The Impact of Inflation on the Profitability of Businesses: Evidence from Kosovo

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Abstract

The aim of this paper is to assess how inflation affects the financial performance of businesses operating in Kosovo. More precisely, the impact of inflation and profit tax on the profitability of businesses is analysed, as well as the relationship between the profitability of businesses with the inflation level, the profit tax, the net wages level and the GDP level of Kosovo for the period 2018 - 2021. In this study, the quantitative approach was applied and the descriptive and verification method was used as the research method. Analyses performed include linear regression analysis and linear trend analysis. The data used in the research are secondary data provided by the financial statements of businesses operating in Kosovo published by the Ministry of Finance, Labour and Transfers. The research sample included 120 businesses. The results of this study show that, for the analysed period 2018 - 2021, inflation and profit tax have a positive impact on the profitability of businesses in Kosovo, as well as there is a positive relationship between the profitability of businesses with the inflation level, the tax on profit, the net wages level and the GDP level in Kosovo. This study contributes to the literature as evidence that makes clear the impact of inflation on the profitability of businesses in Kosovo and can serve as a good basis for other researchers who analyse similar aspects in the future.

Keywords: inflation, profitability, management, businesses
1. Introduction

Businesses face a significant challenge amidst the prevailing economic conditions, mounting debt, a global downturn in economic performance and the looming risk of a prolonged crisis. In such circumstances the prioritization of maximizing business profits has become increasingly crucial (Lyonov & Michalkova, 2021). Numerous scholars have conducted research on the distinctive factors influencing businesses, both at micro and macro levels, in various contexts (Bhutta & Hasan, 2013). Consequently, the financial viability of enterprises assumes paramount importance encompassing their capacity to withstand adverse disruptions and foster system stability (Bhutta & Hasan, 2013).

Maintaining economic stability poses a significant challenge for governments worldwide. Factors, such as government policies, domestic consumption rates, deflation and inflation exert substantial influence on a country’s economy (Olusola et al., 2022). Among the macroeconomic issues that garner substantial attention from financial analysts, policymakers and monetary authorities, in both developed and developing nations, is the relation between inflation and economic growth (Ndoricimpa, 2017; Seleteng et al., 2013; Adaramola & Dada, 2020). The management of inflation is a global issue of utmost concern (World Economic Forum, 2023). Effectively curbing inflation necessitates collaboration and coordination among multiple institutions (Sembiring et al., 2022). Inflation is an inevitable phenomenon in any developing nation, but exerting control over it is crucial for upholding economic stability, as it facilitates favourable conditions for economic growth. Given the multitude of factors influencing inflation, it emerges as one of the most significant economic challenges (Ridwan, 2022). The stability of an economy can be gauged by inflation indicators that can be maintained at a moderate level (Permana et al., 2022). The effects of inflation can be significant and undermine the stability of the financial system (Staikouras & Wood, 2004).

According to Boyd et al. (2001) and Hooshyari and Moghanloo (2015), there is a substantial body of evidence showing that sustained elevated inflation rates can lead to detrimental outcomes, impacting either the long-term real growth rate or the overall level of real economic activity in an economy. According to the literature, there are mechanisms through which even anticipated rises in the inflation rate can disrupt the financial sector’s ability to efficiently allocate resources (Boyd et al., 2001; Hooshyari & Moghanloo, 2015).

This paper aims to examine the influence of inflation on the profitability of businesses, with the specific case of businesses operating in Kosovo. Likewise, the impact of the profit tax on the profitability of businesses is analysed, as well as the relationship between profitability and the inflation level, the profit tax, the net wages level and the GDP level of Kosovo. Business managers undertake various measures to maximize their profits, including optimizing the capital structure, reducing expenses and optimizing tax obligations. Their objective is to achieve the highest possible level of profitability. (Lyonov & Michalkova, 2021).

2. Literature Review

2.1 Inflation

Inflation can arise unexpectedly and from diverse sources, making it difficult to exercise control over its occurrence (Ridwan, 2022). Various researchers, such as: Kessel & Alchian (1962); McConnell et al. (2014), Oner (2017), Yanti (2018), Olusola et al. (2022), Sembiring et al. (2022), Trihardianto & Hartanti (2022), etc., have analysed the phenomenon of inflation and given their definitions for this phenomenon, which are basically the same.

Any type of inflation, regardless of the cause, is defined as an increase in the general level of prices (Kessel & Alchian, 1962). Inflation denotes a rise in the overall price level of goods and services (McConnell et al., 2014). It signifies the rate at which prices escalate over a specific timeframe, reflecting the increased cost of a specific set of goods and/or services, typically observed within a year (Oner, 2017). Yanti (2018) characterizes inflation as a persistent phenomenon, involving a general...
increase in prices that occurs consistently over a defined duration. Inflation pertains to the 
continuous upward movement in the general price level of goods and services (Olusola et al., 2022). 
Inflation is defined as a persistent increase in the overall price level of an economy and cannot be 
attributed solely to the price escalation of one or two goods, unless such increases extend to and 
impact the prices of other goods (Sembiring et al., 2022). Likewise, Trihardianto and Hartanti (2022) 
say that inflation is the process of continuous increase in the general prices of goods. Sembiring et al. 
(2022) continues the explanation by saying that economic analysis indicates the disparity between 
supply and demand, influences the upward movement of commodity prices. A low and stable 
inflation rate is essential for fostering sustainable economic growth, leading to favourable outcomes 
in terms of enhancing people’s well-being. Recognizing the significance of inflation control stems 
from the understanding that high and volatile inflation adversely affects the socio-economic 
circumstances of a society. A high inflation rate diminishes the real income of the community and 
consequently diminishes people’s well-being (Sembiring et al., 2022).

2.2 Profitability of businesses

Profitability is considered the most complicated feature to understand and evaluate a business (Beigi 
et al., 2013). Profitability refers to a ratio that assesses the efficiency of management in achieving 
profits relative to sales and investments (Fahmi, 2012). The profitability ratio serves as an indicator of 
a business’s ability to generate income from its various capacities and existing resources, including 
sales activities, cash flow, capital, employee count, number of branches, and more (Susyana & 
Nugraha, 2021; Ramadhanti et al., 2021). When businesses generate profits, or in other words when 
they are profitable, it means that they have positive financial performance. The financial performance 
of a business is an outcome derived from numerous ongoing decisions made by its management, 
embracing achievements realized through maximum effort. This includes the utilization of 
income statements, balance sheets, and reports on capital changes, which serve as measuring tools to 
evaluate business performance and assess the managerial performance within a specific period 
(Handini, 2020; Salim et al., 2022). These ratios involved in profitability are applied to evaluate 
business capabilities and make wages compared to all costs over a given period of time. In a more 
precise way, the reports show the profitability of a business calculating total costs and profit tax, 
operational efficiency, business pricing policies, asset profitability and business shareholders (Beigi et 
al., 2013).

2.3 The impact of inflation on the profitability of businesses

The literature review supports that many different determinants can have an impact on profitability 
(Staikouras & Wood, 2004). The focus in this study is to examine and analyse the influence that 
inflation has on the businesses profitability. Likewise, the impact of profit tax on the profitability of 
businesses is analysed, as well as the relationship between the profitability of businesses and the 
inflation level, tax on profit, the net wages level and the GDP level in Kosovo.

The significance of profitability lies on its role in shaping and advancing businesses as it serves 
as a metric for assessing performance and determining success, as well as enhances their reputation. 
Maximizing business profits is one of the main objectives of managers because it maximizes 
stakeholder value and investor value (Bhatta & Hasan, 2013). Inflation has different effects on 
economic indices and business activity. One of the most important problems, which is barely 
examined in the literature, is its effects on the value of fixed assets and on the value of profitability of 
businesses (Illés, 2010). High inflation conditions affect the increase in the price of some goods or raw 
materials, which increases production costs and reduces the number of requests, resulting in 
shrinking sales, which leads to a reduction in business income and negatively affects the expected 
rate of return. Based on this description, it can be said that inflation does not only affect stock returns 
but also affects the profitability of businesses (Sanusi & Wiayanti, 2022).
The relationship between inflation and profitability has been analysed by various authors and researchers, such as Revell (1979), Molyneux and Thornton (1992), Athanasoglou et al. (2005), Tan and Floros (2012), Bhutta and Hasan (2013), Mufidhoh et al. (2017), Ramadhanti et al. (2021), Sanusi and Wiayanti (2022), Sembiring et al. (2022) etc.

Thus, Revell (1979) states that there is a relationship between profitability and inflation and the impact of inflation on the profitability of businesses is contingent upon whether the businesses operating expenses and wages experience a more rapid increase compared to inflation. According to Molyneux and Thornton (1992), inflation is positively related to profitability. Athanasoglou et al. (2005) says that inflation positively affects profitability. Inflation turns out to be significantly and positively related to profitability (Tan & Floros, 2012). The results of Bhutta and Hasan (2013) show that there is a positive relationship between inflation and profitability, but this relationship is insignificant. Inflation can affect the financial performance of businesses, especially in relation to the financing distribution. Producers’ perspective highlights that a heightened level of inflation leads to increased production costs in the market. This circumstance can impact business performance causing profitability to decline as the inflation rate rises (Mufidhoh et al., 2017; Ramadhanti et al., 2021). According to Sanusi and Wiayanti (2022), an increase in inflation can reduce the level of profitability and stock returns expected by investors.

Therefore, it is necessary to implement management in the inflation control process in order to realize low and stable inflation, as well as to achieve organizational objectives in an effective and efficient manner. To attain organizational goals in an effective and efficient manner, management can steer and guide the organization through the utilization of managerial functions (Sembiring et al., 2022).

The economic literature has long acknowledged that inflation can exert an influence on economic behaviour, and individuals tend to exhibit distinct behaviours in high and low inflation environments (Basu et al., 2010). Some research shows that rising inflation and rising inflationary expectations lead to increased consumer spending, while others imply that these have little or no impact on consumer spending (Olusola et al., 2022). Consumers increase current spending as a result of a wealth redistribution channel if they anticipate that inflation rates will be higher (Doepke & Schneider, 2006; Mian et al., 2013; Olusola et al., 2022).

3. Research Methodology

This research falls under the category of applied research, employing a quantitative approach (Susanti et al., 2021; Ramadhanti et al., 2021). The research methodology employed in this study involves descriptive and verification methods (Amalia, 2020; Nuryaman & Veronica, 2015; Nariswari, 2020). Additionally, the study utilizes the method of linear regression analysis and linear trend analysis to prove the relationship between the variables included in the study.

The population in this study consists of the manufacturing, service and commercial businesses of Kosovo which publish their financial statements on the official website of the Ministry of Finance, Labour and Transfers. The research sample included 120 businesses operating in Kosovo. This sample was intentional and the reason why these 120 businesses were selected was because they had published their financial reports for the researched period, namely 2018 - 2021.

The data collection technique employed in this study encompasses library research and internet research (Susanti, 2020; Widajatun, 2020). The study utilizes secondary data in the form of financial statements for analysis and examination (Ramadhanti et al., 2021) of businesses listed in the Ministry of Finance, Labour and Transfers for the period 2018-2021.

In order to analyse the impact of inflation on the profitability of businesses in Kosovo, a research model was built which has the following form:

\[ Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \varepsilon \]

Description:
- \( Y = \) Profitability
• $\beta_0 =$ Constant coefficient
• $\beta_1$ and $\beta_2 =$ Regression coefficients of independent variables
• $X_1 =$ Inflation
• $X_2 =$ Profit tax
• $\varepsilon =$ Error term

To prove the accuracy of the research model, two hypotheses were raised:

$H_1$: Inflation has a positive impact on the profitability of businesses in Kosovo.

$H_2$: Profit tax has a positive impact on the profitability of businesses in Kosovo.

![Research model](image)

**Figure 1. Research model**

### 4. Results, Findings and Discussion

In this part, the results and findings from the linear regression analysis and from the linear trends analysis are summarized. Also, the results and findings of this research are discussed and compared here with those of similar research.

**Table 1. Descriptive statistics**

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROF</td>
<td>463</td>
<td>-31134000</td>
<td>21220925</td>
<td>796463.07</td>
<td>2797806.185</td>
</tr>
<tr>
<td>INF</td>
<td>480</td>
<td>.2</td>
<td>3.4</td>
<td>1.850</td>
<td>1.2672</td>
</tr>
<tr>
<td>TAX</td>
<td>463</td>
<td>0</td>
<td>3336000</td>
<td>127839.20</td>
<td>241678.236</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>463</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1 presents the results of descriptive statistics for the variables included in the research model. It can be seen that the number of observations for the variable “Profitability” is 463, the minimum value of the profitability of the businesses included in the analysis is €-31,134,000, the highest value is €21,220,925, with an average of €796,463 and a standard deviation of €2,797,806. Regarding the “Inflation” variable, there are 480 observations with a minimum value of 0.2% and a maximum value of 3.4%. The average inflation rate is 1.9%, and the standard deviation is 1.3%. As for the “Profit tax” variable, there are 463 observations, with a minimum value of €0 and a maximum value of €3,336,000. The mean profit tax amount is €127,839, with a standard deviation of €241,678.

**Table 2. Correlation analysis**

<table>
<thead>
<tr>
<th>Correlations</th>
<th>PROF</th>
<th>INF</th>
<th>TAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROF</td>
<td>1.000</td>
<td>.090</td>
<td>-.064</td>
</tr>
<tr>
<td>INF</td>
<td>.090</td>
<td>1.000</td>
<td>.076</td>
</tr>
<tr>
<td>TAX</td>
<td>-.064</td>
<td>.076</td>
<td>1.000</td>
</tr>
</tbody>
</table>
Correlations

<table>
<thead>
<tr>
<th></th>
<th>PROF</th>
<th>INF</th>
<th>TAX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROF</td>
<td>.</td>
<td>.026</td>
<td>.086</td>
</tr>
<tr>
<td>INF</td>
<td>.026</td>
<td>.</td>
<td>.051</td>
</tr>
<tr>
<td>TAX</td>
<td>.086</td>
<td>.051</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>463</td>
<td>463</td>
<td>463</td>
</tr>
</tbody>
</table>

Table 2 shows the result of the correlation analysis. Through this analysis, the strength of the relationships or interconnections between the variables that are included in the research model is tested. Thus, it can be seen that:

- There is a very weak positive correlation between PROF and INF, at a value of 0.090, and this statement is correct because the significance value turned out to be 0.026 (p value = 0.026 < 0.05).
- There is a very weak negative correlation of 0.064 between PROF and TAX. This statement is not correct because the significance value is 0.086 (p value = 0.086 > 0.05).
- Also, there is a very weak and positive correlation at the value of 0.076 between the two independent variables, INF and TAX, and this statement is also correct because the significance value is 0.051 (p value = 0.051 = 0.05).

Table 3. ANOVA table

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>47482593060343.000</td>
<td>2</td>
<td>23741296530171.500</td>
<td>3.060</td>
<td>.048b</td>
</tr>
<tr>
<td>Residual</td>
<td>3568923792397830.000</td>
<td>460</td>
<td>7758529983473.544</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3616406385458173.000</td>
<td>462</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: PROF
b. Predictors: (Constant), TAX, INF

The statistical analysis of the ANOVA table indicates that the research model is statistically valid and satisfactory. This is confirmed by the actual value of F = 3.060 and by the value of Sig. = 0.048 < 0.05.

Table 4. Linear regression coefficients

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Tolerance</td>
</tr>
<tr>
<td>(Constant)</td>
<td>518170.419</td>
<td>232967.379</td>
<td>2.224</td>
<td>.027</td>
<td></td>
</tr>
<tr>
<td>INF</td>
<td>208952.459</td>
<td>101605.414</td>
<td>.096</td>
<td>2.057</td>
<td>.040</td>
</tr>
<tr>
<td>TAX</td>
<td>-.822</td>
<td>.538</td>
<td>-.071</td>
<td>1.528</td>
<td>.127</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PROF

From table 4, it can be seen that with the increase in inflation the profitability of businesses increases because the significance of the coefficient $\beta_1$ is 0.040 < $\alpha$ (0.05). In other words, the result of this coefficient means that if inflation increases by 1%, the profitability of businesses increases by €0.895. Based on this result, $H_1$ is confirmed as correct: "Inflation has a positive impact on the profitability of businesses in Kosovo". These findings are in agreement with the findings of Molyneux and Thornton (1992), Athanasoglou et al. (2005), Tan and Floros (2012), while they are contrary to the findings of Bhutta and Hasan (2013), Mufidhoh et al. (2017), Ramadhanti et al. (2021), Sanusi and Wiayanti (2022).
Also, according to the result of the coefficient $\beta_2$, with the increase in the income tax, the profitability of businesses also increases. The result of this coefficient shows that if the profit tax increases by €1, profitability decreases by €0.822, but this statement is not correct because the significance of the coefficient $\beta_2$ is 0.127 > $\alpha$ (0.05), which proves the opposite. Based on this result, $H_2$ is accepted: “Profit tax has a positive impact on the profitability of businesses in Kosovo”.

The values of the Tolerance and VIF (Variance Inflation Factor) coefficients show that there is no multicollinearity in the research model since the Tolerance coefficient values are higher than 0.2, respectively 0.994, and the VIF coefficient values are lower than 5, respectively 1.006. This implies that there is no interdependence between the independent variables and the results from the research model are valid and meaningful.

After discussing the results and findings, the research model takes the form:

$$ PROF = 518,170 + 208,952 \times INF - 0.822 \times TAX + \epsilon $$

4.1 Linear trend analysis

There are various statistical approaches for detecting and evaluating trends that may be present in the variables of interest (Hess et al., 2001). In order to achieve the research goal, the analysis of linear trends was performed in this paper, through which it was possible to analyse the relationship between the profitability of businesses and the inflation level, profit tax, net wages level and the GDP level in Kosovo for the period 2018 - 2021.

The following figure shows the linear trend between the profitability of businesses and the inflation level of Kosovo, through which the relationship between these two variables is analysed. The findings presented in Figure 2 demonstrate a positive nexus between the profitability of businesses and the inflation level in Kosovo. So, with the increase in inflation, the profitability of businesses increases.

![Figure 2. Linear trend between the profitability and the inflation level (2018 - 2021)](source:Author’s own calculations (2023))

Basically, the difference between the purchase price and the return price of the resources used appears as the profitability of businesses. Apparent profit arising from inflation, which is usually called inflation profit, is shown together with real profit. In inflationary circumstances, only the price containing a measure of inflationary profit can be considered as a stable price of the cost level.
However, this price usually only provides the income necessary for the business operation and does not make expansion possible (Illés, 2010).

From Figure 3, it is understood that the nexus between the businesses' profitability and the profit tax is positive, since with the increase of one variable, the other also increases. This result follows the logic that the more profit the business generates, the more profit tax it has to pay. Also, it can be seen that the profit has a faster achievement than the profit tax. As mentioned in the introduction, in order to achieve the highest profitability, business managers undertake various tasks, including optimizing the capital structure, minimizing expenses, and optimizing tax obligations (Lyonov & Michalkova, 2021).

Tax optimization and tax planning encompass an intricate system of decisions made by financial managers to tailor (minimize) tax obligations. This optimization can be accomplished through legal or illegal means, including tax avoidance or fiscal evasion (Lyonov & Michalkova, 2021). Within the realm of tax planning, the principal focus lies in reducing tax liability by effectively managing business operations to maximize tax deductions (Raisová et al., 2020; Lyonov & Michalkova, 2021).

Figure 3. Linear trend between the profitability and the profit tax (2018 - 2021)
Source: Author's own calculations (2023)

Figure 4 shows the relationship between the profitability of businesses and the net wages level in Kosovo in the period 2018 - 2021. It can be seen that the relationship between these two variables is positive and both have almost similar growth. According to Blanchard (2017), an upward shift in the anticipated price level results in an increase in nominal wages, prompting businesses to raise their prices. Consequently, this price hike contributes to a further increase in the overall price level. The effect of inflation on the profitability of businesses depends on the fact that the operating expenses of the business and its wages increase faster than inflation (Revell, 1979).
Gross Domestic Product (GDP) serves as a significant indicator for assessing the economic state of a country within a specific timeframe, reflecting the collective contribution of various business sectors operating within that country (Salim et al., 2022). Figure 5 shows the result of the relationship between the profitability of businesses and the GDP level of Kosovo.

In this case, we notice that there is a direct relationship between these two variables, which means that the increase in the profitability of businesses affects the increase in the GDP level. We note that the trend of GDP growth is lower than that of the profitability of business. This means that for the analysed period (2018 - 2021), other factors such as: export, import, remittances, etc. have exerted a
greater influence on the GDP level growth of Kosovo.

5. Conclusions

The aim of this study was to determine the impact of inflation and profit tax on the profitability of businesses in Kosovo through linear regression analysis, as well as through the analysis of linear trends to analyse the relationship between the profitability of businesses and other variables, namely, the inflation level, the profit tax, the net wages level and the GDP level of Kosovo for the period 2018-2021. Based on the results of the data analysis and the discussion, the following conclusions are drawn:

- Inflation has a positive impact on the profitability of businesses in Kosovo for the period 2018-2021.
- Profit tax has a positive impact on the profitability of businesses in Kosovo for the period 2018-2021.
- Also, there is a positive relationship between the profitability of businesses with the inflation level, the profit tax, the net wages level and the GDP level in Kosovo for the period 2018-2021.

References


