zapolniti vrzel v literaturi.

Domnevamo, da inflacijska pismenost ljudi vpliva na njihova inflacijska pričakovanja oz. da imajo manj inflacijsko pismeni večja inflacijska pričakovanja kot bolj inflacijsko pismeni. To kažejo tudi izkušnje iz Avstrije (Rumler & Valderrama, 2020), pri čemer moramo upoštevati, da se ljudje prilagajajo času in okolju (Pfajfar & Žakelj, 2014). Kljub temu so potrebne dodatne raziskave, saj rezultati raziskovanj niso enopomenski (gl. npr. Dräger & Nghiem, 2023).

Ta prispevek ima še pet poglavij. V poglavju 2 podajamo metode, v poglavju 3 rezultate, v poglavju 4 razpravo, v poglavju 5 pa sklep.

2 Metode

Podatke, ki jih analiziramo v poglavju 3, smo dobili z anketiranjem do- in podiplomskih študentov ekonomije in poslovanja, ki študirajo na Ekonomsko-poslovni fakulteti Univerze v Mariboru in so pripadniki generacije Z. Anketo o inflacijski pismenosti in inflacijskih pričakovanjih smo izvajali novembra 2023, in sicer tako, da so anketiranci izpolnjevali anketni vprašalnik, ki ga najdete v prilogi 2. Njihovo inflacijsko pismenost smo ocenjevali s kvizom o Evropski centralni banki (ECB) (kvizom 1), ki ima 11 vprašanj, kvizom o denarni politiki (kvizom 2), ki ima 12 vprašanj, in kvizom o cenovni stabilnosti (kvizom 3), ki ima 10 vprašanj.[1]

V raziskavi uporabljamo dva indeksa inflacijske pismenosti. Indeks infpismenost1 smo izračunali tako, da smo upoštevali samo rezultate kviza 3, indeks infpismenost2 pa tako, da smo upoštevali rezultate kviza 1, 2 in 3, in sicer v razmerju 20 : 30 : 50.

V anketi je sodeloval 101 anketiranec, od tega 35 moških (34,7 %) in 66 žensk (65,3 %), ki so bili v povprečju stari 21,8 leta ($\sigma = 1{,}6$ leta). Dodiplomcev je bilo 47 (46,5 %), podiplomcev pa 54 (53,5 %).

[1] Gl. https://www.ecb.europa.eu/ecb/educational/test-your-knowledge/html/index.en.html.

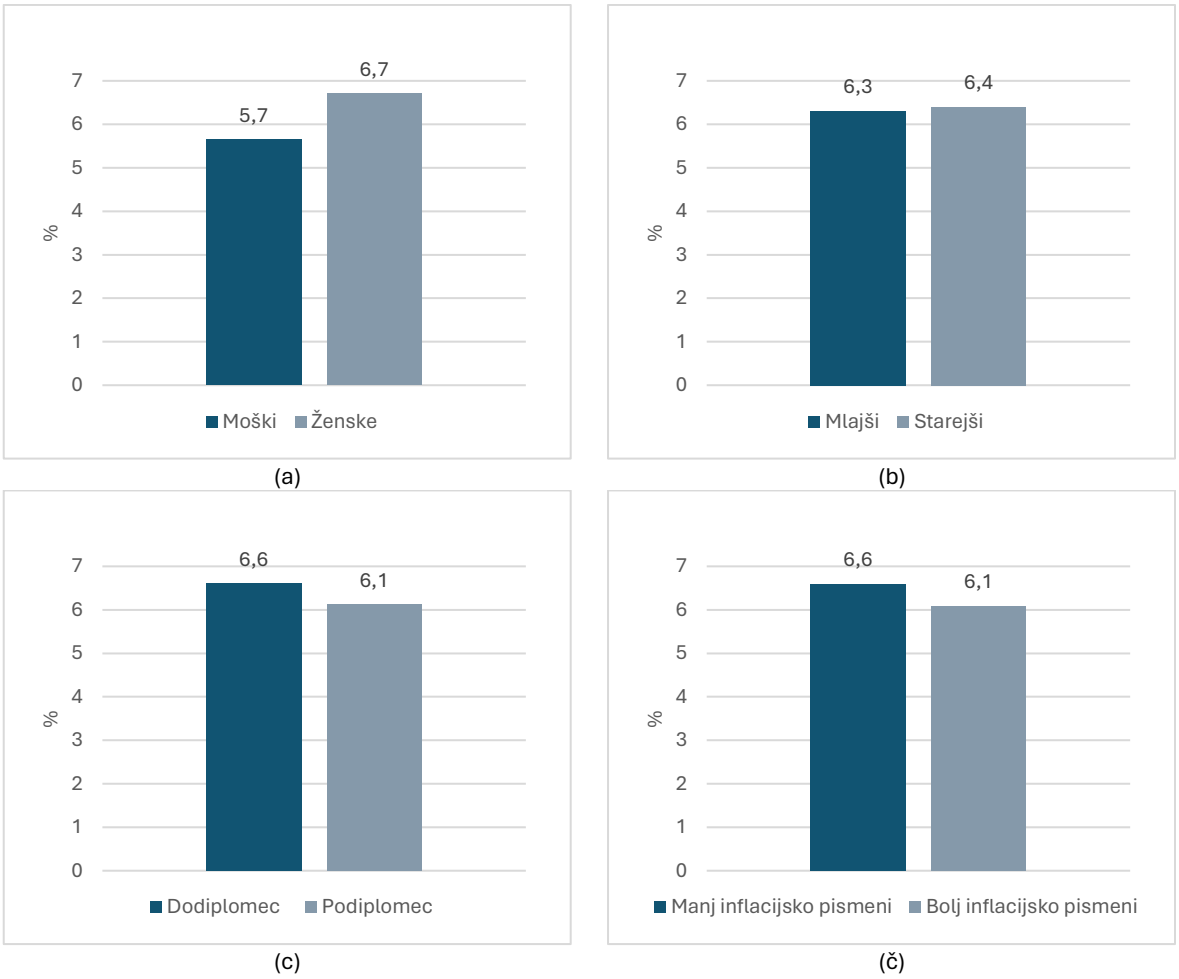
3 Rezultati

V tem poglavju analiziramo kratko- in dolgoročna inflacijska pričakovanja pripadnikov generacije Z glede na njihove demografske značilnosti ter ugotavljamo, kateri demografski dejavniki (spol, starost, stopnja študija, inflacijska pismenost) vplivajo na njihova kratko- in dolgoročna inflacijska pričakovanja.

3.1 Kratkoročna inflacijska pričakovanja

Anketa kaže, da je novembra 2023 povprečna pričakovana stopnja inflacije čez 12 mesecev znašala 6,8 % (σ = 2,4 odstotne točke), kar je za 0,1 odstotne točke manj kot je oktobra 2023 znašala stopnja inflacije v Sloveniji. Slika 1 kaže povprečno pričakovano stopnjo inflacije čez 12 mesecev glede na demografske značilnosti anketirancev (tj. študentov ekonomije in poslovanja).

Slika 1: Povprečna pričakovana stopnja inflacije čez 12 mesecev glede na demografske značilnosti anketirancev



Opomba: Anketirance smo glede na starost in inflacijsko pismenost razdelili v dve skupini, pri čemer smo kot kriterij upoštevali mediano.

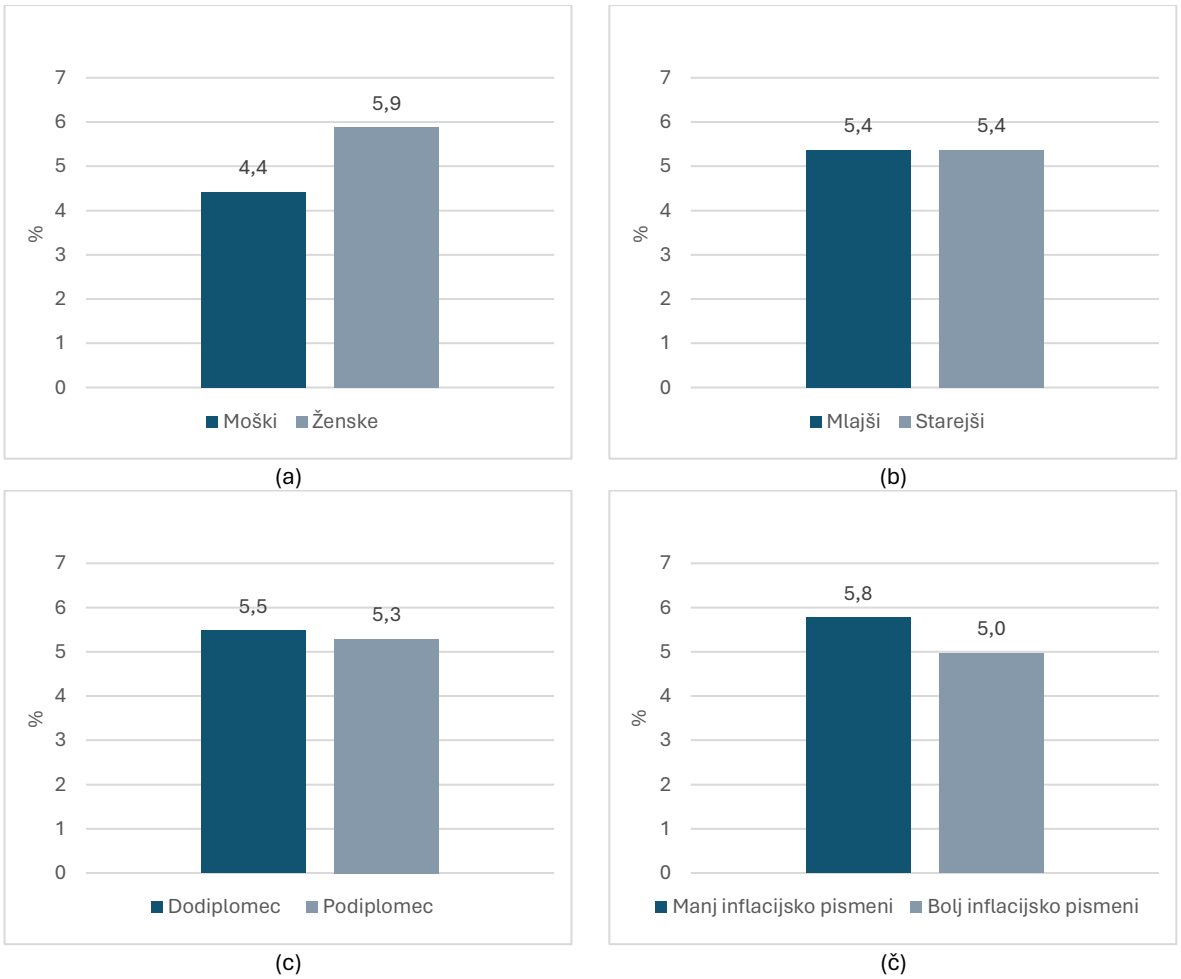
Vir: Lastni izračuni na podlagi podatkov ankete.

S slike 1 je razvidno, da je novembra 2023 povprečna pričakovana stopnja inflacije čez 12 mesecev pri moških znašala 5,7 %, kar je za 1,1 odstotne točke manj kot pri ženskah – gl. grafikon (a), pri mlajših 6,3 %, kar je za 0,1 odstotne točke manj kot pri starejših – gl. grafikon (b), pri dodiplomcih 6,6 %, kar je za 0,5 odstotne točke več kot pri podiplomcih – gl. grafikon (c), pri manj inflacijsko pismenih pa 6,6 %, kar je za 0,5 odstotne točke več kot pri bolj inflacijsko pismenih – gl. grafikon (č). To pomeni, da imajo manj inflacijsko pismeni večja kratkoročna inflacijska pričakovanja, kar je koristna informacija za oblikovalce politike.

3.2 Dolgoročna inflacijska pričakovanja

Anketa kaže, da je novembra 2023 povprečna pričakovana stopnja inflacije čez 36 mesecev znašala 6,3 % (σ = 3 odstotne točke), kar je za 0,5 odstotne točke manj kot povprečna pričakovana stopnja inflacije čez 12 mesecev. To pomeni, da anketiranci pričakujejo, da se bo stopnja inflacije na dolgi rok zmanjšala. Slika 2 kaže povprečno pričakovano stopnjo inflacije čez 36 mesecev glede na demografske značilnosti anketirancev.

Slika 2: Povprečna pričakovana stopnja inflacije čez 36 mesecev glede na demografske značilnosti anketirancev



Opomba: Anketirance smo glede na starost in inflacijsko pismenost razdelili v dve skupini, pri čemer smo kot kriterij upoštevali mediano.

Vir: Lastni izračuni na podlagi podatkov ankete.

S slike 2 je razvidno, da je novembra 2023 povprečna pričakovana stopnja inflacije čez 36 mesecev pri moških znašala 4,4 %, kar je za 1,5 odstotne točke manj kot pri ženskah – gl. grafikon (a), pri mlajših 5,4 %, kar je enako kot pri starejših – gl. grafikon (b), pri dodiplomcih 5,5 %, kar je za

0,2 odstotne točke več kot pri podiplomcih – gl. grafikon (c), pri manj inflacijsko pismenih pa 5,8 %, kar je za 0,8 odstotne točke več kot pri bolj inflacijsko pismenih – gl. grafikon (č). To pomeni, da imajo manj inflacijsko pismeni tudi večja dolgoročna inflacijska pričakovanja.

3.3 Demografski dejavniki pričakovane stopnje inflacije čez 12 mesecev

V tem podpoglavju nas zanima, kateri demografski dejavniki vplivajo na pričakovano stopnjo inflacije čez 12 mesecev (tj. kratkoročna inflacijska pričakovanja). Da bi lahko odgovorili na to vprašanje, smo uporabili dva linearna regresijska modela, katerih ocene parametrov podajamo v nadaljevanju tega podpoglavja (gl. sliki 3 in 4). Inflacijsko pismenost smo najprej merili z indeksom $infpismenost1$, potem pa z indeksom $infpismenost2$.

Slika 3: Zaslonska slika rezultatov linearne regresije v primeru, ko upoštevamo $infpismenost1$

```
. regress inflacija12 spol starost dodiplomec infpismenost1, vce(robust)

Linear regression                               Number of obs     =        101
                                                F(4, 96)          =       4.10
                                                Prob > F          =     0.0041
                                                R-squared         =     0.0901
                                                Root MSE          =     3.2029

------------------------------------------------------------------------------
             |               Robust
  inflacija12 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        spol |   .9062529   .8956615     1.01   0.314    -.8716211    2.684127
     starost |   .5897659   .2566985     2.30   0.024     .0802235    1.099308
   dodiplomec |  -1.640788   .7225049    -2.27   0.025    -3.074949   -.2066277
infpismenost1 |  -.0003745   .0001646    -2.28   0.025    -.0007011   -.0000478
       _cons |   -3.34232   6.356926    -0.53   0.600    -15.96072    9.276079
------------------------------------------------------------------------------
```

Vir: Lastni izračuni na podlagi podatkov ankete.

S slike 3 je razvidno, da starost pozitivno in statistično značilno ($\beta = 0{,}59, p < 0{,}05$), stopnja študija ($dodiplomec$) in inflacijska pismenost ($infpismenost1$) pa negativno in statistično značilno vplivajo na pričakovano stopnjo inflacije čez 12 mesecev ($\beta = -1{,}65, p < 0{,}05$ oz. $\beta = -0{,}00, p < 0{,}05$). Ugotovili smo tudi, da spol statistično značilno ne vpliva na odvisno spremenljivko ($p \geq 0{,}10$). Problem je, ker je delež pojasnjene variance sorazmerno majhen ($R^2 = 0{,}09$), kar povzroča potrebo po prilagajanju (Ozili, 2023). Dejstvo je, da na inflacijska pričakovanja študentov vplivajo tudi drugi dejavniki.

Slika 4: Zaslonska slika rezultatov linearne regresije v primeru, ko upoštevamo $infpismenost2$

```
. regress inflacija12 spol starost dodiplomec infpismenost2, vce(robust)

Linear regression                               Number of obs     =        101
                                                F(4, 96)          =       2.92
                                                Prob > F          =     0.0251
                                                R-squared         =     0.0898
                                                Root MSE          =     3.2033

------------------------------------------------------------------------------
             |               Robust
  inflacija12 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        spol |   .8761256   .8830489     0.99   0.324    -.8767125    2.628964
     starost |   .6000211   .2572834     2.33   0.022     .0893177    1.110724
   dodiplomec |  -1.617573   .7390028    -2.19   0.031    -3.084482   -.1506638
infpismenost2 |  -.4990387   .2462295    -2.03   0.045    -.9878004   -.0102769
       _cons |  -3.108477   6.248649    -0.50   0.620    -15.51195    9.294993
------------------------------------------------------------------------------
```

Vir: Lastni izračuni na podlagi podatkov ankete.

S slike 4 je razvidno, da starost pozitivno in statistično značilno ($\beta = 0{,}60, p < 0{,}05$), stopnja študija ($dodiplomec$) in inflacijska pismenost ($infpismenost2$) pa negativno in statistično značilno vplivajo na pričakovano stopnjo inflacije čez 12 mesecev ($\beta = -1{,}62, p < 0{,}05$ oz. $\beta = -0{,}50, p < 0{,}05$). Ugotovili smo tudi, da spol statistično značilno ne vpliva na odvisno spremenljivko ($p \geq 0{,}10$), kar potrjuje naše prejšnje ugotovitve. Problem je, ker je delež pojasnjene variance tudi v tem primeru sorazmerno majhen ($R^2 = 0{,}09$).

3.4 Demografski dejavniki pričakovane stopnje inflacije čez 36 mesecev

V tem podpoglavju nas zanima, kateri demografski dejavniki vplivajo na pričakovano stopnjo inflacije čez 36 mesecev (tj. dolgoročna inflacijska pričakovanja). Da bi lahko odgovorili na to vprašanje, smo uporabili dva linearna regresijska modela, katerih ocene parametrov podajamo v nadaljevanju tega podpoglavja (gl. sliki 5 in 6). Inflacijsko pismenost smo najprej merili z indeksom $infpismenost1$, potem pa z indeksom $infpismenost2$.

Slika 5: Zaslonska slika rezultatov linearne regresije v primeru, ko upoštevamo $infpismenost1$

```
. regress inflacija36 spol starost dodiplomec infpismenost1, vce(robust)

Linear regression                               Number of obs     =        101
                                                F(4, 96)          =       2.46
                                                Prob > F          =     0.0507
                                                R-squared         =     0.0626
                                                Root MSE          =     4.0829

------------------------------------------------------------------------------
             |               Robust
  inflacija36 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        spol |   1.459178   .8757166     1.67   0.099     -.279106    3.197461
     starost |   .5121046   .2998527     1.71   0.091    -.0830982    1.107307
   dodiplomec |  -1.012355   .9056985    -1.12   0.266    -2.810152    .7854424
infpismenost1 |  -.0003448   .0002607    -1.32   0.189    -.0008623    .0001727
       _cons |   -4.66471   6.528474    -0.71   0.477    -17.62363    8.294209
------------------------------------------------------------------------------
```

Vir: Lastni izračuni na podlagi podatkov ankete.

S slike 5 je razvidno, da spol in starost pozitivno in statistično značilno vplivata na pričakovano stopnjo inflacije čez 36 mesecev ($\beta = 1{,}46, p < 0{,}10$ oz. $\beta = 0{,}51, p < 0{,}10$), medtem ko stopnja študija ($dodiplomec$) in inflacijska pismenost ($infpismenost1$) statistično značilno ne vplivata na odvisno spremenljivko ($p \geq 0{,}10$). Problem je, ker je delež pojasnjene variance tudi v tem primeru sorazmerno majhen ($R^2 = 0{,}06$).

Slika 6: Zaslonska slika rezultatov linearne regresije v primeru, ko upoštevamo $infpismenost2$

```
. regress inflacija36 spol starost dodiplomec infpismenost2, vce(robust)

Linear regression                               Number of obs     =        101
                                                F(4, 96)          =       2.40
                                                Prob > F          =     0.0557
                                                R-squared         =     0.0587
                                                Root MSE          =     4.0913

------------------------------------------------------------------------------
             |               Robust
  inflacija36 |  Coefficient  std. err.      t    P>|t|     [95% conf. interval]
-------------+----------------------------------------------------------------
        spol |   1.452332   .8909266     1.63   0.106    -.3161436    3.220807
     starost |   .5139556   .3049333     1.69   0.095    -.0913322    1.119243
  dodiplomec |  -.9545847   .8855959    -1.08   0.284    -2.712479    .8033093
infpismenost2 |  -.4015211   .3337931    -1.20   0.232    -1.064095    .2610529
       _cons |  -4.67656    6.703509    -0.70   0.487    -17.98292    8.629801
------------------------------------------------------------------------------
```

Vir: Lastni izračuni na podlagi podatkov ankete.

S slike 6 je razvidno, da starost pozitivno in statistično značilno ($\beta = 0{,}51, p < 0{,}10$) vpliva na pričakovano stopnjo inflacije čez 36 mesecev, medtem ko spol, stopnja študija ($dodiplomec$) in inflacijska pismenost ($infpismenost2$) statistično značilno ne vplivajo na odvisno spremenljivko ($p \geq 0{,}10$). Problem je, ker je delež pojasnjene variance tudi v tem primeru sorazmerno majhen ($R^2 = 0{,}06$).

4 Razprava

Analiza nam daje vpogled v stanje na področju inflacijske pismenosti in inflacijskih pričakovanj študentov ekonomije in poslovanja, ki so pripadniki generacije Z. Izkazalo se je, da imajo ženske, starejši, dodiplomci in manj inflacijsko pismeni večja inflacijska pričakovanja kot moški, mlajši, podiplomci in bolj inflacijsko pismeni, kar smo pričakovali. Izkazalo se je tudi, da inflacijska pismenost (ne glede na to, kako jo merimo) negativno in statistično značilno vpliva na pričakovano stopnjo inflacije čez 12 mesecev, ne pa tudi na pričakovano stopnjo inflacije čez 36 mesecev.

5 Sklep

Raziskava kaže, da na inflacijska pričakovanja študentov ekonomije in poslovanja vplivajo različni demografski dejavniki. Ugotovili smo, da na kratkoročna inflacijska pričakovanja vplivajo starost,

stopnja študija in inflacijska pismenost (ne glede na to, kako jo merimo), na dolgoročna pa spol in starost, kar je koristna informacija za oblikovalce politike.

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Priloga: Anketni vprašalnik

Anketa o inflacijski pismenosti in inflacijskih pričakovanjih

Navodila: Najprej v prazna polja vpišite manjkajoče demografske podatke, nato rešite tri kvize in v prazna polja vpišite število doseženih točk, potem pa odgovorite na dve vprašanji. Anketiranje je anonimno.

Spol (M/Ž)	___
Starost (v letih)	___ ___
Dodiplomski študent (DA/NE)	___ ___

Kviz o ECB

Število točk:	___ ___ ___ ___ ___

Kviz o denarni politiki

Število točk:	___ ___ ___ ___ ___

Kviz o cenovni stabilnosti

Število točk:	___ ___ ___ ___ ___

Namig: Oktobra 2023 je bila medletna stopnja inflacije v Sloveniji 6,9-%.

Kolikšna bo medletna stopnja inflacije/deflacije čez 12 mesecev? (V primeru, da pričakujete deflacijo, dopišite predznak minus.)	___ ___ , ___ %
Kolikšna bo medletna stopnja inflacije/deflacije čez 36 mesecev? (V primeru, da pričakujete deflacijo, dopišite predznak minus.)	___ ___ , ___ %

Hvala za sodelovanje!

The impact of the inflation rate and the output gap on the interest rate in Canada, the euro area and the United States*

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Abstract: In this paper, we examine the impact of the inflation rate and the output gap on the interest rate in Canada, the euro area and the United States. Using threshold regression models, we found that there are differences between these economies that researchers need to take into account. It turns out that the inflation rate and the output gap are not always important predictors of the interest rate.

Keywords: Canada, euro area, inflation rate, interest rate, output gap, United States

* This paper was language edited and proofread by artificial intelligence.

1 Introduction

After the Covid-19 shock, the inflation rate, the interest rate and the output gap were the main topics of discussion among central bankers (see e.g. Williams, 2023). In this paper, we examine the impact of the inflation rate and the output gap on the interest rate. We use data for Canada, the euro area and the United States, which are also used by Holston et al. (2023), who estimated the r-star for all three economies.

The fact is that the Covid-19 shock has had a negative impact on all three economies. It quickly became clear that none of them were prepared for a crisis of this magnitude. Data from the Federal Reserve Bank of New York (2023) shows that the output gap in the second quarter of 2020 was negative in all three economies. In Canada, the output gap was –5.9%, in the euro area –4.7% and in the United States –0.8%. This required an expansionary monetary policy to increase economic activity. This is one of the reasons why we examine the impact of the inflation rate and the output gap on the interest rate.

The rest of the paper is organised as follows: In section 2, we describe the methods. In section 3, we describe the results. In section 4, we discuss the results, and in section 5, we draw a conclusion.

2 Methods

In this paper, we use six different threshold regression models to examine the impact of the inflation rate and the output gap on the interest rate in Canada, the euro area and the United States, respectively. We use quarterly data on the interest rate ($interest$), the inflation rate ($inflation$) and the output gap ($ogap$) from the first quarter of 1972 to the second quarter of 2023. We obtained the data from the Federal Reserve Bank of New York (2023). In the case of the output gap, we use estimates from the Holston-Laubach-Williams model (see e.g. Holston et el., 2023).

3 Results

3.1 Results for Canada

In this section, we examine the impact of the inflation rate and the output gap on the interest rate in Canada. First, we use the first lag of the output gap ($l.ogap$) as a threshold variable and assume one threshold or two regions, so that the model can be written as follows:

$$interest_{ca_t} = \delta_{110} + \delta_{111} l.ogap_{ca} + \delta_{113} inflation_{ca} + \delta_{114} ogap_{ca} + \epsilon_{t_1} \quad (1)$$

$$\text{if } -\infty < l.ogap_{ca} \leq \gamma_1$$

$$interest_{ca_t} = \delta_{210} + \delta_{211} l.ogap_{ca} + \delta_{213} inflation_{ca} + \delta_{214} ogap_{ca} + \epsilon_{t_1}$$

$$\text{if } \gamma_1 < l.ogap_{ca} < \infty$$

where ϵ_{t_1} is an IID error with mean 0 and variance σ^2. Estimates of this model are shown in Figure 1.

Figure 1: Screenshot of the estimates of Model1_ca

```
. threshold interest_ca, regionvars(l.interest_ca inflation_ca ogap_ca) threshvar(l.ogap_ca)

Searching for threshold: 1
(running 164 regressions)
.................................................    50
.................................................   100
.................................................   150
..............

Threshold regression
                                                    Number of obs =      205
Full sample: 1972q2 thru 2023q2                     AIC           = -24.6800
Number of thresholds = 1                            BIC           =   1.9040
Threshold variable: L.ogap_ca                       HQIC          = -13.9274

------------------------------------
Order     Threshold           SSR
------------------------------------
    1        2.9135      168.1020
------------------------------------

------------------------------------------------------------------------------
 interest_ca | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
-------------+----------------------------------------------------------------
Region1      |
 interest_ca |
         L1. |   .9238034   .0324821    28.44   0.000     .8601396    .9874672
             |
inflation_ca |   .0291912   .0698828     0.42   0.676    -.1077765    .1661588
     ogap_ca |  -.0127471   .0318616    -0.40   0.689    -.0751946    .0497005
       _cons |   .1895504   .1365056     1.39   0.165    -.0779957    .4570964
-------------+----------------------------------------------------------------
Region2      |
 interest_ca |
         L1. |    .968301   .0419636    23.07   0.000     .8860539    1.050548
             |
inflation_ca |   .1433205    .064554     2.22   0.026      .016797     .269844
     ogap_ca |  -.2182036   .1420347    -1.54   0.124    -.4965866    .0601794
       _cons |   .6252833   .5688843     1.10   0.272    -.4897093    1.740276
------------------------------------------------------------------------------

.
. estimates store Model1_ca
```

Source: Own calculations based on data from the Federal Reserve Bank of New York (2023).

The output consists of two tables. The first table contains the estimated threshold and the corresponding sum of squared residuals. The estimated threshold of 2.91% divides the sample into two regions. Region 1 corresponds to the part of the sample in which the output gap of the last quarter is less than or equal to 2.91%. Region 2 corresponds to the part of the sample in which the output gap of the last quarter is greater than 2.91%. The second table contains the estimated coefficients. In region 1, the coefficient of 0.92 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.03 for the inflation rate and the coefficient

of –0.01 for the output gap are not significantly different from zero. In region 2, the coefficient of 0.97 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.14 for the inflation rate is significantly different from zero, which means that the Bank of Canada is more concerned with the inflation rate than with the output gap.

Second, we use the second lag of the output gap ($l2.ogap$) as a threshold variable and assume one threshold or two regions, so that the model can be written as follows:

$$\begin{aligned} interest_{ca_t} &= \delta_{120} + \delta_{121} l2.ogap_{ca} + \delta_{122} inflation_{ca} + \delta_{123} ogap_{ca} + \epsilon_{t_2} \\ &\text{if } -\infty < l2.ogap_{ca} \leq \gamma_2 \\ interest_{ca_t} &= \delta_{220} + \delta_{221} l2.ogap_{ca} + \delta_{222} inflation_{ca} + \delta_{223} ogap_{ca} + \epsilon_{t_2} \\ &\text{if } \gamma_2 < l2.ogap_{ca} < \infty \end{aligned} \tag{2}$$

where ϵ_{t_2} is an IID error with mean 0 and variance σ^2. Estimates of this model are shown in Figure 2.

Figure 2: Screenshot of the estimates of Model2_ca

```
. threshold interest_ca, regionvars(l.interest_ca inflation_ca ogap_ca) threshvar(l2.ogap_ca)

Searching for threshold: 1
(running 163 regressions)
..................................................    50
..................................................   100
..................................................   150
.............

Threshold regression
                                                      Number of obs =      204
Full sample: 1972q3 thru 2023q2                       AIC           = -24.2104
Number of thresholds = 1                              BIC           =   2.3346
Threshold variable: L2.ogap_ca                        HQIC          = -13.4725

------------------------------------
Order     Threshold           SSR
------------------------------------
    1       -2.0345      167.5045
------------------------------------
```

interest_ca	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
Region1						
interest_ca						
L1.	.9145054	.0436112	20.97	0.000	.8290291	.9999818
inflation_ca	.1649495	.1164236	1.42	0.157	-.0632366	.3931356
ogap_ca	.0808588	.0526364	1.54	0.124	-.0223067	.1840243
_cons	.507688	.4377293	1.16	0.246	-.3502457	1.365622
Region2						
interest_ca						
L1.	.9190007	.0312704	29.39	0.000	.8577118	.9802896
inflation_ca	.1052103	.0495043	2.13	0.034	.0081838	.2022369
ogap_ca	.0889642	.0475305	1.87	0.061	-.0041938	.1821222
_cons	-.214838	.1314343	-1.63	0.102	-.4724445	.0427685

```
.
. estimates store Model2_ca
```

Source: Own calculations based on data from the Federal Reserve Bank of New York (2023).

The estimated threshold of –2.03% divides the sample into two regions. Region 1 corresponds to the part of the sample in which the output gap of the penultimate quarter is less than or equal to –2.03%. Region 2 corresponds to the part of the sample in which the output gap of the penultimate quarter is greater than –2.03%. In region 1, the coefficient of 0.91 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.16 for the inflation rate and the coefficient of 0.08 for the output gap are not significantly different from zero. In region 2, the coefficient of 0.92 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.11 for the inflation rate and the coefficient of 0.09 for the output gap are significantly different from zero, which means that the Bank of Canada is concerned with the inflation rate and the output gap.

Now we can compare the sum of squared residuals and the information criteria of both models. We can see that Model1_ca offers the best fit. This is the model that uses the first lag of the output gap as the threshold variable.

3.2 Results for the euro area

In this section, we examine the impact of the inflation rate and the output gap on the interest rate in the euro area. First, we use the first lag of the output gap ($l.ogap$) as a threshold variable and assume one threshold or two regions, so that the model can be written as follows:

$$\begin{aligned} interest_{ea_t} &= \delta_{130} + \delta_{131} l.ogap_{ea} + \delta_{132} inflation_{ea} + \delta_{133} ogap_{ea} + \epsilon_{t_3} \\ &\text{if } -\infty < l.ogap \leq \gamma_3 \\ interest_{ca_t} &= \delta_{230} + \delta_{231} l.ogap_{ea} + \delta_{232} inflation_{ea} + \delta_{233} ogap_{ea} + \epsilon_{t_3} \\ &\text{if } \gamma_3 < l.ogap < \infty \end{aligned} \tag{3}$$

where ϵ_{t_3} is an IID error with mean 0 and variance σ^2. Estimates of this model are shown in Figure 3.

Figure 3: Screenshot of the estimates of Model1_ea

```
. threshold interest_ea, regionvars(l.interest_ea inflation_ea ogap_ea) threshvar(l.ogap_ea)

Searching for threshold: 1
(running 164 regressions)
.....................................................    50
.....................................................   100
.....................................................   150
..............

Threshold regression
                                                      Number of obs =       205
Full sample: 1972q2 thru 2023q2                       AIC           = -191.5355
Number of thresholds = 1                              BIC           = -164.9514
Threshold variable: L.ogap_ea                         HQIC          = -180.7828

------------------------------------
Order      Threshold           SSR
------------------------------------
    1         1.5472       74.4883
------------------------------------
```

interest_ea	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
Region1						
interest_ea						
L1.	.9650706	.0176811	54.58	0.000	.9304163	.999725
inflation_ea	.0863255	.0276632	3.12	0.002	.0321067	.1405444
ogap_ea	.0938959	.0326378	2.88	0.004	.0299269	.1578649
_cons	.000925	.0853603	0.01	0.991	-.1663782	.1682281
Region2						
interest_ea						
L1.	.8615152	.0429235	20.07	0.000	.7773868	.9456437
inflation_ea	.173608	.0536194	3.24	0.001	.0685159	.2787
ogap_ea	-.0699567	.0791274	-0.88	0.377	-.2250435	.0851301
_cons	-.1096901	.2912421	-0.38	0.706	-.6805141	.461134

```
.
. estimates store Model1_ea
```

Source: Own calculations based on data from the Federal Reserve Bank of New York (2023).

The estimated threshold of 1.55% divides the sample into two regions. Region 1 corresponds to the part of the sample in which the output gap of the last quarter is less than or equal to 1.55%. Region 2 corresponds to the part of the sample in which the output gap of the last quarter is greater than 1.55%. In region 1, the coefficient of 0.97 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.09 for the inflation rate and the coefficient of 0.09 for the output gap are significantly different from zero, which means that the European Central Bank is concerned with the inflation rate and the output gap. In region 2, the coefficient of 0.86 for the interest rate of the last quarter indicates that the interest rate is less persistent than in region 1. The coefficient of 0.17 for the inflation rate is significantly different from zero, while the coefficient of 0.09 for the output gap is not significantly different from zero, which means that the European Central Bank is more concerned with the inflation rate than the output gap.

Second, we use the second lag of the output gap ($l2.ogap$) as a threshold variable and assume one threshold or two regions, so that the model can be written as follows:

$$\begin{aligned} interest_{ea_t} &= \delta_{140} + \delta_{141} l2.ogap_{ea} + \delta_{142} inflation_{ea} + \delta_{143} ogap_{ea} + \epsilon_{t_4} \\ &\text{if } -\infty < l2.ogap_{ea} \leq \gamma_4 \\ interest_{ea_t} &= \delta_{240} + \delta_{241} l2.ogap_{ea} + \delta_{242} inflation_{ea} + \delta_{243} ogap_{ea} + \epsilon_{t_4} \\ &\text{if } \gamma_4 < l2.ogap_{ea} < \infty \end{aligned} \tag{4}$$

where ϵ_{t_4} is an IID error with mean 0 and variance σ^2. Estimates of this model are shown in Figure 4.

Figure 4: Screenshot of the estimates of Model2_ea

```
. threshold interest_ea, regionvars(l.interest_ea inflation_ea ogap_ea) threshvar(l2.ogap_ea)

Searching for threshold: 1
(running 163 regressions)
..................................................    50
..................................................   100
..................................................   150
.............

Threshold regression
                                                    Number of obs =       204
Full sample: 1972q3 thru 2023q2                     AIC           = -213.6104
Number of thresholds = 1                            BIC           = -187.0655
Threshold variable: L2.ogap_ea                      HQIC          = -202.8725

------------------------------------
Order     Threshold           SSR
------------------------------------
    1        1.3469       66.1933
------------------------------------

------------------------------------------------------------------------------
 interest_ea | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
-------------+----------------------------------------------------------------
Region1      |
 interest_ea |
         L1. |   .9627924   .0171949    55.99   0.000     .9290909    .9964939
             |
inflation_ea |   .1091518   .0263718     4.14   0.000     .0574639    .1608396
     ogap_ea |   .1018554   .0305427     3.33   0.001     .0419928     .161718
       _cons |  -.0240703   .0796862    -0.30   0.763    -.1802524    .1321118
-------------+----------------------------------------------------------------
Region2      |
 interest_ea |
         L1. |   .8584039   .0366198    23.44   0.000     .7866303    .9301774
             |
inflation_ea |   .1565903   .0498364     3.14   0.002     .0589127    .2542679
     ogap_ea |  -.0221908   .0541785    -0.41   0.682    -.1283788    .0839971
       _cons |  -.2814068    .207092    -1.36   0.174    -.6872996    .1244861
------------------------------------------------------------------------------

.
. estimates store Model2_ea
```

Source: Own calculations based on data from the Federal Reserve Bank of New York (2023).

The estimated threshold of 1.35% divides the sample into two regions. Region 1 corresponds to the part of the sample in which the output gap of the penultimate quarter is less than or equal to 1.35%. Region 2 corresponds to the part of the sample in which the output gap of the penultimate quarter is greater than 1.35%. In region 1, the coefficient of 0.96 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.11 for the inflation rate and the coefficient of 0.10 for the output gap are significantly different from zero, which means that the European Central Bank is concerned with the inflation rate and the output gap. In region 2, the coefficient of 0.86 for the interest rate of the last quarter indicates that the interest rate is less persistent than in region 1. The coefficient of 0.16 for the inflation rate is significantly different from zero, while the coefficient of –0.02 for the output gap is not significantly different from zero, which means that the European Central Bank is more concerned with the inflation rate than the output gap.

Now we can compare the sum of squared residuals and the information criteria of both models. We can see that Model2_ea offers the best fit. This is the model that uses the second lag of the output gap as the threshold variable.

3.3 Results for the United States

In this section, we examine the impact of the inflation rate and the output gap on the interest rate in the United States. First, we use the first lag of the output gap ($l.ogap$) as a threshold variable and assume one threshold or two regions, so that the model can be written as follows:

$$\begin{aligned} interest_{us_t} &= \delta_{150} + \delta_{151} l.ogap_{us} + \delta_{152} inflation_{us} + \delta_{153} ogap_{us} + \epsilon_{t_5} \\ &\text{if } -\infty < l.ogap_{us} \leq \gamma_5 \\ interest_{us_t} &= \delta_{250} + \delta_{251} l.ogap_{us} + \delta_{252} inflation_{us} + \delta_{253} ogap_{us} + \epsilon_{t_5} \\ &\text{if } \gamma_5 < l.ogap_{us} < \infty \end{aligned} \tag{5}$$

where ϵ_{t_5} is an IID error with mean 0 and variance σ^2. Estimates of this model are shown in Figure 5.

Figure 5: Screenshot of the estimates of Model1_us

```
. threshold interest_us, regionvars(l.interest_us inflation_us ogap_us) threshvar(l.ogap_us)

Searching for threshold: 1
(running 164 regressions)
.................................................    50
.................................................   100
.................................................   150
..............

Threshold regression
                                                    Number of obs =      205
Full sample: 1972q2 thru 2023q2                     AIC           = -20.8641
Number of thresholds = 1                            BIC           =   5.7200
Threshold variable: L.ogap_us                       HQIC          = -10.1114

------------------------------------
Order     Threshold           SSR
------------------------------------
    1        0.6931      171.2604
------------------------------------

------------------------------------------------------------------------------
 interest_us | Coefficient  Std. err.      z    P>|z|     [95% conf. interval]
-------------+----------------------------------------------------------------
Region1      |
 interest_us |
         L1. |   .9123981   .0333396    27.37   0.000     .8470536    .9777426
             |
inflation_us |   .2998547    .073976     4.05   0.000     .1548644     .444845
     ogap_us |   .2068645   .0625612     3.31   0.001     .0842468    .3294823
       _cons |  -.3118728   .1733039    -1.80   0.072    -.6515422    .0277966
-------------+----------------------------------------------------------------
Region2      |
 interest_us |
         L1. |   1.068126   .0494677    21.59   0.000     .9711707     1.16508
             |
inflation_us |  -.1545014   .0818954    -1.89   0.059    -.3150134    .0060105
     ogap_us |   .4293657   .0978134     4.39   0.000      .237655    .6210763
       _cons |  -.5260039   .2244238    -2.34   0.019    -.9658664   -.0861413
------------------------------------------------------------------------------

.
. estimates store Model1_us
```

Source: Own calculations based on data from the Federal Reserve Bank of New York (2023).

The estimated threshold of 0.69% divides the sample into two regions. Region 1 corresponds to the part of the sample in which the output gap of the last quarter is less than or equal to 0.69%. Region 2 corresponds to the part of the sample in which the output gap of the last quarter is greater than 0.69%. In region 1, the coefficient of 0.91 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.30 for the inflation rate and the coefficient of 0.21 for the output gap are significantly different from zero, which means that the Federal Reserve is concerned with the inflation rate and the output gap. In region 2, the coefficient of 1.07 for the interest rate of the last quarter indicates that the interest rate is more persistent than in region 1. The coefficient of –0.15 for the inflation rate and the coefficient of 0.43 for the output gap are significantly different from zero, which means that the Federal Reserve is concerned with the inflation rate and the output gap.

Second, we use the second lag of the output gap ($l2.ogap$) as a threshold variable and assume one threshold or two regions, so that the model can be written as follows:

$$interest_{us_t} = \delta_{160} + \delta_{161} l.ogap_{us} + \delta_{162} inflation_{us} + \delta_{163} ogap_{us} + \epsilon_{t_6}$$
$$\text{if } -\infty < l2.ogap_{us} \leq \gamma_6$$
$$interest_{us_t} = \delta_{260} + \delta_{261} l.ogap_{us} + \delta_{262} inflation_{us} + \delta_{263} ogap_{us} + \epsilon_{t_6} \quad (6)$$
$$\text{if } \gamma_6 < l2.ogap_{us} < \infty$$

where ϵ_{t_6} is an IID error with mean 0 and variance σ^2. Estimates of this model are shown in Figure 6.

Figure 6: Screenshot of the estimates of Model2_us

```
. threshold interest_us, regionvars(l.interest_us inflation_us ogap_us) threshvar(l2.ogap_us)

Searching for threshold: 1
(running 163 regressions)
..................................................    50
..................................................   100
..................................................   150
............

Threshold regression
                                                    Number of obs =      204
Full sample: 1972q3 thru 2023q2                     AIC           = -20.5985
Number of thresholds = 1                            BIC           =   5.9464
Threshold variable: L2.ogap_us                      HQIC          =  -9.8606

------------------------------------
Order     Threshold           SSR
------------------------------------
    1        2.2345      170.4966
------------------------------------
```

interest_us	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
Region1						
interest_us						
L1.	.9554161	.0300407	31.80	0.000	.8965374	1.014295
inflation_us	.1809393	.057832	3.13	0.002	.0675906	.2942879
ogap_us	.1489484	.0475322	3.13	0.002	.055787	.2421098
_cons	-.3311723	.1382644	-2.40	0.017	-.6021655	-.060179
Region2						
interest_us						
L1.	1.152257	.0712314	16.18	0.000	1.012646	1.291868
inflation_us	-.3137312	.1201168	-2.61	0.009	-.5491557	-.0783067
ogap_us	.7169719	.1544997	4.64	0.000	.414158	1.019786
_cons	-1.235841	.4478396	-2.76	0.006	-2.11359	-.3580914

```
.
. estimates store Model2_us
```

Source: Own calculations based on data from the Federal Reserve Bank of New York (2023).

The estimated threshold of 2.23% divides the sample into two regions. Region 1 corresponds to the part of the sample in which the output gap of the penultimate quarter is less than or equal to 2.23%. Region 2 corresponds to the part of the sample in which the output gap of the penultimate quarter is greater than 2.23%. In region 1, the coefficient of 0.96 for the interest rate of the last quarter indicates that the interest rate is persistent. The coefficient of 0.18 for the inflation rate and the coefficient of 0.15 for the output gap are significantly different from zero, which means

that the Federal Reserve is concerned with the inflation rate and the output gap. In region 2, the coefficient of 1.15 for the interest rate of the last quarter indicates that the interest rate is more persistent than in region 1. The coefficient of –0.31 for the inflation rate and the coefficient of 0.72 for the output gap are significantly different from zero, which means that the Federal Reserve is concerned with the inflation rate and the output gap.

From the table above, we can see that Model1_us offers the best fit. This is the model that uses the first lag of the output gap as the threshold variable.

4 Discussion

The results of this study show that there are differences between countries that need to be taken into account. In the case of Canada, we found that the inflation rate is an important predictor of the interest rate only in the region when the output gap of the last quarter is above the threshold. In the case of the euro area, we found that the inflation rate is an important predictor of the interest rate in both regions (i.e. when the output gap of the penultimate quarter is above or below the threshold). However, this is not the case for the output gap, which is only an important predictor of the interest rate in the region where the output gap of the penultimate quarter is above the threshold. In the case of the United States, however, we find that the inflation rate and the output gap are important predictors of the interest rate in both regions (i.e. when the output gap of the last quarter is above or below the threshold).

5 Conclusion

This paper provides an insight into the behaviour of central banks in Canada, the euro area and the United States in the case of a small and a large output gap. We have found that their behaviour differs depending on the economic situation. Nevertheless, further research is needed to gain a better insight. We propose the use of a vector autoregressive threshold model.

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Vpliv poročanja ameriških kabelskih televizijskih postaj o inflaciji na inflacijska pričakovanja ameriških potrošnikov

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Povzetek: V tem prispevku analiziramo vpliv poročanja o inflaciji na ameriških kabelskih televizijskih postajah na inflacijska pričakovanja ameriških potrošnikov, pri čemer uporabljamo mesečne podatke v obdobju 2010–2023. S pomočjo vektorskega avtoregresijskega modela smo ugotovili, da nepričakovano povečanje poročanja o inflaciji na ameriških kabelskih televizijskih postajah vpliva na povečanje inflacijskih pričakovanj ameriških potrošnikov. To pomeni, da lahko ameriški mediji vplivajo na duševno stanje ameriških potrošnikov, kar je koristna informacija za ameriško centralno banko.

Ključne besede: inflacija, poročilo, televizija, Združene države Amerike

1 Uvod

V zadnjih letih so ameriške kabelske televizijske postaje veliko poročale o inflaciji, kar nas ne preseneča glede na inflacijski pritisk na cene v Združenih državah Amerike (ZDA) (Coibion idr., 2023; Kmetz idr., 2022; Macaulay & Song, 2023). V tem članku odgovarjamo na vprašanji, kdaj so ameriške kabelske televizijske postaje največ poročale o inflaciji in ali njihovo poročanje o inflaciji vpliva na inflacijska pričakovanja ameriških potrošnikov, s čimer dopolnjujemo literaturo.

Raziskave (gl. npr. Coibion idr., 2023; Macaulay & Song, 2023) kažejo, da lahko mediji, kot je npr. kabelska televizija, vplivajo na (duševno stanje) ljudi, zaradi česar ni vseeno, o čem in kako novinarji poročajo. Izkazalo se je, da med kabelskimi televizijskimi postajami obstajajo razlike v tem, o čem in kako novinarji poročajo. Dejstvo je, da se mediji med seboj razlikujejo po politični usmerjenosti (desničarski, levičarski) ipd., kar vpliva na to, o čem in kako poročajo. To učijo tudi izkušnje iz ZDA, kjer desničarji (raje) gledajo FOX, levičarji pa CNN. Za oblikovalce politike je pomembno, da opazujejo in spremljajo stanje na tem področju, saj lahko novinarji vplivajo na mnenje ljudi. To pa ne pomeni, da se zavzemamo za uvedbo medijske cenzure, zlasti cenzure nad kabelsko televizijo, ampak za objektivno poročanje, ki je še zlasti pomembno v času lažnih novic. Izkazalo se je, da obstaja tudi potreba po povečanju medijske pismenosti. V ta namen so v ZDA izdelali spletno stran https://newslit.org/, ki je primer dobre prakse.

Domnevamo, da lahko mediji vplivajo tudi na pričakovanja ljudi. V tem prispevku se osredotočamo na njihova inflacijska pričakovanja, pri čemer se omejujemo na ameriške potrošnike. Raziskave (gl. npr. García & Werner, 2015; Kmetz idr., 2022; Larsen idr., 2021; Macaulay & Song, 2023; Mazumder, 2021) kažejo, da lahko mediji vplivajo na stopnjo inflacije in inflacijska pričakovanja.

Ta prispevek ima v nadaljevanju še štiri poglavja. V poglavju 2 podajamo metode, v poglavju 3 rezultate, v poglavju 4 razpravo, v poglavju 5 pa sklep.

2 Metode

V tem prispevku uporabljamo mesečne podatke o trajanju časa, v katerem je bila na zaslonu treh ameriških kabelskih televizijskih postaj (CNN, FOX, MSNBC) navedena beseda *inflation*, ki so dostopni na spletni strani Stanford Cable TV News Analyzer (https://tvnews.stanford.edu/). Dobili smo jih tako, da smo vtipkali `text="inflation" AND channel="CNN"`, `text="inflation" AND channel="FOX"` in `text="inflation" AND channel="MSNBC"` ter sprožili iskanje. Deleže pa smo dobili tako, da smo vtipkali `text="inflation" AND channel="CNN" NORMALIZE channel="CNN"`, `text="inflation" AND channel="FOX"`

`NORMALIZE channel="FOX"` in `text="inflation" AND channel="MSNBC" NORMALIZE channel="MSNBC"` ter sprožili iskanje.

V raziskavi uporabljamo vektorski avtoregresijski model (VAR) s tremi spremenljivkami: pričakovano stopnjo inflacije čez 12 mesecev (*infexp*), stopnjo inflacije (*inf*), naravnim logaritmom povprečnega trajanja časa, v katerem je bila na zaslonu treh ameriških kabelskih televizijskih postaj (CNN, FOX, MSNBC) navedena beseda *inflation* (*news*). Podatke o prvih dveh spremenljivkah smo dobili na spletni strani Zvezne rezervne banke v St. Louisu (https://fred.stlouisfed.org/), podatke o zadnji spremenljivki pa na spletni strani Stanford Cable TV News Analyzer.

Kennedy (2018) pojasnjuje, da so v VAR-modelu vse spremenljivke endogene, pri čemer vsako spremenljivko zapišemo kot linearno funkcijo njenih odloženih vrednosti in odloženih vrednosti drugih spremenljivk v modelu. Model lahko ocenimo tako, da vsako od enačb ocenimo ločeno kot regresijsko enačbo.

Brooks (2019) navaja naslednje prednosti VAR-modelov pred univariatnimi modeli časovnih vrst in modeli simultanih enačb, in sicer:

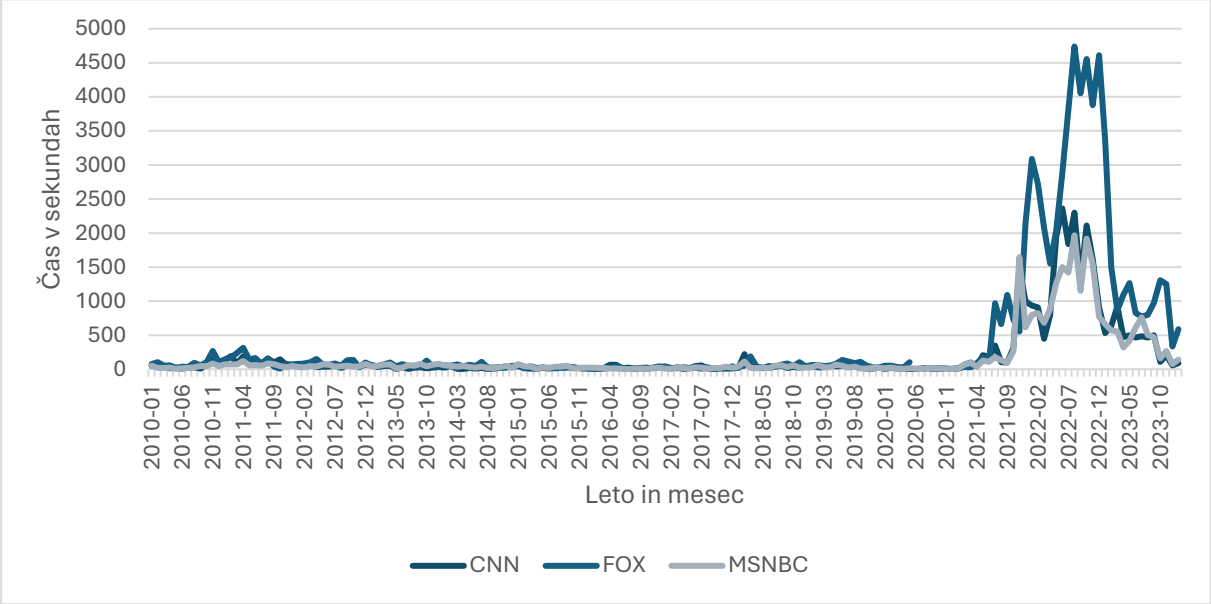
- Raziskovalcem spremenljivk v modelu ni treba opredeliti kot endogenih ali eksogenih, ker so vse spremenljivke endogene.
- VAR-model desnih strani enačb ne omejuje le na odloge odvisne spremenljivke v posamezni enačbi ter je v tem smislu fleksibilnejši od univariatnega AR-modela.
- VAR-model je mogoče oceniti z uporabo metode najmanjših kvadratov (angl. OLS) na vsaki enačbi posebej, saj so vse spremenljivke na desnih straneh enačb predeterminirane (t. j. znane v času t).
- Napovedi, generirane z VAR-modeli, so pogosto boljše od napovedi tradicionalnih strukturnih modelov.

3 Rezultati

V tem poglavju podajamo rezultate raziskave. Analiza kaže, da so po letu 2020 ameriške kabelske televizijske postaje veliko poročale o inflacijskem pritisku na cene, kar smo pričakovali glede na gibanje stopnje inflacije v ZDA. Podatki za CNN kažejo, da se je o inflaciji največ poročalo junija 2022, ko je čas, v katerem je bila na zaslonu navedena beseda *inflation*, trajal 2361,5 sekunde ali 39,4 minute (0,13 odstotka časa trajanja zaslona), kar je za 1229,7 odstotka več kot junija 2021 in za 405,5 odstotka več kot junija 2023. Podatki za FOX in MSNBC pa kažejo, da se je o inflaciji največ poročalo avgusta 2022, ko je čas, v katerem je bila na zaslonu navedena beseda *inflation*,

trajal 4739,6 sekunde ali 79 minut (0,23 odstotka časa trajanja zaslona) oz. 1966,3 sekunde ali 32,8 minute (0,10 odstotka časa trajanja zaslona). Poleti leta 2022 (junij–avgust) je o inflaciji največ poročal FOX (11.430,5 sekunde ali 190,5 minute), ki mu sledita CNN (6495,3 sekunde ali 108,3 minute) in MSNBC (4885,1 sekunde ali 81,4 minute). Zanimivo je, da je v tem času desničarska televizijska postaja (FOX) o inflaciji poročala več kot obe levičarski televizijski postaji (CNN, MSNBC) skupaj (11.430,5 sekunde ali 190,5 minute : 11.380,5 sekunde ali 189,7 minute), kar nas ne preseneča glede na ameriško politično dvopolnost.

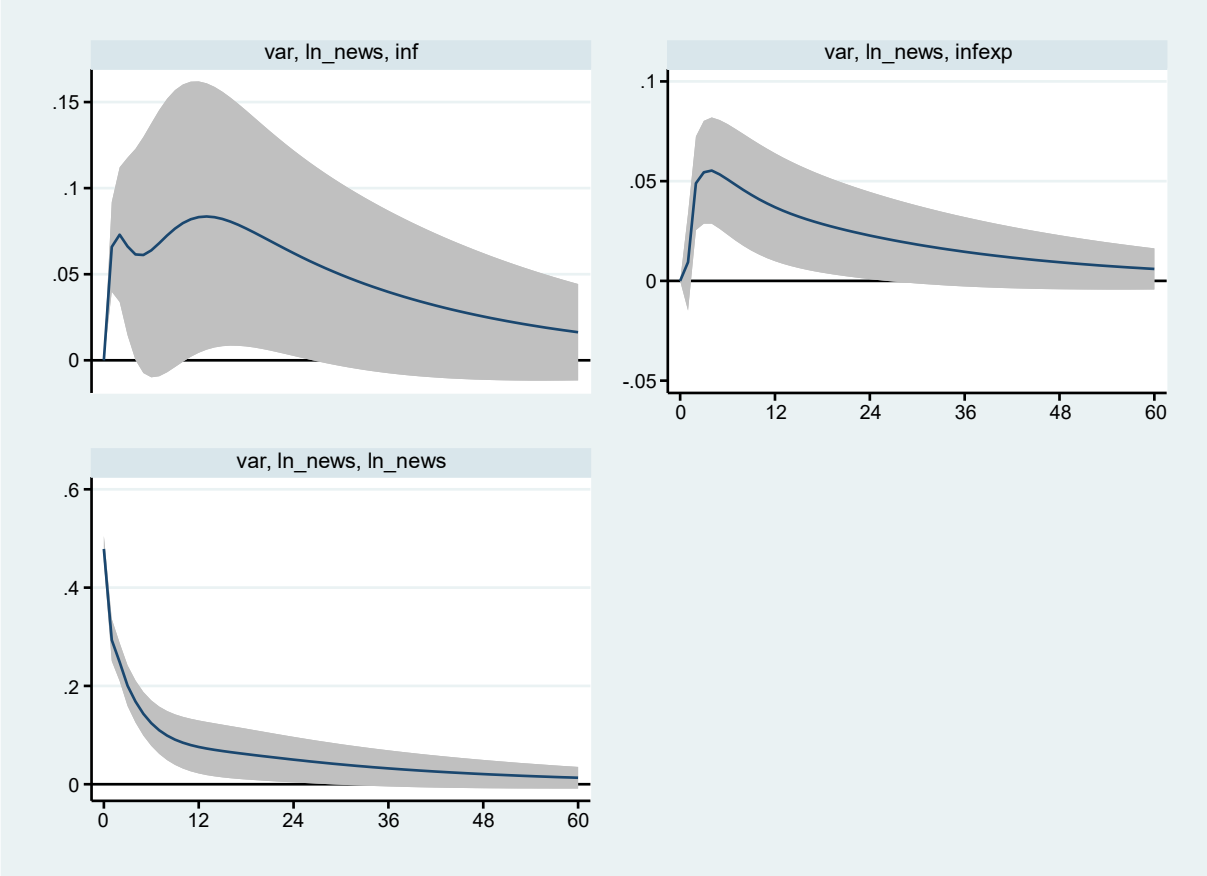
Slika 1: Trajanje časa, v katerem je bila na zaslonu CNN-a, FOX-a, MSNBC-ja navedena beseda *inflation*



Vir podatkov: https://tvnews.stanford.edu/.

V nadaljevanju nas zanima, ali poročanje o inflaciji na ameriških kabelskih televizijskih postajah vpliva na inflacijska pričakovanja ameriških potrošnikov. Da bi lahko odgovorili na to vprašanje, smo uporabili VAR-model s tremi spremenljivkami (*infexp*, *inf*, *news*) in dvema odlogoma, ki smo ju določili na osnovi štirih informacijskih kriterijev (AIC, FPE, HQIC, SBIC) – gl. sliko P.1 v prilogi. Slika 2 kaže ortogonalizirane funkcije impulznega odziva, pri čemer nas zanima zlasti grafikon zgoraj desno, ki kaže odziv *infexp* na nepričakovano povečanje *ln_news*.

Slika 2: Ortogonalizirane funkcije impulznega odziva



Opomba: Os x kaže čas od impulza, os y pa velikost odziva posamezne spremenljivke na impulz. Interval zaupanja je 68-odstoten.

Vir podatkov: Lastni izračuni.

S slike 2 je razvidno, da nepričakovano povečanje poročanja o inflaciji na kabelskih televizijskih postajah pozitivno in statistično značilno vpliva na stopnjo inflacije (gl. grafikon zgoraj levo) in inflacijska pričakovanja potrošnikov (gl. grafikon zgoraj desno), kar pomeni, da morajo oblikovalci politike to upoštevati pri svojem delu (tj. oblikovanju politike). To med njimi povzroča potrebo po opazovanju in spremljanju medijev, kar smo v uvodu že omenili.

V nadaljevanju smo opravili še Grangerjeve teste vzročnosti, katerih rezultati so prikazani na sliki P.2 v prilogi. Brooks (2019) pojasnjuje, da testi vzročnosti poskušajo odgovoriti na vprašanje, ali spremembe v neki spremenljivki (npr. *y1*) povzročajo spremembe v neki drugi spremenljivki (npr. *y2*). Če *y1* povzroča *y2*, so odlogi spremenljivke *y1* statistično značilni v enačbi za *y2*. Če to velja, v obratni smeri (tj. da so odlogi spremenljivke *y2* statistično značilni v enačbi za *y1*) pa ne, rečemo, da *y1* Grangerjevo povzroča *y2* oz. da obstaja enosmerna vzročna povezava od *y1* do *y2*. Ničelna

hipoteza, ki jo preverjamo, je, da so koeficienti specificiranih odlogov spremenljivke *y1* vsi enaki 0. Če obstajata vzročni povezavi v obeh smereh, govorimo o dvosmerni Grangerjevi vzročnosti.

S slike P.2 je razvidno, da lahko pri 5-odstotni stopnji značilnosti potrdimo dvosmerno Grangerjevo vzročnost med *inf* in *infexp* ter *inf* in *ln_news*, medtem kot za *infexp* in *ln_news* ne moremo trditi, da *infexp* Grangerjevo povzroča *ln_news* in da *ln_news* Grangerjevo povzroča *infexp*. Pomembna je tudi ugotovitev, da ne moremo zavrniti ničelne hipoteze, da spremenljivki *ln_news* in *inf* skupno Grangerjevo povzročata *infexp*.

4 Razprava

Izkazalo se je, da so v obdobju 2010–2023 ameriške kabelske televizijske postaje o inflaciji največ poročale poleti leta 2022, ko je bil inflacijski pritisk na cene velik problem za ameriško gospodarstvo. To pomeni, da nam analiza novic na ameriški kabelski televiziji omogoča analizo dobe in okolja. Podatki za ZDA kažejo tudi, da poročanje o inflaciji pozitivno vpliva na inflacijska pričakovanja potrošnikov, kar pomeni, da se ta povečajo (prim. Kmetz idr., 2022; Larsen idr., 2021; Macaulay & Song, 2023; Mazumder, 2021). To pa lahko vpliva na povečanje stopnje inflacije, kar lahko stanje še poslabša. Raziskava kaže tudi na to, da lahko ameriški mediji vplivajo na duševno stanje ameriških potrošnikov (prim. Lamla & Maag, 2012; Pfajfar & Santoro, 2013), kar potrjuje domnevo, da se ekonomija in psihologija dopolnjujeta (Earl, 1990; Rabin, 1998). Grangerjevi testi vzročnosti pa kažejo, da poročanje o inflaciji in stopnja inflacije skupaj Grangerjevo povzročata inflacijska pričakovanja, kar je na nek način razumljivo, glede na to, da sta pojava med seboj povezana.

5 Sklep

Na osnovi rezultatov analize funkcije impulznega odziva lahko sklepamo, da poročanje ameriških televizijskih hiš o inflaciji vpliva na inflacijska pričakovanja ameriških potrošnikov, pri čemer velja, da je vpliv pozitiven in statistično značilen, kar smo domnevali glede na vpliv kabelske televizije na njene gledalce. Izkušnje učijo, da je kabelska televizija pomemben vir informacij o stanju v gospodarstvu. Kljub temu so potrebne še dodatne raziskave na tem področju, med drugim tudi zato, ker v tem prispevku ne ločimo med dobrimi in slabimi novicami o inflaciji.

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Priloga

Slika P.1: Rezultati določitve števila odlogov

```
. varsoc infexp inf ln_news, maxlag(12)

Lag-order selection criteria
```

Sample: 2011m1 thru 2023m12 — Number of obs = 156

Lag	LL	LR	df	p	FPE	AIC	HQIC	SBIC
0	-583.629				.370557	7.52088	7.5447	7.57953
1	-198.697	769.86	9	0.000	.00299	2.70125	2.79654	2.93585
2	-173.621	50.153	9	0.000	.002434*	2.49514*	2.66189*	2.9057*
3	-169.648	7.9455	9	0.540	.002597	2.55959	2.79781	3.1461
4	-165.134	9.0291	9	0.435	.002752	2.6171	2.92678	3.37956
5	-159.594	11.079	9	0.270	.00288	2.66146	3.04261	3.59988
6	-150.336	18.516	9	0.030	.002875	2.65816	3.11077	3.77253
7	-146.193	8.2865	9	0.506	.003066	2.72042	3.2445	4.01075
8	-144.459	3.4681	9	0.943	.003374	2.81358	3.40911	4.27985
9	-136.133	16.651	9	0.054	.003415	2.82222	3.48922	4.46445
10	-127.612	17.041	9	0.048	.003451	2.82836	3.56683	4.64655
11	-115.471	24.282	9	0.004	.003332	2.78809	3.59803	4.78223
12	-103.689	23.565*	9	0.005	.003235	2.75242	3.63381	4.92251

```
* optimal lag
Endogenous: infexp inf ln_news
 Exogenous: _cons
```

Vir podatkov: Lastni izračuni.

Slika P.2: Rezultati Grangerjevih testov vzročnosti

Granger causality Wald tests

Equation	Excluded	F	df	df_r	Prob > F
infexp	inf	5.4009	2	159	0.0054
infexp	ln_news	1.7934	2	159	0.1697
infexp	ALL	4.0772	4	159	0.0036
inf	infexp	3.9359	2	159	0.0215
inf	ln_news	3.5679	2	159	0.0305
inf	ALL	3.9227	4	159	0.0046
ln_news	infexp	.90711	2	159	0.4058
ln_news	inf	4.5906	2	159	0.0115
ln_news	ALL	5.2588	4	159	0.0005

Vir podatkov: Lastni izračuni.

Pričakovanja v zvezi z novo direktivo EU o skrbnem pregledu v podjetjih glede trajnostnosti

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Povzetek: Evropska unija je zavezo k trajnostnemu razvoju opredelila kot temeljno načelo Pogodbe o ustanovitvi EU že leta 1992. Trajnostni razvoj je določila kot prednostni cilj svoje zunanje in notranje politike. Vidnejšo vlogo je odigrala tudi pri sprejemanju Agende OZN o ciljih trajnostnega razvoja do leta 2030. Za njihovo uresničevanje je sprejela številne strateške dokumente, ki so jim sledili zakonodajni akti. Januarja 2022 je Komisija sprejela Predlog Direktive o skrbnem pregledu podjetij glede trajnostnosti, ki kot prvi zakonodajni akt neposredno posega na področje prava družb. Gospodarskim družbam nalaga nove dolžnosti glede upravljanja z okolijskimi vplivi in človekovimi pravicami. Posega tudi v dolžnosti direktorjev, ki bodo pri izpolnjevanju svoje dolžnosti ravnanja v dobro (v najboljšem interesu) družbe morali upoštevati zadeve trajnostnosti. Pričakovanja strokovne in širše javnosti v zvezi z njeno uveljavitvijo so temu primerno velika.

Ključne besede: dolžnost direktorjev, interes družbe, pravo družb, trajnostno korporativno upravljanje, skrbni pregled

1 Uvod

Cilj predloga Direktive Evropskega parlamenta in Sveta o skrbnem pregledu v podjetjih glede trajnostnosti in spremembi Direktive (EU) 2019/1937, COM/2022/71 (angl. *corporate sustainability due diligence directive*, v nadaljevanju predlog direktive) je zagotoviti, da podjetja, ki delujejo na notranjem trgu EU, prevzemajo odgovornost za svoje vplive na človekove pravice in okolje, ki izhajajo iz njihovega poslovanja. S tem bi pripomogla k prehodu v trajnostno ekonomijo in družbo. Predlagana direktiva uveljavlja dolžnost skrbnega pregleda podjetij, ki jo morajo države članice EU implementirati v svojo nacionalno zakonodajo. Podjetja bodo morala izvajati skrbni pregled, s katerim bodo identificirala, preprečevala, omilila ali odpravljala škodljive vplive na človekove pravice in okolje, kot so le-ti opredeljeni v mednarodnih konvencijah o okolju in človekovih pravicah, navedenih v prilogah direktive. Nova dolžnost bo veljala le za »velika« podjetja, ki v povprečju zaposlujejo več kot 500 ljudi in imajo več kot 150 milijonov evrov svetovnega čistega prihodka v zadnjem poslovnem letu, ali za podjetja, ki zaposlujejo več kot 250 ljudi in imajo več kot 40 milijonov evrov svetovnega čistega prihodka v zadnjem poslovnem letu in spadajo v enega izmed sektorjev z velikim vplivom (podrobneje glej točko b prvega odstavka 2. člena predloga direktive). K spoštovanju dolžnosti skrbnega pregleda bodo zavezana tudi podjetja s sedežem v tretjih državah, če bodo izpolnjevala že zapisane kriterije, le da se bo v znesek čistega prihodka uvrščal le promet, ustvarjen v EU (Primec, 2023).

Prispevek prikazuje bistvene vsebinske poudarke predlagane direktive, pri čemer se omejuje na vprašanja dolžnosti direktorjev. Predlagane nove obveznosti analizira s pomočjo pravne teorije predvsem s področja prava družb. Opozori na vprašanje interesa družbe, ki bo imel pomembno vlogo pri implementaciji predlaganih obveznosti v nacionalno pravo držav članic. Primerja monističen in pluralističen pristop obravnave interesa družbe v slovenskem in nemškem pravu. V sklepu predstavi zaključne ugotovitve.

2 Pregled literature

Potreba po odgovornem poslovnem ravnanju in boljšem upoštevanju interesov deležnikov (zaposlenih, drugih prizadetih oseb, okolja itd.) v strategijah in odločitvah podjetij je pridobila na pomenu zaradi večje pomembnosti trajnostnih tveganj za uspešnost podjetja ter zaradi potrebe po prispevku zasebnega sektorja k reševanju današnjih trajnostnih izzivov (Komisija, 2022, str. 3). Med predlogi, kako izboljšati trajnostno korporativno upravljanje, se izpostavljajo: glavni namen podjetij naj bo »ustvarjati trajnostno vrednost znotraj planetarnih meja«; dolžnost direktorjev, da spodbujajo interese podjetja za izpolnitev njegovega glavnega namena; dolžnost direktorjev, da

uravnotežijo interese deležnikov; dolžnost opraviti skrbno oceno trajnostnosti; odgovornost podjetja in direktorja za kršitve (Knapp, 2021). Zamisel o sankcioniranju podjetij ali njihovih predstavnikov zaradi nezadostne skrbnosti pri poslovanju s pomočjo kazni in civilno odgovornostjo naj bi spodbudila proces upravljanja v smeri zmanjševanja negativnih vplivov na človekove pravice in okolje (za kar se je uveljavil izraz internalizacija negativnih vplivov, angl. *internalisation of negative externalities*) (Smit et al., 2020). Ta pristop k trajnostnemu korporativnemu upravljanju neposredno omejuje sprejemanje odločitev družb (delničarjev), saj od direktorjev zahteva, da si ne prizadevajo le za dobiček, ampak da uravnotežijo nasprotujoče si interese delničarjev in nedelničarjev, kot so dobavitelji, kupci, zaposleni in družba na splošno (Paces, 2021). Učinek dodatne obveznosti »upoštevanja vidikov trajnostnosti« bo po določbah predlagane direktive namreč odvisen od nacionalnega prava države članice, natančneje od tega, kako se v posamezni članici opredeljuje »interes« družbe (Weber & Mittwoch, 2023). V skladu s pravom družb ima upravni organ (uprava, upravni odbor ali direktor) ključno vlogo pri določanju strategije in usmeritve podjetja ter nadzoru, kako se to odvija. Pravo družb evropskih držav opredelitev interesov družbe opredeljuje različno. Obstajata dva prevladujoča pristopa, monističen in pluralističen. Razlikujeta se po številu skupin deležnikov, katerih interesi so identificirani z interesi korporacije ali so z njimi povezani (Licht, 2020, str. 4). Prvi poudarja tako imenovani ekonomski interes delničarjev (angl. *shareholder value*), medtem ko drugi izpostavlja vrednost za deležnike (angl. *stakeholder value*). Kot najboljši primer interesno pluralističnega sistema ali sistema, ki temelji na vrednotenju interesov delničarjev, se izpostavlja nemški sistem upravljanja družb (Keavy, 2013). Zakonodaja s področja prava družb praviloma ne določa, kaj je vključeno v interese družbe. Razlaga je tako prepuščena organom vodenja z uporabo pravil poslovne presoje (angl. *business judgement rule*) (Sjåfjel, 2021), pravne teorije in sodne prakse. Glede na besedilo 25. člena predlagane direktive bi lahko država članica ravnala v skladu s predlogom direktive, če bi interese družbe enačila z interesi delničarjev, ter ob tem direktorjem naložila, da upoštevajo druge interese, nasprotno pa bi lahko tudi opredelila interes družbe kot pluralen in od direktorjev zahtevala, da uravnotežijo različne interese (Agostini & Corgatelli, 2022, str. 11).

3 Metode

V prispevku smo uporabili kvalitativne metode raziskovanja. S pomočjo kritičnega pregleda literature smo raziskali stališča pravne teorije v zvezi z vsebino novega zakonodajnega predloga EU, natančneje stališča v zvezi s predlagano dolžnostjo direktorjev glede skrbnega pregleda v zadevah trajnostnosti (Snyder, 2019, str. 335). Pridobljena stališča smo sintetizirali v skupno ugotovitev, ki smo jo v nadaljevanju analizirali z eksogeno primerjavo med ureditvijo obravnavanega

pravnega instituta (interesa družbe), v dveh različnih pravnih sistemih (Strban, 2022, str. 198). S pomočjo sistematične razlage prava, ki je usmerjena v povezovanje posameznih medsebojno ločenih pravnih norm v celoto (Perenič, 1998), smo v sklepnem poglavju ovrednotili rezultate analize in izrazili svoja predvidevanja, kako bo opredelitev interesa družbe v nacionalnem pravu države članice vplivala na implementacijo dolžnosti skrbnega pregleda direktorjev v nacionalno pravo družb.

4 Razprava

S sintezo stališč kritičnega pregleda literature smo ugotovili, da je opredelitev dolžnosti direktorjev v nacionalnem pravu odvisna od tega, kako slednje pojmuje interes družbe. V nadaljevanju prispevka smo s pomočjo primerjalnopravne metode ugotavljali ureditev tega pravnega vprašanja v slovenskem pravu ter ga primerjali z nemškim pravom.

V Sloveniji so za ugotavljanje interesa gospodarske družbe odločilna določila Zakona o gospodarskih družbah (v nadaljevanju ZGD-1). ZGD-1 v uvodnih določbah gospodarsko družbo opredeljuje kot pravno osebo, ki na trgu samostojno opravlja pridobitno dejavnost (1. odstavek 3. člena ZGD-1). Pridobitna dejavnost je vsaka dejavnost, ki se opravlja na trgu zaradi pridobivanja dobička (2. odstavek 3. člena ZGD-1). Nadalje so člani organov vodenja ali nadzora pri opravljanju svojih nalog dolžni ravnati v dobro družbe .... (1. odstavek 263. člena ZGD-1). Ugotovimo lahko, da ZGD-1 članom organov vodenja že nalaga dolžnost ravnanja v dobro družbe, ki jo v izhodišču izpostavi tudi 25. člen predloga direktive. Kaj pa pomeni ravnanje v dobro družbe, ZGD-1 ne določa. Nedvomno je ravnanje v dobro družbe tisto, ki zagotavlja uresničevanje cilja družbe, ki pa je (upoštevaje zgoraj citirana določila) ustvarjanje dobička. Člani organov vodenja, ki so po stališčih teorije tisti, ki določajo interes družbe (Sjåfjel, 2021), bodo tako zasledovali zakonsko določen cilj družbe, hkrati pa s pravili podjetniške presoje, ki vključuje dobro prakso korporativnega upravljanja, ugotavljali, kaj še sodi v interes družbe. Pomembno usmeritev korporacijskega upravljanja v Sloveniji predstavljajo kodeksi upravljanja, ki za razliko od zakonskih določb niso pravno zavezujoči. Kodeks upravljanja javnih delniških družb (LB & ZNS, 2021) kot osnovni cilj delniške družbe, ki opravlja pridobitno dejavnost, določa dolgoročno in vzdržno maksimiranje vrednosti družbe. Kodeks korporativnega upravljanja družb s kapitalsko naložbo države kot temeljni cilj družbe s kapitalsko naložbo države opredeljuje maksimiziranje vrednosti družbe ter ustvarjanje tem višjega donosa za lastnike na dolgi rok (SDH, 2022). Predstavljena določila zakonodaje in kodeksov upravljanja ne vključujejo odgovornosti organov vodenja za vidike trajnostnosti, kot to predlaga 25. člen predloga direktive (da bodo poleg delovanja v dobro družbe »morali upoštevati kratko-,

srednje- in dolgoročne posledice svojih odločitev za vidike trajnostnosti, po potrebi vključno s posledicami za človekove pravice, podnebne spremembe in okolje«, 25. člen predloga direktive).

Nemška razprava o upravljanju podjetij je v preteklosti temeljila predvsem na vprašanju razmerja med državo (tj. javnimi ali splošnimi interesi) in trgom (tj. zasebnimi interesi). To razmerje je trenutno modelirano v 1. odstavku 76. člena nemškega zakona o delniških družbah (nem. Aktiengesetz, AktG), ki po razlagi sodstva in akademske sfere člane upravnega odbora zavezuje, da delujejo v skladu z interesi družbe (Weber & Mittwoch, 2023). Citirano besedilo pomeni skoraj identično določbo kot v slovenskem ZGD-1. Precej drugačno od določil slovenskih kodeksov upravljanja pa je določilo nemškega Kodeksa korporativnega upravljanja, ki kot dolžnost upravnih odborov in nadzornih svetov ravnanja v skladu z najboljšimi interesi družbe, le-te opredeljuje kot interese delničarjev, zaposlenih v podjetju in drugih skupinah, povezanih s podjetjem (deležniki) za nadaljnji obstoj podjetja in njegovo trajnostno ustvarjanje vrednosti (Regierungskommission, 2022).

5 Rezultati

S pomočjo primerjalnopravne metode smo ugotovili podobnosti in razlike v pojmovanju interesa družbe v slovenskem in nemškem pravu. Kot skupno obema zakonodajama lahko ugotovimo, da nobena interesa družbe ne določa. Primerjava ustreznih določb kodeksov korporativnega upravljanja v Sloveniji in Nemčiji pa nakazuje nasprotno. Slovenska kodeksa kot cilj družbe izpostavljata maksimiranje vrednosti družbe, pri čemer oba poudarjata dolgoročnost tega cilja, kar vključuje zasledovanje tudi drugih interesov (interesov drugih deležnikov), vendar je ustvarjanje vrednosti za delničarje v ospredju (pristop *shareholder value*). Nemški kodeks pri opredeljevanju dolžnosti direktorjev ravnanja v dobro družbe (oziroma natančneje v skladu z najboljšimi interesi družbe) poudarja ravnanje v skladu z interesi delničarjev in interesi vseh ostalih deležnikov. Delničarji so resda zapisani na prvem mestu, vendar iz besedila izhaja enakopravna obravnava interesov drugih skupin (pristop *stakeholder value*).

6 Sklep

Implementacija dolžnosti skrbnega ravnanja direktorjev glede vidikov trajnostnosti v nemškem pravu družb, upoštevaje njen pluralističen pristop k opredeljevanju interesa družbe, ne bo prinesla velike spremembe. Drugače bo v slovenskem pravu, kjer ob prevladujoči skrbi za dolgoročno maksimiranje vrednosti družbe v interesu delničarjev ostale skupine deležnikov in zadeve trajnostnosti niso v ospredju. Pričakovati je, da bo zaradi harmonizacije dolžnosti skrbnega ravnanja

direktorjev v zadevah trajnostnosti v EU interes družbe tudi v slovenskem pravu prerasel v pristop dodane vrednosti za vse deležnike.

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