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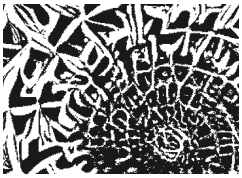

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INTERDEPENDENCE OF HOTEL COMPANIES AND SELECTED ECONOMIC POLICY MEASURES

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For hotel companies to operate successfully, it is important to react to the changes that are happening in the market. The method and form of valuation of companies in a market economy environment implies a thorough knowledge not only of the financial condition of these companies, but also of the means for their evaluation. The research was conducted on a sample of 208 hotel companies in Croatia from 2002 to 2018. The paper implements five models with different dependent variables that show the success of the company's business: profit, employment, income, assets and investments. The independent variables used in the model were corporate tax, exchange rate, contributions, tax and surtax, VAT rate on accommodation services, and average interest rate on loans, while the control variables were enterprise size and gross domestic product. For the sake of transparency in proving hypotheses, all hypotheses were tested through all five models using the econometric panel analysis method using the STATA software package. The results show that there is an interdependence between selected indicators of hotel companies and selected economic policy measures, but the hypotheses are only partially accepted.

Keywords: hotel companies, profit, exchange rate, tax, interest rate

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INTRODUCTION

The business environment represents a source of opportunities, dangers, and limitations for the company, but the company itself can rarely have some significant impact on the factors that are part of the business environment. In this environment, the state and state institutions play an important role, which affects companies in various ways.

The study of the factors that make up the economic and political-legal business environment is an integral part of the observation of the business environment whose *output* affects the result of the company's business. As a basic research *problem*, the question was raised about what the economic and political-legal business environment of hotel companies is and how they cope with the changes imposed on them through their instruments by economic policy. From this research problem, the *subject of research* is defined, which reads how selected economic policy instruments affect the business of hotel companies in the Republic of Croatia.

Based on the setting up of the scientific problem, subject, and object of research, the basic scientific hypothesis is defined:

H0: Which measures and instruments of economic policy of states affect the results of the business of hotel companies.

Government policies include measures that define the business environment of the company, which affects the performance of the company and competitiveness, but also the possibility of development, i.e., the investment potential of the sector. Government measures have multiplicative effects both on hotel companies and on all other activities related to these companies (retail, wholesale, agriculture, food production...). To prove the underlying hypothesis, auxiliary hypotheses are put forward:

P. H. 1: The increased tax burden of the company negatively affects the business of the company because it increases the price of labour, and the price of the offer of hotel accommodation and reduces the accumulated profit of the company.

Various factors, such as an increase in the VAT rate on accommodation services and an increase in taxes, surtaxes, and wage contributions, can modify the function of the offer, thereby changing the marginal costs. Variable costs of a product or service will rise if a tax is introduced. For this reason, the amount of the fee will be added to the marginal cost function of that product. If the product demand function has remained unchanged, the imposition of tax will result in an increase in price as the supply function will be reduced. The supply and demand of goods or services is affected by price changes. However, the price change does not necessarily affect supply and demand equally.

P. H. 2: The depreciation of the exchange rate has a positive impact on the sale of accommodation services, which results in a decrease in the number of employees and the possibility of investing in fixed assets.

Demand for a foreign currency declines as its price, i.e., the exchange rate, rises. Two impacts occur when the price of a foreign currency changes: the substitution effect and the income effect. The supply of foreign currency increases with the rise in the exchange rate. Exchange rate gains improve the income of each foreign currency owner in domestic currency. Given that the hotel sector is an export function, the depreciation of the HRK would increase the demand for hotel services because tourists would receive more HRK for each euro.

P. H. 3: The rise in interest rates negatively affects the business of the company because it reduces the possibility of investing in assets, reduces employment, and the possibility of better profitability of the business.

Investments are necessary for the growth of enterprises, and to finance them, enterprises most often borrow money, creating additional costs in the form of interest. Rising interest rates increase investment costs, which inevitably drives lower-income investors out of the market and reduces investment demand. On the other hand, lower interest rates result in more affordable investments, which encourages investment.

The application contribution of the paper is based on the conducted empirical research that, by modeling economic policy measures, can significantly affect the competitiveness of hotel companies on the world market.

LITERATURE REVIEW

Using data from Hawaii, Fuji et al. (1985) concluded that not all the burden of residence tax could be transferred to visitors. A study by Bonham and Gangnes (1996), also using data from Hawaii, investigated the ex-post effect of accommodation taxes in a time series study, similarly revealing that such taxes do not significantly reduce hotel revenues. By contrast, Hiemstra and Ismail (1992) concluded that much of the frequency of such taxes is absorbed by the hotel industry. Corthay and Loeprick (2010), based on surveys conducted in enterprises in several economies, show that most tourism participants consider taxes to be significant obstacles to business and investment. Do Valle et al. (2012) present evidence in their paper that tourist taxes could potentially be effective, although the way such fees are distributed can be an important factor in determining the willingness to pay such taxes. Lee (2012) found that resi-

dence taxes are essentially unfavourable for hotels in places where taxes are higher compared to other destinations. On the other hand, Hudson et al. (2021), in a survey conducted on eight destinations, found no significant evidence to suggest that increases in tax rates above those in nearby competing destinations may negatively affect business. Mills et al. (2019), using county-level data from the state of Florida, similarly claim that tourists are quite insensitive to prices in demand for hotel rooms. A study conducted by Crouch et al. (2019) suggests that as persons become more experienced in event planning, concern surges about a broader set of attributes, including cost, in the process of choosing a destination. By contrast, pass-by travellers could be expected to be less experienced in buying accommodation and therefore hotels are more likely to transfer the tax burden to them. The results of the Sharma et al. (2022) survey indicate that residence taxes hurt hotel occupancy, while the Hudson et al. survey (2021) concludes that tax increases do not show a major impact on the business of hotel companies. Similarly, Swenson (2022) states that taxes have a negligible impact on hotel sales and employment. On the other hand, hotels/motels operating in cities with higher tax rates had greater financial stress in terms of lower credit ratings. Mazzola (2021) argues that tax policies help create jobs, generate revenue and overall economic growth by providing incentives for business development. Taxation, investment decisions, business development and economic growth are intertwined. Favourable tax policies that encourage investment and business development can help boost economic growth by promoting investment, increasing productivity, creating employment opportunities and supporting innovation. Policymakers must devise tax policies that balance income generation and stimulate investment and business development, ensuring long-term economic growth and prosperity (Raihan et al., 2022). Favourable tax policies can encourage companies to invest in research and development, innovation and expansion, resulting in increased productivity and competitiveness. Furthermore, tax policies can affect consumer behaviour by affecting disposable income, purchasing power and savings rates, affecting consumption patterns and aggregate demand (Atichasari & Marfu, 2023).

The first attempt to measure the impact of exchange rate fluctuations on tourism revenues was made by Gerakis (1965). His results show that Canada experienced a relatively modest growth in tourism earnings after the depreciation of the national currency. Corgel and Gibson (2005) use a time series simulation to compare hotel and industry revenues per available room (RevPAR) to London's interbank bid rate (LIBOR)

using data from 1987 to 2004. The study found that LIBOR and RevPAR changes were strongly correlated, suggesting the interrelationship between RevPAR and variable interest rates. According to Dritsakis (2004), there is a two-way causality between revenues from international tourism and economic development. According to Khanalizadeh & Ranjandish (2019), the elasticity of income suggests that tourism is a non-luxury commodity, and prices and the real exchange rate are negatively correlated with tourist arrivals. Seetaram (2012) applied a dynamic cointegration data technique for those arriving in Australia from ten major markets and found that tourism demand is resilient in the long run to changes in revenues, real exchange rates, and prices. In his research on the demand of tourists from Switzerland for overnight stays in western Austrian ski resorts, Falk (2015) found that exchange rates between the currencies of the two countries are an important factor in tourist demand for Austria. Similarly, Karimi et al. (2015), based on research, conclude that inflation and the real exchange rate have negative relations with international tourism demand. The exchange rate affects not only hotel demand but also tourist arrivals, and thus wider tourist consumption (Aalen et al. 2019). Generalised methods of system moments evaluated by both Vítová et al. (2019) have shown that in order to attract tourists to a particular country, it is very important to maintain a relatively stable exchange rate. Doytch and Nguyen (2023) concluded that economic growth, the depreciation of the currency used in the destination country and the openness of trade are positively linked to tourism's foreign direct investment. According to Rookayyah et al. (2024), in the long term, both the exchange rate and its volatility have negative and significant impacts on tourism demand and corporate revenues.

Gu (1995) concludes that the interest rate influences decisions on tourist spending when it comes to activities that require the separation of significant financial resources and leisure time. High-interest rates discourage tourist travel, while low ones encourage them. Modern investment theory suggests that the decision to invest is, ultimately, a decision on spending costs (Levy & Sarnat, 1984). In his research, Dragičević (2013) explores the effects of interest rate change on the position of hotel companies and states that the increase in interest rates affects demand in a way that discourages consumption and stimulates savings. The decline in consumption will reduce the income of the company, worsen its economic position and indirectly jeopardise the position of consumers (employment reduction). The state can assist companies operating in the tourism sector through direct subsidies or reduced VAT

on tourism activities, which also has a positive impact on business profitability (Agiomirgianakis et al., 2013). According to Sumidartini (2017), interest rates do not significantly affect tax revenues. This happens because interest rates do not cause an increase or decrease in operating costs so they do not affect profits and tax revenues. According to Sari & Baskara (2018), interest rates can affect foreign investment because the increased interest rate occurs due to a decrease in investment and vice versa. Demertzis and Viegi (2021) believe that low interest rates were linked to a decline in productivity even in the period between the global financial crisis and the pandemic crisis, and even before the global financial crisis. However, the decline in productivity runs counter to the technological progress achieved, and the lack of real economic financing will continue to be an important factor of pressure to cut interest rates.

DATA AND METHODOLOGY

Variables were analysed by descriptive statistics over collected data on selected variables in the period from 2002 to 2018. The subjects of the research are micro, small, medium, and large hotel companies from the group "Hotels and Similar Accommodation" in the Republic of Croatia. Companies submitted annual financial statements throughout the observed period and were in the tax system. The sample size consisted of 208 enterprises.

After conducting the research part of various scientific studies, for this research work, the most suitable variables were selected to confirm the hypotheses and determine the interdependence of selected economic policy measures and their impact on the business of hotel companies in Croatia. The paper conducted five models of panel analysis with different dependent variables that show the company's performance and the same independent variables.

Dependent variables:

- Total revenue (TR)
- Employees (Emp)
- Profit (Prof)
- Assets (Ass)
- Investments (I)

Independent variables used in panel analysis:

- Corporate income tax (Ln_Inc_tax)
- Exchange rate (Exc)
- Contributions, tax, and surtax (Ln_L_tax)
- VAT rate on accommodation services (VATa)
- Average interest rate on loans (i)

Control variables selected:

- Gross domestic product (Ln_Y)
- Instead of the company size variable, additional dummy variables were introduced – formula (Mic), medium-sized enterprises (Med), and large enterprises (Lar)

Due to the large ranges in amounts in which variables were expressed and the appearance of absolute and relative values among variables, some variables had to be logarithmed. After the logarithms were carried out, the model became more transparent, and the level of statistical significance among the variables was stronger and better.

Furthermore, Table 1 shows descriptive statistics of all the aggregate variables that are covered by the model. This analysis shows the application of statistical indicators to the selected data set with the aim of determining and displaying the movement of values of the observed variables in the model. Within the descriptive statistics for each variable, the maximum, minimum, and mean values of the dataset, standard deviation, and a number of observations are most often analysed.

TABLE 1
Descriptive statistics of variables used in the model

Variable	Observations	Mean	Std. dev.	Min	Max
TR	3,536	17,300,000	50,900,000	0	1,170,000,000
Emp	3,536	44.13	110.07	0	2,017
Prof	3,536	2,006,460	10,800,000	0	308,000,000
Ass	3,536	70,700,000	190,000,000	9,212	3,020,000,000
I	3,536	1,846,706	12,600,000	0	390,000,000
Ln_Inc_tax	3,536	17.43	0.30	0	17.92
Exc	3,536	7.44	0.11	7.22	7.63
VATa	3,536	8.53	4.90	0	13.00
Ln_L_tax	3,536	10.92	4.08	0	17.98
I	3,536	6.36	1.15	3.47	7.71
Mic	3,536	0.09	0.29	0	1
Sm	3,536	0.72	0.45	0	1
Med	3,536	0.15	0.36	0	1
Lar	3,536	0.04	0.19	0	1
Ln_y	3,536	12.64	0.17	12.24	12.86

The value of total revenues in the observed period ranged from a minimum of 0 to a maximum of HRK 1,170,000,000. The number of employees tended to grow steadily and in the last year of observation amounted to a maximum of 2017 employees in hotel companies. The average profit generated from 2002 to 2018 was HRK 2,006,460. Investments averaged HRK 1,846,706, while average interest rates on loans range from 3.465% to 7.705%.

Methodology

Before conducting the panel analysis, multicollinearity among the data was checked. To detect multicollinearity, variance impact factors (VIF) were calculated for all independent variables. Based on the results shown in Table 2, it was concluded that the VIF values for all variables are less than ten and that multicollinearity is not a problem.

➲ TABLE 2
Results of multicollineation testing between selected economic policy measures used in the model

Variable	VIF	1/VIF
Y	8.41	0.118873
VATa	7.65	0.130642
I	1.89	0.529679
Mic	1.66	0.601900
L_tax	1.35	0.740246
Med	1.22	0.819987
Exc	1.12	0.889910
Lar	1.12	0.893929
Inc_tax	1.00	0.995219
Mean VIF	2.83	

The model was then tested for possible irregularities: testing the model for heteroskedasticity was carried out using a modified Wald test; cross-correlation testing of the model was carried out using the Pesaran test.

The heteroskedasticity problem was removed by using the "robust" command to obtain standard errors of robust heteroscedasticity known as Huber/White or *sandwich estimators*. The problem of autocorrelation was eliminated using robust errors.

Based on all the tests conducted, a model of panel analysis with a fixed effect was selected. One of the basic assumptions on which the model of individual fixed effects is based is that individual effects, which are included in free members, are unknown and fixed parameters, i.e., free members of the model are variable, with fixed values in different units of observation, while individual effects are fixed parameters. On the other hand, in a model with fixed individual and weather effects, the free members vary by both units of observation and by periods taking fixed values. One of the advantages of this model over the others is that differences within the observation unit are considered, that is, in this research of differences within the enterprise.

First model: Interdependence of selected economic policy measures and total revenues of hotel companies

The results of the model of interdependence of selected components of economic policy and total revenues are as follows:

• The corporate income tax variable (*Ln_Inc_tax*) has been shown to be statistically significant and has a negative impact on

the total revenue of hotel companies. The increase in Ln_Inc_tax by 1% according to the model will reduce total revenues (TR) by -40,627.82 HRK.

➲ TABLE 3
Results of panel analysis of the interdependence of selected economic policy measures and total revenues of hotel companies – fixed effect model

Dependent variable: Total revenue (TR)	Coefficient	Robust standard errors	$p > t$
Ln_Inc_tax	-4,062,782	715,522.1	0.000***
Exc	5,678,669	2,775,710	0.042***
VATa	540,424.90	188296.2	0.005***
Ln_L_tax	710,325.20	161,617	0.000***
I	-3,433,602	1,057,445	0.001***
Mic	12,300,000	3,504,023	0.001***
Med	20,100,000	3,616,696	0.000***
Lar	88,800,000	20,700,000	0.001***
Ln_Y	4,292,148	4,181,823	0.306
_cons	-4,178,716	54,400,000	0.939
Number of observations 3,536			
Number of groups 208			

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$; values in parentheses are corrected (robust) standard errors.

• The exchange rate variable *(Exc)* has a positive and statistically significant impact on the total revenue of hotel companies. According to the model, the increase in Exc by HRK 1 will increase the total revenue (TR) by HRK 5,678,669.

• The variable VAT rates on accommodation services (*VATa*) have a positive and statistically significant impact. Increase VATa will increase revenue (TR) by HRK 540,424.90 according to the model.

• The variable tax, surtax, and contributions from salary (*Ln_L_tax*) have a positive and statistically significant impact on income. The increase in the Ln_L_tax variable by 1% will, according to the model, increase revenue (TR) by HRK 7,103.25.

• The variable average interest rate on *loans* (*s*) has a negative and statistically significant impact on income. The increase by 1 percentage point will, according to the model, reduce revenue (TR) by -3,433,602 HRK.

• Dummy variables show that enterprise size has an impact on the overall revenue of hotel enterprises. The larger the enterprise, the higher the company's revenues. The total revenues of micro-enterprises (*Mic*) decreased by HRK 12,300,000 compared to small enterprises. Furthermore, the total revenues of large enterprises (*Lar*) increased by HRK 88,800,000 compared to small enterprises.

• The GDP *variable* (*Ln_y*) has no statistically significant impact.

Second model: Interdependence of selected measures of economic policy and employment in hotel enterprises

The results of the model of interdependence of selected components of economic policy and employment in hotel companies are as follows:

➲ TABLE 4
Results of panel analysis of the interdependence of selected measures of economic policy and employment in hotel companies – fixed effect model

Dependent variable: Employment (Emp)	Coefficient	Robust standard errors	$p > t$
Ln_Inc_tax	-9.96	1.61	0.000***
Exc	-7.86	5.79	0.176
VATa	1.27	0.39	0.001***
Ln_L_tax	2.51	0.44	0.000***
i	-2.40	1.43	0.095*
Mic	-6.52	4.36	0.136
Med	49.56	8.33	0.000***
Lar	212.60	43.89	0.000***
Ln_Y	-30.91	11.59	0.008***
_cons	629.26	162.32	0.000
Number of observations 3,536 Number of groups 208			

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$; values in parentheses are corrected (robust) standard errors.

• The corporate income tax *variable (Ln_Inc_tax)* has been shown to be statistically significant and has a negative impact on employment. An increase in Ln_Inc_tax by 1% under the model will reduce employment (Emp) by 0.09964 employees.

• The exchange rate *variable (Exc)* has no statistically significant impact.

• The VAT rate variable on accommodation *services (VATa)* has a positive and statistically significant impact on employment. An increase in VAT by 1 percentage point according to the model will increase employment (Emp) by 1.270739 employees.

• The variable tax, surtax, and contributions from salary (*Ln_L_tax*) have a positive and statistically significant impact on employment. An increase in the variable Ln_L_tax by 1% according to the model will increase employment (Emp) by 0.025127 employees.

• The variable average interest rate on loans (*i*) has a negative and marginally significant impact on employment. An increase of 1 percentage point according to the model will reduce employment (Emp) by 2.402942 employees.

• *Mic* enterprises have not shown statistically significant impact on employment (Emp). Furthermore, *Lar* and *Med* proved to be significant and statistically significant in the model. The

larger the enterprise, the higher the employment compared to small enterprises. Medium-sized enterprises have 49.55932 more employees compared to small businesses, while large enterprises have 212,5956 more employees compared to small businesses.

• The GDP *variable (Ln_y)* has a negative and statistically significant impact on employment. Growth y of 1% according to the model will also reduce employment (Emp) by 0.3091341 employees.

Third model: Interdependence of selected measures of economic policy and profit in hotel enterprises

The results of the model of interdependence of selected components of economic policy and profits of hotel companies are as follows:

➲ TABLE 5
The results of the panel analysis of the interdependence of selected economic policy measures and profits of hotel companies – a fixed-effect model

Dependent variable: Profit (Prof)	Coefficient	Robust standard errors	$p > t$
Ln_Inc_tax	-4,280,171	393,645.3	0.000***
Exc	2,235,079	803,332.8	0.006***
VATa	33,625.94	51,934.31	0.518
Ln_L_tax	21,616.86	26,278.27	0.412
I	-1,200,422	365,291.9	0.001***
Mic	-3,685,911	1,053,719	0.001***
Med	2,692,748	644,627.3	0.000***
Lar	4,911,459	5,781,643	0.397
Ln_Y	2,087,467	1,493,407	0.164
_cons	40,500,000	17,900,000	0.025
Number of observations 3,536			
Number of groups 208			

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$; values in parentheses are corrected (robust) standard errors.

• The variable corporate income *tax (Ln_Inc_tax)* has been shown to be statistically significant and has a negative impact on the profits of hotel companies. An increase in Ln_Inc_tax by 1% according to the model will reduce profit (Prof) by HRK 42,801.71.

• The variable exchange rate (*Exc*) has a positive and statistically significant impact on profits. Increasing Exc by 1 HRK according to the model will increase profit (Prof) by 2,235,079 HRK.

• The variable VAT rates on accommodation *services (VATa)* have no statistically significant impact.

• The variable tax, surtax, and contributions from salary (*Ln_L_tax*) have no statistically significant impact.

• The variable average interest rate on loans (*s*) has a negative and statistically significant impact on profits. An increase of 1 percentage point according to the model will reduce profit (Prof) by HRK 1,200,422.

• *Lar* enterprises have not proved to be statistically significant for profit (Prof). Furthermore, *Med* proved to be both significant and statistically significant in the model. Micro enterprises generate 3,685,911 fewer profits compared to small businesses, while medium-sized enterprises generate 2,692,748 more profits compared to small businesses.

• The GDP variable (*Ln_y*) has no statistically significant impact.

Fourth model: Interdependence of selected measures of economic policy and assets in hotel enterprises

The results of the model of interdependence of selected components of economic policy and assets are as follows:

➲ TABLE 6
Results of panel analysis of the interdependence of selected measures of economic policy and assets of hotel companies – fixed effect model

Dependent variable: Assets (Ass)	Coefficient	Robust standard errors	$p > t$
Ln_Inc_tax	-15,600,000	1,523,066	0.000***
Exc	6,293,485	10,000,000	0.531
VATa	1,727,133	577,127.7	0.003***
Ln_L_tax	2,076,109	636,779.2	0.001***
i	-7,849,083	3,536,856	0.028**
Mic	-38,200,000	10,200,000	0.000***
Med	52,300,000	13,800,000	0.000***
Lar	166,000,000	68,100,000	0.015**
Ln_Y	45,200,000	15,800,000	0.005***
_cons	-275,000,000	228,000,000	0.230
Number of observations 3,536			
Number of groups 208			

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$; values in parentheses are corrected (robust) standard errors.

• The variable corporate income *tax (Ln_Inc_tax)* has been shown to be statistically significant and has a negative impact on the assets of hotel companies. An increase in Ln_Inc_tax by 1% according to the model will reduce assets (Ass) by 156,000 HRK.

• The exchange rate variable (*Exc*) has no statistically significant impact.

• The vat rate variable on accommodation services (*VATa*) has a positive and statistically significant impact on assets. An increase in VAT by 1 percentage point according to the model will increase assets (Ass) by HRK 1,727,133.

• The variable tax, surtax, and contributions from salary (*Ln_L_tax*) have a positive statistically significant impact on assets. An increase in the variable Ln_L_tax by 1% according to the model will increase assets (Ass) by HRK 20,701.09.

• The variable average interest rate on loans (*s*) has a negative and statistically significant impact on assets. An increase of 1 percentage point according to the model will reduce assets (Ass) by -7,849,083 HRK.

• Dummy variables show that enterprise size has an impact on the assets of hotel businesses. The larger the enterprise, the larger the assets of the enterprise. The total assets of micro-enterprises (*Mic*) are reduced by HRK 38,200,000 compared to small enterprises. Furthermore, the total assets of large enterprises (*Lar*) increased by HRK 166,000,000 compared to small enterprises.

• The GDP *variable (Ln_y)* has a positive and statistically significant impact on the assets of hotel enterprises. An increase of y by 1% according to the model will increase assets (Ass) by 452,000 HRK.

Fifth model: Interdependence of selected economic policy measures and investments in hotel companies

The results of the model of interdependence of selected components of economic policy and investment are as follows:

➲ TABLE 7
The results of the panel analysis of the interdependence of selected measures of economic policy and investments of hotel companies – a model with a fixed effect

Dependent variable: Investments (I)	Coefficient	Robust standard errors	$p > t$
Ln_Inc_tax	1,482,905	165,685	0.000***
Exc	-7,115,354	2,909,577	0.015**
VATa	285,252.7	165,692.6	0.087*
Ln_L_tax	122,550.6	66,684.4	0.068*
i	-1,221,880	324,204.5	0.000***
Mic	-1,009,038	565,609	0.076*
Med	-3,160,328	1,984,918	0.113
Lar	-1,796,997	4,548,335	0.693
Ln_Y	-17,000,000	5,766,962	0.004***
_cons	248,000,000	5,766,962	0.004
Number of observations 3,536			
Number of groups 208			

Notes: *$p < 0.1$, **$p < 0.05$, ***$p < 0.01$; values in parentheses are corrected (robust) standard errors.

• The variable corporate income tax (*Ln_Inc_tax*) has been shown to be statistically significant and has a positive impact on investments. An increase in Ln_Inc_tax by 1% according to the model will increase investments (I) by HRK 14,829.05.

• The exchange rate variable (*Exc*) has a negative and statistically significant impact on investments. The increase of Exc by HRK 1 according to the model will reduce investments (I) by HRK 7,115,354.

• The vat rate variable on accommodation services (*VATa*) has a positive and on the verge of significance statistically significant impact on investments. Vat increases by 1 percentage point according to the model will increase investments (I) by HRK 285,252.7.

• The variable tax, surtax, and contributions from salary (*Ln_L_tax*) have a positive and on the verge of significance statistically significant impact on investments. The increase in the variable Ln_L_tax by 1% according to the model will increase investments (*i*) by HRK 1,225.51.

• The variable average interest rate on loans (i) has a negative and statistically significant impact on investments. An increase of 1 percentage point according to the model will reduce investments (I) by HRK 1,221,880.

• Dummy variables *Med* and *Lar* do not have a statistically significant impact, while the variable *Mic* shows a negative and on the verge of significance statistically significant impact. Micro enterprises have HRK 1,009,038 less investment compared to small enterprises.

• Variable GDP (*Ln_y*) has a negative and statistically significant impact on investments, an increase of y by 1% according to the model will reduce investments (I) by 170,000 HRK.

EMPIRICAL RESULTS

The obtained results of all five models of conducted static panel analysis accept the basic working hypothesis: *Measures and instruments of economic policy of states affect the results of business operations of hotel companies*. Based on the results obtained, it is concluded that economic policy through its measures affects the business of the enterprise.

The results of the panel analysis showed that the rise in corporate taxes will reduce the income, profit, employment, and assets of hotel companies, which is in line with the economic theories and expectations of the author, according to which demand declines when the price rises. However, the model shows that the increase in corporate tax affects the increase in investment, which is inconsistent with economic theories. According to the results obtained from the model, it is concluded that the elasticity of demand for services offered by the hotel company was less than the elasticity of supply and the consumer bears most of the tax burden. The offer of labour proved inelastic to the change of wages, i.e., to increase taxes, surtaxes, and contributions from salaries. The obtained results partially confirm the auxiliary hypothesis.

Given that the hotel industry is an export function, then the depreciation of the HRK would have a positive impact on the demand for hotel services because a tourist gets more HRK for 1 EUR. The results obtained indicate that depreciation will have a positive effect on the income and profit of the company, while it will be in reverse relationship with investments. The exchange rate change is statistically insignificant when it comes to the dependent variable employment. The obtained results partially confirm the auxiliary hypothesis.

Rising interest rates increase investment costs, inevitably bringing lower-income investors to leave the market, thereby reducing investment demand. However, lower interest rates mean lower investment costs, which encourages investment. The results obtained show that the increase in interest rates on loans will negatively affect all selected indicators of the business of hotel companies. The results are consistent with economic theories and expectations. The auxiliary hypothesis is accepted.

The results obtained using panel analysis show that dependent variables react similarly to changes in independent variables. Corporate income tax has a statistically significant and negative impact on income, employment, profit, and investments, while investments have shown a positive result on the increase in corporate income tax. Furthermore, the VAT rate on accommodation services shows a positive statistical impact on all dependent variables except the profit of hotel companies, on which it has no statistically significant impact. Income tax, surtax, and contributions from wages have a positive impact on most variables, while profits have not shown statistical significance. Selected economic policy measures have the opposite effect on dependent variables. The variable exchange rate has been statistically significant and has a positive impact on the income and profit of hotel companies, while average interest rates have a negative impact. The exchange rate does not have a statistically significant impact on employment and assets. Investments react negatively to an increase in the exchange rate and the average interest rate. The state through taxes and tax policy produces numerous microeconomic effects. The effects of taxation are so intertwined with each other, even though certain tax forms can more effectively affect certain categories such as labour offers, investments, etc. A change in the price of a product or service affects its supply and demand. However, the same price change does not have to affect both supply and demand equally. The coefficient of elasticity shows how much of a relative change in supply or demand will be caused by a one percent change in price. The results of the panel analysis showed that the rise in corporate taxes will reduce the revenues, profits, employment and as-

sets of hotel businesses, which is consistent with economic theories that say demand declines when the price rises. The supply function of a product is an ascending function of price, and the function of demand for the same product or service is a declining price function. So, with the price rising, one rises and the other falls. However, the model shows that the increase in corporate tax affects the increase in investment, which is inconsistent with economic theories. The corporate tax rate in the period under review (2002–2018) decreased from 20% to 12% or 18%, depending on the size of the revenue generated by the hotel company. Given that Croatia ranks among the countries with the lowest corporate tax rate, the goal of such a policy is to attract as much direct investment as possible. Namely, this variable alone is not enough to make an adequate locational decision but is more important for the macroeconomic and social environment. How much corporate taxation affects investments also depends on the very nature of the investment function. The investment function depends on several factors such as the profitability of the project (net rate of return), changes in sales (realisation) changes in existing capacity about sales, and the availability of internal financing funds (including profit after tax and depreciation). A change in the function of the offer can occur for various reasons that lead to changes in marginal costs, such as an increase in the VAT rate on accommodation services and an increase in taxes, surtaxes and contributions from salary. The introduction of a tax on a product or service will affect the increase in its variable costs. That is why the marginal cost function of this product will also be moved up by the amount of this levy. The introduction of a tax per unit of product affects the reduction of production. If the function of demand for a product has remained the same, it means that the introduction of taxes through a reduction in the supply function will affect the price increase. The introduction of sales tax (VAT rate on accommodation services) affects the increase in the price paid by the consumer. However, the entire additional tax burden does not have to be borne entirely by the consumer, but also by the seller of the service (manufacturer). On the elasticity of demand and supply depends the distribution of the tax burden between consumers and producers (tax override). According to the results obtained from the model, it is concluded that the elasticity of demand for services offered by the hotel company was less than the elasticity of the supply and the consumer bears most of the tax burden. The VAT rate on accommodation services is a type of indirect tax, i.e., that form of tax where companies transcend the amount of consumer tax through the price of services, i.e., the tourist pays this tax indirectly. As the VAT rate on accommodation services rises, hotel compa-

nies increase the price of their services. In the total cost of the enterprise, gross wages make a large item, so the management of human resources in order to achieve maximum productivity is very important. The size of the labour supply depends on the size of the real net salary, while on the other hand, the size of labour demand depends on the size of the real gross labour cost for the enterprise. In the analysis of the impact of taxes on employment and growth, it is crucial to analyse the override of taxes, i.e., how much of the tax burden will be borne by the employer and how much will be borne by the worker. Tax override depends primarily on the elasticity of supply and demand in the labour market. In markets where labour supply is inelastic to wage change, the tax wedge will roll over to the workers and reduce their net wage, while the gross cost of wages for the employer will remain the same. The same applies the other way around. Workers will change their behaviour due to a decrease in net wage, and how they react specifically depends on whether the income effect or the substitution effect will prevail. Lowering the tax burden on labour and lowering rigidity in the labour market would lead to higher supply and demand for labour, resulting in an increase in employment and in the second phase an increase in production. On the other hand, in practice, it is difficult to find room to reduce the tax burden, especially in the segment of contributions, whose systems suffer from a lack of financial resources anyway. Depreciation of the domestic currency can increase the competitiveness of the net exporting enterprise. Therefore, increased sales can dominate the additional costs of their external debt. However, if the depreciation of the currency is accompanied by a contraction of the economy, an enterprise with revenues and expenses in domestic currency may cause problems with servicing debt denominated in foreign currency. The export of goods and services is a function of price relations at home and abroad. The demand for foreign exchange is a declining function of their price, the exchange rate. When the price of foreign currency changes, two effects occur: the substitution effect and the income effect. The supply of foreign exchange is a growing function of the exchange rate. Namely, the increase in the exchange rate increases the income in the domestic currency of every holder of foreign exchange. Given that the hotel industry is an export function, then the depreciation of the kuna would have a positive impact on the demand for hotel services because a tourist gets more HRK for 1 EUR. In accordance with this economic theory, the results of the translated panel analysis were obtained. If the exchange rate of the euro in Croatia depreciates, then according to the results of the panel analysis, the income and profit of the company will in-

crease, while investments will decrease, which is in line with the economic theories and expectations of the author.

The growth of the enterprise requires investments. Loans from banks (or other financial institutions) are the most common form of financing enterprise investments. Rising interest rates increase investment costs, inevitably bringing lower-income investors to leave the market, thereby reducing investment demand. However, lower interest rates mean lower investment costs, which encourages investment. The interest rate as a connecting force of diverse interests gives price signals to borrowers, savers and investors. So, for example, a high interest rate generally generates a greater volume of savings and stimulates borrowing funds. Low interest rates, on the other hand, weaken savings flows and reduce borrowing activities. At the same time, high interest rates reduce the volume of borrowing and capital investment, and low interest rates stimulate lending and investment spending. The results obtained show that the increase in interest rates on loans will negatively affect all selected indicators of the business of hotel companies.

CONCLUDING REMARKS

Analysing the business environment in which hotel companies operate, the importance of the economic business environment is multifaceted both in theory and in practice. Large investments and intense competition require an understanding of the business environment. Because an enterprise must communicate with society and policymakers on a daily basis, it must have a thorough understanding of all policies and practices that affect business. Only then can businesses make better decisions in time and space for sustainable business. The overall business environment consists of many different forces that interact with each other but can affect every functional area of the enterprise. The factors that a company can manage and influence are considered endogenous. They do what is theoretically called the internal or internal environment of the enterprise. The behaviour of the company implies adaptation to changes in the environment, while changes in the environment are conditioned by the constant change of the needs of action and organisation of the companies themselves. In this sense, companies undertake several business activities daily that ensure that they behave in an extremely rational way, i.e., use their material, human, and financial resources rationally to meet the needs of consumers while operating efficiently and effectively.

The achievement of certain objectives is attained by applying the appropriate policy. Conscious changes in certain

economic variables carried out by economic policy makers to achieve some final goal are called economic policy. The process of achieving the final goal needs to be managed, i.e., it is necessary to select adequate and purposeful economic policies and the instruments available for their achievement. Modern management of the state and economy imposes the need to harmonise measures of certain types of economic policy. The harmonisation of measures requires coordination between economic policy holders (entities). Achievement of short-term (stabilisation) and long-term (structural) goals is not possible without the cooperation and joint action of the holders of certain types of economic policy. In the context of the present, cooperation and coordination of the activities of the government and the central bank are essential to achieve strategic objectives. Fiscal and monetary policy combinations have an extremely high significance for the effects of overall economic policy, bearing in mind that all the measures taken lead the economy to a balanced state, i.e., to full employment and the utilisation of the factor of production without inflation. Monetary and fiscal policy as a type of economic policy have their areas of activity. But the effects of their measures complement each other.

This paper initiates further research into the interdependence of economic policy measures in other sectors, analysis of the difference in sensitivity of different sectors to economic policy measures, and comparisons with other countries and their fiscal and monetary policy measures that burden the operations of hotel companies.

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Međuovisnost hotelskih poduzeća i odabranih mjera ekonomske politike

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Da bi hotelska poduzeća uspješno poslovala, važno je reagirati na promjene koje se događaju na tržištu. Način i oblik vrednovanja poduzeća u okruženju tržišnoga gospodarstva podrazumijevaju temeljito poznavanje ne samo financijskoga stanja tih poduzeća nego i sredstava za njihovu evaluaciju. Istraživanje je provedeno na uzorku od 208 hotelskih poduzeća u Hrvatskoj od 2002. do 2018. godine. U radu je implementirano pet modela s različitim zavisnim varijablama koje pokazuju uspjeh poslovanja poduzeća: dobit, zaposlenost, prihod, imovina i investicije. Nezavisne varijable koje su se rabile u modelu jesu porez na dobit, tečaj, doprinosi, porez i prirez, stopa PDV-a na usluge smještaja i prosječna kamatna stopa na kredite, dok su kontrolne varijable bile veličina poduzeća i bruto domaći proizvod. Zbog transparentnosti u dokazivanju hipoteza, sve hipoteze testirane su kroz svih pet modela ekonometrijskom metodom panelanalize pomoću STATA programskoga paketa. Rezultati pokazuju da postoji međuovisnost između odabranih pokazatelja poslovanja hotelskih poduzeća i odabranih mjera ekonomske politike, međutim hipoteze su samo djelomično prihvaćene.

Ključne riječi: hotelska poduzeća, dobit, tečaj, porez, kamatna stopa

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