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Analyzing factors influencing food price dynamics in Turkey: a Bayesian perspective

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Abstract

This study investigates the factors influencing food inflation in Turkey, employing both endogenous and exogenous models and integrating major literature findings. Utilizing monthly data from February 2007 to November 2023, standardized for analysis, it explores the relationship between food inflation and various determinants through classical and Bayesian methods. The analysis reveals that increases in the real effective exchange rate, money supply (M1), Turkish and Federal Reserve interest rates, and the food and beverage price index contribute to rising food inflation. Conversely, higher oil prices have a statistically significant negative effect on food inflation. The most influential variables, determined by their inclusion probabilities in the model, are the money supply, Federal Reserve interest rate, real effective exchange rate, and Turkish interest rate. These findings underscore their importance in understanding and analyzing changes in Turkey's food inflation.

Keywords: food inflation, money supply, real effective exchange rate, commodity prices, bayesian moving averages

Introduction

With the Covid-19 pandemic, supply and demand-side uncertainty in the general level of prices has increased worldwide, and the problem of high inflation has become an important problem for developed and developing countries. Many factors such as increasing demand, supply chain disruptions and rising energy prices cause the general level of prices to increase. In addition, the Russia-Ukraine war, which started in February 2022, led to an increase in energy and food commodity prices. Ukraine and Russia stand as key global grain suppliers, and the conflict in the region has impeded access to these vital resources, consequently causing fluctuations in commodity prices. Long-term empirical analyses underscore the persistent nature of this trend, suggesting that prolonged

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geopolitical tensions will likely sustain the upward trajectory of food prices, particularly within the European context (Sohag *et al*., 2022, pp. 2369). Furthermore, the escalating average temperatures attributed to climate change further compound this issue by diminishing agricultural output, thereby amplifying food prices. Kotz *et al*. (2023) found that global warming will increase food inflation by between 0.92 per cent and 3.23 per cent until 2035. Considering all these factors, one of the factors that significantly affect the general level of prices worldwide is the change in food prices. In Turkey, the price index for food and non-alcoholic beverages, which has an important place among the main expenditure groups of the Consumer Price Index, increased significantly during and after the Covid-19 pandemic, and this rate of increase was 71.01% in 2023. The fact that this rate of increase is higher than the change in the general Consumer Price Indexadversely impacts the accessibility of sufficient food for the economically disadvantaged segments of the population.

FAO, the Food and Agriculture Organization of the United Nations, reported in February that the Food Price Index fell by 1.1% to 118% in January 2024 compared to December 2023 due to the decline in grain and meat prices.

Figure 1. FAO Worlwide Food Price Index (1990-2024:M01)
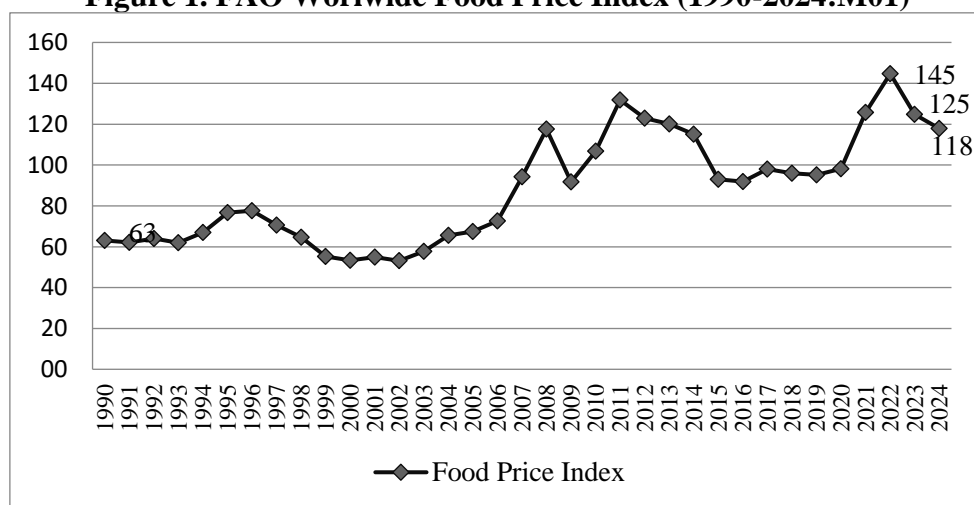
Source: Food and Agriculture Organization of the United Nations (FAO), 2024

As can be seen in Figure 1, the Food Price Index increased by approximately 27.7 points in 2021 compared to 2020 due to supply disruptions due to the Covid-19 pandemic, export restrictions and increased demand, production difficulties due to adverse weather conditions, and exchange rate volatility, and reached its highest level in the last thirty years with approximately 145 index points in 2022. In 2023, the decline in food commodity prices due to the agreement between Ukraine and

Russia on the unblocking of the main Black Sea ports and the increase in grain production in Russia due to favorable weather conditions were reflected in the Food Price Index in 2023 and January 2024.

Figure 2. Food Inflation Rate of OECD, OECD-EU, EU and Türkiye (1971-2022, 2001-2022)
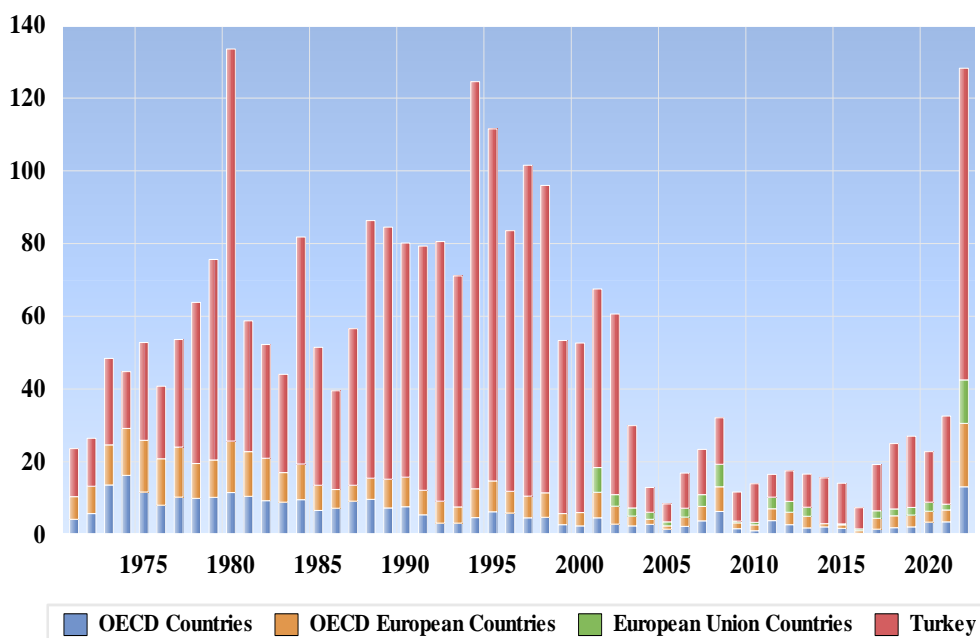
The disparity in Turkey's food inflation rate compared to other country groups is striking. In 2022, Turkey witnessed a substantial increase in food inflation compared to 2020 rates, surpassing the escalation seen in OECD countries by 2.84 times, OECDEU countries by 4.77 times, and European Union countries by 3.76 times (refer to Figure 2). Turkey has the 4th highest nominal food inflation rate in the world after Argentina, Lebanon and Venezuela (FAO, 2024). This trend underscores the urgency of investigating the economic factors driving Turkey's soaring food inflation despite the global downturn in the food price index, particularly evident in the past year. Thorough examination of these factors is imperative to comprehend the unique dynamics at play within Turkey's economy.

There are many factors determining food inflation. When empirical studies are examined, it is seen that factors such as agricultural commodity prices (Baek and Koo, 2010), energy prices (Nazlıoğlu and Soytaş, 2012; Shrestha *et al*., 2019; Taghizadeh-Hesary *et al*., 2019; Gökçe, 2021), money supply and exchange rate (Khan and Gill, 2007, Awan and Imran, 2015; Oral *et al*., 2023), climate change (Odongo *et al*, 2022) and industrial production index (Kutlu, 2021) can explain the change in food inflation. While the source of some of these factors is endogenous, the source of some factors is exogenous. The policy implications for countries in combating inflation vary based on the extent to which exogenous and endogenous factors influence inflation dynamics. When a country's

inflation rate is primarily determined by global factors, any instability on a global scale can lead to fluctuations in the country's inflation rate (Kim and Kwark, 2023). In such scenarios, the sensitivity of the general price level to local policies within the country tends to be diminished, resulting in policy implications that may fall short of expectations. Consequently, policymakers in these countries may need to adopt more nuanced and globally oriented strategies to effectively address inflationary pressures and stabilize the economy.

This study aims to address the following questions: What are the country specific and global factors that influence food inflation in Turkey? Among these factors, which ones exert the most significant influence? The determination of endogenous and exogenous factors aligns with the framework proposed by Kim and Kwark (2023). The study considers the following country specific factors: real effective exchange rate, money supply (M1), food and beverage production index, food and beverage capacity utilization rate, and 2-year bond interest rate (TR Interest Rate). Additionally, global factors include the Composite Leading Indicators index, US federal funds rate (FED interest rate), food and beverage commodity price index, OECD industrial production index, and crude oil barrel price. These variables serve as independent variables in the analysis, facilitating a comprehensive examination of the drivers of food inflation in Turkey. With the diversity of variables, it is aimed to analyse global and macroeconomic effects in more detail. The data set[1] created with monthly data for the period 2007:M02-2023:M11 is standardised to have zero mean and unit standard deviation. In the study, the regression relationship between the variables is analysed by the Least Squares method, and then the estimations are repeated with the Bayesian Moving Average Method to ensure that it is robust. Bayesian models are widely acknowledged as a potent tool in statistics and data science, particularly in situations where conventional approaches prove inadequate. Notably, Bayesian methods offer a robust framework for addressing model uncertainty by facilitating the calculation of weighted averages of estimates derived from various model structures, known as posterior probabilities. This allows for informed decisions regarding the relative effectiveness of variables within the model. In the present study, the Markov Chain Monte Carlo (MCMC) sampling method was employed to compute the posterior probability distributions. Specifically, the Bayesian Moving Average method was utilized to address the second question posed by the study, which pertains to identifying the factors exerting the most significant influence within the model setup. By leveraging Bayesian methodologies, the study aims to provide comprehensive insights into the relative importance of different variables in driving food inflation dynamics in Turkey. In the second

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[1] Following the standardization of the variables employed in the study, the presence of seasonality is assessed using the TRAMO/SEATS test. The results indicate that there is no seasonality within the variables

part of the study, the literature review on the subject is given and the methodology is explained in the third part. In the fourth section, the results of the analyses are reported. In the conclusion section, the results obtained are evaluated and the study is completed.

1. Literature Review

When reviewing the literature on the subject, it has been observed that the factors significantly influencing food inflation and the directions of their effects vary according to national, temporal, and methodological differences.

Yang, Qiu, Huang, and Rozelle (2008) analyzed the impact of the global food crisis on China's agricultural commodity prices using a Computable General Equilibrium (CGE) model for the period of 2005-2008. According to their findings, it was determined that the shocks causing the global food crisis were largely attributed to increases in oil prices and rising demand for biofuels. In response to the global food price increases, China managed to keep its domestic grain prices below world prices by reducing its stocks and implementing export restrictions on major grains.

Baek and Koo (2010) analyzed the relationship between U.S. food prices and agricultural commodity prices, energy prices, fuel ethanol production, and the real effective exchange rate index using monthly data from January 1989 to January 2008. They employed the Johansen Cointegration method in their analysis. According to their findings, agricultural commodity prices and the exchange rate were identified as two significant factors influencing U.S. food prices in both the long and short terms, while the impact of energy prices decreased in the long term. Studies by Nazlioglu and Soytas (2012) examined the relationship between global agricultural commodity prices, global oil prices, and exchange rates for the period from January 1980 to February 2010 using panel cointegration and panel causality tests. They concluded that oil prices strongly affected agricultural commodity prices. Similarly, Taghizadeh-Hesary, Rasoulinezhad, and Yoshino (2019) analyzed the relationship between food prices and energy prices using a Panel-VAR model for 8 Asian countries during the period of 2000-2016. According to their findings, based on impulse-response functions, agricultural food prices exhibited a positive response to any shock originating from oil prices.

Durevall, Loening, and Birru (2013) examined the dynamics of inflation in Ethiopia using the Ordinary Least Squares (OLS) method. They found that grain and food prices were primarily determined by exchange rates and commodity prices in the long term. While domestic agricultural market supply shocks had an impact on food prices, no direct effect of money supply was identified.

Shrestha, Staab, and Duffield (2019) tested the potential relationship between food prices, biofuel production, and changes in land use through correlation analysis in sub-periods spanning from

1991 to 2016. In their study conducted for three different regions of the United States, among the various variables tested as potential reasons for the increase in the food price index, the variable with the highest correlation is crude oil prices.

When examining studies specific to Turkey, several notable analyses emerge, particularly focusing on the relationship between food and oil prices. For instance, Altıntaş (2016), Utkulu and Ekinci (2016), Gökçe (2021), and İçen *et al*. (2022) investigate the asymmetric relationship between oil prices, exchange rates, and food prices in Turkey over different periods using the non-linear autoregressive distributed lag (NARDL) modeling method. Their analyses reveal that increases in oil prices have a greater impact on food price increases in both the short and long term, and similarly, exchange rates also positively affect food prices. Using a different analytical approach, Gungor and Erer (2022) examined the relationship between food inflation, oil prices, and exchange rates in Turkey with the Time-Varying Parameter VAR (TVP-VAR) method for the period from January 2006 to December 2021. Their findings indicate that increases in exchange rates and oil prices lead to higher food inflation, with these effects being more pronounced during crisis periods.

Estürk and Albayrak (2018) explored the short- and long-term effects of food and agricultural product prices on inflation in Turkey using the ARDL approach. Their research determined that increases in food prices contribute to inflation in both the short and long term. Additionally, they identified a one-way causality relationship between the producer price index of food products, the producer price index of agricultural products, oil prices, and the general consumer price index.

Kutlu (2021) investigated factors influencing changes in food prices in Turkey using the Structural VAR (SVAR) model with monthly data from August 2008 to August 2020. This study included the world food price index, nominal exchange rate, industrial production index, and food product exports as independent variables, while the food and non-alcoholic beverage price index served as the dependent variable. The results indicated that only increases in the exchange rate significantly affected food prices, suggesting that the increases during this period were not demand-driven. Similarly, Orkun Oral, Cakıcı, Yildiz, and Alayoubi (2023) analyzed the factors determining food inflation in Turkey from January 2003 to March 2022 using the Structural VAR (SVAR) method. They found that food inflation significantly responded to shocks in global food prices, oil prices, and money supply, with the exchange rate being the most important determinant during the period studied.

2. Data and methodology

2.1. Data Description

In this study analyses the determinants of food inflation in Turkey with the help of two distinct models, endogenous and exogenous, taking into account the major studies in the literature. The endogenous factors considered in the analysis encompass the real effective exchange rate, money supply (M1), food and beverage production indexes, and food and beverage capacity utilization rate, alongside Türkiye 2-year bond yield (TR Interest Rate). Meanwhile, the exogenous factors include the Composite Leading Indicators index, US federal funds rate (FED interest rate), food and beverage commodity price index, OECD industrial production index, and crude oil barrel price. The data set constructed with monthly data for the period 2007:M02-2023:M11 is standardized to have zero mean and unit standard deviation. The definitions of variables are presented in Table 1.

Table 1. Definitions of variables

Variables	Definition	Source
INF_{food}	Food Inflation Index, (2003=100)	Central Bank of the Repuclic of Turkey https://evds2.tcmb.gov.tr/
RER	CPI Based Real Effective Exchange Rate (2003=100)	Central Bank of the Repuclic of Turkey https://evds2.tcmb.gov.tr
M1	Money Supply (M1)-TL	Central Bank of the Repuclic of Turkey https://evds2.tcmb.gov.tr
INT_{TR}	Türkiye 2-year bond yield	https://tr.investing.com
P_{oil}	Cushing, OK Crude Oil Future Contract 1 (Dollars per Barrel)	https://www.eia.gov/
$CP_{f\&b}$	Commodity prices/Food and Beverage Price Index, (2016 = 100)	https://www.imf.org/
$PROD_{food}$	Food production index, (2015=100)	Central Bank of the Repuclic of Turkey https://evds2.tcmb.gov.tr
$PROD_{beverage}$	Beverage production index, (2015=100)	Central Bank of the Repuclic of Turkey https://evds2.tcmb.gov.tr
$CR_{f\&b}$	Food and beverage capacity utilization rate,(Percent)	Central Bank of the Repuclic of Turkey https://evds2.tcmb.gov.tr
CLI	Composite Leading Indicators index (Average-12 Month)	Central Bank of the Repuclic of Turkey https://evds2.tcmb.gov.tr
IPI_{OECD}	OECD industrial production index (2015=100)	OECD (2024)
VIX	Chicago Board Options Exchange (CBOE) Volatility Index, monthly. It measures market expectation of near term volatility conveyed by stock index option prices.	https://www.investing.com/
FFR	Federal Funds Effective Rate, Percent, Monthly, Not Seasonally Adjusted	https://fred.stlouisfed.org

Descriptive statistics of the variables indicated in Annex 1. According to the descriptive statistics in Annex 1, the variable INF_{food} fluctuates between a minimum and maximum value of 133.18 and 2552.51 respectively (compared with 2003 as the reference year, corresponding to value 100), with a mean value of 466.17. The variable M1 ranges between a minimum and maximum value

of 63 billion and 4631 billion respectively, with a mean value of 712.6 billion. It is observed that, especially after COVID-19, the increasing money supply and inflation values have deviated significantly from their averages. When examining the standard deviations of the variables INT_{TR}, $CR_{f\& b}$, CLI, and FFR, it is observed that these variables have moderate standard deviations, indicating that they are close to the mean value and have a wide distribution. When the mean, standard deviation, minimum, and maximum values of our variables are examined, it is evident that INF_{food}, M1, RER, P_{oil}, $CP_{f\& b}$, $PROD_{food}$, $PROD_{beverage}$, IPI_{OECD} and VIX exhibit very high standard deviations. Consequently, this indicates that these series are highly volatile. After analyzing the correlation results, it was observed that no significant correlations existed between the variables. Therefore, all variables were included in the models (see Annex 2).

2.2. Model Specification

In this study, using the framework established by Kim and Kwark (2023), an analysis is conducted to assess the impact of both country-specific and global factors on food inflation in Turkey, and this analysis is examined and interpreted through the application of three different models. The empirical models to be estimated in this study for Türkiye are as follows:

Model I
$$INF_{food,t} = \alpha_0 + \alpha_1 RER + \alpha_2 M1_t + \alpha_3 INT_{TR,t} + \alpha_{i,t} Z_{i,t} + \epsilon_t \tag{1}$$
Model II
$$INF_{food,t} = \beta_0 + \beta_1 P_{oil,t} + \beta_2 CP_{food\ and\ beverage,t} + \beta_{i,t} X_{i,t} + \varepsilon_t \tag{2}$$
Model III
$$INF_{food,t} = \varphi_0 + \varphi_1 RER_t + \varphi_2 M1_t + \alpha_3 INT_{TR,t} + \varphi_4 P_{oil,t} + \varphi_5 CP_{f\& b,t} + \varphi_{i,t} A_{i,t} + \mu_t \tag{3}$$

The subscript t and i denotes time period and parameters' number of auxiliary variables. $Z_{i,t}$ refers to the auxiliary variables (food and beverage production indexes, and food and beverage capacity utilization rate) in Model I. $X_{i,t}$ denotes the auxiliary variables (US federal funds rate, OECD industrial production index and Composite Leading Indicators index) in Model 2. Finally, $A_{i,t}$ refers all auxiliary variables as country-specific and global (Model III).

2.3. Methodology

The empirical investigation of this study consists of two parts. Firstly, the stationarity of data is investigated. Following Perron (1989), the innovational outlier (IO) model, in which a gradual break occurs, is assumed for data exhibiting a one-time break. In this study, the preferred specification for the Dickey-Fuller regression in unit root tests is non-trending data with an intercept break. Secondly, the regression relationship between food inflation and the endogenous and exogenous factors in Turkey is analysed using both classical and Bayesian methods. The regression relationship between the variables was initially analyzed using the Least Squares method. Subsequently, to ensure robustness, the estimates were replicated using the Bayesian Moving Average Method. In the Bayesian moving averages method, the Markov Chain Monte Carlo (MCMC) sampling method is preferred for estimating the posterior probability distributions. Using the posterior probability distribution (PIP), the effect strength of the variables on the dependent variable is determined, and the priority of inclusion in the regression model is calculated (Zellner, 1986). According to the criteria established, variables with PIP values ranging from 0.75 to 0.99 are considered to have a strong likelihood of inclusion in the model, while those with values of 0.50 and below are deemed weak candidates for inclusion. Furthermore, it is noted that variables with PIP values approaching 0 tend to have negative coefficients, whereas those approaching 1 are associated with positive coefficients (Magnus *et al.*, 2010; Yardımcı, 2019; Boonman, 2023). Through the utilization of Bayesian estimators, it becomes possible to discern which variables exhibit greater efficiency within the econometric model.

3. Empirical Results

Before conducting OLS and Bayesian estimation, a unit root test is investigated on both the dependent and independent variables. Based on the test unit root test results, the variables exhibit non-stationarity in non-trending data when employing an intercept break model at the level (see Annex 3). However, they demonstrate stationarity when examined at their first differences. This suggests that both internal and external shocks affecting these variables in the respective countries are of a permanent nature. Hence, to analyze the relationship between the variables using both Ordinary Least Squares (OLS) and the Bayesian Moving Average (BMA) method, the first difference of variables is evaluated.

The results obtained for Models 1, 2 and 3 respectively are reported in Table 2.

Table 2. The Results of OLS and BMA estimations

	OLS		BMA	
	Coefficient	t-stat	Coefficient	t-stat
MODEL − I				
CONSTANT	0.016 (0.003)***	4.31	0.016 (0.004)***	4.19
RER	0.126 (0.03)***	4.17	0.119 (0.03)***	3.97
M1	0.464 (0.058)***	8.06	0.463 (0.058)***	8.01
INT_{TR}	0.034 (0.012)***	2.90	0.032 (0.012)***	2.73
		Auxiliary Variables		
$PROD_{food}$	-0.025 (0.016)	-1.54	-0.004 (0.011)	-0.37
$PROD_{beverage}$	-0.0002 (0.012)	-0.02	-0.0001 (0.0003)	-0.04
$CR_{f\&b}$	-0.006 (0.004)	-1.48	-0.0009 (0.003)	-0.34
Number of obs	202		202	
MODEL − II				
CONSTANT	0.024 (0.004)***	6.01	0.024 (0.004)***	6.01
P_{oil}	-0.017 (0.017)	-1.03	-0.021 (0.017)	-1.25
$CP_{f\&b}$	0.055 (0.023)**	2.41	0.049 (0.023)**	2.15
		Auxiliary Variables		
CLI	-0.013 (0.01)	-1.31	-0.004 (0.008)	-0.47
VIX	0.005 (0.006)	0.72	0.0002 (0.002)	0.13
IPI_{OECD}	-0.012 (0.021)	-0.57	-0.002 (0.009)	-0.27
FFR	0.167 (0.037)***	4.48	0.155 (0.038)***	4.13
Number of obs	202		202	
MODEL − III				
CONSTANT	0.016 (0.004) ***	4.50	0.016 (0.004)***	4.39
RER	0.104 (0.03)***	3.46	0.099 (0.03)***	3.31
M1	0.41 (0.058)***	7.11	0.412 (0.057)***	7.20
INT_{TR}	0.044 (0.012)***	3.58	0.044 (0.012) ***	3.64
P_{oil}	-0.029 (0.015)*	-1.88	-0.034 (0.015)**	-2.29
$CP_{f\&b}$	0.053 (0.019)***	2.68	0.049 (0.019)***	2.58
		Auxiliary Variables		
$PROD_{food}$	-0.021 (0.016)	-1.30	-0.003 (0.009)	-0.29
$PROD_{beverage}$	-0.005 (0.012)	-0.39	-0.0005 (0.004)	-0.14
$CR_{f\&b}$	-0.006 (0.004)	-1.55	-0.002 (0.004)	-0.44
CLI	-0.008 (0.008)	-0.98	-0.0014 (0.005)	-0.32
IPI_{OECD}	-0.004 (0.019)	-0.21	-0.0013 (0.006)	-0.21
VIX	0.004 (0.006)	0.79	0.0003 (0.002)	0.16
FFR	0.135 (0.033)***	4.06	0.123 (0.035) ***	3.56
Number of obs	202		202	

Note: The values within parentheses in the table indicate the standard errors of the coefficients.*,** and *** denotes 10%, 5% and 1%, respectively. t table values are 1.645, 1.96 and 2.576 for 10%, 5% and 1%, respectively. According to the OLS estimation results, the R^2 values for Model I, Model II, and Model III are 0.315, 0.111, and 0.384, respectively. To elucidate the relative importance of each regressor, we calculate the posterior inclusion probability (PIP) in BMA regression models. According to the results of the BMA regression models, the posterior inclusion probability (PIP) for each of the focus regressors is 1, indicating that these regressors are included in the model with a probability of 1.

In Model 1, it is observed that only the real effective exchange rate, money supply, and interest rate exhibit a positive and statistically significant effect on food inflation. In Model 2, a one unit increase in food and beverage commodity prices in Turkey leads to an approximate 0.05 unit rise in

food inflation, while an increase in the FED interest rate results in a 0.15 unit increase in food inflation. Among the auxiliary variables in Model 2, only the FED interest rate emerges as statistically significant. In Model 3, an attempt is made to explain the effects of all variables within a single model. The findings suggest that the real effective exchange rate, money supply, TR interest rate, and food and beverage commodity prices exert a positive influence on food inflation, whereas an increase in oil prices has a negative impact. Moreover, in Model 3, the effect of the FED interest rate remains positive and statistically significant. Furthermore, to compute the posterior probability distributions of the variables in Model 3, the Bayesian Moving Average Method is re-estimated with all variables included as auxiliary variables. The Posterior probability distribution results are represented in Table 3.

Table 3. The Posterior Probability Distribution Results

Variables	PIP	t-statistics
RER	0.92	2.25
M1	1.00	7.08
INT_{TR}	0.87	1.91
P_{oil}	0.21	-0.42
$CP_{food\ and\ beverage}$	0.32	0.56
$PROD_{food}$	0.18	-0.38
$PROD_{beverage}$	0.07	-0.09
$CR_{food\ and\ beverage}$	0.21	-0.43
CLI	0.12	-0.27
IPI_{OECD}	0.10	-0.20
VIX	0.09	0.18
FFR	0.95	2.54

Upon analyzing the results presented in Table 3, it becomes evident that the money supply, FED interest rate, real effective exchange rate, and TR interest rate variables are the most efficient within the model. These variables exhibit respective values of 1, 0.95, 0.92, and 0.87, signifying their prominence in explaining food inflation dynamics. This suggests that these variables play a crucial role in influencing food inflation in Turkey and should be accorded significant consideration in policy formulation and decision-making processes.

Conclusions

The Covid-19 pandemic, which started in Wuhan, China in 2019 and spread globally, and the Russia-Ukraine war, which started in February 2022, increased the uncertainty in the general level of prices worldwide. While the pandemic pushed prices higher due to increased demand and supply chain disruptions, the war led to an increase in energy and food commodity prices in particular. The fact that Ukraine and Russia are major grain producers around the world ensured that this effect was felt on a global scale. This study analyses the country-specific and global factors determining food

inflation in Turkey and investigates the most influential ones among these factors. In this context, in the light of related studies, variables such as real effective exchange rate, money supply (M1), food and beverage production index, food and beverage capacity utilisation rate, 2-year benchmark interest rate (TR Interest Rate) were used as endogenous factors determining food inflation; while the composite leading indicators index, US federal funds rate (FED interest rate), food and beverage commodity price index, CBOE volatility index, OECD industrial production index and crude oil barrel price variables were selected as exogenous factors. The variables that constitute the focus of the study are tested for three different models with the least squares method and Bayesian moving averages method. Upon analyzing the findings obtained from the study, several noteworthy observations emerge: In Model 1, the positive and statistically significant effects of the real effective exchange rate, money supply, and TR interest rates (among the endogenous factors) on food inflation are evident. In Model 2, the positive and statistically significant impact of food and beverage commodity prices on food inflation is observed. In Model 3, which attempts to explain the effects of all variables within a single model, it is found that the real effective exchange rate, money supply, TR interest rates, and food and beverage commodity prices exert positive influences on food inflation, while an increase in oil prices has a negative effect. Among the auxiliary variables considered in Model 2 and Model 3, only the US federal funds rate (FED interest rate) emerges as having a positive and statistically significant effect on food inflation. When assessing the efficiency level of variables in explaining Turkey's food inflation, it is found that the most efficient variables are M1 money supply, real effective exchange rate, FED interest rate, and TR interest rates. These findings underscore the multifaceted nature of factors influencing food inflation in Turkey and highlight the importance of considering various endogenous and exogenous variables in analyzing and forecasting inflation dynamics.

The increasing money supply resulting from expansionary monetary policies implemented during the Covid-19 pandemic has played a significant role in exacerbating food inflation, which has become increasingly chronic. Similarly, the rise in import dependency for food has had adverse effects on food prices, particularly in the face of possible exchange rate volatility. Turkey's reliance on foreign sources for energy production further complicates matters, as higher oil prices, which are a critical input cost in agricultural production, would typically lead to upward pressure on food inflation. However, contrary to expectations, the analysis reveals a negative relationship between food inflation and oil prices in Turkey during the period under review.

This unexpected finding can be attributed to several factors, including the lagged pass-through effect of oil prices on inflation and a decline in demand for energy-intensive products in food

production. Additionally, Turkey's lack of savings exacerbates sensitivity to domestic and foreign interest rates. Increases in interest rates not only raise future inflation expectations among consumers and producers but also stimulate demand among consumers and encourage higher pricing policies among producers. The study underscores that the surge in food inflation over the past decade is significantly influenced by financial stability and monetary policies. In response, policymakers should consider implementing strategies to bolster domestic production, ensure financial stability, and enhance the productivity of agricultural producers. By doing so, policymakers can promote social welfare and ensure equitable access to food products, thereby mitigating the adverse impacts of chronic food inflation on society.

References

Altıntaş, H. (2016), Petrol Fiyatlarının Gıda Fiyatlarına Asimetrik Etkisi: Türkiye İçin Nardl Modeli Uygulaması, *Journal of Management and Economics Research*, 14(4), pp. 1-24.

Awan, A. G. ve Imran, M. (2015). Factors Affecting food price inflation in Pakistan. *ABC Journal of Advanced Resear*ch, 4, pp. 74-88.

Baek, J., and Koo, W. W. (2010), Analyzing factors affecting US food price inflation, *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, 58(3), 303-320.

Boonman, T. M. (2023), Portfolio capital flows before and after the Global Financial Crisis, *Economic Modelling*, 127(C), 106440.

Durevall, D., Loening, J. L., and Birru, Y. A. (2013), Inflation dynamics and food prices in Ethiopia, *Journal of development economics*, 104, pp. 89-106.

Eştürk, Ö., and Albayrak, N. (2018), Tarım Ürünleri-Gıda Fiyat Artışları ve Enflasyon Arasındaki İlişkinin İncelenmesi, *Uluslararası İktisadi ve İdari İncelemeler Dergisi*, pp. 147-158.

Food and Agriculture Organization of the United Nations (FAO), (2024). *World Food Situation*, https://www.fao.org/worldfoodsituation/foodpricesindex/en/. Access date: 08.02.2024

Gökçe, C. (2021), Petrol Fiyatı ve Döviz Kurunun Gıda Fiyatları Üzerine Asimetrik Etkisi: Türkiye Örneği, *Business and Economics Research Journal*, 12(3), pp. 599–611.

Güngör, S., and Erer, D. (2022), Türkiye'deki Gıda Fiyatları ile Petrol Fiyatları Ve Döviz Kuru Arasındaki Doğrusal Olmayan İlişkinin İncelenmesi: Zamanla-Değişen Parametreli VAR Modelleri, *Alanya Akademik Bakış*, 6(2), 2481-2498.

İçen, H., Esenyel İçen, N. M., and Polat, B. (2022), Türkiye'de Gıda Fiyatları, Döviz Kuru ve Petrol Fiyatları Arasındaki Asimetrik Ilişki, *EKOIST Journal of Econometrics and Statistics* (37), pp. 149-169.

Khan, R. E. A., and Gill, A. R. (2007), Impact of supply of money on food and general price Indices: A case of Pakistan, *IUB Journal of Social Sciences and Humanities*, 5(2), pp. 125–143.

Kim, Y. J., and Kwark, N. S. (2023), Changes in Inflation Dynamics in Korea: Global Factor, Country Factor, and Their Propagation, *Bank of Korea WP, 11*.

Kotz, M., Kuik, F., Lis, E., and Nickel, C. (2023). The impact of global warming on inflation: averages, seasonality and extremes. *ECB Working Paper Series*, No:2821

Magnus, J. R., Powell, O., and Prüfer, P. (2010), A comparison of two model averaging techniques with an application to growth empirics, *Journal of econometrics*, 154(2), pp. 139-153.

Nazlioglu, S., and Soytas, U. (2012), Oil price, agricultural commodity prices, and the dollar: A panel cointegration and causality analysis, *Energy Economics*, 34(4), pp. 1098-1104.

Shrestha, D. S., Staab, B. D., and Duffield, J. A. (2019). Biofuel impact on food prices index and land use change. *Biomass and Bioenergy*, 124, pp. 43-53.

Sohag, K., Islam, M. M., Tomas Žiković, I., and Mansour, H. (2023) pp. Food inflation and geopolitical risks: Analyzing European regions amid the Russia-Ukraine war pp. *British Food Journal*, 125(7), pp. 2368-2391.

Şahin Kutlu, Ş. (2021), Türkiye'de Gıda Enflasyonunun Belirleyicileri: Svar Modelinden Kanıtlar. *EKEV Akademi Dergisi* (87), pp. 581-598.

Odongo, M. T., Misati, R. N., Kamau, A. W., and Kisingu, K. N. (2022), Climate Change and Inflation in Eastern and Southern Africa, *Sustainability*, 14(22), pp. 1-18.

OECD (2024), Industrial production (indicator). doi: 10.1787/39121c55-en (Accessed on 21 January 2024)

Orkun Oral, İ., Çakıcı, A., Yıldız, F., and Alayoubi, M. (2023), Determinants of food price in Turkey: A Structural VAR approach. *Cogent Food & Agriculture*, 9(1), pp. 2247169.

Taghizadeh-Hesary, F., Rasoulinezhad, E., and Yoshino, N. (2019), Energy and food security: Linkages through price volatility, *Energy policy*, 128, pp. 796-806.

Utkulu, U., and Ekinci, R. (2016). Uluslararası Petrol ve Gıda Fiyatlarından İç Fiyatlara Asimetrik ve Doğrusal Olmayan Fiyat Geçişkenliği: Türkiye İçin NARDL Modeli Bulguları, *Finans Politik ve Ekonomik Yorumlar* (617), pp. 9-22.

Yang, J., Qiu, H., Huang, J., and Rozelle, S. (2008), Fighting global food price rises in the developing world: the response of China and its effect on domestic and world markets, *Agricultural Economics*, 39, pp. 453-464.

Yardımcı, A. (2019), *Bayesci model ortalaması yöntemi: İstihdam oranı üzerine bir uygulama. İstatistikçiler Dergisi:İstatistik ve Aktüerya*, 12(1), pp. 15-31.

Worlbank (2024), Food security update, February 1 2024. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://thedocs.worldbank.org/en/doc/40ebbf3 8f5a6b68bfc11e5273e1405d4-0090012022/related/Food-Security-Update-XCIX-February-01-24.pdf Acces date: 08.02.2024

Zellner, A. (1986), On assessing prior distributions and Bayesian regression analysis with g-prior distributions, in: Goel, P.K., Zellner, A. (Eds.), *Bayesian Inference and Decision Techniques: Essays in Honor of Bruno de Finetti (Studies in Bayesian Econometrics Statistics)",* Vol. 6, Elsevier Science Ltd, North Holland, pp. 233–243

Annex 1. Descriptive Statistics

Variables	Obs.	Mean	Standart Deviation	Min	Max
INF_{food}	203	466.17	485.49	133.18	2552.51
RER	203	93.12	22.89	47.62	127.71
M1	203	712.6 billion	103 billion	63 billion	4631 billion
INT_{TR}	203	13.17	5.45	5.14	35.87
P_{oil}	203	72.80	22.65	16.70	134.02
$CP_{f\&b}$	203	111.10	16.08	85.23	162.22
$PROD_{food}$	203	103.79	22.62	68.26	165.69
$PROD_{beverage}$	203	103.71	21.63	72.47	159.54
$CR_{f\&b}$	203	72.01	2.19	61.20	77.80
CLI	203	4.86	3.52	-7.99	20.09
IPI_{OECD}	203	95.78	14.96	66.85	119.57
VIX	203	20.34	8.51	9.51	59.89
FFR	203	1.17	1.62	0.05	5.33

Annex 2. Correlation Results

	RER	M1	INT_{TR}	P_{oil}	$CP_{f\&b}$	$PROD_f$	$PROD_b$	$CR_{f\&b}$	CLI	IPI_{OECD}	VIX	FFR
RER	1											
M1	-0.26	1										
INT_{TR}	-0.27	0.25	1									
P_{oil}	0.12	-0.01	0.22	1								
$CP_{f\&b}$	0.14	-0.01	0.00	0.52	1							
$PROD_{food}$	0.02	-0.01	0.02	0.15	0.01	1						
$PROD_{beverage}$	-0.05	-0.03	0.09	0.09	0.13	0.11	1					
$CR_{f\&b}$	0.10	0.02	0.07	0.04	-0.01	-0.05	-0.01	1				
CLI	0.12	-0.08	-0.03	0.20	0.24	0.01	0.21	0.08	1			
IPI_{OECD}	0.06	-0.09	0.12	0.22	0.11	0.07	0.36	0.09	0.52	1		
VIX	-0.07	-0.08	0.12	-0.19	-0.19	0.03	0.22	-0.10	0.01	0.13	1	
FFR	0.18	0.11	-0.09	0.17	-0.00	0.01	0.03	0.10	0.15	0.23	-0.09	1

Annex 3. The Breakpoint Unit Root test results

Variables	ADF	Prob	ADF	Prob
	Level		1st difference	
INF_{food}	-0.349988	>0.01	-5.410764	<0.01
RER	-2.427958	>0.01	-11.33454	<0.01
M1	4.520179	>0.01	-10.72907	<0.01
INT_{TR}	-2.926659	>0.01	-13.93409	<0.01
P_{oil}	-4.248760	>0.01	-10.25082	<0.01
$CP_{f\&b}$	-4.058805	>0.01	-9.381976	<0.01
$PROD_{food}$	-1.627039	>0.01	-19.61425	<0.01
$PROD_{beverage}$	-3.118299	>0.01	-17.25011	<0.01
$CR_{f\&b}$	-2.970791	>0.01	-6.408297	<0.01
CLI	-4.613713	>0.01	-13.07438	<0.01
IPI_{OECD}	-3.847674	>0.01	-16.01476	<0.01
VIX	-4.506585	>0.01	-8.880633	<0.01
FFR	-4.591118	>0.01	-7.804333	<0.01

Note: Akaike and Schwarz information criterias were used. Max. Lag length is preffered as 14.
[1] Since no structural break was detected in the variable, standard unit root test was used.

#Bookstagram: A dual perspective study on the trend's evolution

Iuliana OBREJA[*], Adriana MANOLICĂ[**], Alexandra Raluca JELEA[***]

Abstract

The way firms and marketers promote their products is being shaped by consumer needs and trends alongside the evolution of the marketplace. As web technologies and consumers' online behavior improve, influencers are becoming increasingly significant in social media marketing strategies. This research intends to investigate a particular digital phenomenon observed in the field of books, namely, marketing books on Instagram. Therefore, the study aims to highlight the key aspects of book influencers' Instagram activity, namely by examining the literature, but also the evolution of the bookstagram phenomenon in a dual perspective in both Romania and the United States. Furthermore, the purpose of this research is to draw attention to the similarities and differences among the existing communities in the two countries pointed out by a quantitative research. On that account, the data analyzed was collected in two different ways, first we retrieved information from Statista online database about the phenomenon in the United States of America and then, we conducted a questionnaire to bookstagram community members in Romania. Accordingly, the paper will contribute to the expansion of the literature on #bookstagram communities in various cultures around the world by providing useful information and a more diverse view of this market.

Keywords: digital influencer, bookstagram, book influencers, book consumption, book trends

Introduction

In today's contemporary era of digital influence, the marketing landscape is continually evolving and also, the promotion of products and services is undergoing a substantial transformation. This is particularly evident in the realm of social media, where influencers have become pivotal in shaping marketing strategies because of the consumers' constantly changing needs and preferences as stated in the present trends. Therefore, these micro celebrities have become increasingly important as web technologies have developed, and consumer behavior has matured in the digital environment.

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Hence, the way products are advertised and used has reshaped according to the digital use of the online platforms.

This research is dedicated to a specific digital phenomenon: the marketing of books on Instagram. Knows as #bookstagram, this trend represents a modern and quite beautiful intersection of social media marketing, more specifically influencer marketing and reading culture. In this manner, it offers a significant opportunity to better understand the book consumption regarding the digital promotion of books and, simultaneously, to examine the evolution of the relationship between the micro celebrity and the consumer. The study begins by acknowledging the broader context of the bookstagram phenomenon, recognizing the importance of social media as an essential medium for influencer marketing, where new marketing and promotion strategies are introduced.

Since the global book consumption has been greatly impacted by the bookstagram movement, it is essential to comprehend how this cultural phenomenon manifests in diverse cultural contexts and having that in mind, this study investigates this trend both from the Romanian and the American perspective. Therefore, the relevance of the study lies in its exploration within these diverse environments, where the main purpose is to uncover reading choices and habits. This study is particularly relevant in an increasingly globalized world where understanding the nuances of cultural influence on media consumption is crucial. The insights gained will not only contribute to academic literature reviews in social media studies but also provide valuable information for marketers and stakeholders in the publishing industries, helping them to better understand and engage with divergent reader communities.

For a better understanding of the #bookstagram phenomenon, we conducted an extensive review of the literature, where we focused on academic articles, books and reputable online sources related to the evolution of this trend both in Romania and the United States of America. In this way, the information accumulated was extracted from several academic databases, where we mention Google Scholar and Research Gate. This review provided a theoretical framework and contextual background for the study.

The journals and publications consulted were chosen according to representative keywords, namely, social media influencers, Instagram, social media, bookstagram, influencer and influencer marketing. Moreover, all these main ideas found in the literature are also translated in the present paper, thus providing relevant information for the research. Another important criterion we used in the analysis of the articles was the publication period, primarily based in the period 2019–2022, when the bookstagram phenomenon had the most significant growth online. The limited available articles on the bookstagram phenomenon highlight the importance of understanding this phenomenon.

1. Literature review

The ways in which consumers are influenced in the daily life of the economic market are continually changing, shaping themselves according to its demands in relation to the evolution of society and embedded digital technologies. As a consequence, the online environment supports the majority of the activities of participants in the buying and selling process and thus businesses are forced to adapt their marketing strategies. In this manner, new digital means are being implemented that aim to ensure effective communication and, moreover, respond to the needs of consumers with the intent that potential customers' decisions depend entirely on digital content (Leparoux, *et al*., 2019).

To that end, influencers are introduced as modern methods of promotion, where their main objective is to improve the process of convincing users about the benefits of the promoted product, which ultimately ensures its sale. However, the new approach, which is by definition direct and organic in terms of establishing real connections with potential consumers, relies primarily on how the relationship is formed with them.

Consequently, the choice of people must be made accordingly, since they – the future influencers who will share information about the brand, represent the target market. Therefore, the company's messages must be perceived from an honest perspective so as to facilitate the buying process and ultimately strengthen the relationship between the company and its customers. Moreover, the micro-celebrities introduced in the marketing strategy should be people who have a large number of followers in social media, as this aspect influences the purpose of promotional techniques. Therefore, information should reach as many users as possible in order to be much more effective (Martinez-Lopez, *et al*., 2020). In this way, the influencers become trustworthy people because they provide customers accurate data and authentic review and recommendations from their own experiences.

To highlight the importance of such an approach in the 21st century, we point out that 44% of potential customers rely on the recommendations of online micro-celebrities to buy products and also associate all their activity with the brand they represent. Hence, as the digital activity of influencers develops, they gradually become the actual image of the promoted product, which users take for granted (Pradhan, *et al*., 2022). In addition, there have been so many changes in marketing strategies that this modern approach has become one of the most effective promotion techniques, since it keeps discussions going in real time. Respectively, it provides the opportunity for messaging with a direct representative of the company who is also perceived as a member of the target market due to the content created detailing their experience with the product (Acikgoz and Burnaz, 2021). Moreover, it

creates a sense of trust and belonging, ultimately attracting customers through the digital version of word of mouth, posts and personalized images.

In terms of the field we want to study in this research, namely books, we can point out that companies are adhering to the changes in the market and choosing to integrate into the current bookstagram trend. As well, we define the current social media platform, Instagram, which focuses mainly on visual content and often posts high quality images. In addition, this online medium was primarily designed to provide users with the opportunity to connect with each other and therefore to break down the barriers that prevent the formation of quality relationships between Generation Z, millennials and companies (Salomon, 2013).

The platform focuses on attracting users with eye-catching elements, vibrant colors and memorable posts designed to impress and satisfy the user. To that end, the virtual community succeeds in increasing the popularity of the social network (Tselenti, 2020). Since its launch in October 2010, when 25.000 users registered on the first day, by the first quarter of 2023, there are approximately 2 billion users on Instagram[1] (Zhan, Tu and Yu, 2018). With this data in mind, we can conclude that one of the main characteristics of the online environment created is its ability to attract the attention of a large number of individuals from different fields, covering a large part of the general digital population (Budge, 2020).

In other words, social media is beginning to consolidate a considerable database of potential customers for certain products and is becoming a habit and an essential element of the present society. As a result, the behaviour of a 21st century shopper is largely influenced by new technologies and opportunities in the virtual environment. This allows us to highlight the foundation of innovative marketing strategies with regard to Instagram, characteristics that can be transferred to the subculture called bookstagram (Acikgoz and Burnaz, 2021; Bowles, 2016). In this way, it consists of people sharing images, opinions and recommendations related to books. Therefore, we define the trend as an opportunity to connect people with similar passions from anywhere in the world so that they can actively participate in the online community that has been created.

What started as a simple hashtag to organize book-related posts – bookstagram, has grown to encompass around 99.7 million posts that are part of a community-built and maintained ecosystem for book lovers.[2] #Bookstagram continues to play an important role in promoting books online as the relevance of the trend has grown over time and continues to influence an increasing number of active users (Tselenti, 2020). Consequently, companies can benefit from the images and associated text

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[1] Statistical data retrieved from: https://sproutsocial.com/insights/instagram-stats/, accessed on 3 December 2023;
[2] Number of posts retrieved from the Instagram platform on 23 January 2024.

because it builds a connection with those interacting with the post, i.e. Instagram users. In other words, writers, booksellers or marketing people who want to sell books actively contribute to the growth of the community, attracting customers by being active with the trend. In addition, some of them become important members of the community by participating in the visual development of the platform: either by posting frequently and recommending different books, or by reaching out to bookstagrammers, specialized influencers (Thomas, 2021).

The impact these individuals have on book consumers is therefore valued. Book influencers can shape the opinions of their target audience and thus their decision-making process. In particular, #bookstagram creates a safe environment in which bookstagrammers introduce readers to new books, types of literature they may not have tried before, lesser-known authors, and advantageous methods of buying books. In this way, these influencers offer marketers a modern way to connect organically and over a longer period of time with users, showing that promoting books is a fun and natural activity for Instagram users. More importantly, this modern technique of marketing by leveraging bookstagram helps to increase the number of visitors to profiles promoted through integrated techniques such as hashtags used, locations offered, and individual influencer mentions. In other words, bookstagrammers attract target audiences, regardless of age, using a variety of techniques and continuing to promote the sense of belonging that community reinforces through free expression and welcoming behaviour (Alfonzo, 2019; Novotná, *et al*., 2021).

As this trend created from the joining of two words – "book" representing both the product to be sold and the domain being cornered and "Instagram", is based on the social media platform mentioned above, we point out that the emergence of the trend is relatively recent, being closely linked to the rise of social media and its desire to take over the daily activities of consumers. Additionally, it was created to make it easier to describe content – books – in cases where images were not compelling enough, therefore communicating in a visually appealing way (Abbott, *et al*., 2013).

It is important to note that it is becoming popular due to the significant increase in users' use of the virtual environment, but also due to their desire to share images of and about books, as well as the need to exchange opinions, recommendations and information about specific areas of reading (Darma, *et al*., 2020). Thus, the bookstagram phenomenon was born in early 2010 with the development of the social media platform, laying the foundation for a new way of communication and continues to make books more compelling through pictures rather than words ever since (Tselenti, 2020).

Consumers introduced the hashtag "*bookstagram*" in 2011 and it quickly became popular after its first appearance since it has been used regularly on social media platforms. In this case, the trend plays a key role in expanding the target audience of the person distributing the post, thus reaching an audience larger than the number of followers (Zappavigna, 2015). Book lovers registered on

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Instagram regularly use this method of sharing content related to books and, by the large number of posts that are visible, increase the value of a community.

Table 1. The evolution of number of posts that exists in the #bookstagram hashtag on Instagram (August 2022 – October 2023)

Date of search	The hashtag searched globally	Number of posts
15ᵗʰ August 2022	*#bookstagram*	*79.870.608 posts*
8ᵗʰ November 2022	#bookstagram	82.566.659 posts
30ᵗʰ December 2022	*#bookstagram*	*84.392.106 posts*
17ᵗʰ January 2023	#bookstagram	85.238.736 posts
20ᵗʰ March 2023	*#bookstagram*	*87.925.185 posts*
5ᵗʰ April 2023	#bookstagram	88.517.453 posts
8ᵗʰ May 2023	*#bookstagram*	*89.828.937 posts*
30ᵗʰ May 2023	#bookstagram	90.678.891 posts
22ⁿᵈ June 2023	*#bookstagram*	*91.579.796 posts*
1ˢᵗ August 2023	#bookstagram	93.157.381 posts
27ᵗʰ September 2023	*#bookstagram*	*95.363.637 posts*
21ˢᵗ October 2023	#bookstagram	96.381.775 posts

Source: Own processing based on the online activity registered on hashtags on Instagram

Also, the trend of the phenomenon is to add new material and content gradually and consistently, as can be seen in Table 1, a particular case where the hashtag "*bookstagram*" is analyzed globally. According to this data, this phenomenon underlines the importance and continued growth of bookstagram communities among book lovers on Instagram.

So, between August 2022 to October 2023, the #bookstagram community reaches a new stage of online appreciation. As a result, the number of digital interactions posted on Instagram increases by more than 17 million new Instagram posts, reflecting a 20.67% content addition. This activity growth allows users to better interact, setting the stage for a conducive environment for friendships and collaborations (Thomas, 2021). It also highlights the success that the ways of connecting implemented in this community are having among consumers of digital content. So the trend we can examine from this data is that the phenomenon continues to grow in terms of the actual amount of digital interactions, content shared between users, but also the virtual visibility offered to brands in this environment (Wiederhold, 2022).

1.1. The American approach to Bookstagramming

The "*bookstagram*" phenomenon arose from the desire of users on Instagram to interact with book lovers in a different way than simple message exchanges. In other words, a community that has formed around it includes both readers who look forward to sharing their opinions and reviews, and enthusiasts who read often but want to stay up to date with the latest releases. Hence, bookstagram stands out for its diversity, giving any consumer the chance to participate in the evolution of digital book marketing actively or inactively.

This trend continues to have a significant impact in the United States, where it has gradually become more of a necessity than simply a way for people to interact with each other, since is educating the 21st century public about the importance of books. In particular, we can say that the bookstagram phenomenon has evolved from a simple hashtag that is used to properly manage book-related posts into an extended digital culture. In terms of the book product, the environment created around the above-mentioned initiative has become an important basis for educating the 21st century audience. Therefore, bookstagram is having an impact on reader habits, literary genres and the publishing industry.

To that end, Figure 1 describes how the book industry has evolved throughout the years, highlighting the fact that even if the year 2023 has recorded a smaller amount of units of books sold, the number is higher than the year prior to 2021. Therefore, this industry is still rising, continuing to create great products for consumers.

Figure 1. Unit sales of printed books in the United States from 2004 to 2023
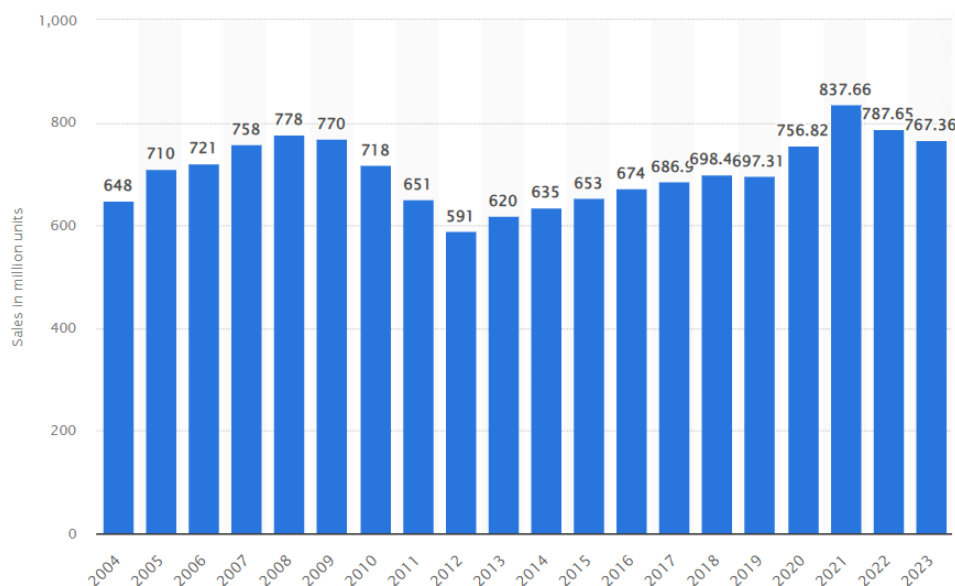
Source: Statista, 2023

With this in mind, the main advantage of the preceding trend is its ability to create a buzz around digitally published content. In other words, the way #bookstagram has grown over time has been driven by the posts created and Instagram's tendency to convey information through images. Therefore, bookstagram provides users with a visual experience that connects them directly to a book they might read to stay up to date with community news (Li and Xie, 2019).

In addition, the phenomenon of book consumers and content in the United States started with the launch of the platform and adapted to the market requirements significantly affected by technological advancement. Thus, we recall the first steps of bookstagram, which were between 2010 and 2014. The year 2010 is the year in which the hashtag was created more out of interest, as it was also the year in which Instagram became accessible to the general public (Tselenti, 2020). Although it was more of a curiosity at first, 2014 was the year when the phenomenon took shape and quickly adapted to new trends and user desires to post and discuss, and how quickly other users wanted to join the trend. Also, from the figure above we can observe that starting with 2014, the quantity of books sold slowly escalated because the product started to become more popular in the eyes of the potential consumers.

Next, the period of growth in popularity of #bookstagram occurred between 2014 and 2018, when it saw a large number of posts and appearances online. The content focuses on books and how they can become increasingly important to users' daily lives, reaching around 12 thousand posts in 2016. In addition, the phenomenon managed to double its activity two years later. This was disclosed by the 24 thousand posts it posted on Instagram in 2018 and highlighted how people are sharing their passion for reading and the desire to keep the culture alive.[3] This phase of the #bookstagram trend also shows the emergence of book bloggers and people who want to share this passion from a subjective perspective.

Due to efforts to change the way most businesses communicate with their customers; the phenomenon is slowly taking over marketing strategies and becoming the core component used in social media promotion. In other words, influencer marketing is considered more of a necessity than a surprise in the 21st century and the fact that creating the closest and strongest relationships with potential customers is becoming a necessity (Acikgoz and Burnaz, 2021). Companies are looking at the potential of the bookstagram community in terms of book promotion methods, and the emergence of bookstagrammers has also introduced the idea of collaboration by providing just released copies of books in exchange for posts on book influencers' personal profiles. In particular, this method

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[3] Maria Bellotto, November 4, 2018, article accessed from: https://losbuffo.com/2018/11/04/leggere-ai-tempi-di-instagram-il-fenomeno-bookstagram/ on November 10, 2023.

increased the number of people participating in the trend, and while the passion for reading continued to increase the number of interactions, #bookstagram underwent changes in terms of built-in commerciality.

Between 2018 and 2021, the years of growth and diversity are characterized by continued community development in terms of the number of posts, members and digital activities. However, the community continues to grow and become increasingly diverse and also, the book industry has experienced growth as brands have recognized the potential of collaborations with book influencers and marks the time when influencers become a 21st century necessity. As a result, the "voices" that gather around the hashtag become micro-celebrities for a portion of the platform's users, transforming from mere influencers into individuals with similar experiences followed by a growing number of readers. But as the trend becomes more popular and has more followers, its variety expands, and new categories of virtual content emerge.

Under these circumstances, subgroups of people in the same industry of bookstagrammer are forming, growing in popularity through different approaches, such as "*black bookstagram*", "*Latinx bookstagram*" or "*LGBTQ+ bookstagram*". These are all focused on a specific demographic that identifies with a set of values or people who directly support them. It is also believed that these types of environments created through social media are becoming significantly accessible to people using the internet. These virtual spaces create a comfortable, authentic and friendly environment for consumers, where they can connect with other book lovers much more easily and effectively (Wiederhold, 2022).

Despite the fact that the pandemic period coincides with the aforementioned period, these two periods are interlinked, as between 2020–2021 there was a massive increase in digital users, which led to an excessive practice of the bookstagram community. In other words, the time spent increasingly at home, with laptop in hand and without the opportunity to normally go outdoors, has directly led to an increase in online interactions. As a result, reading, in combination with bookstagram activities, has become an ideal way for people to spend their time, as you can see in the figure number 1, where between 2019 and 2021, the number of books sold increased fundamentally. Similarly, the year 2021 became the period of time for selling and promoting this product. Furthermore, the target population has become even more interested in this trend. Hence, the size of the audience significantly determines the relevance of the community to the marketing industry. For this reason, the community has shaped itself into a major player in the book market, incorporating social and political themes, as community personalities use their "voice" to promote and encourage change for the better (Balaban, *et al*., 2020).

Despite the changes that have occurred since the phenomenon's inception to present time, the community around the hashtag #bookstagram continues to focus on the passion for reading, providing users with resources and content to educate and encourage them to read as a means of personal development. Thus, digital activity focuses on recommending specific books, reviews and photos, as well as participating in various discussions, contests or special experiences with other active community members.

As for the exact number of community members relying on #bookstagram, this is not formally identified or analyzed as the community continues to grow and there is no concrete evidence to support the membership record. In other words, we can only recall the significant amount of posts that have been published, estimated to be over 96 million in October 2023. Respectively, for each content created there are hundreds of thousands of users and therefore many more lovers following this hashtag related to books.

1.2. The Romanian approach to Bookstagramming

Since the bookstagram phenomenon has become a popular way to connect book lovers across Europe, the desire to share the same principles of literary culture has also materialized in our region. As for the exact moment when the #bookstagram hashtag appeared in Romania, we don't have exact data, as it had a slow start and absorbed elements of the global bookstagram community gradually. However, at present, we can say that #bookstagram is almost a decade old, having been most exploited in the most recent period of the present.

So, the trend emerged later in Europe, around 2012–2013, partly influenced by content creators in the United States. In addition, more developed countries such as the UK, Germany and France managed to keep up with the aforementioned official launch of #bookstagram and had people focusing their attention from the beginning on spreading and appreciating book-related posts. In other countries, such as Romania, it has been harder to keep up with the progress of digital activity. This is because the country has a smaller population and therefore a smaller number of potential users and a less up-to-date social media culture.

In other words, the Romanian community based on the #bookstagram hashtag has been growing in recent years, posting pictures, reviews or even favorite books from different types of literature, as well as supporting contests or book clubs in comments and private messages on Instagram. Regarding the history of this phenomenon in Romania, we can remember that it started with a small number of

readers who discovered Instagram as a new way to share positive thoughts and experiences about books during 2015–2016, about 8 or 9 years ago.

In addition, Romanian bookstagrammers claim that in the beginning they didn't know what it meant to be a "book influencer" and that their activity was just a desire to post images illustrating what they were reading. Oana Turcea claims, in an interview for Ziarul de Iași, that "I had started in 2015 to post pictures of books on my personal account, and then I discovered other pages from abroad", supporting the idea that the concept of bookstagram did not yet exist in Romania at that time.[4] Moreover, the aforementioned bookstagrammer says that she was among the first to adopt the hashtag #bookstagram in early 2016.[5] For a while, the hashtags for posts dedicated to books in the country were #bookstagramro and #citind. Then the community focused on #bookstagram, like most Instagram activity at the moment, amplifying the hashtag's popularity and connecting digital content globally with all the sub-communities in the rest of the digitized world.

From 2016 to 2019, there have been years of growth where the popularity of the trend has progressively increased, but not to the same alarming level as in the United States. However, a growing number of book bloggers and influencers started posting on Instagram, gaining likes and followers, which laid the foundation for the future Romanian #bookstagram community. Gradually, these individuals became strong voices, eager to build a safe and open place for all readers in the country, being considered by the public advocates for reading. As the rapid evolution of social media forces most entities to change the way they interact and maintain a certain connection between business and consumers, both Romanian publishers and authors tend to use bookstagrammers to promote their products to their target audience.

Consequently, Instagram has become an ideal medium for promotion, as it is among the most popular social media platforms where merchandise can be "humanized" by its influencers (An and Haryanto, 2021). And, as Statista Research Department states, the book industry in Romania is booming, with a considerable leap in 2018, when the Romanian bookstagram community is coming together and literally bringing the trend into the "spotlight" of the digital social media platform.[6]

The impact of the #bookstagram community in the United States on its users cannot be compared to the one in Romania in 2019–2020. However, more and more Romanians are joining the

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[4] Oana Turcea – @oanareads24 is known as a bookstagram with over 14,000 followers on Instagram (https://www.instagram.com/oanareads24/).

[5] Andreea Popa, 14 August 2022, article accessed from: https://www.ziaruldeiasi.ro/stiri/foto-povestea-celor-patru-fete-frumoase-din-iasi-care-au-lansat-a-bookstagrama-o-inedita-initiativa-online-ce-incurajeaza-lectura-utilizand-retelele-sociale--330853.html?fbclid=IwAR3RTsj3F0qfSWUsW-jOD5VFTlXLUl5tEVe1Hh61a8mhA-eD-PhwNBH6w3A on 10 November 2023.

[6] Statista Research Department, 21 December 2023. Industry revenue of "book publishing" in Romania from 2012 to 2025, data retrieved from https://www.statista.com/forecasts/395793/book-publishing-revenue-in-romania on 25 January 2024.

trend and sharing the opinions of the reading community in the country. In other words, regional barriers are being broken down, and the passion for books is making the space that has been created open and able to accept an increasingly wide range of opinions, literary genres and methods of discussing books. Moreover, the Romanian community reaches a peak in terms of the amount of information provided and end-user responses in the period 2020–2021, especially during the pandemic, when #bookstagram played a role in promoting books and increasing online sales.

As much as these channels of communication between individuals have been able to leverage the power of bookstores in the book market, allowing authors to promote their books themselves, #bookstagram has benefited from the flow of activity created. Firstly, the hashtag-based Romanian community has significantly increased interest in reading. Also, the trend has significantly contributed to the increase in book sales through the simultaneous recommendation of literary novelties, as according to Statista Research Department, we can understand that the year 2021 for the book industry is the most fruitful year from 2012–2025.

Given these stages that the #bookstagram phenomenon has gone through both in the United States and in Romania, the trend is an influential force in the digital promotion of reading, books and the publishers or authors. Consequently, living in an era primarily influenced by the Internet, the communities created around this hashtag directly involve users in the whole process of promoting the final products and thus help create connections and increase interest in books (Lo, 2020).

2. Methodology

The purpose of this research is to thoroughly clarify the book consumption phenomenon from a dual perspective, focusing on both Romania and the United States. In order to achieve a comprehensive understanding, we collected both primary and secondary data, using two distinct research approaches.

For this research, we can outline four objectives that aim to help improve the understanding of the book digital environment. Hence, we have the following:

O1. To examine the book consumption in Romania

O2. To examine the book consumption in the United States of America

O3. To investigate the book format preferred by Romanian readers

O4. To investigate the book format preferred by American readers

In order to examine the impact that the hashtag has on the digital consumers and also, the book consumption and the forecast of books in the 21st century, we extracted both primary and secondary

data. Objectives O1 and O3 were followed by an online survey and objectives O2 and O4 were reached by a secondary data approach, using information available on Statista database. Due to the limitation of online access to an up-to-date database for the case of Romania, we conducted a structured questionnaire, developed specifically for this country. In that case, we wanted to better understand the book consumption that is already analyzed worldwide, having the American trend as the main example and then, to gather contemporary data from the Romanian bookstagram community.

Therefore, the sample for the survey was consisted of Romanian respondents, both female and men, with ages between 18 and 57 years old. The questionnaire focused on #bookstagram usage, reading habits, and the number of books read. On account of that, we focused on how many books do they read and also, in which format do they prefer to enjoy the lecture. Regarding the questionnaire sampling, in order to gather significant data for our research, we utilized a sampling technique in which only Instagram users, namely people from the bookstagram community in Romania, were asked to answer the questions. Thus, 91 respondents participated in our research, with the majority of the answers being from the female perspective (80 women and 11 men).

The questionnaire was distributed among Facebook groups dedicated to the book community, Instagram stories, both from the personal bookstagram account and from two other bookstagrammers accounts and also, was handed out to family, friends and colleagues that satisfy the reading requirement. The survey was open for about two weeks, date of start: 1 November 2023 and it availability of the link ended on 14 November 2023.

As such, we wanted to ensure representation of the actual and real perspectives on #bookstagram phenomenon. When it comes to the secondary data used in this study, we extracted relevant information from Statista database in order to broaden trends in book consumption and reading habits from the United States of America, information that already exists in the domain. For the data analysis, we mention the statistical analysis tools that we applied, including descriptive statistics and inferential statistics, to interpret the quantitative data gathered from the Romanian questionnaire.

3. Results

3.1. Book consumption in Romania

The future of #bookstagram in Romania remains uncertain, but its steady growth indicates a significant impact on the Romanian publishing industry, as there is a tendency to bring local authors and publications to the forefront. Also, it marked the process of independent book authors digitally

promoting their products at the same level as publishers. All this together, it reinforces the fact that, alongside the #bookstagram phenomenon, the book consumption arises. Therefore, the digital environment in which book influencers are creating unique and visual appealing content can help the book industry to gather more units sold than previous years.

For (O1) we highlight Figure 2, where we gathered Romanian respondents' answers regarding how many books do they read in a month. With this research, we wanted to examine the book consumption in Romania, by age group and also to forecast the consumption of this product with real time evolving digital technologies taken into consideration.

Figure 2. Number of books in any format read by the Romanian readers in 2023, by age group
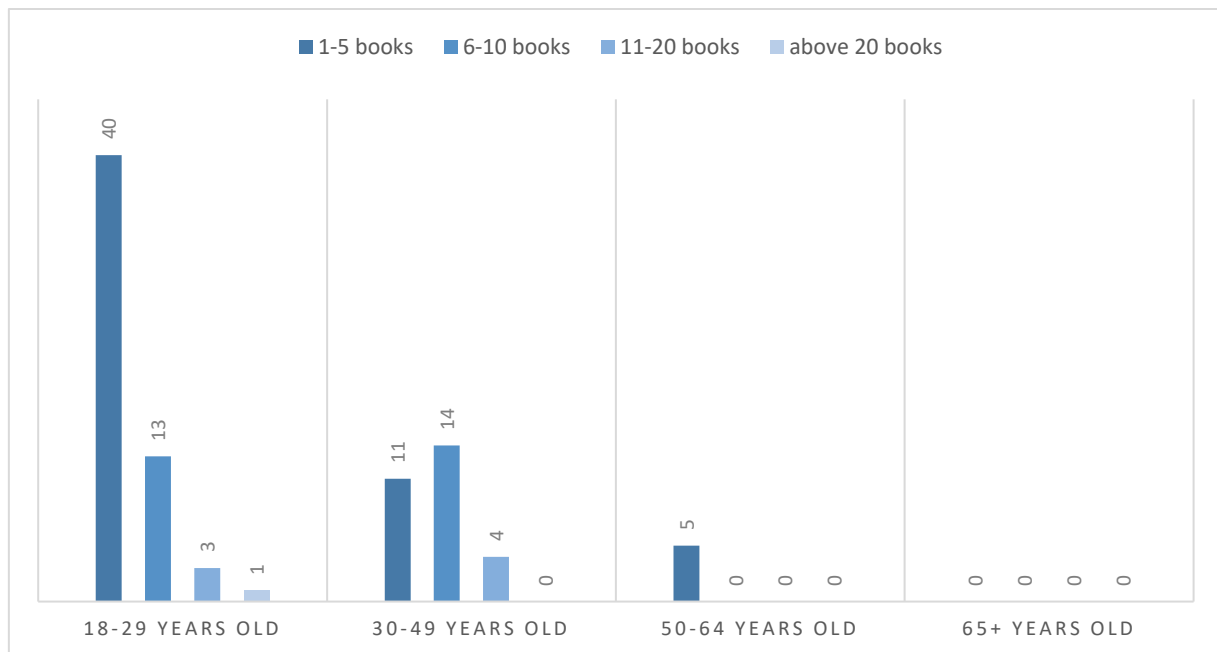
Source: own processing based on the conducted questionnaire

The majority of the respondents were people from the #bookstagram community who were familiar with the Instagram phenomenon that promotes books, reading habits and literary culture. So, all 91 participants of the questionnaire are active readers and, therefore, they are inclined to read between 1 or more than 20 books per month, just as the figure illustrates. To that end, the book consumption trend by age is that individuals between 18 and 29 years old allocate the most time for reading at least one book per month. Actually, the majority of consumers that are attracted to online visual content is stated that belongs to Generation Z, namely people with ages between 12 and 28 (An and Haryanto, 2021). Hence, our results confirm the fact that this age range is more predestinated to consume books in the digital era, where a lot of recommendation and discussions are held in an online environment, because it's easier for them to access this information.

Figure 3. Book format preferred by Romanian readers in 2023
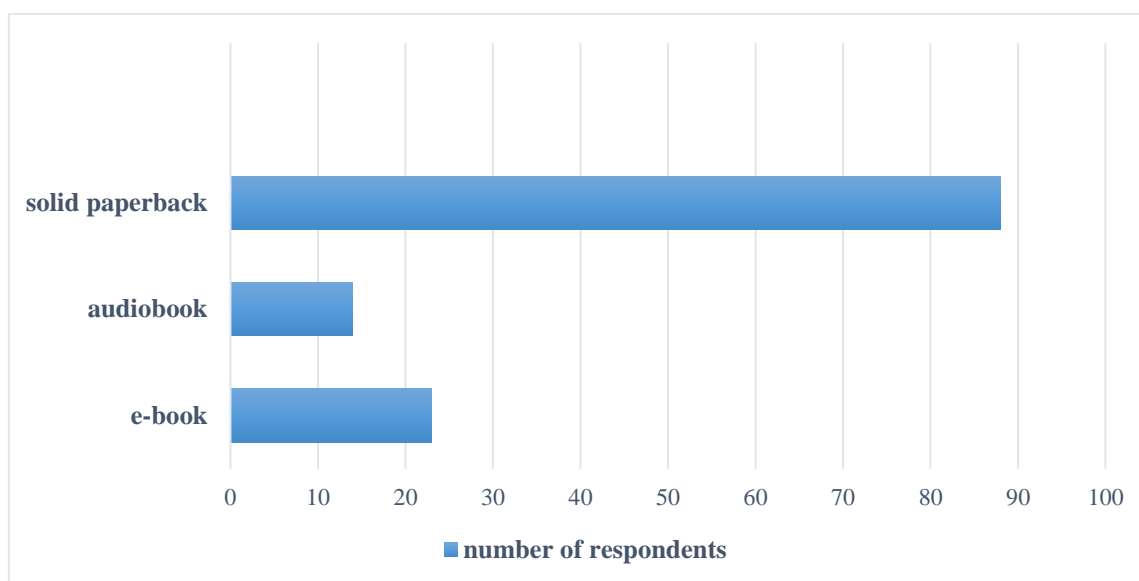
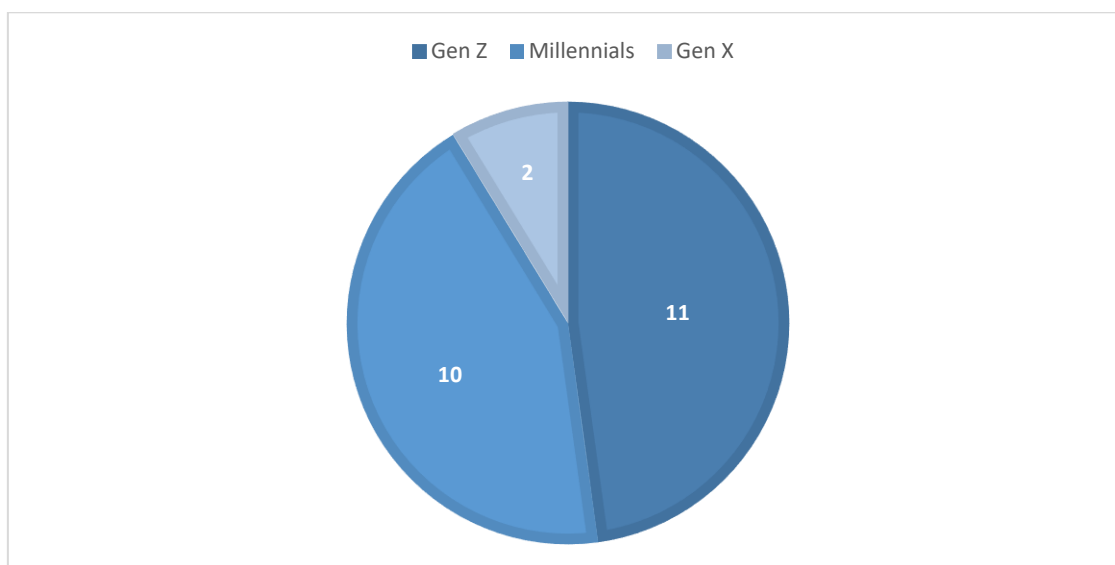Source: own processing based on the conducted questionnaire

While trying to investigate the book format preferred by these Romanian readers, we concluded in creating Figure 3 for (O3), where the majority of the respondents continues to choose the paperback version of a book at the expense of e-book or audiobook versions. Hence, the number of books sold in Romania for the near future should increase. As the Statista Research Department (2023) mentioned it is expected that book industry will maintain its course, which is steadily rising.

More than that, if in 2020 a majority of Romanian respondents have never heard of an e-book, but alone use it, we can highlight the fact that in 2023 a quarter of the respondents are regularly using an e-book.[7] Hence, 23 individuals from 91 respondents (i.e. 25%) are thinking about an electronic version of reading a book.

In the same manner, Figure 4 explores the range of ages that the e-book readers have. As follows, the majority of individuals are from the younger generation, namely Gen Z, data similar to the Statista research (2023), where in 2020, the highest consumption was allocated to teens (ages between 14 and 17 years old). Therefore, in the future we can assume that the trend in which people more familiarized with digital content and easy access to Internet chose to read from an audiobook or an e-book will continue to evolve.

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[7] Statista Research Department, 12 June 2023. Reading e-books frequency in Romania in 2020, data retrieved from https://www.statista.com/statistics/1264505/romania-reading-e-books-frequency/ on 25 January 2024.

**Figure 4. E-book consumption for Romanian reader in 2023**

Source: own processing based on the conducted questionnaire

Thus, the more accustomed to the digital, the more chances to use it. In addition, the substantial difference between book formats from the Romanian readers may change in the future since the tendency starts to add value to the digital versions of the products and, on account of that, book enthusiast will start to use all kind of formats according to their current need and comfort.

3.2. Book consumption in The United States of America

The future of bookstagram in the United States is expected to grow, adapting to new technologies and trends. Collaboration between brands and bookstagrammers will become more common, helping independent authors to promote their works authentically. Also, the impact of #bookstagram will become even stronger when it comes to accessibility of reading all together.

For (O2), we can observe in Figure 5 the book consumption habit of American readers both from 2019 and 2021, pre and pandemic years. Hence, the major difference between these periods of time is the fact that individuals, regarding the age group, are still interested in reading books. Actually, the number of American readers is growing from one year to another, data that illustrates the fact that the book industry is also growing. Even if the research presented is about respondents who read at least one book in a year, different from our research conducted in Romania, the desire of choosing to participate in the reading culture is prominent.

Figure 5. American readers who read at least one book in any format in 2019 and in 2021, by age group
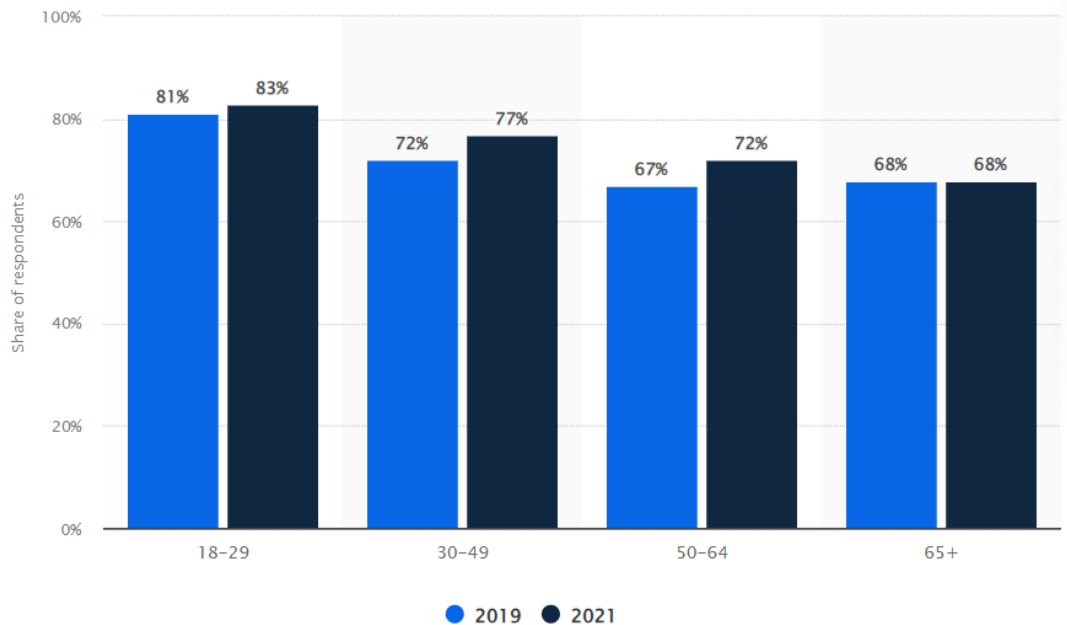
Source: Statista, 2023

Under these circumstances, the survey results show that the younger generations are more likely to read one book in a period of time of twelve months than the individuals wild older age range. This being said, the energy and vitality that the American readers from 18–29 and also from 30–49 have is the key element that supports the book consumption regularly. More than that, according to figure number 6, we can observe that with each year, people are even more eager to spend money on books.

Figure 6. Consumer expenditure on books in the United States from 1999 to 2022
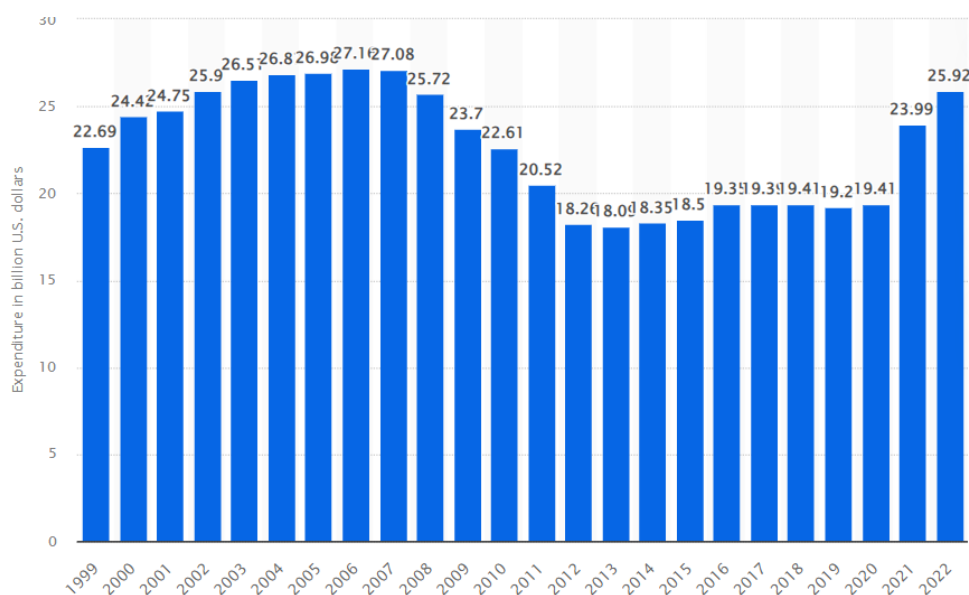
Source: Statista, 2023

Thus, the book culture and therefore, the book consumption in the United States forecast a continuous growth within book enthusiasts that are more familiar with the Internet, namely Gen Z or Millennials. Since they navigate on digital platforms and are dependent on the online facilities and its dynamism, they are expected to rapidly understand the changes in the book industry and consequently, to adapt to its transformations in order to satisfy their reading needs.

As we investigated in the United States (O4), the preferred format for the American readers is also the printed version, maintaining a constant option.

Figure 7. Book format preferred by American readers between 2011–2021
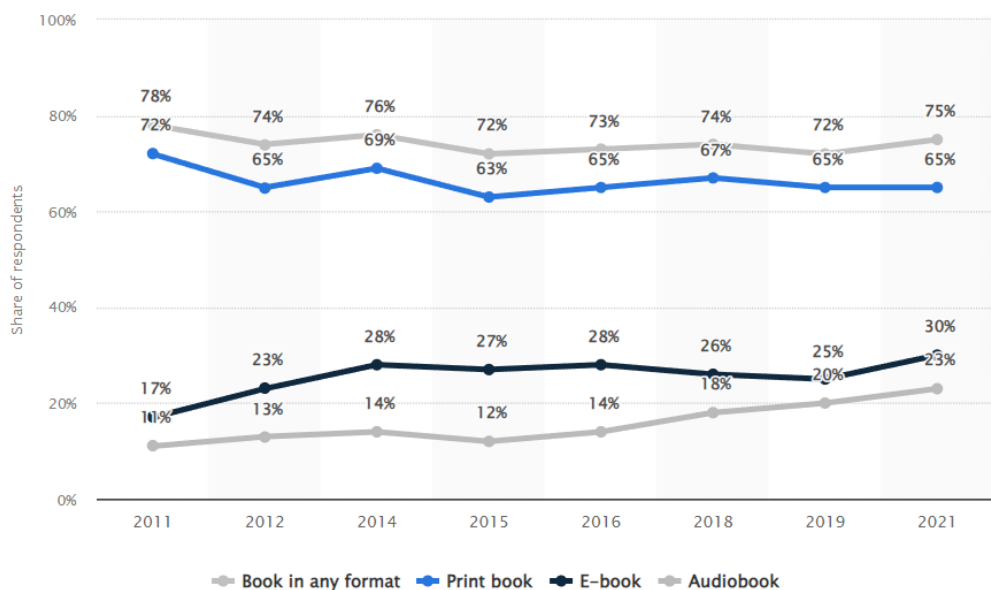
Source: Statista, 2023

This being said, we can affirm that having a physical contact with the product remains a must-do in the reading process from both perspectives. Hence, in figure number 7, we can point out that, even if the digital platforms are evolving and offer more possibilities to reach out to a book content, the printed books continue to be the most demanded choice for the American readers. As well as in Romania, e-reading, even if it includes diverse devices such as Kindle or not, is fighting for the readers' attention. In the presented data we can see that the year 2021 represents a leap point for its growing popularity, thus the future beholds a great opportunity for increasing use.

Conclusions

Concluding this research about #bookstagram phenomenon and its link to the book industry's growth both in Romania and the United States reveals a noteworthy development in the mentioned

sector and also, in the reading habits of the Romanian, respectively, American readers. Here, we highlight the evolution driven significantly by the younger generation's digital content consumption, where we mention bookstagram communities and their promotion tactics. For the both countries, despite the digital age's influence, printed books continue to be the favored format among all age ranges that participated in the study. This preference, however, does not overshadow the gradual development of the alternative forms existing. Hence, readers are starting to accept various formats of book content, such as e-books and audiobooks.

In this changing context, bookstagram, a welcoming digital ecosystem where readers share and discover book-related content, has become a catalyst in this on-going changing market landscape. Therefore, it helps close the gap between traditional and digital media, changing alongside the way in which book consumption is being made. As follows, both in Romania and the United States, this modern phenomenon has the ability to influence reading culture, especially among the youth. Growing in popularity, this phenomenon continues to shape the way books are consumed, debated and finally, marketed while also sustaining an interactive place for book enthusiasts to gather and create connections. The study's findings suggest that in order to effectively engage with diverse reading communities, the publishing industry, writers and marketers must adjust to these digital changes, namely, to focus on taking advantage of the digital platforms and bookstagram to reach as many potential customers as possible.

Under these circumstances, publishers and writers should take advantage of this growing trend among the modern readers and embrace different collaborations with influencers in the community in order to create visually appealing promotions and interactive content. Also, the characteristics of social media, namely the Instagram platform, can provide the necessary tools to maintain loyal consumers and identify preferences according to their demographics. Therefore, not only for the marketers, but also everyone who wants to advertise books and book behaviors, the bookstagram trend is crucial for enhancing the overall customer online experience and a more dynamic and interconnected 21st century book market.

The research has certain limitations that we acknowledge regarding the data collection, where we include the sample size constraints for the presented study. Therefore, there was a limited availability of the statistical information about Romania readers and for this reason the questionnaire focused only on the European geographical participants. Due to this discrepancy, namely the absence of data from the same period of time, we had to estimate the results in our dual perspective study, meaning that the responses recorded from Romania are more up-to-date than the American data extracted. Also, in order to gather more accurate results and to be able to create an analysis for the similarities and differences, we recommend future researchers to include a quantitative analysis

conducted for the same period of time and with the same components (i.e. equal number of individuals) for both countries participating in the study. In that way, the collected data will be exact and will become a turning point in deepening the specific preferences and insights about each community created around the hashtag bookstagram.

References

Abbott, W., Donaghey, J., Hare, J., Hopkins, P. (2013), An Instagram is worth a thousand words: an industry panel and audience Q&A, *Library Hi Tech News*, 30(7), pp. 1–6. DOI:10.1108/LHTN-08-2013-0047

Acikgoz, F., Burnaz, S. (2021), The influence of 'influencer marketing' on Youtube influencers, *International Journal of Internet Marketing and Advertising*, 15(2), pp. 201-2019. DOI:10.1504/IJIMA.2021.114331.

Alfonzo, P. (2019), Mastering Mobile through Social Media: Creating Engaging Content on Instagram and Snapchat. Library Technology Reports, 55(2), *ALA TechSource* (eds.), ISBN: 978-0-8389-1815-9, Extracted from Chapter 4. "Instagram in the Library".

An, C. and Haryanto, J., O. (2021), Exploring motivations of social media influencers as an emerging job market, *IDEAS: Journal of Management and Technology*, 1(1), pp. 13–23. DOI:10.33021/ideas.v1i1.1700

Balaban, D., C. and Racz, R., G. (2020), Social Media Influencer Advertising versus Advertising on Social Media Account of a Brand. Evidence from an Experimental Design, *Journal of Media Research*, 13(3(38)), pp. 46–54. DOI:10.24193/jmr.38.3

Bowles, J. (2016). Instagram: A visual view of the southeastern conference, *Journal of Contemporary Athletic*, 10(4), pp. 227–240.

Budge, K. (2020). Remember Me: Instagram, Selfies and Libraries, *Journal of the Australian library and information association*, 69(1), pp. 3–16. DOI:10.1080/24750158.2019.1688507.

Darma, I., G., S., B., Nurtiara, S., F., Amanda, R., Nindyana, R., Meisandy, M., N., R. (2020), Bookstagram Community's Book Review: A Reciprocal Ethnography Study. *Journal of English Literature, Linguistic, and Education*, 1(2), pp. 1–11. DOI: http://dx.doi.org/10.31941/jele.v2i1.1431

Leparoux, M., Minier, P., Anand, A. (2019), The online influencers strategies and their impact on consumers decision process, *Vestnik of Saint Petersburg University. Management*, 18(3), pp.419–447. DOI:10.21638/11701/spbu08.2019.305

Li, Y. and Xie, Y. (2019), Is a Picture Worth a Thousand Words? An Empirical Study of Image Content and Social Media Engagement, *Journal of Marketing Research XX(X)*, 57(1), pp. 1–19. DOI:10.1177/0022243719881113

Lo, E., Y. (2020), How Social Media, Movies, and TV Shows Interacts with Young Adult Literature from 2015 to 2019, *Publishing Research Quarterly*, 36, pp. 611–618. DOI:10.1007/s12109-020-09756-8

Martinez-Lopez, F., J., Anaya-Sanchez, R., Esteban-Millat, I., Torrez-Meruvia, H. (2020), Influencer marketing: brand control, commercial orientation and post credibility, *Journal of Marketing Management*, 36(17–18), pp. 1805–1831. DOI: 10.1080/0267257X.2020.1806906.

Novotná, A., Matula, K., Kociánová, V., and Svačina, V. (2021), Lessons Learned from Bookstagrammers for Library Promotion and Promotion of Readership: Qualitative Study, *Library Philosophy and Practice (e-journal)*, 6768. https://digitalcommons.unl.edu/libphilprac /6768

Pradhan, D., Kuanr, A., Pahi, S., A., Akram, M., S. (2022), Influencer marketing: When and why gen Z consumers avoid influencers and endorsed brands, *Psychology & Marketing*, 40(1), pp. 27–47. DOI:10.1002/mar.21749

Salomon, D. (2013), Moving on from Facebook: Using Instagram to Connect with Undergraduates and Engage in Teaching and Learning, *College and Research Libraries News*, 74(8), pp. 408–412. DOI:10.5860/crln.74.8.8991

Statista. (2023), Book consumption in Romania 2020, by number of books purchased last year, retrieved from https://rb.gy/h2gl4j.

Statista (2023), Book consumption in the U.S. 2011-2021, by format, retrieved from https://shorturl.at/gizGX

Statista. (2023) Book readers in the U.S. 2019-2021, by age group, retrieved from https://shorturl.at/jvFP8

Statista. (2023), Industry revenue of "book publishing" in Romania 2012-2025, retrieved from https://shorturl.at/dnDFR

Statista. (2023), Reading e-books frequency in Romania 2020, retrieved from https://rb.gy/5eojui

Statista. (2023), Recreational books: consumer expenditure in the U.S. 1999-2022, retrieved from https://shorturl.at/fnqS5

Thomas, B. (2021), The #bookstagram: distributed reading in the social media age, *Language Sciences*, 84. DOI:10.1016/j.langsci.2021.101358

Tselenti, D. (2020), *'What a nice picture!' Remediating print-based reading practices through Bookstagram,* Paper Presentation at the Conference: Digital Practices: Reading, Writing and Evaluation on the Web, pp. 23–25.

Wiederhold, B., K. (2022), BookTok Made Me Do It: The Evolution of Reading. *Cyberpsychology, Behavior, and Social Networking*, 25(3), pp. 157–158. DOI: 10.1089/cyber.2022.29240 .editorial

Zappavigna, M. (2015), Searchable talk: the linguistic functions of hashtags, *Social Semiotics, 25*(3), 274–291. DOI: 10.1080/10350330.2014.996948.

Zhan, M., Tu, R., and Yu, Q. (2018), Understanding Readers: Conducting Sentiment Analysis of Instagram Captions, *International Conference on Computer Science and Artificial Intelligence*, pp. 33-40. DOI:10.1145/3297156.3297270.

A new performance paradigm: watermelon effect in HR services

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Abstract

In the past 10 years at least, not only that human resource specialists have been challenged to up-skill and re-skill themselves to stay relevant in a world dominated by technology, but they are in the driver's seat for selecting the right technology for employees and leadership, for managing large scale implementations and integrations, managing vendors, with the objective to keep the workforce engaged. Technology development disrupted traditional thinking, changed consumer behavior, and led to what we could call systemic malfunctions – the rapid development of technology gave no time to human resource specialists to acquire expertise in data analytics, information technology, user behavior, etc. – which translated into watermelon effect: metrics look good, but reality feels different. This study aims to add one more perspective in evaluating human resource technology performance, showing that we are measuring mostly service efficiency instead of measuring employee and business impact and outcomes. The methodology used in this study is Action-Research, mainly because is mostly aligned with Agile philosophy and business operating models. The existent literature is rich in proposing new ways to keep technology users engaged, and delighted, however, is not provide practical and relevant guidelines on how to measure their perception over the holistic experience mediated by technology. Outdated key performance indicators are no longer capable of driving further innovation, setting the stage for failure in keeping employees engaged. Furthermore, we believe that now more than ever before it's time for consultants to play the role of service aggregators, to bring together technology, processes, and service providers, to unify the experience of employees.

Keywords: employee experience, technology, performance, KPI, innovation

Introduction

As the Human Resource (HR) function of organizations started to play a crucial role in the era of digitization, the technology used to mediate the interactions between HR Specialists and Employees became the focus of the leadership. Creating a virtual space to foster collaboration and engagement, organizations started to investigate plugging more employee tasks into the digital space, life at work being now handled by the systems – like annual leave requests, references, time and

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attendance, bonuses, all one can think of. Given the fast-paced development of technology, and the discovery of its use, companies implement systems in a more intuitive way rather than adopting a more academic approach, based on research and proven results; part of it because of the time pressure and part of it because of the lack of specific bibliography. Conducting studies to analyze the effects of technology adoption on employee perception is imperative if companies want to meet their objectives. Moreover, the pandemic brought irreversible changes, as digital transformation became the priority of all companies, which means the perception of technology (and its perverse effects) needs to be looked at too. This study is specifically addressing the need to help understand how to measure the efficiency of the technology considering new expectations influenced by the use of technology itself (watermelon).

Companies developed metrics to measure the quality of their services, and the efficiency of the technology, but most often these are not applied to their internal functions, such as human resources. Moreover, the companies adopting a modern model, look at metrics that picture the employee engagement level which is not a result of HR operations and its processes. Only two decades ago large companies started to outsource their internal functions to specialized service providers and this has been the beginning of performance measurement. It is this context that creates the need to understand the metrics associated with the service and the effects of technology use.

In this fast-paced changing landscape, no wonder that HR faces multiple times the watermelon effect – a concept associated with key performance indicators showing positive quality of service (green color), although the perception of quality of service is poor (red color). The concept has been borrowed from safety experts, who have been highlighting that in their experience, they encountered situations when surface through parameters were reflecting a good quality of processes, whereas reality on the field was exposing professionals to incidents that could have been avoided (ABB, 2017).

In HR services the concept is known especially when associated with outsourcing. Large companies engage multiple partners in an ecosystem, without necessarily looking at the end-to-end process, generating a watermelon effect only by contracting different partners to manage different areas of HR – payroll with one provider (mostly because there are few payroll service providers who have global coverage), employee benefits with another one, service center with a third one and so on. The reason behind this is cost efficiency and proof of expertise. Consultants, often engaged to look at the employee experience holistically, focus on the end-to-end experience too high level, making room for gaps that later on will lead inevitably to the watermelon effect.

Irina Butnaru, one of the two authors of this article, has spent have spent 11 years working as a leader in HR Services, implementing and improving constantly service models for organizations, based on technology and human interaction. She helped organizations shape service and technology

adoption strategies, end to end processes, and workflows, constantly focusing on how to achieve a more rapid adoption, because, in the end, employees will have to utilize the technology to fulfill their responsibilities in relation to their employment.

Leading a global organization (line of business) providing HR services to international companies, she constantly looked for ways to improve the quality of services, and level of performance, to meet clients' expectations that have been constantly changing (due to technology context – changing user expectations).

There is no unique recipe for success, and it has been fascinating to witness how fast large organizations must adapt and adopt new technologies. In this fast-paced changing landscape, no wonder that she faced multiple times the watermelon effect. This study focuses on bringing a new dimension to the watermelon effect in business – technology use is triggering new needs that lead ultimately to the watermelon effect or on contrary, show the opposite (indicators are red but employee perception is good).

It has been often, especially between 2010 and 2020 that we have heard – you are not being proactive, you are not understanding our employees, you are not understanding the real impact, how can we improve the service beyond the contractual agreement, etc. HR service providers equip themselves to deliver the best services to their clients, meeting contractual expectations, especially knowing payroll has a significant impact on employees; however, it is often that they hear it still needs improvement.

On the one hand, service providers looked at the perception of their stakeholders – is it that they feel the service is not meeting expectations because they are dealing mostly with the issues and escalations? – but on the other hand, they looked at the performance of their service centers – Are they listening? Are they empathetic? Are they really solving the issue?

Usually, service providers make use of data analysis to get to the bottom of the issues, sometimes combined with qualitative interviews (mostly with detractors) – in business services root cause analysis is the usual methodology, to understand the problem and to find solutions that would translate into an action plan. Most of the issues tackled through root cause analysis cover timeliness and quality gaps, translated into adding resources into the service center and re-train the existing staff to remind them of procedures to be followed.

Still, the watermelon effect comes back regularly, hence, it's time to look at how performance is measured, and how the performance is tied to what end-user (employee) experiences, and it's time to start wondering if technology design doesn't have a more important role than anticipated when

using HR systems. Especially when the business world faces a silent crisis of HR technology, HR specialists have to deal with data, systems, and integrations, in other areas of expertise than theirs.

It's time to question the need for a holistic set of key performance indicators, to measure both technology performance and service center performance, indicating the experience quality, and the outcomes generated by the vendor ecosystems.

There are numerous studies and a rich bibliography in the field of human resource management but there is a gap in addressing specific human resource service performance indicators, part of it because the function is measured holistically by employee engagement scores, part of it because service providers are reactive instead of being proactive by adopting a more academic approach.

1. Literature Review

As mentioned earlier, HR's key performance indicators address the business impact and/or outcomes like attrition rate, absenteeism, revenue per employee, engagement score, inclusion rating, diversity index, etc. One of Irina's business objectives over the years has been to standardize and leverage best practices across client services and it is a prerequisite to analyze the status-quo before standardization. Her empirical studies over the years, conducted on a set of 20 companies revealed a set of seven performance indicators that are being used by more than 10 companies, indicators that are largely used by most of the companies in measuring their success in providing services, as shown in the below (Figure 1) will detail each KPI for alignment, given the numerous studies with slightly different views on the definitions and methodology.

Figure 1. Most Used KPI Review and Observations
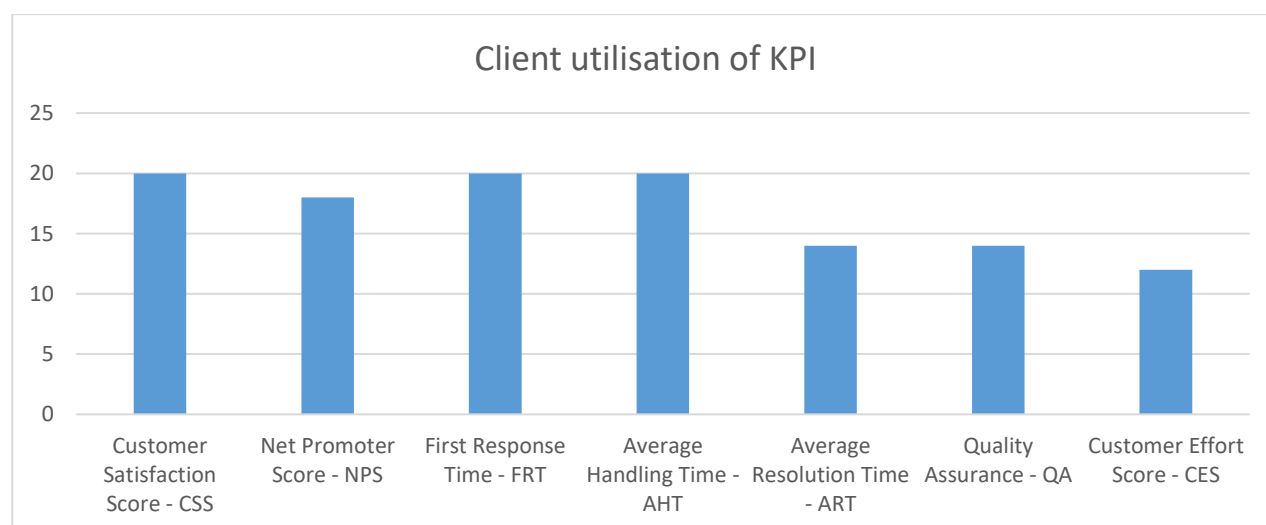
Source: Own representation

One of the most common metrics used by the business world is the Customer Satisfaction Score – CSS – which is defined as "the overall happiness a customer feels when interacting with a company's products and services" (American Society for Quality, 2024). On a scale from 1 to 10, the user rates the interaction by responding to a question: How satisfied are you today with the service provided? Measurement scale: 1 – 6   Detractor; 7 – 8   Passive; 9 – 10 Promoter.

One observation would be that CSS it is measuring the perception of the overall experience or use of a product, without necessarily understanding the standards against which the service or product is measured. If we limit the analysis to services, the interaction starts with technology and a service representative might come in the process to pick up a query that could not be resolved with the help of technology only. Moreover, if the technology is provided by a partner of the ecosystem and the service center is operated by another partner, does it mean the end user will receive two surveys? One for the experience associated with the use of the technology, and one associated with the use of the service center services?

Net Promoter Score – NPS – "measures the loyalty of customers to a company" (Qualtrix, 2020). Mostly applicable to senior leaders, from a scale from 1 to 5 where 1 is very poor and 5 is very good, they are being asked to evaluate 3 areas: innovation, technology, and added value. NPS can also be measured with a single question survey (how likely would you recommend us to a friend?) and reported with a number from -100 to +100. A higher score is desirable.

This section will not be expanded in our study, since our objective is to identify the indicators related to the experience of HR Technology, and employees are not being asked if they would refer the HR service to a peer, but rather their loyalty is measured through the engagement surveys where they need to evaluate if they would recommend the company as employer. However, the quantitative score without qualitative data may be misleading, hence, it is highly recommended to use both in establishing the action plans.

First Response Time – FRT – is defined as the average time to provide a first response to the requestor, except for the acknowledgement of receiving the request. FRT is to be calculated as the average (sometimes the median) of the resolved tickets/cases within the established timeframe versus the total number of tickets/cases received.

More than twenty years ago, when automation was not so present, at least not widely, this indicator was extremely important to all service providers, indicating the time to provide a first response to a customer request. As the technology evolved, the systems have been used to provide an automated first response, setting expectations with requestor/end-user/customer and comforting

them. In essence, this need may have been created by the unknown at that time – the uncertainty that the email or form filled in had been received by the service provider.

Average Handling Time – AHT – is defined as the average time spent by the service provider to handle a request – be it through a call, be it through a chat conversation, be it through an email – and was used to measure efficiency in providing the solution. This indicator has been crucial in forecasting resources. The indicator has been instrumental in leading the way to reduce or eliminate handoffs between service representatives, which was causing the long average time in some cases (Dixon, Toman, and Delisi, The Effortless Experience - Conquering the New Battleground for Customer Loyalty, 2013).

One observation would be that a good AHT doesn't necessarily mean a great experience for the end-user. The watermelon effect appears when service center representatives are measured by AHT and they rush the conversation or they rush the resolution, creating the space for making mistakes, and being under pressure. One way to constantly check the validity of AHT is in conjunction with other metrics – CSS, UR. AHT in itself is nothing more than the basis for forecasting resource needs. Also, the effect can be the way around too – too long AHT but great customer satisfaction.

Average Resolution Time – ART – is defined as the average time spent by a provider to work on a ticket/case including time in pending (with other providers/or clients). As organizations expand and new technologies and services arise, we cannot talk about single service providers in HR, in Finance, or Procurement. Most of organizations have a vendor ecosystem and ensure smooth delivery of services to their employees by coordinating the network.

Internet access, highly automated systems in our day-to-day personal life, and AI everywhere created the same expectancy from employer technology – real time action, real time resolution. However, when dealing with multiple stakeholders one cannot expect resolution in real time, this metric being the one with most instances of service complaints seen as watermelon effects – metrics showing expectations have been met by each service provider, but employees complaining about time to resolve their query.

Starting in 2017 the business world began to talk about experience indicators, a leverage from technology user experience indicator. We needed to shift to indicators that would reflect more what customers expect, not what service providers can offer. The same was applicable to employees, they were expecting the same experience from technology, be it at home, be it at work. Still, only 4 companies out of the 20, measure performance of the service using this KPI too.

Quality Assurance – QA – is measured through all or selected indicators: accuracy of data provided, correctness of the solution provided, professionalism of the representative, and ability to meet the customer needs.

The quality assurance scores reflect the competence of the service representatives, encompassing the training quality, compliance controls, personal skills, and management strategy, predicting the ability to upskill and provide future services, more complex, and more sophisticated. It is well known that one negative interaction has a 4 times higher impact on quality perception, hence the importance of this indicator (Dixon, Toman, and Delisi, The Effortless Experience - Conquering the New Battleground for Customer Loyalty, 2013). The service providers not only started in 2015/2016 to take the proactive approach, to align to the new attention span of 8 seconds but understood the weight of disappointment over delight and worked on equipping their staff with technology that would enable them for success (Swinscoe, 2016). Service providers who want to be successful and known as trusted partners invest in quality assurance functions, train resources, implement controls, identify points of failure, and close the loop with more training, up-skilling, re-skilling, and understanding what causes the failures.

The more we automate, the more service representatives will handle more complex and new queries arising from consumer behavioral changes.

Customer Effort Score – CES – is one of the recently added metrics that evolved from the need to drive customer loyalty (Dixon, Freeman, and Toman, Stop Trying to Delight Your Customers, 2010).

On a scale from 1 to 3, the user rates the easiness of the interaction/use of technology by responding to a question: How easy was it for you to get the service today? where 1 is very difficult, 2 not difficult but not easy, and 3 is very easy. Another way of measuring customer effort score is by the number of touchpoints within a process.

Large organizations, which are the subject of the research, evolved to a high degree of automation, that would imply a high level of efficiency, implying among others, a low level of user effort. Technology, through the bots, should be sufficient to complete any employee related tasks, such as annual leave requests, balances, payroll inquiries, policy clarifications, references, etc. because the data is kept in the data lake, the bot is integrated with all employee data systems and should easily identify the solution. However, the employees' queries are becoming more and more complex, identifying new needs as society evolves. It takes time to understand new trends, find complex solutions to match most of the expectations, and feed the bots to be able to respond.

Why change systems as a result of measuring perception when technology cognition varies from user to user and efficiency standards vary too? This has been the trigger to leverage the agile methodology of implementing platforms and systems to the HR Technology space and apply the Action-Research method to enable analysis of behavior and change in the perception of technology

users. Especially because in 2020, 100% of the service providers in all locations have been operating remotely, due to the Pandemic restrictions, making the virtual employee space more important than ever before.

Along with the development of technology, we witnessed changes in consumer behavior, and with this, we want to emphasize the importance of history and social context – it is specifically the development of technology that changed user behavior, expectations, and evaluation criteria. We adopt a technology, and we become loyal to it, but we also develop new expectations, and needs. We did not imagine that once we have access to integrated data systems, we will develop the expectancy for predictive data. A few years ago, we had no other expectation than to have access to aggregate data. No wonder we are facing the watermelon effect – the question is how much of this is being influenced by continuously changing expectations of technology users, and how much of this has to do with the fact that service providers operate in an ecosystem that needs alignment. Independent of the cause, both need key performance indicators reviewed.

When analyzing the key performance indicators, we cannot study the technology or the people only (service providers), but we need to identify a way to study both and ensure some level of alignment.

Technology is continuously evolving, and developers work with Agile methodology. In technology, well-defined plans are only around the platforms, tools, and systems to be used, the technology landscape and the integrations to be built, but then the functionality of the tools and systems is not documented a priori, part of the plan, but it is documented in real time, as the technology implementation and configuration happens. It is precisely to allow developers to explore the technology capabilities and allow integration of improvements that come from testing and experiencing the tools. Agile is not just about being flexible but also about a mindset that fosters collaboration, efficiency, and continuous improvement (Brook Appelbaum, 2023).

In social sciences, a similar approach in terms of managing change from within and following a more adaptable path to implementing a change is represented by Action–Research. Moreover, this methodology applied by "internal resources of an organization seeking to inquire into the working of their own organizational system, in order to change something in it, can be considered or understood as undertaking insider action-research." (Shani and Coghlan, 2021).

Action-Research as a method applied in the workspace, was inspired by Kurt Lewin, a renowned German American psychologist based in the USA, a pioneer in the field of psychology applied in society and organization. The method can be applied in any situation of change in a phased manner, based on 3 steps – planning, action, and evaluation/research and in a democratic organizational environment will promote critical thinking and collaboration. Today the methodology

most often applied in technological projects is Agile, a methodology based on the same principles. But technology alone can't bring big benefits. It has also been mentioned in the previous sections that the world of training has most easily adopted these innovative methods and multiple controversial theories around which the most advanced organizational structures in the world have been built. Collaboration and immediate action are the key components to adapt solutions to the current dynamics.

NTL – The National Training Laboratories in the USA have experienced behaviorist theories in conjunction with the research-action method and helped create a practice and methodology to help organizations develop – team building, process consultation, conflict management democracy and group autonomy have become recurring themes in the literature. The development of the organization directly influences the quality of social life so that the task and responsibility of organizations to define and solve problems, to introduce new forms of leadership, to change the organizational culture cannot be fulfilled at an intuitive level without considering social behaviors and emotional balance / emotional well-being.

Organizations now have an impressive set of data, but they lack a solid foundation to capitalize on it and the intuitive way to draw conclusions does not necessarily lead to essential changes. A rigorous collection of data and the choice of appropriate methods of analysis, together with the immediate implementation/correction of the results, can have a considerably greater and at the same time positive impact on the organization and extrapolate, on the society (Chevalier and Buckles, 2013).

A study conducted by the Swedish Healthcare Organization with the aim to improve an integrated care system for elderly persons (Lifvergren, Huzzard, and Hellstrom, 2015) is very eloquent for the business world and how we constantly try to improve services and reduce cost, but with a focus on innovation and increased satisfaction at the same time

Starting in 2002, elderly integrated care has been prioritized in Sweden, being a strategic objective for the country. A report from 2006-2007 (SALAR, 2008) was suggesting unclear outcomes from a patient perspective after numerous improvements were applied in 16 out of 20 counties in Sweden. The challenges that prevented the outcomes from appearing, were around the complexity of the stakeholder ecosystem, being formed out of specialists (doctors, nurses) politicians too, and administrators, but at the same time around the linear approach that has been adopted. According to (Mintzberg and Glouberman, 2001) it is vital to ensure collaboration of all stakeholders in the system, including the patient.

The research has been conducted with patient representatives, co-workers, managers from various healthcare providers, politicians, and union representatives, to ensure a 360 degrees approach. The project team developed a routine inspired by the action-reflection group: mapping the patient pathway, identifying, analyzing, and measuring weak points, designing and introducing improvements, evaluating implemented solutions, and reflecting. The problems identified were always confirmed through quantitative data using structured data collection, stratification of data, control charts, Pareto charts, fishbone diagrams, cause-effect diagrams, and histograms. Measurements were also repeated after improvements to ensure the practicality of actions taken.

At the end of 2015 the Orjan network presented some key outcomes of its work:

- elimination of waiting time at the reception, except for non-acute heart ailments
- reduction in the number of hospital admissions to the medical clinic (18%)
- initiation of process work in many other clinics
- increase in staff awareness and learning along with patient pathways.

The reason we provided more details from the study is to make a parallel and highlight the similarities between the study approach and the corporate business model. Large companies developed business models that encompass all of the above. The perception is that all the business routines emerged intuitively and are not grounded hence, case studies and white papers are valid sources of information, and they contain valuable empirical data. From defining the problem to be solved or improvement need, data collection and analysis, regular meetings to track progress, address risks and issues, and change the course of action, all exist in the business practice and are followed at all levels. Hence, it has been easy to conclude that action-research is the most appropriate way to study watermelon effect and other pressing business matters.

2. Methodology

To elaborate more on the objective of this study, the human resource service providers are usually dealing with service issues around timeliness and quality of service – two areas where there is a constant focus to improve, the theory which has been validated by the metrics identified as being most commonly used, because 3 are used by 20 companies out of 20 (as shown earlier in Figure 1): Customer Satisfaction, Average Handling Time and First Response Time.

We selected 2 different companies to conduct case studies since in both watermelon effect seemed to be present and related to the same metrics – quality and timeliness of the service. Companies hold important data that is and should be used to help improve the services, products, and

overall business performance. Technology is supporting data analysis more than ever, having access to integrated systems and making possible the use of tools without necessarily having deep expertise in statistics and data interpretation. But, having access to data is not everything, companies should challenge the status-quo including the metrics, leading to new correlations and identifying new ways to improve. An interdisciplinary approach is adding more and more value, by creating diversity and the possibility to look at the issues from all angles. Focus groups are quite common in the corporate environment, hence bringing together specialists from quality assurance, business analysis, data intelligence, business operations management, client management, clients and representatives has been achieved, ensuring diversity not only from a business experience perspective but from an educational background too. Starting with a set of data from systems, collecting input from each participant helped define the problem to be solved and set objectives along with directions for action.

Figure 2. Types of alignment
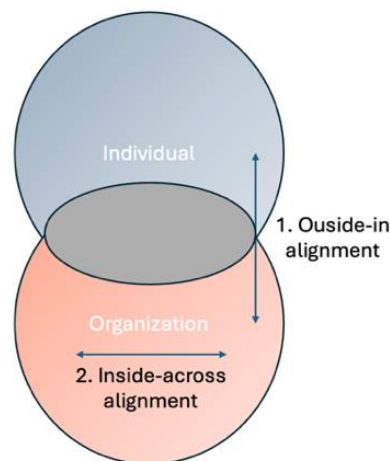
Source: Kalbach, 2021

During both case studies process blueprints and diagrams have been used to map the employee journey and each process, step by step, to understand the experience end to end. Processes that were designed in early 2010 were no longer relevant for employees in early 2020 (Kalbach, Mapping Experiences: A Complete Guide to Customer Alignment Through Journeys, Blueprints and Diagrams, 2021). According to Jim Kalbach, there are two types of alignment: the alignment to the experience from the outside in and internal alignment between the teams that create the experience (Figure 2).

The first case study, conducted between 2019 and 2021 has been focused on the timeliness perceived issues (average resolution time) – watermelon effect was present in employee perception. Although the service center was providing the resolution in 1-3-5 days depending on criticality as

agreed with the stakeholders, the employees were unsatisfied. The agreed timeliness was met – 95% and showing green, but the employees were complaining and escalating.

The study has been conducted on a global company, having 18.000 employees worldwide. The focus has been on Europe, where the complaints were mostly coming from. Europe – 6.521 employees, LATAM – 1.823 employees, US – 7.310 employees, APAC – 2.346 employees. We did not factor in any demographic data other than nationality/region, this being a subsequent step if the study would not reveal useful information without these attributes.

We conducted a focus group oriented on the improvement of timeliness along with customer satisfaction KPIs formed of 3 quality assurance specialists, 2 data intelligence specialists, 3 business analysts, 2 operations managers, 2 team leaders, 1 project manager, and 1 Black Belt operations specialist to define the problem and identify a plan to address the issue.

The second case study from 2019 – 2021 on Average Handling Time (AHT), has been conducted with an international company subsidiary in the United Kingdom, having cca. 21.500 employees, delivering professional services.

The objective was to improve metrics, since a data analysis on a different matter (chatbot enhancement) revealed that in 2019 compared to 2013 (data has been stored from 2013 and this was the basis we were starting from), the time used to resolve phone queries increased from an average of 8 minutes to 23 minutes and still, Customer Satisfaction Scores were not reflecting any severe issues – by contrary, it was quite linear, the average being 86,95% (green, according to dashboards, against a target of 85%), as shown in the graph below (Figure 3).

Figure 3. Average Handling Time and Customer satisfaction trends (2013 – 2019)
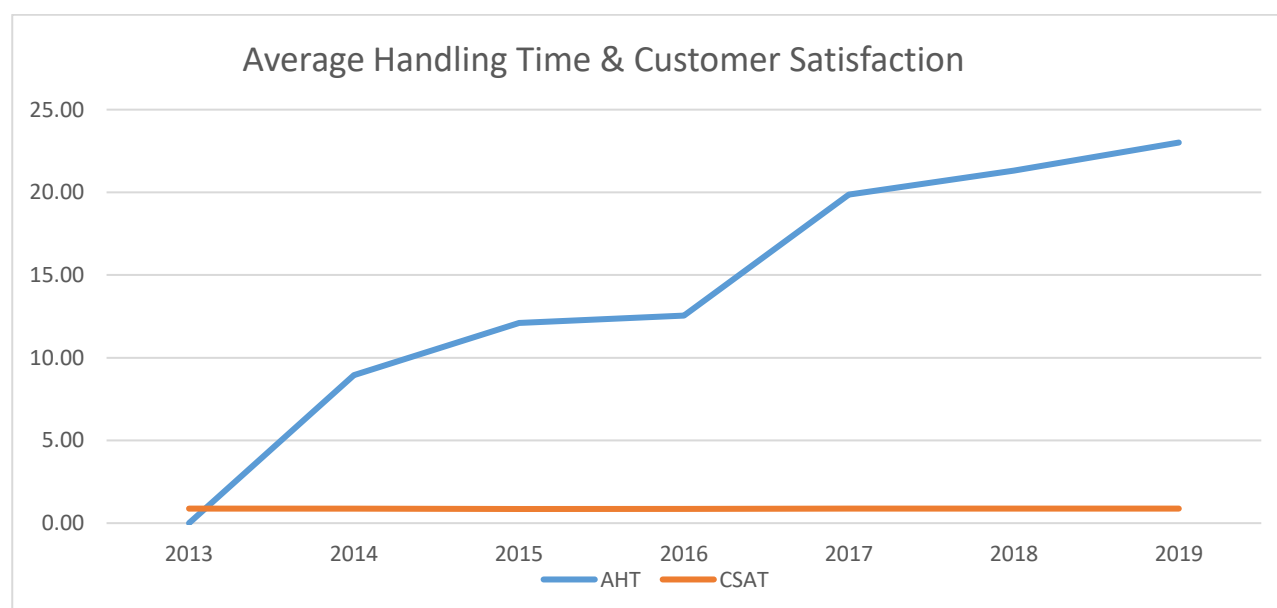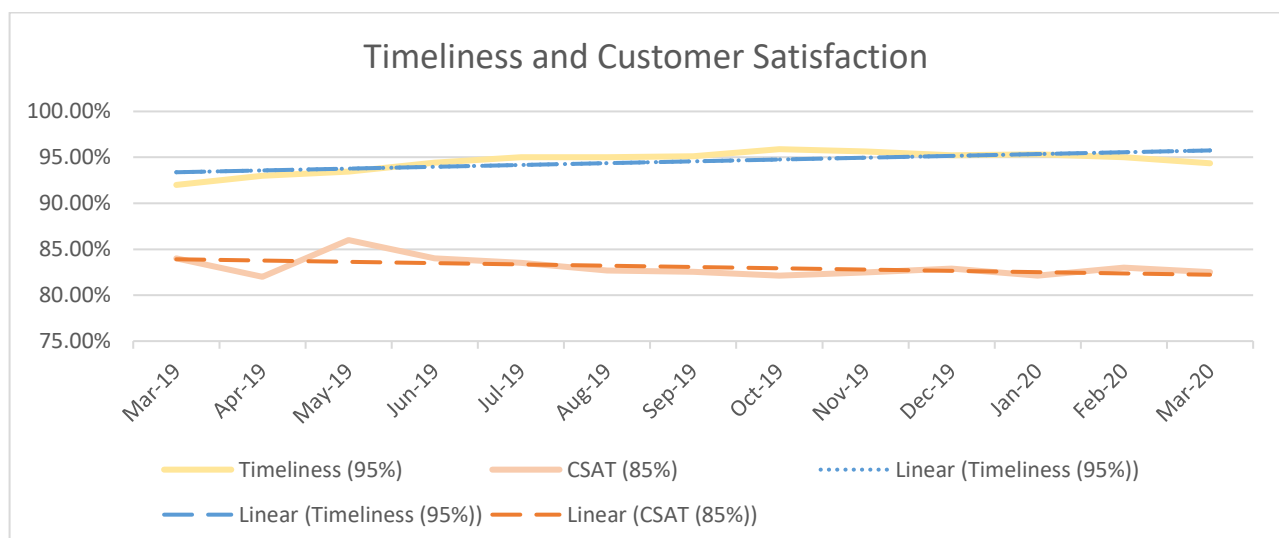

Source: Own representation

The dilemma we had to deal with was that the customer satisfaction survey was showing linear positive results (CSS), while AHT was disappointing; so, it was very unusual because until that time, efficiency was the most important attribute of the service provided. So, this could be seen as the reverse of the watermelon effect: although AHT was red, the perception of the service was green, validated by CSS.

The need was identified because of not being able to meet the expected performance levels across several years – the target was set for 7 minutes per call in 2013, to handhold the user to navigate the portal and/or resolve any technical issues that may arise (password reset, wrong browser, etc.). The customer was somehow satisfied because there were almost no complaints associated with timeliness coming from the business but on the other hand, the service provider was paying considerable penalties for not meeting the service levels. The service provider appointed a team of professionals – operations managers, quality analysts, data analysts, and business analysts, led by the service center responsible – to identify the root cause and remediate the problem for the customer and the company too.

3. Results

Case Study 1: Although the timeliness metrics were showing as yellow to green – 92% - 95,89% - from March to October 2019, the Customer Satisfaction Survey results were quite linear and still on a negative trend, as shown in the chart below (Figure 4) throughout the same period of time – 84% to 82%, which was showing a contradiction – if timeliness would improve and end-user would get matters sorted, how come satisfaction does not improve?

Figure 4. Timeliness and Customer satisfaction trends observed from March 2019 to March 2020

Source: Own representation

During the discussions of the focus group, we concluded there are 2 hypotheses that need to be tested:

- The prioritization was not aligned with employee expectations (queries and inquiries around payroll are a priority that allows 1 day resolution – time and attendance, promotions, demotions, bonuses, etc. - followed by employee referrals, mortgage, medical, etc., within 3 days, and rest within 5 days).

- Overall processing time (vendor + other vendors or customer organization like managers, workers council, HR, etc.) was not aligned to employee expectations – in cases where one or more vendors were involved, the natural time was not equal to processing time (vendor has a performance indicator of 1/3/5 days but excluding pending time with customer organization or other vendors).

300 interviews were conducted during March 2020 and August 2020 with the help of 25 service center representatives. The sample has been selected from the reports showing very low and high customer satisfaction scores from January 2020 to March 2020, taking into account a 90% confidence level and 5% margin of error. (The sample was statistically calculated at 258 rounded to 300 to allow 12 interviews for each representative for training purposes too).

The interview duration has been 7 minutes on average and consisted of 2 major opening questions: What made your experience with HR Service Center disappointing? and What can we do better next time?

The representative assigned the feedback to a sub-process (onboarding – pre-employment check, onboarding – induction day, etc.) and reported using a mapping sheet (interview number, positive/negative, process, sub-process, timeliness, accuracy, representative issue). In addition, the interviews have been recorded and a tool embedded into the voice solution has been used to automatically analyze the frequency of words, and tone of voice, and extract the clusters.

The preliminary conclusions of the discussions (starting point for further data analysis and validation) were that we are not measuring the natural or perceived time of resolving tasks but the effort time on the service center side. The employees were complaining about the end-to-end time – comprising the time of all vendors and internal stakeholders – which is changing the paradigm. We now need to look at the aggregated service, at the experience overall, thinking or working in silos is not an option any longer.

The onboarding moment/journey is one of the most important for companies and employees and from the data it was obvious that it was the focus (most of the negative feedback was in this area). Some studies concluded that employees are more likely inclined to stay longer with the company if the experience associated with onboarding is positive. Also, some studies show that employees who

did not have a pleasant onboarding experience, are likely more inclined to leave the company in the first 9 months of their employment.

The end-to-end process is relevant for the study also because it involves more vendors specialized in different areas – we might take as examples specialized recruiting services, professional background check services, pre-employment screenings (for visa, residency, work permit, etc.), HR outsourcing partners (transactional – offer letter, contracts, employee file, etc.), training services – allowing analysis on internal alignment, between all entities (vendors) behind the holistic experience.

The analysis started with feedback provided by the interviewed employees for different areas of the journey – the below chart (Figure 5) shows the type of feedback (positive or negative depending on the position in the grid - 30% to 130%) correlated with the area of the journey.

Figure 5. Feedback on Onboarding experience stages
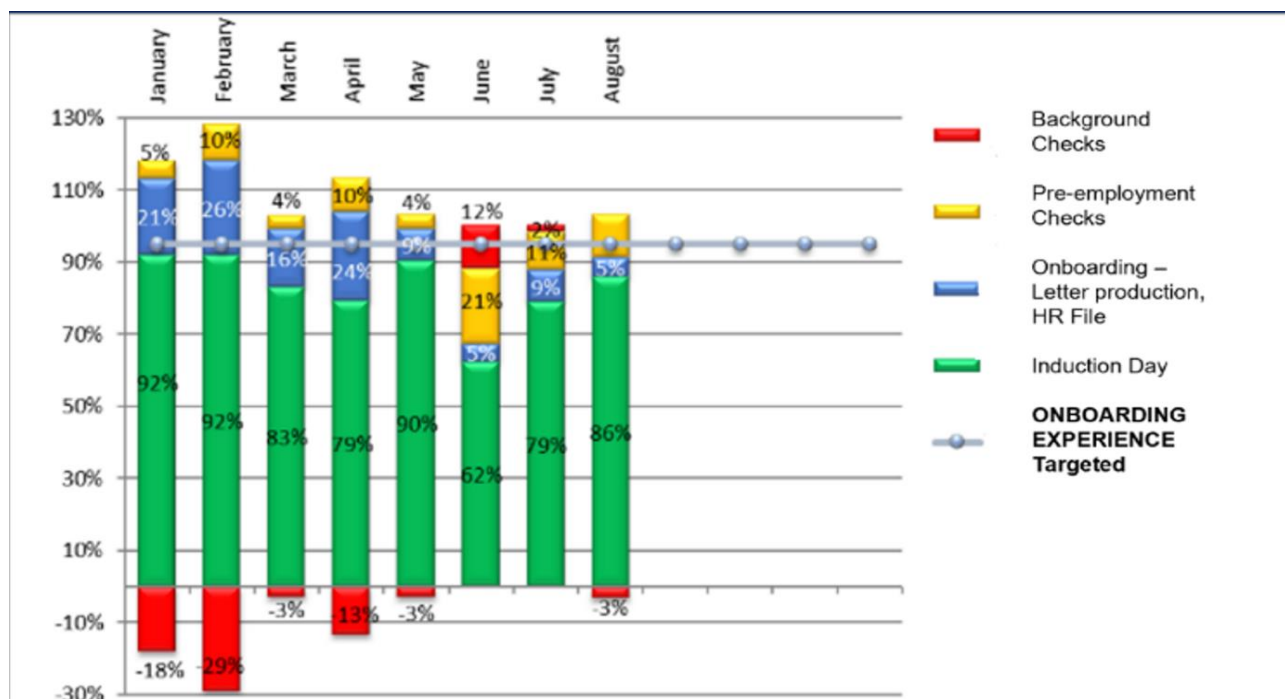
Source: Own representation

The perception of the overall onboarding experience was quite positive, but the negative feedback mainly came from the background check step and the induction day which were two areas out of the service center control. Still, there were some improvements that the service center could apply – setting expectations with candidates (if the candidate handling service is outsourced) on the duration, and effort expected, and setting some notifications on the way to alleviate the pressure of the waiting time (while background checks are performed, candidates might be under unnecessary stress). With regards to induction day – the first day of an employee with the company – an agenda

along with contact details of their manager and their trainer for the day, could help set expectations and eliminate the stress of the unknown.

The plan was to prepare draft communications to candidates, establish timing for sending them out, align vendors through client communication to avoid doubling the effort and over-communicating to candidates, set deployment date and launch. The effort associated with the mentioned deliverables is time consuming, given that my client was quite large – so we decided to start with one country (UK, approximately 200 new employees every month) to act as a pilot, and if results show improvement, deployment for rest of the countries to follow. This was in line with the study since the analysis was conducted on data and subjects from this country only. Usually, we do not recommend deploying different features in each country, for efficiency purposes (imagine an upgrade change a feature that is different from country to country; testing and implementation would either need to be done by dozens of professionals or by the same professionals but with a longer delivery timeline).

The improvements have been deployed in December 2020, the month chosen because of the lower number of new joiners, to help measure the results through qualitative interviews (lower effort).

Although the improvements were not impacting the real time process (the professional background check was still long), the perception was different, because the candidate did not have to wait for results without knowing that it would take up to 3 weeks and on the way, being reminded that it is in progress and it is usual to take long, they won't stress about what if something goes wrong.

The watermelon effect was coming from the fact that employees were evaluating the overall experience but providing feedback when they reached out to the service center, hence, the metrics were associated with the service center performance.

The time from the moment the candidate has accepted the offer to their first day with the company is what employees will evaluate when reaching out to the service center to ask for an update on their background check status, to get support on navigation when uploading necessary documents to their employee file, etc.

Case Study 2: After focus group discussions and preliminary conclusions, the managers looked at the individual performance (2,5 years experience on the job), language skills (understanding the request), process knowledge (service representative skills on processes, portal navigation, etc.) to understand where the issue comes from. One might rightly ask why the company did not change the service provider – although AHT was not met, this was not seen as a metric that adds value necessarily, but rather the company agreed to add resources several times. The performance was improving for a couple of months and then mysteriously was again back to square 0 and even worse.

The phone queries have always been analyzed and used as a feed for technology (from 2017 for chatbot feed especially), in the sense of upgrading technology to resolve issues employees were dealing with during navigation – like areas of improvement (annual performance not being straight forward, pay-slip information not being detailed enough on the portal, etc.) – because navigation was the main area employees would call the service center (supposing). We decided to look at the data extracted from the calls and analyze the words and themes; call recordings were only available for the past 6 months due to regulations hence we could use data collected for training purposes.

The technology adopted in 2012 - when the solution was implemented (both technology and service center) - was on-premise, and since then, we adopted cloud technology and hence, access to more integrated data. Also, the behavior of the consumer of technology was changing, not only at work but in day-to-day life. Hence, it was necessary to conduct a comprehensive study on consumer behavior, based on grasping the new needs generated by access to technology, which was not a priority for the business to invest in, at that time.

Still, to get an idea of potential behavior changes, the study over average handling time had to be conducted on the type of queries associated with process and technology – a mapping between the type of query and process along with an existent feature on the portal (e.g. is portal able to answer through an article question around pay-slip?). This was the result of a focus group organized to discuss the matter. The focus group brought together representatives from operations, quality and training, data analytics, management, and clients.

Table 1. Type of queries

Type of Query	% from total
Navigation	66%
Learning	8,00%
Payslip information	14,00%
Employment Data	11,50%
Referrals	3,00%
Benefits	14,20%
Retirement	15,03%
Technical issues	34%

Source: Own representation

The relevant data (type of queries) for the purpose of this study was available only from 2017 on, when the service center got access to a more sophisticated ticketing/engagement system, integrated with the telephony, capable of providing a more complex set of data, to allow comprehensive analysis. Until

2017, only the data associated with the identity of the caller, the identity of the service representative, and the duration of the call along with the outcome type (successful/not successful) have been stored, due to the limitations of technology in use.

The data provided some relevant insights, on type of queries mostly addressed through service center, shown in Table 1, and has led to a series of improvements that could change employee perception. Having access to the resolution provided through service center, we could identify some areas where behavior was changing:

- employees were no longer conducting their own research on internet to understand pay-slip information but they wanted the information to be personalized and available to them on the portal;
- employees expected to be advised on type of benefits to choose in order to maximize income.
- employees wanted to have access to their retirement plan information through the portal, to simulate their income if retiring in the next few years.

The surprise was around employees developing new expectations, maybe emerging from use of technology – they were expecting support for some features that were not yet available, not planned and not communicated.

The other navigation queries were quite usual, employees looking for support in different areas, at that time but there are no guarantee employees will not develop new expectations in relation to the features of technology.

The plan to address the findings has been discussed and agreed with all stakeholders:

- introduce a simple table explaining the pay-slip information in the payroll section of the portal.
- introduce a field in the benefits catalogue to distinguish between taxable and non-taxable benefits (some benefits may carry additional tax, while others will not incur additional tax)
- introduce a pension calculator, in line with local regulations, to allow employees to simulate their income at retiring age but in advance too.

Table 2. Type of queries post enhancement

Type of Query	% from total
Navigation	59%
Learning	7,40%
Payslip information	7,80%
Employment Data	19,10%
Referrals	4,00%
Benefits	17,20%
Retirement	3,00%
Technical issues	41%

Source: Own representation

The enhancements have been deployed throughout September 2021 and March 2021, and at the end of September 2021 the analysis on type of navigation queries along 12 months, was showing quite different in some areas like shown in *Table 2*:

- Pay-slip information navigation queries decreased significantly from 14% to 7,80%, showing improvement.

- In the benefits area the feature introduced might have caused new expectations and needed further analysis. However, it was obvious the benefits area was not in accordance with employee expectations.

- Retirement queries dropped significantly from 15,3% to an average of 3% which validated that the measure taken was successful.

Reflecting on the results of the study, the management decided to closely monitor the behavior of the employees in relation to HR technology, to constantly adapt to their expectations and improve the portal to maximize self service

The conclusion was that we need to consider AHT as an indicator of employee / consumer needs and not necessarily as an indicator of service center performance. Especially during Pandemic, we could notice some new needs emerging from the isolation – the need to communicate.

Later in 2023 the customer decided to change the flexible benefits platform, to provide employees with access to a more dynamic environment, providing more insights and relevant simulation to help them make their own decisions.

The opposite watermelon effect has been confirmed – taking longer time to resolve employee queries was not necessarily poor performance but proactive attitude of service center representatives who identified ways to help employees find available online tools to perform simulations, helped them understand how policies apply. Or seen as a watermelon effect, customer satisfaction was good/green but did not feel different because of long time on the phone, by contrary, employees were appreciative for the support received by service center to help them navigate the websites in providing them with solutions.

4. Discussion

We are facing today a silent crisis of HR technology along with the silent quitting of employees, and while technology can be incredibly transformative, can also be contributing to employee disappointment if not chosen carefully.

Companies have to make choices over platforms and vendors to use, and HR specialists don't necessarily have the skills to make the right choices – HR professionals are expected to know employee behavior and how integrations work, and they are expected to set up key performance indicators that would help them measure the quality of the tools, the quality of the processes, the quality of the experiences, and still, there is no unique recipe to guide them to success.

Our study comes to support the hypothesis around changing employee expectations especially because of the use of technology, and access to aggregated data, hence generating a watermelon effect that companies need to consider as a source of inspiration for their next enhancements rather than as a measurement of the service itself only.

Service providers should look at measuring the end-to-end experiences, not only their individual performance. It is imperative to build technology around humans, especially now that the business and technology world become human-centric. Probably now it is more than ever before, the time for consultants to become service aggregators, and play the role of coordinating the vendor ecosystem for their clients, offering them holistic experiences.

Analyzing the metrics studied one by one, the first conclusion is that the average handling time for queries of employees increased because of new needs of the employees – they needed predictive analytics regarding their pension, for example (they wanted to know how much they contributed to the pension fund and what their contribution will look like if they decide to retire next year).

During the analysis, we could notice the proactiveness of the service center representatives – the first requests on the pension simulation were closed without a real time resolution, by the book, as there was no answer in the policies, in the portal articles, in frequently asked questions – who raised the concern and identified existent solutions on the internet, going the extra mile, because all employees want to succeed in the end. The process of adding a potential response to the frequently asked questions book of a service center is not an easy task, because it needs validation in several forums. Hence, comprehensive analysis, company case studies need to be conducted to become relevant and especially in large international companies this may be a process that takes years of continuous efforts with a financial impact that not all are willing to invest.

After careful consideration, companies should use AHT as an indicator of employee expectations changes and avoid setting a target – employees might feel quickly dismissed if service center representatives are rushing the conversation.

This conclusion helped in upgrading the portal with an automated simulator for their pension contribution. The monitoring time – set for 6 months shown in Figure 6 revealed a decrease to 12,11 minutes/call, but in the last 2 months, the monitoring time increased to 12,56 which needed further analysis on new needs of employees. Still, the technology enhancement reduced the handling time by

almost 50% and significantly reduced the number of queries in this area – by 12,3% to be more specific - which is a clear indicator that the new need for data incorporated within technology has been the right resolution.

Figure 6. Average handling time (monitored February – August 2019)
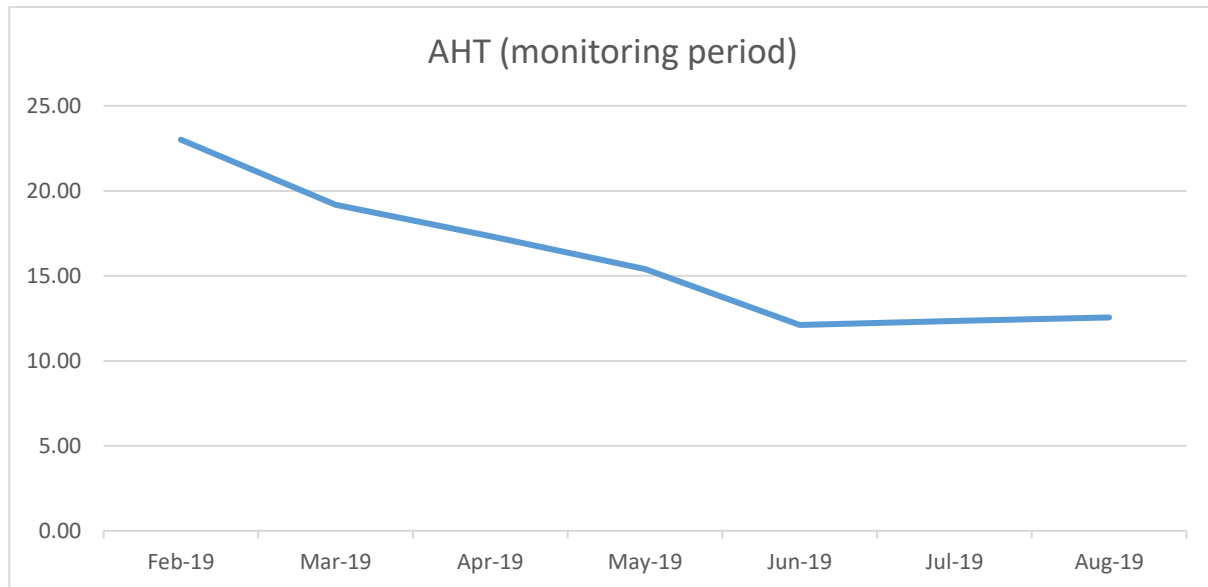
Source: Own representation

The main conclusion of the Average Handling Time study was not only that employees need improvements in technology (portal) but they develop new needs once data is available to them. The expectations to get support on navigating the portal in 2013 changed to expecting predictive analytics from the portal – hence requesting the information from the service center in the absence of the information being available on the portal – in 2019.

It is more important now to stay connected to employees' perception of technology and identify ways to keep them engaged, especially with the shift to a hybrid way of work. If companies want to obtain high employee engagement, they need to fully satisfy the basic needs of their employees, and make sure they don't fail them, before getting to a more strategic objective of the use of technology – a platform to keep employees engaged through communication and appreciation, a workspace that is bringing together the employees working from home, employees working from different geographies, employees whose expectations might be different from culture to culture.

On the other hand, keeping employees connected through employee portals / platforms and systems does not guarantee a seamless experience across areas of their life at work – looking at the moments that matter for employees, seeing them as full or end-to-end experiences instead of measuring fragmented service performance indicators, will help improving engagement.

Measuring quality of service through customer satisfaction surveys is no longer a matter of measuring accuracy, relevance of resolution provided, and language capabilities, but needs to be seen as the perception of the overall experience in that moment of work life. And the results should be the starting point for finding the issues, across the vendor ecosystem.

After the study was concluded a new employee satisfaction survey was to be launched after each interaction with the service center – meant to measure only the perception of the service provided, to make sure a distinction is made between the end-to-end experience of the moment and the interaction with the service center.

Figure 7. Customer Satisfaction Survey implemented in May 2021

Source: Own representation

The new Customer Satisfaction Survey has been implemented in May 2021 (*Figure 7*) and it is still being monitored, the aim being to switch the focus from traditional metrics to perception over the service, seen as the starting point for identifying new ways to measure performance.

Conclusions and recommendations:

This study aims to provide a new performance paradigm in HR service delivery – focusing on traditional key performance indicators may lead to a watermelon effect (in time, and not always linear,

to exclude potential fraud) and this effect does not necessarily depict the performance of the service provider (be it the company itself, be it an outsourcing company, or an ecosystem of service providers), but might be a valuable resource for improving the end-user experience.

The watermelon effect – seen as the contradiction between satisfactory service key performance indicators and disappointment of end-users, or the contradiction between process and experience – can unlock the opportunity to explore new technologies and services, based on new needs generated by exactly the development of technologies and services.

The study focused essentially on 3 metrics – Customer Satisfaction, Average Handling Time, and Average Resolution Time (Timeliness) as the most used by my customers throughout my career, but the effect can be observed in all other areas of the service:

- What if we study the Utilization Rate across HR processes to determine if mandatory tasks once completed result in positive perception over experience because of the actual completion and not because of the technology friendliness?

- What if we study the First Response Time to understand if this is linked to resolution or to acknowledgment of the query? Do we understand end-users expect a real-time resolution? Are we equipped to solve it real-time? Are we measuring what employees expect or the availability of automation in technology (automated acknowledgement)?

- What if we study Quality Assurance by re-thinking the expectations? In early 2010 when services were being moved offshore, language skills were weighing much more than they do today when technology has the capability to translate in real time. Do all companies consider calibrating with customers? Do all companies consider the accuracy or fairness of the solution provided?

Applying Root Cause Analysis principles along with or as part of Participatory Action Research methodology, companies will embark in an adaptive journey to secure the foundation for better employee engagement.

HR function might need service aggregators, with the mission to unify the vendor ecosystem, measure their unitary performance, and start looking into providing seamless experiences, now that integrations are mostly native, AI can ensure the same look and feel across systems. And once unitary experience is enabled, the watermelon effect should be studied continuously to understand the new needs of the employees generated by the use of technology (expanding possibilities).

Our future research will focus on identifying a set of new indicators as a result of studying the watermelon effect over the years. set of indicators that will reflect the changing needs and expectations of technology users. The new set of indicators will be the result of aggregating or

combining traditional key performance indicators, to measure the overall experience of the users – from a process perspective, but also from a technology perspective, engaging the user in the process.

The bottom line, HR needs to focus on measuring the experience of the employees when assessing the quality of the services provided by their vendors. Monitoring the traditional metrics is not sufficient and will lead to a watermelon effect more often in the future. Having access to data does not mean data is the only source of truth, especially in the fast-paced development of technology. As the new priorities in the world change and the focus is more human centric, it is time for qualitative research around experiences. A holistic approach to look at every step of an employee instead of only tracking disparate metrics depicting service performance and efficiency will add value and will improve the business performance overall.

References

ABB (2017), *Avoiding the 'Watermelon' Effect* (retrieved from ABB: https://library.abb.com/).

American Society for Quality (2024), *American Society for Quality* (retrieved from https://asq.org/quality-resources/customer-satisfaction#:~:text=Customer%20satisfaction%20is%20defined%20as,changes%20its%20products%20and%20services).

Brook Appelbaum (2023), *The Agile Manager's Handbook*, E-Book: Planview Ltd (retrieved from https://www.planview.com/resources/guide/agile-methodologies-a-beginners-guide/).

Chevalier, J. M., and Buckles, J. D. (2013), *Participatory Action Research*, London: Routledge.

Dixon, M., Freeman, K., and Toman, N. (2010), Stop Trying to Delight Your Customers, *Harvard Business Review*, July-August.

Dixon, M., Toman, N., and Delisi, R. (2013), *The Effortless Experience - Conquering the New Battleground for Customer Loyalty*, New York: Penguin Group.

Kalbach, J. (2021), *Mapping Experiences: A Complete Guide to Customer Alignment Through Journeys, Blueprints & Diagrams*, Sebastopol: O'Reilly.

Lifvergren, S., Huzzard, T., and Hellstrom, A. (2015), After a Decade of Action Research: Impactful Systems Improvement in Sweedish Healthcare, in: Bradbury, H. (Ed.), *The Sage Handbook of Action-Research*, SAGE Publications Ltd., pp. 336-350. https://doi.org/10.4135/9781473921290

Glouberman, S., and Mintzberg, H. (2001), Managing the care of health and the cure of disease--Part I: Differentiation, *Health care management review*, 26(1), pp. 56–89. https://doi.org/10.1097/00004010-200101000-00006

Qualtrix (2020), *Qualtrics*, retrieved from: https://www.qualtrics.com/uk/experience-management/customer/net-promoter-score/

SALAR. (2008), *The Swedish Healthcare System: How Does It Compare with Other EU Countries, the United States and Norway?* Swedish Association of Local Authorities and Regions.

Shani, A. B. (Rami), and Coghlan, D. (2021). Action research in business and management: A reflective review, *Action Research*, 19(3), pp. 518-541. https://doi.org/10.1177/1476750319852147

Swinscoe, A. (2016), *How to Wow, 68 Effortless Ways to Make Every Customer Experience Amazing*, Edinburgh Gate: Pearson Education Limited.

WHO (2000), *The world health report 2000*, World Health Organisation.

WHO (2012), *World Health Statistics*, World Health Statistics.

Considerations on the influence of corporate social responsibility on consumers' purchasing decisions

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Abstract

In the age of globalization and increasing social and environmental awareness, corporate social responsibility (CSR) and commitment to sustainability are becoming increasingly important for companies. These practices are no longer just optional choices but are becoming essential criteria for consumers in their purchasing decisions. In our empirical endeavour, we used document content - and survey analysis as research methods. By employing a qualitative content analysis procedure, we examined and evaluated various campaigns promoting sustainability and philanthropy in relation to different apparel brands. Thus, we identified four such relevant campaigns, designed to emphasize ethical and sustainable values enabling a comprehensive overview of the impact of these marketing strategies on consumer purchasing decisions. Moreover, we statistically analysed how the perceived brand value (i.e., translated into purchasing decision) is influenced by philanthropic and sustainable business practices. Based on our results we draw some relevant conclusions about the impact of CSR campaigns, in general, and on Romanian consumer purchasing behaviour, in particular.

Keywords: corporate social responsibility, sustainability, philanthropy, consumer-purchasing decisions

Introduction

In this paper, we present the influence of CSR on the customer's purchasing decision. Specifically, we examine the influence of philanthropy and sustainability on the consumer buying process. Since a while now, more and more small, and middle-sized enterprises (SME) are committing to issues such as sustainability, ethics, and social impact.

Corporate Social Responsibility (CSR) has its origins in the 1930-1940s and to this day, there are many definitions of corporate social responsibility (Frynas and Yamahaki, 2016). The answer to

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the question of why a business or a company exists is no longer only linked to economic aspects, but also revolves around a more nuanced and complex conceptual paradigm (Latapí Agudelo *et al.*, 2019). We resonate with the European Commission's (2001) definition of corporate social responsibility, as a phenomenon in which companies voluntarily decide to contribute to a better society and a cleaner environment. To be responsible, according to the European Commission's definition, a company must integrate social and environmental concerns into its actions and strategies in the context of the interactions it engages in.

Although studies (Crișan-Mitra and Borza, 2015; Badulescu *et al.*, 2018) show that CSR in Romania contributes to the increase of the company's notoriety as a socially responsible entity, Romanian managers are currently not fully attuned to the significance of CSR. Due to previous education focused on operations management, i.e., in achieving state-planned production targets, many managers of small and middle-sized enterprises tend to be resistant to adopting CSR as an additional tool for improving the competitiveness of companies (Obrad *et al.*, 2011; Badulescu *et al.*, 2018). Moreover, according to Saveanu *et al.*, (2021), Romania scores below the European average on aspects related to handling human resources and environmental topics, i.e., the impact of CSR actions and policies have a relatively narrow applicability, especially in the Romanian SME.

Research shows that CSR initiatives can create a strong bond between the company and consumers, thus strengthening consumer loyalty and value creation (Husted and Allen, 2007). For example, a study by Rahman and Norman (2016) shows that firms that implement effective CSR policies tend to have higher consumer loyalty ratings. Scholars (Havidz and Mahaputra, 2020; Rosanti and Salam, 2021; Prayuda, 2024) show that a solid brand image positively influences the customers' purchasing decisions, translated in better reviews (Iskuntianti *et al.*, 2020), a solid trust in the brand itself (Wijaya and Annisa, 2020), and mediates even the relationship between price and quality in purchase decisions (Sihombing *et al.*, 2022).

Taking the above into consideration, we are grounding our empirical endeavour on "the latest belief" according to which responsible companies should focus on generation of shared values (Latapí Agudelo *et al.*, 2019) and we explore if this perceived shared values are important for Romanian customers. Consequently, we will analyse both the general concept of CSR, through a qualitative analysis of four CSR international campaigns from the apparel industry and CSR in Romania, deploying a quantitative study through a questionnaire filled by Romanian consumers, related to the impact of the companies' philanthropic and business sustainability policies on their purchasing decisions. Moreover, we additionally examine what impact the common values (theirs and the companies') have in building loyalty for the companies' brands.

The article is organized as follows. Section 1 presents various definitions and concepts related to CSR (in general - subsection 1.1. and in the Romanian case, in particular - subsection 1.2.), and purchasing decisions (also discussing brand image and customer loyalty - subsection 1.3.); section 2 describes the research methodology and the specific objectives of the research; section 3 presents the empirical part of the paper and the results, forked into the qualitative study (i.e., subsection 3.1.) dealing with the content analysis of four international CSR campaigns of multinational companies, and the quantitative approach (i.e., subsection 3.2.), encompassing a survey on Romanian consumers about the factors that influence their purchasing decisions. Finally, section 4 offers a discussion upon our search for a relationship between the purchasing decision and the factors that compose the concept of social responsibility. Conclusions are being drawn and limits and prospects are put brought into light.

## 1. Considerations on CSR and purchasing decisions
1.1. CSR

The first author to address corporate social responsibility was Howard R. Bowen, who is also known as the "father of CSR". With the publication of the book "Social Responsibilities of the Businessman" in 1953, he set a milestone for the beginning of the modern CSR era. He defines the concept of social responsibility as "the obligation of businesspeople to pursue those policies, make those decisions or follow those courses of action that are desirable in terms of the goals and values of our society" (Bowen, 2013; Carroll, 1999). Bowen discusses many issues related to CSR and business in his book and raises several questions, including the most important one: "What responsibilities to society can businesspeople reasonably be expected to fulfil?" (Bowen, 2013; Carroll, 1999).

After Bowen, authors such as Davis (1960, 1967, 1973), Preston and Post (1975, 1981) and Carroll (1979) have continued to search for an appropriate definition of the meaning and content of CSR. Davis contends that the idea of corporate social responsibility is still muddled but frequently appears in management contexts. He argues that "decisions and actions of businesspeople should be made at least partially beyond the immediate economic and technical interests of the company" (Carroll, 1999).

Another important author for the CSR concept in the 1970s is George Steiner. He argued that business must continue to be an element of the economy and that as profits increase, so does corporate responsibility (Steiner, 1975; Carroll, 1999). CSR therefore not only improves business, but its movement represents a broader interest in the role of business and the improvement of social obligations (Eells and Walton, 1974; Carroll, 1999).

According to Carroll, "corporate social responsibility involves managing a company in such a way that it is economically profitable, law-abiding, ethically correct and socially beneficial" (Carroll, 1991). Despite the numerous definitions and concepts that have been developed for CSR, Carroll first presented his CSR model in the form of a pyramid in 1991. Called the "Pyramid of Corporate Social Responsibility", the 4 elements are explained as follows: economic, legal, ethical, and philanthropic. These dimensions are shown in the pyramid in Figure 1.

Figure. 1 The Pyramid of Corporate Social Responsibility

Source: Carroll, 1991
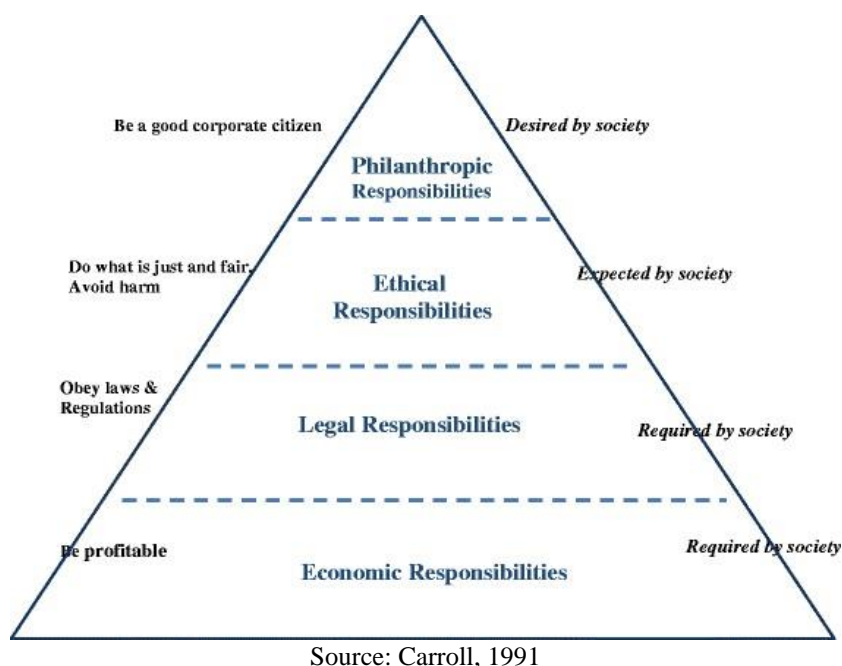
At the bottom of the pyramid are the economic responsibilities, which are considered to have the highest share or the greatest importance within the overall spectrum of responsibilities and which form the foundation without which the other responsibilities cannot be fulfilled. At the top of the pyramid in this order are legal, ethical, and philanthropic responsibilities, with the latter having the least weight in the overall spectrum of corporate social responsibility. Carroll (1991) therefore locates ethical norms within the economic and legal responsibilities, but also beyond them in relation to the ethical responsibilities (Meynhard and Gomez 2019 cited in Brieger *et al.*, 2020).

The four elements are explained as follows:

- Economic - the economic level refers to the responsibility to earn from stakeholder investments.
- Legal - responsibility for compliance with the law.
- Ethical - the responsibility to comply with social norms that are not codified by law but are expected by stakeholders operating in society.

- Philanthropic - the responsibility to take on a specific role in volunteering to benefit a segment of society (Burton and Goldsby, 2009).

The pyramid should be considered sustainable in that these responsibilities represent long-term commitments that spill over to future generations of stakeholders. Although the pyramid could be perceived as a static snapshot of responsibilities, it should be understood as a dynamic, adaptable framework whose content is geared towards both the present and the future. In the next section, we move from a conceptual understanding of corporate social responsibility to its manifestation in Romania.

1.2. CSR in Romania

Although the idea of corporate social responsibility (CSR) has a long history in business literature, it is relatively new in the Romanian business landscape. Multinational companies have adopted CSR and developed new processes and initiatives. CSR activities began to diversify as they made their way into the Romanian business landscape, becoming more professionalized over time and often becoming a permanent endeavour integrated into companies' development strategies.

In the context of the process of alignment with EU standards and requirements, investigating the implementation of CSR by Romanian companies can provide essential information for assessing the degree of compliance and identifying areas for improvement. CSRMedia.ro and EY have conducted several studies, based on empirical evidence collected between 2013 and 2015, where they show a clear trend of increasing interest of Romanian companies in CSR. These studies highlight a growing concern among companies to strengthen their CSR efforts and improve their visibility in this area. (CSRMedia.ro and Ernst&Young, 2013; 2014; 2015). The promoters of this phenomenon are generally multinational companies that implement the CSR approach of the and above all their corporate culture, which is rarely adapted to local needs (Crișan-Mitra and Borza, 2015).

The resources spent on CSR initiatives are increasing, although they are still in their infancy in the Romanian business climate. A growing number of companies are paying great attention to CSR, especially considering that the social audit is one of the most important indicators for evaluation in the economic field (Obrad, *et al*., 2011).

In Romania, the first social responsibility actions were carried out in 1990, when several non-governmental organizations (NGOs) with humanitarian purposes were founded with the support of international, public or private institutions. Certain "responsible" economic sectors have increased in Romania, including waste management, the marketing of organic and eco-products, ecotourism, rural

tourism and renewable energy. According to a survey by The Azores (2014), among the most ethical food businesses in Romania, sustainable development in the supply chain and organic products received the highest scores at 25.5% and 24.7% respectively, while stakeholder involvement was rated the lowest at 2.2% (Popa 2015).

1.3. Purchase decision and loyalty

The purchase decision is a sequence of decisions that a consumer makes before making a purchase decision, which begins as soon as they are ready to satisfy a need. According to Lee and Ismail (2009), consumers made their purchase decision firstly based on traditional criteria such as price, quality, and convenience and secondly on the basis of harm or benefit to society.

Consumers are becoming increasingly aware of corporate social responsibility (CSR) through better education and the growing influence of the media. The nature of CSR activity, consumer support for the initiative and their beliefs about the trade-offs a company makes in its CSR activities play a crucial role in consumers' reactions to CSR activities (Sen and Bhattacharya, 2001). Some marketing experts believe that consumers are increasingly basing their purchasing decisions on their perception of a company's role in society. For example, consumers want to know how a company treats its employees, shareholders, neighbours, and other stakeholders. A company that engages in CSR activities helps itself to create a brand identity, which acts as a factor that can influence consumers' purchase intention (David, Kline and Dai 2005; Ali and Sohail 2018).

According to Inamullah (2012), customer loyalty is the willingness of a consumer to buy the same product and maintain the same lucrative association with a particular company. Many researchers have accepted the notion that loyalty or loyal customers are the lifeblood of a business, regardless of its size and scope (Yusof *et al*., 2015). Customer loyalty could lead to higher profits for retailers as customers buy more of a higher percentage of goods from retailers (Ailawadi and Keller, 2004). Loyalty can be measured by the intention to repurchase, recommendation of the product/service and patience towards the price (Kim and Yoon, 2004).

Rahman and Norman (2016) have shown that consumers have a more positive attitude towards a company when they learn that its CSR activities are aimed at local beneficiaries. This attitude manifests itself in a better intention to purchase the product and a willingness to pay higher prices for it (Rahman and Norman, 2016 cited in Sawicka and Marcinkowska, 2022). A study by Mohr *et al*. (2001), which examined the relationship between CSR and consumer purchasing behaviour, yielded following conclusions: most respondents were generally positive about socially responsible companies and expected a high level of CSR activities from companies. In addition, the results

showed that a slight majority of respondents did not really or only sometimes think about aligning their purchasing behaviour with CSR, even if CSR as a purchasing criterion did not play a major role in the decision-making process or purchasing behaviour.

However, 39% of respondents based some or most of their purchasing on CSR (Mohr *et al.*, 2001 cited in Bashar, 2021). In the same line of thought, Becker-Olsen (2005) contributed to a study aimed at investigating the impact of CSR on consumer behaviour. The results of the study showed that an overwhelming majority of respondents believed that companies should participate in social initiatives and 76% believed that these initiatives would benefit companies' businesses. About half of the respondents stated that they would boycott irresponsible companies if reasonable alternatives were available (Becker-Olsen and Hill, 2005, cited in Bashar, 2021).

2. Research methodology

Document analysis can be a valuable method for qualitative research as it can provide insight into topics that would be difficult to gain through other research methods such as interviews or observations (Holliday, 2007). Therefore, we believe that document analysis is an efficient method to define relationships between CSR and the consumer's purchasing decision. Thus, we analysed various environmental philanthropy campaigns of the following apparel brands: Patagonia; TOMS; H&M; Benetton. We sought for a connection between brand image and CSR policies, asking ourselves:

RQ: How and why are CSR policies influencing the customers' purchasing decisions?

Consequently, we examine four sustainability and philanthropic campaigns undertaken by apparel brands and analyse the impact of corporate social responsibility (CSR) on consumer purchasing decisions. At a time when environmental and ethical issues are becoming increasingly important, the fashion industry has begun to adopt sustainable strategies and initiatives to meet the growing demand for green and ethical options. These campaigns aim to inform and influence consumers to choose brands and products that use responsible and sustainable practices.

We also developed to working hypothesis, sprang from our research question that deal with the declared goals of CSR policies, namely business sustainability and philanthropic character of these campaigns (H1) and creating common values which lead to customer loyalty (H2), thus positively influencing the purchasing decision.

H1: Customers' purchasing decisions in relation to clothing items will show a positive correlation with the perceived sustainable business practices and philanthropic policies.

H2: Customer loyalty will have a positive correlation with the existence of apparel brands' policies to create shared value with those of their customers.

In order to explore our hypothesis, we applied a questionnaire addressed to Romanian consumers (N=100), where significant information was obtained about their preferences and perspectives on sustainability in the fashion industry and brands' philanthropic campaigns. Demographics such as gender, age, education level and monthly income have composed the first part of the questionnaire, whereas, in the second part, we developed questions regarding the Romanian customers' purchasing behaviour and attitudes towards sustainability issues (thus, addressing the first hypothesis). The third and last section of the questionnaire dealt with the relation between customer loyalty and common shared values, trying to engage in answering the second hypothesis. For the last two sections of the questionnaire, a Likert scale with numbers from 1 to 5 was used, where 1 = not at all important and 5 = very important.

Demographic analysis revealed a predominance of women (see, Appendix 1), 18–25 year-old (see, Appendix 2), and those with a university degree (Appendix 3). while the income intervals were evenly distributed (please consult, Appendix 4).

Linear regression was used to assess the impact of the independent variables (philanthropy, sustainability) on the dependent variable (brand value). We analysed the relationship using Spearman correlation. The Spearman correlation coefficient measures the association between ordered or ranked variables without assuming their distribution.

3. Results
3.1. Content analysis of public records

In the first part, we analyse the strategies and tactics used in these campaigns to promote responsible practices in the fashion industry. In the second part, we draw some conclusions regarding the influence of CSR on consumer purchasing decisions. The campaigns we have chosen are representative of the topic. By understanding the impact these campaigns have on customers, we gain a clearer perspective on how companies can use sustainable and philanthropic advertising strategies to attract and retain loyal and engaged customers while making a meaningful contribution to social and environmental issues. We chose to focus on the campaigns of globally recognized brands because of the impact these campaigns have on customers due to their name recognition. Brands such as Patagonia, H&M and TOMS have stood out with important initiatives and campaigns in this direction.

These companies have adopted innovative strategies and taken concrete measures to reduce their environmental impact and contribute to a more sustainable textile industry.

- Patagonia is committed to spending 1% of sales on preserving and restoring the natural environment. The key values promoted by the "1% for the Planet" campaign include social responsibility, sustainability, environmental protection and community involvement.

- The "Garment Collecting" campaign initiated by H&M consists of collecting and recycling old clothes and using recycled materials to make new products. The values promoted include raising awareness and education, transparency and informing customers about recycling and sustainability.

- TOMS' "One for One" campaign is a social and business initiative in which TOMS donates a product or service for every product purchased by customers. Some of the key values promoted through the campaign are empathy, generosity, providing equal educational opportunities for all children and supporting the local economy.

- The aim of the United Colours of Benetton campaign is to draw public attention to social issues, contribute to change and raise awareness of important issues. "United Colours of Benetton" promotes several core values, including Diversity and Inclusion, Human Rights, Social Commitment.

Further, we examine the impact of corporate social responsibility (CSR) campaigns on consumer behaviour. In a world where concern about social and environmental issues is growing, brands have a greater responsibility to show their commitment to these issues and engage in philanthropic and sustainable activities.

A CSR campaign is a strategy that brands use to make a positive impact on society and raise awareness of their ethical values. Such campaigns range from supporting social causes such as education and health to environmental protection measures and the promotion of human rights. This section focuses on how CSR campaigns influence consumer behaviour. We examine how consumers perceive and respond to such campaigns and how they influence their purchasing decisions. We also examine which factors determine the effectiveness of these campaigns and how they can strengthen customer loyalty and increase sales.

By understanding the impact of CSR campaigns on consumer behaviour, brands can develop more effective and responsible strategies that respond to customers' needs and values.

The "1% for the Planet" campaign has played an important role in raising awareness and informing customers about the negative impact of human activity on the environment. It has helped to educate consumers about the importance of protecting and preserving nature. With over 3,000

members in more than 90 countries, people's awareness of the need to protect our planet has increased. The "1% for the Planet" campaign has led to increased loyalty to brands that pledge to donate 1% of their revenue to environmental organizations. The 1% for the Planet initiative has helped to strengthen Patagonia's reputation as a leader in sustainability. Through its commitment to donate at least 1% of annual sales to environmental charities, Patagonia has captured consumers' attention and gained their trust (Alonso, 2023).

The "1% for the Planet" and "Garment Collecting" campaigns promote environmental protection as a core value. Both campaigns promote sustainability and environmental protection efforts. 1% for the Planet focuses on donations to environmental organizations and Garment Collecting promotes the recycling and collection of clothing to avoid waste and reduce environmental impact. Sustainability campaigns help to build a positive brand image in the eyes of consumers. Companies that commit to sustainability and promote their efforts can gain the trust and loyalty of customers and stand out from the competition. One of the key values of the H&M campaign is to inform customers about sustainability. The campaign promotes the importance of recycling and the circular economy. Customers are taught to recycle and reuse recycled clothing in a way that is economical and beneficial for the planet. However, it is important to note that there is also criticism of the clothing drive. Some believe the campaign is just a marketing ploy to get customers to return to H&M stores and buy new products.

Some argue that H&M should focus more on producing sustainable, high-quality clothing instead of recycling. Both the "One for One" campaign and the "United Colours of Benetton" campaign are campaigns to promote CSR, especially the philanthropic part. Both campaigns have had a great impact and attracted the attention of the public. They have succeeded in strengthening their brand image, initiating discussions, and encouraging people to get involved in promoting positive social values.

Toms donated over 95 million pairs of shoes to children in need, funded 780,000 pairs of eyeglasses and 722,000 weeks of clean water, and donated $6.5 million. In total, the company has helped over 9.5 million people in over 85 countries around the world. The "One for One" campaign has given TOMS a significant increase in sales and awareness. The unique concept of making a donation for every product sold attracted the attention of consumers who were motivated to support a company with a strong social purpose.

Social campaigns can help to raise awareness of important social and environmental issues. They can bring issues such as discrimination, poverty, climate change or human rights to the fore and educate the public about these topics. Thanks to these social campaigns, such as that of "United Colors

of Benetton", people are sensitized to the problems surrounding them. Generosity and social campaigns help to create a sense of solidarity and social cohesion. When people are willing to support those in need and get involved in social initiatives, a sense of community is created, and interpersonal relationships are strengthened. Creating equal educational opportunities for all children, which the "One for One" campaign has succeeded in doing to a certain extent, is an essential prerequisite for reducing social inequalities and promoting fundamental rights. Ensuring universal access to quality education creates the conditions for the personal and professional development of every child, regardless of their background and social status.

CSR campaigns can be a way to stand out from the competition. When consumers have a choice between two similar products, a company's commitment to social issues can influence their purchasing decision. At the same time, a campaign that supports the customer's moral values often enjoys a higher reputation, and there is a greater chance that the customer will learn about the brand through a campaign.

3.2. Survey on customers' purchasing behaviour and attitudes towards sustainability issues.

The results of our survey revealed a positive association between age (please consult, Table 1) and interest in sustainability, as well as higher income (see, Table 2) and this concern. This could be explained by the fact that consumers, while getting older (and wealthier), the interests regarding environmental issues are getting stronger and fastidious. Thus, the CSR policies aiming for sustainable business behaviour seems to gain more and more attention for the Romanian consumers from the apparel sector.

Table 1. Relationship between age in years and sustainability

	Age in years	Correlation Coefficient	1.000	0.338**
		Sig. (2-tailed)	.	0.001
Spearman's rho		N	100	100
	Sustainability	Correlation Coefficient	0.333**	1.000
		Sig. (2-tailed)	0.001	.
		N	100	100

** Correlation is significant at the 0.01 level (2-tailed).

Table 2. Relationship between monthly income and sustainability

	Monthly income	Correlation Coefficient	1.000	0.230**
		Sig. (2-tailed)	.	0.021
Spearman's rho		N	100	100
	Sustainability	Correlation Coefficient	0.230**	1.000
		Sig. (2-tailed)	0.001	.
		N	100	100

** Correlation is significant at the 0.01 level (2-tailed).

Moreover, correlation was used to assess the connection between variables such as monthly income and interest in sustainability and philanthropy. Consequently, our results show that people with a higher monthly income often have greater financial resources to purchase sustainable products.

Running the regression between the dependent variable – brand value, and the two independent variables – philanthropy and sustainability, we obtained following results (see, Table 3).

Table 3. Regression between brand value and the independent variables

`	Significance of Coefficients (t)
Const	2.017 (9,518)
Philanthropy	0.23 (1.909)
Sustainability	0.276 (4,993)
N	100
R Square	0.368

Note: significance levels: Significance levels: * p < 0.1, ** p < 0.05, *** p < 0.01. t-statistics are displayed in parentheses.

According to our results, there is a positive correlation between monthly income and sustainability, indicating that people with higher incomes are more likely to adopt sustainable behaviours. These findings could help companies to better target their customers and engage in philanthropical and sustainable practices, and consequently, strengthening and improving their brand value.

Discussion and Conclusions

Philanthropy can help to positively shape a company's image in the eyes of consumers. When a company actively participates in philanthropic activities, such as donations to social, environmental,

or charitable causes, this can improve the public perception and reputation of the company. For some consumers, participation in philanthropic activities can be a sign of a company's commitment to social issues and its contribution to the common good, which can have a positive impact on their purchasing decisions.

Sustainability can help create a sustainable and relevant brand image in the eyes of consumers. Companies that adopt sustainable practices and demonstrate a genuine commitment to sustainability can be perceived as concerned about their impact on the environment and the community. Customers who share the values of sustainability are more likely to choose that company over others that do not place the same importance on environmental and social issues.

The conclusion of the paper is in line with the theory discussed in Section 1. In the context of the influence of CSR on consumer purchasing decisions, Carroll (2016) states that that social practices and commitments can influence consumer attitudes and behaviour. He pointed out that as consumers become more aware of the social and environmental impacts of companies, they may take these aspects into account when making purchasing decisions. The results were also like those of Mohr's (2001) study which contributed to a deeper understanding of the impact of CSR on consumer behaviour and the importance of this issue for companies in developing effective marketing and communication strategies.

In summary, both sustainability and the philanthropic environment have the potential to positively influence Romanian customers' purchasing decisions, as initially proposed in hypothesis 1, by creating emotional and value-based connections between brand and consumer, as proposed in hypothesis 2. These statements are also in line with the findings of some scholars (Havidz and Mahaputra, 2020; Rosanti and Salam, 2021; Prayuda, 2024), whereas creation of common values seems to be the novel belief, and also the golden ticket through which CSR strategies and policies generate customer loyalty, and trust in the companies' brands (Iskuntianti *et al*., 2020; Wijaya and Annisa, 2020).

In this paper, we have answered the original research question, namely that there is an influence of CSR on consumers' purchasing decisions. The scientific approach and methodology chosen to examine customers' purchasing decisions regarding corporate social responsibility (CSR) in the context of environmental sustainability and philanthropy can provide valuable insights into consumer behaviour and preferences for socially responsible practices. Among the benefits of this approach, we generate a deeper understanding of how CSR initiatives influence consumer decision-making, which can be useful for companies in developing effective CSR strategies. In addition, stakeholders

such as consumers, businesses, policy makers and researchers can benefit from the findings of this research to make informed decisions and contribute to sustainable practices.

Our research could be extended through deploying a larger sample, and deepening the discussions about what motivates Romanian customers to purchase one brand or another, through in-depth interviews and focus groups, which enable a more nuanced understanding of the connection between perceived CSR policies, brand value and loyalty.

References

Ailawadi, K.L., and Keller, K.L. (2004), Understanding Retail Branding: Conceptual Insights and Research Priorities, *Journal of Retailing*, 80 (4), pp. 331–42.

Ali, F., and Maarif S. (2018), Effects of Corporate Social Responsibility on Consumer Purchase Intention, *Pakistan Journal of Humanities and Social Sciences,* No 6.

Alonso, T. (2021), How Patagonia Became the Benchmark in Sustainable Clothing. Strategy Factory: https://www.cascade.app/studies/patagonia-strategy-study.

Bowen, H.R. (2013), *Social Responsibilities of the Businessman*. University of Iowa Faculty Connections. Iowa City, Iowa: University of Iowa Press.

Brieger, S.A., Anderer, S., Fröhlich, A., Bäro, A., and Meynhardt, T. (2020), Too Much of a Good Thing? On the Relationship Between CSR and Employee Work Addiction, *Journal of Business Ethics,* 166 (2), pp. 311–29.

Burton, B.K., and Goldsby, M. (2009), Corporate Social Responsibility Orientation, Goals, and Behaviour: A Study of Small Business Owners, *Business & Society,* 48 (1), pp. 88–104.

Carroll, A.B. (1999), Corporate Social Responsibility: Evolution of a Definitional Construct, *Business & Society*, 38 (3), pp. 268–95.

Carroll, A.B. (2016), Carroll's pyramid of CSR: taking another look, *International Journal Corporate Social Responsibility*, 1 (3). https://doi.org/10.1186/s40991-016-0004-6

Crişan-Mitra, C., and Borza, A. (2015), Approaching CSR in Romania: An Empirical Analysis, *Procedia - Social and Behavioural Sciences*, 207, pp. 546–52.

Eells, R., Fox, S., and Walton, C.C. (1974), *Conceptual foundations of business. 3d ed*. The Irwin series in management and the behavioral sciences. Homewood, Ill: R. D. Irwin.

CSRMedia.ro, and Ernst&Young, (2013), *Tendinţe şi realităţi CSR în România*, Ediția 2013, www.csrmedia.ro

CSRMedia.ro, and Ernst&Young, (2014), *Tendinţe şi realităţi CSR în România*, Ediţia 2014, www.csrmedia.ro

CSRMedia.ro, and Ernst&Young, (2015), *Tendinţe şi realităţi CSR în România*, Ediţia 2015, www.csrmedia.ro

Frynas, J. G., and Yamahaki, C. (2016), Corporate social responsibility: Review and roadmap of theoretical perspectives, *Business Ethics: A European Review*, 25(3), 258-285.

Havidz, H. B. H., and Mahaputra, M. R. (2020), Brand image and purchasing decision: Analysis of price perception and promotion (literature review of marketing management). *Dinasti International Journal of Economics, Finance & Accounting*, *1*(4), pp. 727-741.

Hee-Su, K., and Choong-Han, Y. (2004), Determinants of Subscriber Churn and Customer Loyalty in the Korean Mobile Telephony Market, *Telecommunications Policy,* 28 (9–10), pp. 751–65.

Husted, B.W., and Allen, D.B. (2007), Strategic corporate social responsibility and value creation among large firms: Lessons from the Spanish experience, *Long Range Planning*, 40(6), pp. 594–610.

Iskuntianti, N. D., Faisal, M. A., Naimah, J., and Sanjaya, V. F. (2020), The Influence of brand image, lifestyle, and product quality on purchasing decisions, *Journal of Business and Management Review*, 1(6), pp. 436-448.

Latapí Agudelo, M. A., Jóhannsdóttir, L., and Davídsdóttir, B. (2019), A literature review of the history and evolution of corporate social responsibility, *International journal of corporate social responsibility*, *4*(1), pp. 1-23.

Meynhardt, T., and Gomez, P. (2019), Building Blocks for Alternative Four-Dimensional Pyramids of Corporate Social Responsibilities, *Business & Society,* 58 (2), pp. 404–38.

Obrad, C., Petcu, D., Gherheş, V., Suciu, S. (2011), Corporate Social Responsibility in Romanian Companies – between Perceptions and Reality, *Amfiteatru Economic Journal*, 13(29), pp. 43-55.

Popa, Raluca A. (2015), The Corporate Social Responsibility Practices in The Context of Sustainable Development. The Case of Romania, *Procedia Economics and Finance,* 23, 1279–85.

Prabu, D., Kline, S., and Dai, Y. (2005), Corporate Social Responsibility Practices, Corporate Identity, and Purchase Intention: A Dual-Process Model, *Journal of Public Relations Research*, 17 (3).

Prayuda, R. Z. (2024), The Role of Price Perceptions, Product Quality, and Brand Image on Purchasing Decisions, *Journal of Industrial Engineering & Management Research*, 5(2), pp. 15-20.

Rahman, F., and Norman, R.T. (2016), The Effect of Firm Scale and CSR Geographical Scope of Impact on Consumers' Response, *Journal of Retailing and Consumer Services*, 28, pp. 189–98.

Rosanti, N., and Salam, K. N. (2021), The Effects of Brand Image and Product Quality on Purchase Decisions, *Quantitative Economics and Management Studies*, 2(6), pp. 365-375.

Sawicka, J., and Marcinkowska, E. (2022), The Effect of CSR Environmental Initiatives on Purchase Decisions—A Cross-Regional Study in Poland and Ukraine, *Sustainability,* 14 (5): 2590.

Saveanu, T., Badulescu, D., Saveanu, S., Abrudan, M.M., and Badulescu, A. (2021), The role of owner-managers in shaping CSR activity of Romanian SMEs, *Sustainability*, 13(20), 11546.

Sihombing, L. A., Suharno, S., Kuleh, K. and Hidayati, T. (2023), The Effect of Price and Product Quality on Consumer Purchasing Decisions through Brand Image, *International Journal of Finance, Economics and Business*, 2(1), pp. 44-60.

Steiner, G.A. (1975). *Business and society*, 2d ed. New York: Random House.

Yusof, J.M., Hasman, A.M., Norzitah A.K., and Nor A.M.K. (2015), Customer's Loyalty Effects of CSR Initiatives, *Procedia - Social and Behavioral Sciences* 170.

Appendix 1. Gender

	Valid Percent	Cumulative Percent
male	38.0	38.0
female	62.0	100.0
Total	100.0	

Appendix 2. Age in years

	Valid Percent	Cumulative Percent
Under 18 years	8.0	8.0
18-25 years	53.0	61.0
25-40 years	19.0	80.0
40-55 years	18.0	98.0
over 55 years	2.0	100.0
Total	100.0	

Appendix 3. Current level of education

	Valid Percent	Cumulative Percent
secondary education	1.0	1.0
high school	22.0	23.0
university	71.0	94.0
postgraduate studies	6.0	100.0
Total	100.0	

Appendix 4. Monthly income

	Valid Percent	Cumulative
under 1000 lei/month	25.0	25.0
1000-3000 lei/month	28.0	53.0
3000-5000 lei/month	26.0	79.0
5000-7000 lei/month	12.0	91.0
over 7000 lei/month	9.0	100.0
Total	100.0	

France and the war in Ukraine. A realist constructivist perspective

Armand SADOVSCHI[*]

Abstract

France's reaction to Russia's invasion of Ukraine was initially conciliatory. However, the current French President' statements, Macron, gradually changed, suggesting a potential shift in France's stance. The French president recently suggested troops could be sent to Ukraine to fight the Russians, a move that could significantly impact the course of the war. Our paper aims to address this possibility. How feasible would this be from a military perspective? Second, are there any other relevant political actors that will support it? Third, why has Paris changed its position to such a radical stance? We start from the theoretical design of realist constructivism. Postcolonial theories and the concept of locked-in path dependence supported this research. The methods follow the path of historical synthesis, discourse analysis of key political actors, and text analysis of defense white papers. Quantitative military variables are used to understand France's and the EU's military-industrial complex capabilities and assess its potential. The collapse of France's neocolonial empire in Africa and Russia's growing influence in the region partially explains Macron's discourse change. This is correlated with the need to follow a more independent European security policy and the worsening military situation in Ukraine.

Keywords: Realist Constructivism, France, Russia, Ukraine, West Africa

Introduction

Macron played a pivotal role in the unfolding of events. After the annexation of Crimea in 2014, the chances of establishing a security partnership between the EU and the Russian Federation decreased drastically. With the power vacuum within the EU created by Brexit in 2016, France's recently elected president perceived Russia's security threat as an opportunity to enhance France's international standing and pursue an independent European defense policy. This was highlighted in the Defence and National Security Strategic Review 2017. The declared security goals were "to preserve its strategic autonomy and to build a stronger Europe to face the growing number of common challenges" (Orbis, 2017, p. 14). Macron was the last Western leader to talk with Putin in the call four days before Russia invaded Ukraine. Parts of the conversations were leaked to the press by the

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French to the protests of Russia (Chemin & Ricard, 2022). Throughout 2022, France offered economic and military aid to Ukraine but tried to persuade Russia to negotiate the end of hostilities (Pietralunga & Ricard, 2022). Macron talked about how Russia made a historical mistake but should not isolate itself from the rest of the international community because Russia is a great nation. As the Russians suffered serious defeats through 2022 and it seemed that Ukraine had the upper hand, the French president insisted on a compromise that infuriated President Zelenskyy. Macron advised that Russia should not be humiliated because the West will need to find a diplomatic solution once the war ends. The West should not impose harsh terms because this will increase resentment and offer the excuse of revenge. Macron estimated that his conversations with Putin for negotiating peace took at least 100 hours throughout 2022. Still, France can still play a key mediator role (Sandford, 2022). At this point in time, Macron's arguments were closer to Mearshemer's controversial thesis of the West's failure to prevent the war (Mearsheimer, 2014). Ukraine, many opposition leaders in France, and the Western allies harshly criticized Macron's statements. Still, this policy continued well into 2023, with France admitting that it desires to facilitate peace negotiations if Russia is willing to make the first step and contact Macron. Simultaneously, France held joint declarations with Ukraine, increased its military support, and agreed with Ukraine's application to NATO (Élysée, 2023).

In February 2024, Macron made another statement that shocked both the West and Russia. France radically changed its strategy from mediating the conflict to proposing sending troops to Ukraine. The United States, Germany, the EU, and the French opposition parties once again criticized the declarations and denied any such intention (Gatinois, 2024). Another important provocation from Russia's perspective was the NATO military exercise organized in March 2024 in Northern Poland, where 20,000 soldiers took part. NATO announced that around 90,000 soldiers would participate in similar exercises as part of the Steadfast Defender strategy between January and May 2024 (NATO, 2024). This is the largest NATO exercise since the end of the Cold War. Russia responded by threatening with a nuclear war. Putin argued that Macron's declarations were emotionally motivated by Russia's growing influence in Africa to the detriment of France (Le Monde, 2024). If the rest of his speech is propagandistic, Putin has a point about Wagner's intervention in Africa that France perceives as a great threat. In this context, Macron's policy change simply follows France's national security priorities, as defined by official documents. This threat was identified two years ago.

The latest updated defense paper was published in 2022, reiterating the same geopolitical ambition and highlighting that France's defense budget has increased as per the previous plan. It also acknowledges that Russia's invasion of Ukraine requires a radical change in strategy. France recognized even from 2022 that Moscow represents a severe threat to its national interests due to its

expansionist plans in Africa. Concomitantly, the growing partnership between China and Russia and the Chinese investments further destabilize Africa. The two countries coordinate their efforts to gain influence in the region. The document concludes that France should prepare for a possible confrontation with Russia:

> The split caused by the war and the irreversibility of Russia's strategy choices makes it necessary to anticipate confrontation with Moscow based on the trio of competition, dispute and confrontation, taking place over a long period of time, in multiple regions and spaces. This move towards confrontation is already taking place in Africa, through offensive diplomatic manoeuvres combined with anti-Western information-based attacks and the use of mercenaries. Moscow sees in this globalised hybrid war substantial leverage in external theatres and in environments where new types of action are now being taken (SGDSN, 2022, p. 10).

Russia did not expel France from West Africa; it just took advantage of the situation. The anti-French sentiment in the Sahel region was on the rise long before Wagner's activity in Africa. France's retreat after the military operation Barkhane left a vacuum of power. With the scale of jihadist attacks going beyond any control, a wave of military coups in the Sahel region replaced the former authoritarian leaders and corrupt quasi-democratic governments with military dictatorships. The new leadership rose to power using an accentuated discourse in favor of Pan-Africanism, the discriminatory double standards of the EU, and the fight of the Global South against the collective West. The anti-colonial sentiments against the French in West Africa have reached an unprecedented level since these countries gained formal independence (Guiffard, 2023). This unstable political environment and ideological wave represented the perfect opportunity for Russian propaganda of multilateralism. Moscow had a lot of discoursive narratives in common and points of complete overlap with the new authoritarian African leaders and with China's pose as the protector of the Global South. Putin weaponized the Wagner mercenaries that offered to protect the new regimes in exchange for gaining a foothold in the Sahel region.[2]

The present paper's main argument is that France's new approach to the war in Ukraine was caused by Russia's geopolitical gains in Africa. There are other relevant variables, such

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[2] The Sahel region represents the transition from the Sahara desert in northern Africa and the African savannas in the South. It spreads from the Atlantic Ocean to the Red Sea.

as the 2024 EU elections, France's commitment to the security of Europe, the worsening situation on the front, and the need to protect French core values by supporting Ukraine's war effort, but the implications of Moscow's existential threats for the Françafrique are the most important. This is not the result of the Kremlin's propaganda. The existence of a French neocolonial empire in West and Central Africa has been documented in the academic sphere since the 1960s till the present date. From the perspective of the realist constructivist theory that we employ, there is no contraction in a liberal democratic France firmly committed to noble moral values and the persistence of a French sphere of influence. In the complexity of the political world, these two realities coexist.

The article is divided into five parts. We summarize the literature and then discuss our theoretical assumptions and methodology. The content section examines the evolution and implications of the French neocolonial empire at the beginning of the 21st century. It represents an attempt to understand how the anti-colonial sentiments developed and why Russia's discourse became so persuasive. It also aims to shatter the myth that spheres of influence and power politics are no longer relevant instruments to the Western world. The research moves to understanding the leading causes for the collapse of France's neocolonial empire and why Paris perceives Russia's involvement as an existential threat. We return to the war in Ukraine and examine the EU's and France's military capabilities and near-future potential. This part also tries to hypothesize how France might be able to military intervene in Ukraine on its own without provoking a nuclear war or a confrontation between NATO and Russia. However, the danger of escalation is exceptionally high and most probably is not worth the costs. Even if everything goes according to plan diplomatically, France will also have to overcome incredible logistical difficulties.

1. Literature review

This section summarises the discussions about four separate topics: the existence and evolution of the French neocolonial empire long past the 1960s; how France's recent fight against terrorism in the Sahel region ultimately led to its collapse; and how Russia's growing influence in Africa is challenging France's interests and eroding its international prestige. Finally, we return to how France's position concerning the war in Ukraine changed over time. The main argument of this paper is that these variables are intrinsically linked and explain France's behavior towards Russia. France's influence in West and Central Africa has been long documented. To track French neocolonialism's

evolution in detail exceeds this article's purpose. We will only sketch some of the most relevant key aspects highlighted in the literature and offer a few examples using case studies.

France's military interventions in West Africa were gradually replaced by a French-led coalition supported by the United States and the EU. Bruno Charbonneau argues that the African states were arbitrarily created by the French colonial empire. The multinational interventions in Chad and Côte d'Ivoire do not automatically legitimize French neocolonial practices. It also fails to counterbalance France's influence in the region. The authoritarian leaders of these states still expect France to protect them under its security umbrella. If the EU tries to replace France by promoting unilateral interventions followed by strict governance conditions, then it will only perpetuate the unequal relationship between the global North and South (Charbonneau, 2008, p. 294).

More than fifty years after they gained de jure independence, the Communauté Financière Africaine comprises countries under French neocolonial rule (Taylor, 2019). This argument is supported by the lack of monetary sovereignty due to the use of the CFA franc, which is controlled by the Bank of France. Taylor argues that the CFA system creates the community's dependence on France's economic growth, encourages widespread corruption, and prevents those countries from pursuing the development of other economic sectors. The author notes that the complicity of the local elites perpetuates this relationship, and they are no less morally responsible than France. Other authors have reevaluated France's neocolonialism in the light of new changes, with positive and negative aspects. Timothy Gibbs attempts to summarize the latest debates on this topic (Gibbs, 2024). Since being elected in 2017 as president, Macron has made controversial declarations, including the recognition that France committed war crimes during the process of decolonization. It even appointed a commission to investigate France's role in Rwanda's 1994 genocide. France has taken active steps to reduce its military presence in the region. The importance of trade with Africa has drastically decreased. Critics point out that the corrupt political relations within Françafrique stayed the same, as these countries remained undeveloped. France increased the number of military interventions but failed to stop the spread of terrorism. These states are more unstable and institutionally fragile than ever.

Out of the fourteen countries of the French Community of Africa, Gabon is arguably one of the most illustrious examples of neocolonial practices. Even in the Cold War era, scholars pointed out the neocolonial relationship long after Gabon's independence in 1960. The leading cause was Gabon's political leadership, completely under Paris's control. France imposed Omar Bongo, Gabon's de facto dictator, who became one of the wealthiest men in Africa. In exchange, the French colonial companies exploiting the country in the past were replaced by other French multinationals. Gabon's government granted them unlimited access (Reed, 1987). Bongo's regime was under threat

between 1988 and 1993 when France's left-wing ruling party considered abandoning him. The opposition parties hoped to gain Paris's help to organize fair elections. However, the neocolonial relationship was restored in 1993 when France's new government reinforced its support, including sending troops to repress any possible rebellion (Gardinier, 2000).

More recent case studies emphasized the persistence of France's neocolonialism in countries such as Mali, Côte d'Ivoire, and Niger. Panira Ali argues that Mali continues to experience neocolonialism mainly due to France's military interventions aimed at securing access to natural resources and raw materials. Mali accepted France's military presence because it could not afford the costs of a modern army that could secure its borders, but it never agreed with losing its sovereignty. The exploitation is accentuated by the United States' military interventions and by China's growing investments that are only for the benefit of Beijing (Ali, 2018). The numerous French military interventions in Côte d'Ivoire and the direct involvement of French presidents in the country's internal affairs are given as examples of neocolonialism. The country remained poor and undeveloped despite its rich natural resources, partially due to France's hegemonic influence. Still, between President Jacques Chirac and President Emmanuel Macron, France made efforts to change its neocolonial policies and focus more on humanitarian aid (Krupova & Cech, 2020). The use of military force is not the only instrument that France used to impose neocolonial practices. When France decided to invest heavily in nuclear energy, its former colony of Niger provided the much-needed uranium ore. Paris used its privileged position to impose unfair trade practices on Niger. Behind the liberal speech of free trade for the benefit of all, France uses its superior technology and French multinational companies, such as Areva, to the detriment of Niger's economic security. The authors conclude that between 1945 and 2020, Niger only obtained 3.2% of the value of the electricity that the French companies produced in France by exploiting its uranium (Murat et al., 2023, p. 177).

Nigeria's case offers another interesting angle to the debate on French neo-colonialism (Omotuyi, 2020). Nigeria was a British colony that obtained independence in 1960 and was never part of the Françafrique. Still, well after obtaining independence, Nigeria perceived France's significant influence in West Africa as a serious challenge to its regional security ambitions. Sunday Omotuyi makes the case that this perception only recently changed due to the increasing cooperation between France and Nigeria in fighting the Boko Haram terrorist organization. Nigeria is part of the Multinational Joint Task Force composed of Benin, Cameroon, Chad, and Niger.

In 2013, with a growing number of terrorist insurgencies in West Africa, France, the EU, and the United States decided to intensify their cooperation (Olsen, 2014). Olsen explains the position of the United States and the EU through the lens of neoclassical realism. Despite France's and the

United States' military presence in the region, the West decided to mainly enlist proxy soldiers to fight off the terrorists. In support of this argument, Gorm Rye Olsen points out the AMISOM in Somalia and AFISMA in Mali. These multinational coalitions are supported by the West's funds, technology, reconnaissance, and logistical capabilities, while African troops do most of the infantry fighting. In an updated paper, the same author noticed that little progress has been made in the fight against terrorism. France has become even more dependent on the United States' logistical support in sending so many troops overseas. Both nations have strong incentives to cooperate to contain the spread of an Islamic caliphate in the Sahel region. Still, the coordination of forces in the region left much to be desired. Hollande was more motivated by its unpopularity at home to send French troops to Mali, while Obama was reluctant to increase the level of American direct intervention (Olsen, 2018).

As the security situation continued to deteriorate, the number of studies noticing Russia's intervention in West Africa increased. Even though France has the EU's strongest military, it is already strategically overextended. France has commitments with Australia and India to contain China's rise in the Indo-Pacific. The French troops are unable to patrol the Sahel region efficiently and keep the peace with the limited number of France's current forces. The war in Eastern Ukraine became France's primary security concern. Significant units were retreated from African countries. This was speculated by the Russian Federation, which increased its military interventions, espionage operations, propaganda campaigns, and cyberattacks in the Middle East and Africa. France must prioritize what is vital for its national interests and security agenda to reach its core political goals (Pannier & Schmitt, 2019). The present situation has led to the almost total collapse of the French neocolonial empire in West Africa. The insurgencies in Chad, Burkina Faso, and Mali have only increased in size. The Economic Community of West African States has to choose between tolerating the rise of military dictatorships or disintegrating into a regional war. France's military presence has been limited only to Chad and Niger, while the CFA franc might be replaced with new African currencies. China uses its Belt and Road Initiative to replace France's economic influence. Russia aims to replace France's security role. With the EU and the United States' attention focused on other crises, West Africa seems to fall under a Sino-Russian protectorate (Avila & Quinn, 2023).

Several scholars identified the Wagner group's growing political importance in Africa. Wagner's activity in Mali, Sudan, Lybia, and the Central African Republic proves that it is more than just a private army in the service of authoritarian leaders. Moscow used Wagner to spread its influence in the region and compete with the United States and France (Pokalova, 2023). Wagner has become a quasi-state actor working as a proxy for Russia's interests. It operates in failed states that have rich natural resources that could be exploited and return profits for Moscow. Lybia is important for its oil

resources and its strategic position in North Africa; the Central African Republic can provide gold and diamond mines; Sudan is also rich in gold, gas, and oil; and finally, Mali is used as a puppet state to counter France influence in West Africa (Neethling, 2023). The Wagner group declared purpose is to fight terrorism, but its real aim is to establish a long-lasting military presence in Africa and expel the United States, the EU, and France from the region. The Russian soldiers gain valuable combat experience and test new tactics while Russia forges new alliances and signs deals with military dictatorships to exploit valuable resources. Wagner has been rebranded after Prigozhin's assassination in 2023 as Russia's Africa Corps. The mercenaries are under the direct control of the institution of the Main Directorate of the General Staff of the Armed Forces of the Russian Federation. Moscow also has under its influence more than 20 smaller quasi-private military companies similar to the previous Wagner that it will probably use to expand further in Africa (Olech, 2024).

France's change of posture regarding the war in Ukraine can be correlated with the above-described events but should be understood in a broader strategic context. When Macron won the elections in 2017, his foreign policy aim was to return France to the center of the world's geopolitics. France should seek an independent security policy outside of NATO and reduce American influence in Europe. France could become a leader within the EU, pursue a historic rapprochement with Russia, and solve the Ukrainian crisis. Macron's efforts were shattered by Russia's invasion of Ukraine in February 2022. France had to adapt to the changing circumstances, but its main goal of a European security independent of the United States remained the same. This recalibration meant uniting the European nations against the Russian threat (Nougué, 2023). Henry Welc's approach to applying offensive realism to explain France's security policy is more nuanced. Russia's invasion of Ukraine has indeed provided a great opportunity. France tried to elevate its international position by mediating between the United States and Russia. Macron organized a diplomatic tour in an attempt to save France from losing control of West Africa, but it was of no use. Most of those states have not condemned Russia's invasion of Ukraine and have now fallen under Moscow's and Beijing's influence. The problem is that France's economy does not support Macron's geopolitical ambitions. Even simple policy acts, such as slightly raising the retirement age, were met with determined protests. The conservative and left-wing opposition to his ambitious initiatives from France also hinders what France can achieve. No less relevant is the growing rivalry with Germany within the EU, which has the potential to block any substantial reform in the defense sector (Welc, 2023).

The regime of economic sanctions imposed costs on the United States and Europe. The war in Ukraine has negatively impacted the global economy with unintentional consequences. A quantitative study estimated that France suffered the most significant costs from all the other EU member states

due to spillover effects (Qureshi et al., 2022). France's ambivalence towards Russia can also be explained through its complicated partnership with the United Kingdom. Cooperation between Washington and London was strengthened to face the challenge posed by Russia and China, but this did not include Paris. France seeks an alternative to the NATO partnership, while Brexit and the AUKUS treaty only escalated diplomatic tensions with the United Kingdom.[3] The French military should have provided nuclear-powered submarines to Australia, but the United Kingdom replaced them at the last moment. Similarly, Macron asked for a ceasefire in Gaza, to the dismay of Washington and London (Rees, Xu, 2024).

1.1. Theory and methods

Realism constructivism borrows the classical realist ontology and combines its study with constructivist methods (Barkin, 2003). The theory studies the application of power politics to a socially constructed reality. The apparent incompatibility of realism and constructivism is rooted in the confusion of what classical realism and constructivism represent and in treating international relations theory as opposing paradigms (Barkin, 2010). We aim to build on the existing literature on applying the realist constructivist theory to case studies (Barkin, 2020). This paper tries to show that France's behavior in the ever-changing security environment can be better explained through the concepts of co-constitution and intersubjectivity. Without getting into too much detail, as this is not the scope of the current article, we also borrow from post-colonial and critical theories the idea of exploitation of former colonies that are only de jure independent. Realist constructivism has this element in common with critical theories, as both oppose the excessive optimism of liberal constructivism, even though for different reasons and with very different conclusions (Jacob, 2023).

Macron's policy towards Russia concomitantly reflects France's moral posture and rational political interests. The two cannot be separated. France seeks the leadership of the EU and an independent policy from the US. It aims to strengthen its security against the Russian threat. It understands that Russia can be a major economic partner in the future and that the post-war security framework in Europe will have to include Moscow in one way or another. Promoting France's interests includes reinforcing the commitments to its liberal democratic values, respect for the rule of law, and strengthening the UN charter's international norms. France's support for Ukraine reflects this nuanced understanding of foreign policy conduct. The same can be applied to its neocolonial

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[3] AUKUS is a security partnership between Australia, the United Kingdom, and the United States formed on the 15th of September 2021. The United Kingdom and the United States will provide Australia with nuclear-powered submarines.

empire. France has economic, political, and strategic interests in Africa, but its actions were also driven by a sense of guilt for its colonial past and a commitment to the doctrine of human rights, to which France had a decisive historical contribution.

France's strategy is intersubjective because it tries to reconcile rational power politics interests with moral values in conditions of imperfect information. It is co-constituted because the actual foreign policy act results from the constant interactions of France with its partners and competitors, some of whom have very different cultural and political values. This interaction conditions France's intersubjective perception of its position in the world and determines its recalibration. Starting in the 1990s, Paris tried to gradually reform its approach to Françafrique with little success. After decades of unfair practices, the states of the former French West Africa no longer trusted the sincerity of French politicians. The accumulated frustrations culminated in the failure of Operation Barkhane to obtain its military goals against the terrorist insurgencies between 2014 and 2022. From the perspective of the African leadership, France could no longer even guarantee their security, but it still wanted to maintain its neocolonial domination.

Path dependence has a long history in political science (Greener, 2005). Path dependence can be defined in the social world as self-reinforcing sequences of events that explain the resilience of specific political institutions or political behavior (Georg & Jörg, 2010, p. 16). The theory can be explained in two mutually complementary ways. First, the results in the social world depend on the build-up of a precise sequence of events. Second, the chronological sequence of events is causally connected and is "both a reaction to the antecedent events and a cause of subsequent events" (Georg & Jörg, 2010, p. 29). Other authors propose an actor-network approach where human agency is taken into account to explain the transformation of path-dependent structures (Munck, 2022). Some tried to differentiate between path dependence studies of resilient institutions for recent events and proposed the terminology of historical persistence for studying long-term patterns that imply connections between political, economic, social, and symbolic variables (Cirone & Pepinsky, 2022).

We use this concept to explain why France was reluctant to abandon its neocolonial empire. During the Cold War period, these nations provided an invaluable set of natural resources. They supported France's struggling economy after the disastrous and costly Nazi occupation, the First Indochina War, and the Algerian War of Independence. In terms of values, France aimed to stop the spread of communism and counter the soviet influence in the former French West Africa. France was path-dependent in maintaining its influence over a region it had colonized, starting in the 18th century. Even after the fall of the Berlin Wall and even after it became more economically costly to maintain its influence over Françafrique, Paris refused to grant de facto independence to those countries. The

African states asked for permission to leave the CFA franc, but France used its economic leverage to block the reform.

In a path-dependent fashion, the French leaders considered it a far more significant prestige blow. The French leadership was used to have an economic, political, and cultural influence over Françafrique. They wanted the African states to be grateful for France's investments, humanitarian aid, and regional security guarantees. Similar to Napoleon the Third's failed attempt to establish a monarchy in Mexico, France could not accept that it was no longer a great power. By the mid-2010s, the local populations lost patience in the face of never-ending corruption and widespread terrorist attacks. France no longer had a viable option. If it pulled out of Africa, it would have been accused of exploiting these countries and then abandoning them. If it increased its presence, it was accused of further neocolonial practices.

Macron chose the middle ground, which only postponed the inevitable. Élysée perceived it as a great humiliation for an authoritarian state like Russia to take France's place. With its record of human rights abuses, internal law infringements, and war crimes, Russia was welcomed with enthusiasm by the local population that harshly criticized decades of French support. From the French perspective, this is not only a security threat to its remaining presence in the region but a great affront to France's complex colonial legacy in the Sahel region.

The paper uses historical synthesis to understand the evolution of France's interaction with its former African colonies. The intersubjective co-constitution of identity in these countries is brought to light via the speech act analysis of key political leaders. The objective is to understand how they perceive each other and to explain Russia's propagandistic success in the region. Quantitative economic indicators support the thesis of a French colonial empire but also reflect on the vulnerability of those states and societies. The level of education and future prospects in the context of a demographic boom is also highly relevant. Military data, official defense papers, and the reports of military experts reflect how France defined its security policy. The figures reflect French military capacity in the event of sending troops to Ukraine.

1.2. France's neocolonial empire

France already has an official empire called Overseas France. This empire is composed of 13 territories spread all over the world, with a population of three million people. The territories were initially colonial possessions assimilated into France. Unlike, for example, the US Territories and Freely Associated States, the people living in Overseas France are French citizens, have the right to

vote, and are represented in the French Parliament. They can also theoretically organize a referendum if they want to declare independence. Because they are part of France, they are also part of the European Union and use the Euro as currency. Still, this does not change the fact that these remote points on the map from the Hexagon are used to increase France's sphere of influence at a global scale. Thanks to Overseas France, the Exclusive economic zone of France is the biggest in the world, with 11,691,000 km^2. It is followed by the United States 11,351,000 km^2, Australia 8,505,348 km^2, Russia 7,566,673 km^2, and the United Kingdom 6,805,586 km^2 (WorldAtlas, 2024). The territories represent strategic points from distant places such as the Caribbean (French West Indies), Latin America (French Guiana, bordering Brazil), North America (Saint-Pierre and Miquelon, bordering Canada), Antarctica (French Southern and Antarctic Lands), the Indian Ocean (Réunion), and the Pacific (French Polynesia and New Caledonia). Following the United States and the United Kingdom, France is third in terms of the number of overseas military bases. As of today, after it had to abandon its military bases in Mali, Burkina Faso, Central African Republic, and Niger, France had 16 remaining overseas military bases. France's forces in Africa are still present in Djibouti, Ivory Coast, Gabon, Senegal, and Chad. As of early 2024, Paris declared its plans to pull back most of its troops from Africa.

France simultaneously controlled a neocolonial empire in Africa. To understand the political mechanics of this unofficial empire, we have to go back in history. France understood that it could no longer maintain its colonial empire after the conflicts of the First Indochina War (1946-1954) and the Algerian War of Independence (1954-1962). International law infringements were a common practice in France's case. Even after Algeria's independence, between 1960 and 1966, France conducted 17 nuclear tests in the deserts of Algeria (Henni, 2022). Almost two hundred nuclear warheads were tested between 1966 and 1996 in the Pacific, French Polynesia (Macumber et al., 2023). In both cases, activists are now asking France to take responsibility. The war in Algeria was ruthless, with over two million casualties, other two million Algerians internally displaced into concentration camps, and one million French colonists returning to mainland France. The French forces recruited local Algerian soldiers and committed horrible war crimes and crimes against humanity (Horne, 2014).

France had serious economic difficulties, so it had to formulate a strategy. The CFA franc was designed to maintain France's influence in Africa with minimum costs. France promised to grant independence to all the countries in French West Africa. The CFA franc has been used in these colonies since 1945. The exchange rate was fixed at 1 CFA franc to 2 French francs as of 1948. During the negotiations between France and the African leaders between 1958 and 1960, Paris

proposed the continuation of the CFA franc as a common currency within this new community of states. The community represents 14 states with more than 200 million French speakers. It was divided in two. The West African CFA franc is composed of Benin, Burkina Faso, Mali, Niger, Senegal, Guineea-Bissau, Côte d'Ivoire, and Togo. The Central African CFA franc is used in Cameroon, the Central African Republic, Gabon, Chad, Equatorial Guinea, and the Republic of the Congo. The official name of the CFA community changed from the French colonies of Africa to the Financial Cooperation in Central Africa. Françafrique was used in the 1950s to define the close relations of France with West Africa, but the terminology later changed to represent a critique of French neocolonialism. The CFA franc remained in place even after France adopted the Euro currency in 1999, with 1 euro to 655.957 CFA franc. France claims that granting independence was not conditioned by the CFA franc since this was totally optional. The French politicians argued that the CFA franc would provide financial stability to new countries and avoid rampant inflation. They usually give the example of Equatorial Guinea in 1985 and Guinea-Bissau in 1997, which voluntarily joined the CFA franc even though they were never a French colony. Mali left the CFA franc and later rejoined on its free will. The French arguments are correct, but there are also numerous counterarguments that are worthy of our analysis.

Equatorial Guinea and Guinea-Bissau decided to join the financial community because they were struggling with major economic issues caused by political turmoil. Guinea-Bissau would plunge into another civil war in 1998, just one year after joining the CFA. The country has known a series of rebellions and coups that continue until today (the last failed coup took place in 2023). Equatorial Guinea joined after Teodoro Obiang was instaurated as a military dictator after the 1979 coup, with the involvement of the United States and Spain. Teodoro Obiang remains in power to this day, and his regime has one of the worst human rights abuses recorded in Africa. The two countries were former colonies of Spain and Portugal.

The CFA franc fixed exchange rate led to its overvaluation. The African countries using this currency produced goods at prices that were not competitive on the global market compared to other developing nations at that time. Export-oriented economies benefited from a weak national currency, with Japan arguably the most famous success story of currency depreciation. The only remaining option was to sell what they produced only to France. These economies were undeveloped and mostly exported raw materials. France benefited from a monopoly on a steady reserve of uranium, gold, copper, diamond, bauxite, timber, crude oil, iron ore, and agricultural products. The French multinationals obtained a monopoly on exploiting natural resources from the African governments. From 1927 until now, the French conglomerate Bolloré Transport & Logistics controlled West

Africa's biggest ports (16 ports now) and has businesses in 46 African states (Weir, 2021). The state benefited from a guaranteed supply of above-market prices. However, most of the funds were used by the African leaders imposed by France to enrich themselves and their families above anything else. The national economies were not stimulated to diversify or produce anything else more complex with added value. Due to the overvaluation, it was cheaper for the CFA African countries to import high-value products from France than from any other developed economy. In Wallerstein's terminology, this represented a classic system of a neocolonial relationship between exporting raw materials exclusively to the center, which sells back to the periphery manufactured goods.

Figure 1. Bolloré ports in West Africa as of 2021
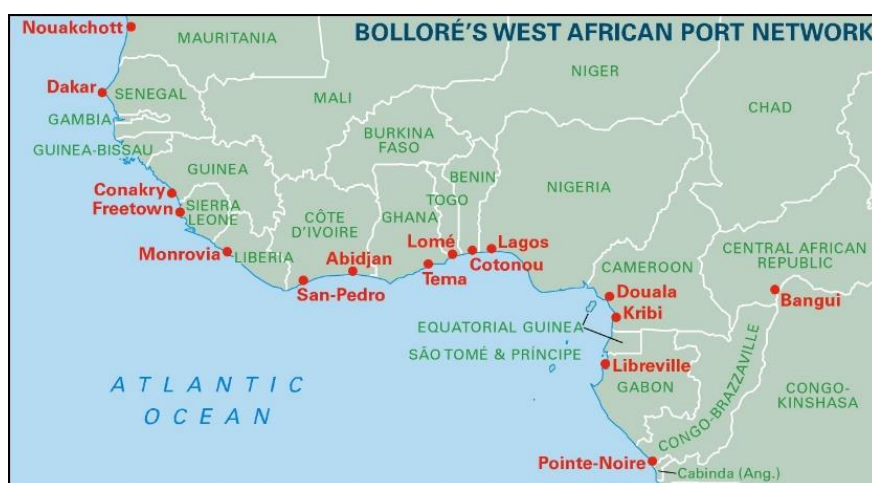
Source: Weir (2021)

The CFA countries kept inflation under control, unlike many other neighboring non-CFA states. However, they also registered modest rates of growth. This was partially caused by the fact that developing nations can induce inflation to stimulate growth and create jobs. Typically, a high level of inflation creates low levels of unemployment and vice-versa. It was a matter of economic sovereignty. The CFA countries depended on how well France's economy was behaving. The newly independent nations also lacked monetary and financial sovereignty. France imposed strict conditions. The CFA countries had to deposit 50% of the state reserves and another 20% for financial liabilities to the French treasury. Only 30% of the state's funds remained in Africa. The reserves had a 0.75% interest rate paid to the African central banks. France guaranteed the security of these reserves, unlimited exchange disponibility with other international currencies, and printed the CFA currency. With France's entrance into the Eurozone, the European Central Bank dictates the monetary policy. The EU comprises developed nations with very different interests from those of developing

African countries. Facing harsh criticism, Paris finally agreed in 2020 to renounce the 50% deposit condition but not the 20% guarantee for financial liabilities.

Guinea was the only country from the former French colonial empire that gained independence in 1958 but rejected the CFA franc from the beginning after organizing a popular referendum. In a historical speech, the first president of Guinea, Sekou Toure, proclaimed that they preferred to live in poverty but free rather than rich and still enslaved (Pace, 1984). France retaliated in full force under Operation Persil and set an example for other countries that may be tempted to follow Guinea's example. It tried to block Guinea's application as a UN member and destroyed all the infrastructure built by the French during the colonial era, including dismantling the country's power grid. All financial aid was stopped, and Paris tried to diplomatically isolate Guinea from the rest of the world. With no other remaining allies, Guinea sought help from the Soviet Union. France also armed anti-government resistance and flooded the country with counterfeit bills to ensure Guinea's inflation rose to uncontrollable levels. The literature from that era talked about Guinea's resistance and the acceptance of the other countries of their limited autonomy under the CFA franc (Hapgood, 1963). France prevented others from following Guinea's example. Sylvanus Olympio, Togo's first president, was replaced in a military coup and later assassinated on the 13th of January 1963, right outside the American embassy. He was a pacifist who effectively disbanded Togo's army, keeping only a tiny garrison force, and pursued the modernization of his country. Ghana and France were involved. France was worried that Togo had closer relations with the United States and the United Kingdom. On the 10th of July 1963, France signed an updated defense agreement with Togo's new government that increased the cooperation between the two countries (Desmarescaux, 1964). Another famous case was the assassination of Félix-Roland Moumié on the 3rd of November 1960 by France's secret services in Switzerland, where he sought refuge against France. He was a Cameroonian anti-colonial activist murdered with thallium poisoning.

During the ideological context of the Cold War era, other African leaders forged alliances with Moscow or had communist sympathies. However, it would be an exaggeration to label them as profoundly convinced neo-Marxists, as they were rather nationalist opportunitists. The United States formally opposed European colonialism but did little to help the newly independent nations. Moscow and China offered the development aid that these countries desperately needed. One such example is Thomas Sankara, a Marxist, and pan-africanist who rejected any form of foreign aid. He became Burkina Faso's president after a coup in 1983 and was assassinated in 1987 with the direct aid of the French secret services. Sankara and 12 of his council members were killed by a professional death squad during a meeting. The man behind the plot was one of his close collaborators, Blaise Compaoré.

Blaise explicitly motivated his act due to Thomas Sankara's rebellious attitude that endangered the country's relations with France and the Ivory Coast (arguably France's closest ally in West Africa). He remained the president of Burkina Faso with France's support until 2014, when he fled to Ivory Coast after an uprising against his rule. He was sentenced in 2022 in his absence to life imprisonment for the assassination. Burkina Faso officially asked France to reopen its archives and acknowledge its responsibility (Obadare, 2022).

France was among the most enthusiastic supporters of the military intervention in Lybia in 2012. It continued to be involved in the following civil war by supporting one of the rebel factions and simultaneously trying to act as a mediator (Mezran, Fasanotti, 2020). In addition to securing Lybia's oil reserves, some political scientists argued that France had every intention of getting Muammar Gaddafi killed by the rebels instead of being arrested and facing trial. Gaddafi proposed the African Union and the gold dinar, a common currency that would have threatened the CFA franc (Ebatamehi, 2022).

Not only did France crush any dissent, but it also systematically appointed and protected military dictators and authoritarian rules in Françafrique even until the 21st century. The tragedy of those countries was that they were simultaneously exploited by France and by their local highly corrupt authorities. This generation of African leaders remained under France's de facto protectorate and were given the freedom to rule as they pleased. Rebellions and coup attempts against them were crushed with France's direct military support. Researchers usually approximate the number of French military interventions in Africa post-1960 to around 50 (Powell, 2017). Including multilateral interventions, between 1990 and 2022, France initiated approximately 20 military operations in Africa (Recchia & Tardy, 2020, p. 93). Another estimate offers a staggering number of 122 military interventions from 1945 to 2005 (Charbonneau, 2008, p. 67).

Viewed from this perspective, the French exploitation only partially caused the economic stagnation of the countries of Françafrique. However, we argue that the neocolonial relationship with the corrupt local governments caused even more harm. For example, Omar Bongo was directly named President of Gabon in 1967 after a coup ordered by Charles de Gaulle. Despite numerous protests, failed coups, and rebellions, he remained in power until his death in 2009. His son Ali Bongo became president until 2023, when he rigged another election and was removed from power by the military junta that had enough of the Bongo family. The French companies that benefited from monopoly exploited the country's oil, gas, rare materials, manganese, diamonds, gold, and uranium resources. Gabon remained extremely undeveloped despite the French payments. Gabon's GDP increased from 0.27 billion dollars in 1967 only to 12 billion dollars in 2009 and reached 21 billion in 2022 (Trading

Economics, 2024). Around 80% of Gabon's exports are represented by oil, so most of that growth filled the pockets of Bongo's family. As of 2022, 40% of the population lived under the poverty line, and the unemployment rate was 30% (Donmez, 2023). The French authorities discovered that Omar Bongo received hundreds of millions of euros as bribes from the French company Elf Aquitaine for oil exploitation (Henley, 2003). At the time of his death, Omar Bongo was one of the wealthiest state leaders in the world, with hundreds of millions of dollars in bank accounts and luxurious properties worldwide (Reddy, 2023).

At the end of the Cold War, there were some attempts to reform the CFA system, and Jacques Chirac was the first French President who broke ranks and acknowledged France's colonial past but then retracted much of what he said. In a 2005 French law on colonialism, the French youth should be taught about the positive aspects of French colonialism. Macron apologized for the French war crimes in Algeria but refused to do the same for the colonial rule (Camut, 2023). As time passed, the growing resentment in Africa against France's neocolonial rule eroded the stability of the Françafrique. In the following section, we will try to understand the main causes of its collapse and explain how Russia managed to speculate the political chaos.

1.3. Beyond the Coup Belt and Russia's Africa Corps

The economic problems in Françafrique, coupled with demographic growth and the advancement of telecommunication technology and social media, were among the leading causes of the growing political dissent against their corrupt governments and France. The complexity of this social phenomenon deserves a separate case study; here, we will only sketch the bigger picture by analyzing some macro indicators.

If most developed regions of the world are facing demographic decline, the population of Sub-Saharan Africa continued to grow at an accelerated pace, from 929 million in 2012 to 1.211 million in 2022 (Statista, 2024). The population is very young, with a median age of 18.8 years compared with France's 42 years (CIA Factbook, 2024). Some relevant examples of CFA countries are Niger, with an increase from 2.6 million in 1950 to 26 million in 2022; Burkina Faso 4.2 million in 1950 to 22 million in 2022; and Mali 4.6 million in 1950 to 22 million in 2022 (Worldometer, 2024). Despite a slight decrease in the poverty rate from the 1990s to 2010s due to population growth, the actual number of people living in poverty has increased in the region. It is estimated that most Sahel countries will double their population by 2050. The younger citizens in the African states barely have access to elementary education, but they also use their phones to access political news. Because they

lack any perspectives for growth, they are more capable and motivated to protest and even raise their arms against their governments. Criminal organizations, populist politicians, and ambitious military leaders thrive in this environment and can quickly undermine fragile democratic institutions.

France's GDP per capita in 1960 was $1300, at the same rate as the OECD average, and above Senegal with $300, the wealthiest CFA country at that time. Fast forward to 2022, the difference has dramatically increased. France's GDP per capita reached $40,000, and the average OECD was $43,000. Subsaharan Africa had the lowest GDP per capita in the world, with $1700 in 2022. In the same year, out of all 12 CFA countries that were former French colonies, only Gabon, with $8800, the Republic of the Congo, with $2600, and Côte d'Ivoire, with $2400, had a higher GDP per capita than the Sub-Saharan average. Niger's GDP per capita barely increased in sixty years, from $128 in 1960 to $585 in 2022. (The World Bank, 2022). The figures for Gabon are misleading due to its low population, rich oil resources, and the monopoly of the Bongo family on the country's wealth.

Figure 2. GDP per capita (current US$) 2022
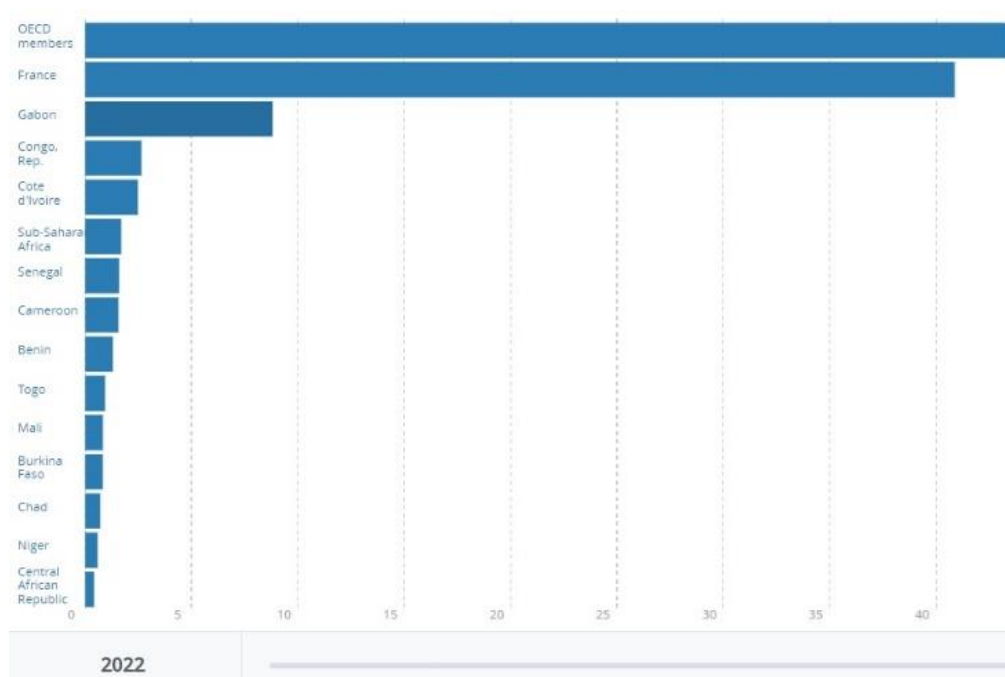
Source: World Bank (2024)

Ethnic tensions represent another major cause of conflict within the CFA countries and across borders. The borders of the African nations were set by French colonial rule without considering local cultures or religious differences. In post-independence West Africa, voting is primarily based on ethnic and religious groups. An ethnic minority that represents only 10% or 20% of the population of an African state but might be majoritarian in a particular province will never win a fair election, so it

can only hope to get its interests represented through violent means. In correlation with the economic struggle, government corruption, and France's neocolonialism, this explains the numerous coups and periods of social unrest. Particularly impactful for the Sahel region is the existence of the Tuareg and Fulani ethnic groups.

The Tuareg are composed of around 4 million people, present in Niger, Mali, Burkina Faso, Libya, Algeria, Mauritania, and Nigeria. There are also 40 million Fulani scattered all across the Sahel, from the Red Sea to the Atlantic. Unlike any other major ethnic groups in Africa, most of the Tuareg and Fulani are still nomadic pastoralists and have been practicing this lifestyle for thousands of years. They were at the base of the Trans-Saharan trade (which included slaves well before the European powers arrived), making Mansa Musa one of the world's wealthiest men in the 14th century. From their perspective, the new African nations' borders overlap with the trade network. The growing size of the Sahara desert is pushing them further south into the territories of the West African states. The nomadic people did not want to recognize the legitimacy of these societies created by the European colonial powers and repeatedly asked for a state of their own. The Tuaregs rebelled against the African states backed by the French between 1962 and 1964, 1990 and 1995, 2007 and 2009, and again in 2012 till the current date. They acted as mercenaries in the Lybian civil war between 2014 and 2020. The rise of the Islamist insurgency in the Sahel region, starting in 2012 in Mali, should be understood on this background.

The Islamic terrorists defeated in the Middle East regrouped in the fertile grounds of the Sahel region. The current conflicts are, first and foremost, culturally and economically based. The so-called Islamic insurgency is rather better represented as a series of ethical conflicts with a newly added religious variable. The government in Mali was unable to fend off this rebellion, so it called for the help of France, which launched Operation Serval in December 2012, followed by Operation Barkhane in August 2014. At the height of the mission, the French forces had 5,500 soldiers supported by another 5,000 locally recruited troops. The Islamist rebels were pushed back, and the local population initially welcomed the French as saviors, chanting slogans such as Vive Hollande and Vive la France (Lewis & Valdmanis, 2013).

The Islamists benefited from the Tuareg and Fulani's help, who knew the land and retreated into the Sahara desert, from where they continuously launched terrorist attacks. The hostilities turned into France's forever war, similar to the United States in Afghanistan. The conflict spilled over from Mali into neighboring Burkina Faso and Niger. The Tuaregs mercenaries, who gained experience in the Lybian Civil War, returned in 2020 to support the insurgency. Now, the Islamists control large territories of all of these three nations. Before the 2010s, there was almost no terrorist activity in the

region. The Overall Terrorism Index Score 2023 measures the incidents, fatalities, injuries, and hostages of terrorist activity and ranks the situation from 0, the best, to 10, the worst. Burkina Faso has an 8.57 score, Mali 8.00, and Niger 7.27, occupying the first, third, and tenth place in the world. Neighboring Nigeria is noted with 7.57, the eighth position. From 2018 to 2019, Burkina Faso's terrorist attacks increased by 590%. Burkina Faso registered 2,000 deaths due to terror attacks only in 2023, which is a quarter of the world's total for that year. Around 1.5 million people in Burkina Faso have been internally displaced (Vision of Humanity, 2023). The Burkina Faso and Mali attacks represented 73% of the Sahel region and 52% of sub-Saharan Africa. The entire Sahel region accounted for 43% of the terrorist attacks in the world in 2022, a massive increase from only 7% in 2007. This means more than the terror attacks in the Middle East, North Africa, and South Asia combined. "Across the Sahel, 22,074 people were killed in 6,408 terror attacks between 2007 and 2022" (Institute for Economics and Peace, 2023, p. 62).

We argue that the above causes caused the collapse of the French neocolonial empire. A series of coups replaced both democratic and authoritarian governments generally loyal to France with military juntas that hated the French in the Sahel region. Political scientists named it the Coup Belt. In chronological order, this happened as follows: Mali in May 2021, Chad in April 2021, Guinea in September 2021, Sudan in October 2021, Burkina Faso in September 2022, Niger in July 2023, Gabon in August 2023. Numerous failed coups also occurred in the Sahel, starting with the 2020s. Additionally, a civil war erupted in Sudan in April 2023. France was forced to retreat from the Central African Republic in 2021, which first requested the military support of Russia in 2018. At the request of the new governments that ceased diplomatic relations with France, the French military presence was expelled from Niger, Mali, and Burkina Faso.

The Wagner mercenaries have already been active in Sudan since 2017 and in Lybia since 2018. They proved their efficiency, so the new military juntas ravaged by terrorist insurgencies invited them to take France's place. The local populations celebrated this decision, which, according to them, meant the release from France's colonial rule. The protestors attacked the French embassy in Ouagadougou and the French Institute in Bobo-Dioulasso. Anti-French demonstrations took place in Niger, Mali, and Burkina Faso. They waved Russian flags and shouted death to France, France go home, long live Russia, and Merci Wagner (Le Cam, 2023).

The United States was also forced to leave Niger in April 2024, and their place was taken by Wagner Russian soldiers. In the same month, Chad sent a letter to the US requesting that they leave the country. This negatively affects the United States' capability to fight terrorism in the region. In the face of strategic overextension, Washington might decide to abandon the Sahel. France still has

1,000 soldiers in Chad, but the new military junta met with Putin in January 2024. Chad seems to favor a strengthened partnership with Russia (Reuters, 2024). The Economic Community of West African States imposed sanctions on the new military juntas and even threatened with a military intervention. In response, in January 2024, Burkina Faso, Mali, and Niger proclaimed the Alliance of Sahelian States, promising military aid and formulating plans to abandon the CFA franc in favor of a new currency. Russia is quoted as the primary security provider. The rest of the countries from the ECOWAS felt threatened by this new wave, as their governments might be next in line to be replaced. The ECOWAS seriously contemplates declaring war on the Alliance of Sahelian States, and most of its members promised to support the campaign (Aning & Bjarnesen, 2024). This would represent a regional war supported by great power proxies of unprecedented scale for Africa in the 21st century.

Russia exploited the turmoil by manipulating the strong sentiments of pan-Africanism and anti-colonialism. This was coordinated with China's Global South rhetoric and the fight against the collective West. The G77 meetings held in September 2023, January 2024, and the BRICS summit in August 2023 supported the same idea of multilateralism and contesting the supremacy of the US dollar. Most of the people from the Sahel region were convinced by Russia's propaganda of its fight against NATO in Ukraine. Within the UN General Assembly, only 10 African states voted to suspend Russia from the Human Rights Council. The votes for the ES-11 various resolutions directed at punishing Russia for its invasion showed 140 votes in favor, 18 against, and 122 abstained (Götz et al., 2023).

It matters less for the distressed local populations in the Sahel regions that the new military juntas have already committed crimes against humanity, as Burkina Faso executed over 200 civilians without trial (Human Rights Watch, 2024). Wagner's similar war crimes against civilians in the region fall within the same category. With the reform of Wagner and its transformation into Africa Corps, Moscow now directly controls the mercenaries that took over France's neocolonial empire. Their mission is also to exploit the natural resources in the region to bypass the regime of sanctions and provide extra funds for Russia's war effort in Ukraine. France had no choice but to retaliate.

1.4. Military capabilities and logistical limitations

France initiated several diplomatic missions to defend its security priorities and represent its moral commitments to the international community and the EU. These actions were simultaneously directed against what Russia considers its core sphere of influence. In late 2023 and early 2024,

France enhanced its nuclear cooperation with Kazakhstan and Mongolia by signing deals for uranium exploitation. Kazakhstan is the world's biggest producer of uranium. Macron visited Kazakhstan and Uzbekistan in November 2023 with the declared objective of increasing the cooperation between these countries. France agreed to sell weapons to Armenia in two deals signed in October 2023 and February 2024 (Kayali & Gavin, 2024). With the exception of Mongolia, these states are part of the Eurasian Economic Union and are controlled by Russia. On March 6, 2024, Macron met with Maia Sandu and signed a defense pact with Moldova to counter the destabilization efforts of Russian forces in Transnistria (Irish, 2024). In an interview on the second of May 2024, Macron reiterated that France should not abandon the idea of sending troops to Ukraine in case the frontline collapses and Kyiv asks for direct support (Le Monde, 2024). In this section, we will examine France's military capabilities in the case of a large-scale conflict.

According to the 2024 Military Strength Ranking, out of 145 countries, Russia remains the second-largest power in the world, while France occupies the 11th place. It has 200,000 active personnel and 26,000 reservists. Macron introduced the Service National Universal Program in 2021 to boost these numbers, an optional military service for one month for citizens aged 15 to 17. France only has around 180 fighters, 55 attack helicopters, 178 tanks, and 77 mobile artillery pieces ready for combat (Global Firepower, 2024). France sent a significant amount of its arsenal as aid to Ukraine. The military equipment sent between 24 February 2022 and 31 December 2023 amounts to €2.615 billion (Ministère des Armées, 2024). France's military has the same problems as the other European powers. Its core strategy was to build a high-performance but reduced-size army capable of low-scale warfare. Its professional efficiency in targeted missions is remarkable. The main issue is that it lacks the ammunition stockpiles and logistical capabilities for more ambitious operations.

France struggled to maintain a 5,000-strong force in Africa and had to rely on American logistical support. France already has 30,000 troops abroad, and its power projection abroad is limited to an estimated maximum expeditionary force of 35,000 soldiers simultaneously (Schmitt & Tenenbaum, 2023). These forces do not have the combat experience of a large-scale industrial war. Macron stimulated France's military industry, and now France has overtaken Russia and is the second arms exporter in the world after the United States. However, shifting France to mass production will take many years and more sustained efforts. Even before the invasion, Russia had a stockpile of 16 million artillery rounds and had the capacity to produce 1 million rounds per year. This increased to 4.5 million in 2024. The estimates range from an average of 10,000 to 80,000 shells fired by the Russians daily, while the Ukrainians were able only to fire back 2,000 to 9,000 shells daily (Ruokonen, 2024). In comparison, France produced 24,000 artillery shells in 2023 (Shekina, 2024).

The EU has the economic potential to vastly surpass Russia's military industry, but despite the rhetoric, there seems to be little political will to take action in this direction. Even if the European nations would be willing to take the costs, it would take years to build the necessary infrastructure.

France is not to blame for this situation. The EU faces the same shortcomings, failing to produce the promised one million shells for Ukraine by March 2024 and instead producing only 300,000 as of November 2023 (Kayali et al., 2023). The United States aid package was finally approved in April 2024 after six months of delay caused by an internal squabble. Some of the equipment will be delivered starting in June 2024, but it will take at least two years to transform the $61 billion package into weapons for Ukraine. In complete contrast, a very modest economy like North Korea was able to send more than 3 million shells to Russia since the beginning of the war (Kobara, 2024). Even with the additional Western weaponry, Ukraine faces a major manpower crisis. According to President Volodymyr Zelensky, Ukraine needs at least 500,000 recruits. Some experts say that Ukraine will lose the war if it does not pass a law for a mass mobilization of all men aged between 18 and 60, but the Ukrainian politicians still hesitate because this measure will be highly unpopular and there will not be enough people supporting the economy (Dettemer, 2024). The situation on the front has worsened after the failed counteroffensive, Russia's victories in Bakhmut and Avdiivka, and the latest advancements towards Kharkiv.

If the front collapses, what can France do to stop Russia's advance without provoking an all-out war with NATO? Macron suggested sending French troops to Kyiv or Odesa. We believe that Kyiv is out of the question. Even if the Ukrainian front collapses, Kyiv is a metropolis with 3 million people. Russia does not have the forces to occupy it and will most likely avoid engaging again on that front. Instead, a more plausible plan would be for France to send an expeditionary force to Poland and from there into Ukraine. They will be deployed in northern Ukraine, right at the border with Belarus. The French forces will not directly confront the Russian ones and will relieve some of the Ukrainian border forces that could be redirected elsewhere. A second scenario implies that France sent troops to Moldova and then siege Transnistria to free Chisinau from Moscow's pressure without engaging in an actual firefight. Because Transnistria is a separatist regime, a direct confrontation would be avoided. A third hypothetical plan involves Romania. In response to Russia's invasion, France initiated Mission Aigle in February 2022, sending a mechanized rapid force of 1,000 soldiers to Romania. This force could be further supplemented with more French troops that could cross the border from Romania through South-West Ukraine and dangerously bypass Transnistria through the south. The French forces will rush to deploy on the Tylihul Estuary, which would provide a great natural barrier for the defense of Odesa. The brigades will work as peacekeeping forces right between

the Ukrainian and Russian forces. Macron could try forcing Putin's hand into negotiating an armistice to avoid a war with NATO, which he knows that he will lose.

This compromise would likely mean ceasing hostilities and Russia keeping most of the territory it gained until that moment without obtaining international recognition for the annexation. This result will severely impair Ukraine's future capabilities as a functional state integrated into the EU and NATO, but it will at least ensure its survival and the end of a devastating conflict with over one million casualties. All the above plans imply a high risk of escalating to a world war. France will also struggle with the logistical nightmare of sending rapid task forces 2,500 km away from its borders. These scenarios do not represent foreign policy prescriptions or international relations forecasting but our hypothetical tactical assessments. Their purpose is to show what, in our view, France's tactical options are if it decides to pursue a questionable strategy that goes against the realist tradition.

Conclusions

Unlike other European colonial powers, France tried to directly assimilate the people from its colonies into the French civilization. It tried to delegate the administration of the colonies to loyal locals. This set the French colonies in Africa on a long path of dependence that started in the 18th century on Paris's central authority. This dependence also meant the complicity of the local rulers with the colonizers. Sometimes, these local leaders were far more ruthless and corrupt than the French. After the Second World War, France found ways to maintain its regional influence through the CFA system. Their authority was reinforced by the already existing historical path dependence of the newly born African states.

Since the demise of the French colonial empire, Paris has maintained a privileged and close relationship with the states of the former French West Africa that represents the textbook definition of neocolonialism (Etogho et al., 2023). Some might argue that France's neocolonial exploitation was balanced by its investments and development aid that it provided to the region. The CFA countries had a stable currency. Côte d'Ivoire, for example, partially obtained a relative level of industrialization thanks to France's help. France sent to Africa as aid an average of 2.800 million dollars in the 1970s, $3.900 in the 1980s, $4.700 in the 1990s, and $4.300 in the 2000s (Jacquemot, 2011). Even if we could be inclined to accept this argument, France may still be morally and legally responsible for the perpetuation of authoritarian and kleptocratic regimes in the Sahel region for sixty years. In addition, this may have caused significantly more harm indirectly than the direct exploitation. Due to the same path of dependence, France refused to let go of what it considered a part of its legacy and a sign that

France could still be a great power. The extreme poverty and boiling political frustration could not have continued indefinitely. The repeated interactions between colonizers and colonized co-constituted strong cultural identities.

Starting in 2012, a series of events endangered control over the CFA franc by sparking terrorist insurgencies, military coups, civil wars, and interstate conflicts. Ironically, Macron is also partially to blame for hesitating to act sooner out of fear of being labeled a colonizer. France struggled to find a strategy for Africa, and its actions reflected a case-to-case reaction to what was happening instead of a broader plan (Beloff, 2024). France's presence was gradually replaced by the reformed Wagner group, which took advantage of the anti-colonial sentiments in the region. The intersubjective perceptions of the collective West's double standards and the ruthless exploitation of the Global South were already present before Russia's propaganda took the initiative in the region and monopolized this discursive course. France responded to the new challenge by being far more active in countries under Russia's sphere of influence and by taking a hawkish stance on the war in Ukraine. This represented a radical strategic change.

Macron's change of position regarding Russia can also be explained by the need to pursue an independent European security policy and rely less on the support of the United States. His recent statements can be understood as speech acts meant to mobilize the EU institutions that, according to his view, are responding slowly to this serious security crisis. Still, this also means that France wants to negotiate and better cooperate with the United States against a common threat to the rule-based international order.

The results suggest that despite having one of the largest and most experienced armies within the EU, France is not ready for a large-scale war. The best it could hope for are limited operations to support the defense of vital strategic points such as Odesa. This might require sending a rapid force from Romania and crossing through the Republic of Moldova. Poland is the most likely candidate for unofficially backing France's efforts due to its ideological motivation and military preparations, with 200,000 military personnel and another 350,000 reservists. European values, the balance between France and Germany within the EU, and the 2024 EU elections partially explain Macron's change of strategy. Still, the paper argues that what matters the most is France's clash with the Russian Federation over the Sahel and West Africa.

References

Ali, P. (2018), French colonialism to neo-colonialism in Mali: An analytical study, *Journal of European Studies,* 34(2), pp. 112–129.

Aning, K., and Bjarnesen, J. (2024), *Ecowas' dilemma: Balancing principles and pragmatism*, The Nordic Africa Institute, April 10 (retrieved from https://nai.uu.se/news-and-events/news/2024-04-10-ecowas-dilemma-balancing-principles-and-pragmatism.html).

Avila, J., and Quinn, B. G. (2023), The Future of Françafrique: Neocolonialism in Africa and the War on Terror. *Claremont-UC Undergraduate Research Conference on the European Union,* Vol. 2023, Article 7, pp. 50-65.

Barkin, J. S. (2003), Realist Constructivism, *International Studies Review*, 5(3), pp. 325-342.

Barkin, J. S. (2010), *Realist Constructivism: Rethinking International Relations Theory,* Cambridge: Cambridge University Press.

Barkin, J. S. (2020), *The Social Construction of State Power: Applying Realist Constructivism*, Bristol: Bristol University Press.

Beloff, J. R. (2024), How France's Lack of a Strategy in West Africa Indirectly Led to the Coups D'états. *Military Strategy Magazine*, 9(2), pp. 20-26.

Cam, M. L. (2023), How the Russian propaganda machine works in Africa, *Le Monde*, July 31 (retrieved from https://www.lemonde.fr/en/international/article/2023/07/31/how-the-russian-propaganda-machine-works-in-africa_6074552_4.html).

Camut, N. (2023), Macron will not ask Algeria for 'forgiveness' over colonization, *Politico*, January 12 (retrieved from https://www.politico.eu/article/emmanuel-macron-france-will-not-ask-algeria-for-forgiveness-over-colonisation/).

Charbonneau, B. (2008), Dreams of Empire: France, Europe, and the New Interventionism in Africa, *Modern & Contemporary France*, 16(3), pp. 279–295.

Charbonneau, B. (2008), *France and the New Imperialism: Security Policy in Sub-Saharan* Africa, New York: Routledge.

Chemin, A., and Ricard, P. (2022), *Macron riles Russia with documentary releasing content of Putin calls*, *Le Monde*, June 30 (retrieved from https://www.lemonde.fr/en/international/article/2022/06/30/macron-riles-russia-with-documentary-releasing-content-of-putin-calls_5988537_4.html).

CIA Factbook. (2024), *Country Comparisons Median age* (retrieved from https://www.cia.gov/the-world-factbook/field/median-age/country-comparison/).

Cirone, A., and Pepinsky, T. B. (2022), Historical Persistence, *Annual Review of Political Science*, 25(1), pp. 241-259.

Desmarescaux, J. (1964), The development of the countries of French civilisation in Africa, *Civilisations,* 14(1), pp. 116-133.

Dettmer, J. (2024), Ukraine is heading for defeat, *Politico*, April 17 (retrieved from https://www.politico.eu/article/why-ukraine-losing-russia-war/).

Donmez, U. (2023), *Resource-rich Gabon fails to share wealth with public*, Anadolu Agency, September 4, (retrieved from https://www.aa.com.tr/en/africa/resource-rich-gabon-fails-to-share-wealth-with-public/2982976).

Ebatamehi, S. (2022), How French Currency Imperialism in Africa Led to the Assassination of Muammar Gaddafi, *The American Journal of Economics and Sociology*, 81(5), pp. 889-904.

Élysée. (2023), *Joint declaration of France and Ukraine*, May 15, (retrieved from https://www.elysee.fr/en/emmanuel-macron/2023/05/15/joint-declaration-of-france-and-ukraine).

Etogho, E. B., Eben, S. E.-M., and Dalton, A. L. (2023), French Neocolonialism in Africa: Historical Overview and Summary of Current Events, *The American Journal of Economics and Sociology,* 81(5), pp. 829-849.

Gardinier, D. E. (2010), France and Gabon Since 1993: The Reshaping of a Neo-Colonial Relationship, *Journal of Contemporary African,* 18(2), pp. 225-242.

Gatinois, C., Ricard, P., Segaunes, N., and Pietralunga, C. (2024), War in Ukraine: Emmanuel Macron's metamorphosis from dove to hawk, *Le Monde,* March 14 (retrieved from https://www.lemonde.fr/en/politics/article/2024/03/14/war-in-ukraine-emmanuel-macron-s-metamorphosis-from-dove-to-hawk_6618730_5.html).

Georg, S., and Jörg, S. (2010), *The Hidden Dynamics of Path Dependence: Institutions and Organizations*, New York: Palgrave Macmillan.

Gibbs, T. (2024), A French Neo-colonialism? The Controversial Concept of Françafrique, *The English Historical Review*, pp. 1-22.

Götz, E., Kaas, J., and Knudsen, K. (2023), *How African states voted on Russia's war in Ukraine at the United Nations – and what it means for the West*, Danish Institute for International Studies, November 15 (retrieved from https://www.diis.dk/en/research/how-african-states-voted-on-russias-war-in-ukraine-the-united-nations-and-what-it-means).

Greener, I. (2005), The Potential of Path Dependence in Political Studies, *Politics,* 25(1), pp. 62–72.

Hapgood, D. (1963), Guinea's First Five Years, *Current History*, 45(268), pp. 355-360.

Henley, J. (2003), Gigantic sleaze scandal winds up as former Elf oil chiefs are jailed, *The Guardian*, November 13 (retrieved from https://www.theguardian.com/business/2003/nov/13/france.oilandpetrol).

Henni, S. (2022), Nuclear powers: France's atomic bomb tests in the Algerian Sahara, *The Architectural Review*, June 23 (retrieved from https://www.architectural-review.com/essays/nuclear-powers-frances-atomic-bomb-tests-in-the-algerian-sahara).

Horne, A. (2006), *A Savage War of Peace: Algeria 1954-1962*, New York: NYRB Classics.

Human Rights Watch (2024), Burkina Faso: Army Massacres 223 Villagers, *Human Rights Watch*, April 25 (retrieved from https://www.hrw.org/news/2024/04/25/burkina-faso-army-massacres-223-villagers).

Institute for Economics and Peace (2023), *Global Terrorism Index 2023* (retrieved from https://reliefweb.int/report/world/global-terrorism-index-2023).

Irish, J. (2024), Moldova signs defence pact with France amid Russia fears, *Reuters*, March 7 (retrieved from https://www.reuters.com/world/europe/moldova-signs-defence-pact-with-france-amid-russia-fears-2024-03-07/).

Jacob, F. (2023), *Wallerstein 2.0: Thinking and Applying World-Systems Theory in the 21st Century*, Bielefeld: Transcript Publishing.

Jacquemot, P. (2011), Fifty Years of French Cooperation with Sub-Saharan Africa, *Afrique contemporaine,* 238 (2), pp. 43-57.

Kayali, L., and Gavin, G. (2023), *Liberté, égalité and military hardware: France sets its sights on Russia's former allies*, *Politico*, November 3 (retrieved from: https://www.politico.eu/article/emmanuel-macron-france-russia-kazakhstan-uzbekistan-allies/).

Kayali, L., Babigazzi, J., Lau, S., and Larson, C. (2023), Artillery blame game hits Brussels over the million shell pledge to Ukraine, *Politico*, November 14 (retrieved from: https://www.politico.eu/article/germanys-pistorius-says-eu-will-fall-short-of-million-shell-pledge-to-ukraine/).

Kobara, J. (2024), *North Korea sent more than 3m artillery shells to Russia, says Seoul*, Nikkei Asia, February 28 (retrieved from: https://asia.nikkei.com/Politics/Ukraine-war/North-Korea-sent-more-than-3m-artillery-shells-to-Russia-says-Seoul).

Krupova, K., and Cech, L. (2020), A Neo-colonialist French Foreign Policy in Africa? Insights from Côte d'Ivoire, *Studia Politica: Romanian Political Science Review,* 20(2), pp. 291-317.

Le Monde. (2024), Macron doesn't rule out troops for Ukraine if Russia breaks front lines, *Le Monde*, May 2 (retrieved from https://www.lemonde.fr/en/france/article/2024/05/02/macron-doesn-t-rule-out-troops-for-ukraine-if-russia-breaks-front-lines_6670198_7.html).

Lewis, D., and Valdmanis, R. (2013), Mali hails "saviour" Hollande, he says fight not over, *Reuters,* February 2 (retrieved from https://www.reuters.com/article/idUSBRE911045/).

Macumber, B., Smith, D., and Matthews, A. (2023), France detonated nearly 200 nuclear 'tests' in French Polynesia — now this activist is calling for accountability, *ABC Pacific,* July 14 (retrieved from https://www.abc.net.au/pacific/nuclear-testing-french-polynesia-hina-cross/102585930).

Mearsheimer, J. J. (2014), Why the Ukraine Crisis Is the West's Fault: The Liberal Delusions That Provoked Putin, *Foreign Affairs*, 93(5), pp. 77-89.

Mezran, K., and Saini, F. (2020), France must recognize its role in Libya's plight, *Atlantic Council*, July 21 (retrieved from https://www.atlanticcouncil.org/blogs/new-atlanticist/france-must-recognize-its-role-in-libyas-plight/).

Ministère des Armées. (2017), Defense and National Strategic Review, *Open Repository Base on International Strategic Studies* (retrieved from https://espas.secure.europarl.europa.eu/orbis/document/defence-and-national-security-strategic-review-2017).

Ministère des Armées. (2024, March 4), *French Military Equipment Delivered to Ukraine* (retrieved from https://www.defense.gouv.fr/en/news/french-military-equipment-delivered-ukraine).

Munck, B. D. (2022), Assembling Path Dependency and History: An Actor-Network Approach, *The Journal of Interdisciplinary History,* 52 (4), pp. 565–588.

Murat, Y., Karabulut, S., and Karcı, A. (2023), On Economic Security and the Political Economy of Neocolonialist Capitalism: The Case of France and Niger's Uranium Resources, in: Ari, A. (ed.), *Capitalism at a Crossroads: A New Reset?* (pp. 159-180), Springer International Publishing.

Neethling, T. (2023), Russian Para-Military Operations in Africa: The Wagner Group as a De Facto Foreign Policy Instrument, *Scientia Militaria,* 51(1), pp. 1-23.

North Atlantic Treaty Organization (2024), *Allies demonstrate strengthened deterrence and defence during Polish-led Dragon 24 exercise*, March 6 (retrieved from https://www.nato.int/cps/en/natohq /news_223439.htm?selectedLocale=en).

Nougué, J. (2023), Lessons from Ukraine: Macron's European policy in the wake of the war, *St Antony's International Review,* 18(1), pp. 249-267.

Obadare, E. (2022), *What the Sankara Assassination Trial Means for West Africa*, Council on Foreign Relations, March 9 (retrieved from https://www.cfr.org/article/what-sankara-assassination-trial-means-west-africa).

Olech, A. (2024), The Wagner Group in Africa. The sham battle of Russian mercenaries against terrorism, *Terrorism – Studies, Analyses, Prevention,* 5(5), pp. 273–309.

Olsen, G. R. (2014), Fighting terrorism in Africa by proxy: the USA and the European Union in Somalia and Mali, *European Security,* 23(3), pp. 290-306.

Olsen, G. R. (2018), Transatlantic cooperation on terrorism and Islamist radicalisation in Africa: the Franco-American axis, *European Security,* 27(1), pp. 41-57.

Omotuyi, S. (2020), Franco-Nigerian détente? Nigeria, France and the Francophone states of the Lake Chad region in the era of the Boko Haram terrorism, *African Identities,* 20(1), pp. 26-41.

Pace, E. (1984), Ahmed Sekou Toure, a radical hero, *The New York Times*, March 28 (retrieved from https://www.nytimes.com/1984/03/28/obituaries/ahmed-sekou-toure-a-radical-hero.html).

Pannier, A., and Schmitt, O. (2019), To fight another day: France between the fight against terrorism and future warfare, *International Affairs,* 95(4), pp. 897–916.

Pietralunga, C., and Richard, F. (2022), Macron hopes for negotiations between Russia and Ukraine, *Le Monde*, October 13 (retrieved from https://www.lemonde.fr/en/international/article/2022/10/13/emmanuel-macron-hopes-for-negotiations-between-russia-and-ukraine_6000156_4.html).

Pokalova, E. (2023), The Wagner Group in Africa: Russia's Quasi-State Agent of Influence, *Studies in Conflict & Terrorism*, pp. 1-23.

Powell, N. K. (2017), Battling Instability? The Recurring Logic of French Military Interventions in Africa, *African Security,* 10(1), pp. 47-72.

Qureshi, A., Rizwan, M. , Ahmad, G. , and Ashraf, D. (2022), Russia–Ukraine war and systemic risk: Who is taking the heat? *Finance Research Letters,* 48(1), pp. 1-13.

Recchia, S., and Tardy, T. (2020), *French Interventions in Africa. Reluctant Multilateralism*, New York: Routlege.

Reddy, M. (2023), *Gabon's Bongo family enriched itself over 56 years of kleptocratic rule, spreading its wealth across the world*, International Consortium of Investigative Journalists, September 5 (retrieved from https://www.icij.org/investigations/pandora-papers/gabons-bongo-family-enriched-itself-over-56-years-of-kleptocratic-rule-spreading-its-wealth-across-the-world/).

Reed, M. C. (1987), Gabon: a Neo-Colonial Enclave of Enduring French Interest, *The Journal of Modern African Studies,* 25(2), pp. 283-320.

Rees, W., and Xu, R. (2024), US–UK–France relations amid the Russia–Ukraine war: a new strategic alignment? *International Affairs*, 100(3), pp. 1249–1261.

Reuters. (2024), Putin meets Chad junta leader as Russia competes with France in Africa, *Reuters*, January 24 (retrieved from https://www.reuters.com/world/africa/putin-meets-chad-junta-leader-russia-competes-with-france-africa-2024-01-24/).

Ruokonen, A. (2024), Ukraine's Artillery Shell Shortfall, *Lawfare*, April 3 (retrieved from: https://www.lawfaremedia.org/article/ukraine-s-artillery-shell-shortfall).

Sandford, A. (2022), Ukraine war: What has Macron said about the need not to 'humiliate Russia'? *Euronews*, June 6 (retrieved from https://www.euronews.com/2022/06/06/ukraine-war-what-has-macron-said-about-the-need-not-to-humiliate-russia).

Schmitt, O., and Tenenbaum, E. (2023), Caught between a Rock and a Hard Place: The French Army, Expeditionary Warfare, and the Return of Strategic Competition, in: Weissmann, M. and Nilsson, N. (eds.), *Advanced Land Warfare: Tactics and Operations* (pp. 353–372), Oxford: Oxford University Press.

Secrétariat général de la Défense et de la Sécurité nationale (2022), *National strategic review*, retrieved from https://www.sgdsn.gouv.fr/files/files/rns-uk-20221202.pdf

Shekina, D. (2024), *France aims to ramp up artillery shell production to 5000 per month, MoD says*, RBC-Ukraine, February 27 (retrieved from https://newsukraine.rbc.ua/news/france-aims-to-ramp-up-artillery-shell-production-1709063167.html).

Statista (2024, February 1), *Sub-Saharan Africa: Total population from 2012 to 2022*, retrieved from https://www.statista.com/statistics/805605/total-population-sub-saharan-africa/

Staunton, E. (2022), A Useful Failure: Macron's Overture to Russia, *Global Politics and Strategy,* 64(2), pp. 17-24.

Taylor, I. (2019), France à fric: the CFA zone in Africa and neocolonialism, *Third World Quarterly,* 40(6), pp. 1064-1088.

Trading Economics (2024), *Gabon GDP*, retrieved from https://tradingeconomics.com/gabon/gdp

Vision of Humanity (2023), *Overall Terrorism Index Score*, retrieved from https://www.visionofhumanity.org/maps/global-terrorism-index/#/

Weir, A. (2021), How Vincent Bolloré won control of Ghana's biggest port, *Africa Confidential*, April 1 (retrieved from https://www.africa-confidential.com/article/id/13322/SPECIAL_REPORT_How_ Vincent_Bollor%C3%A9_won_control_of_Ghana%27s_biggest_port).

Welc, H. (2023), Macron in praise of folly? How Macron's France seeks to gain from power vacuum during the war in Ukraine, *Security. Theory and Practice,* 52(3), pp. 117-129.

World Bank (2024), *GDP per capita (current US$) - Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal, Togo, Cameroon, Central African Republic, Chad, Gabon, Congo, Rep., Sub-Saharan Africa, France, OECD members* (retrieved from https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?end= 2022&locations=BJ-BF-CI-ML-NE-SN-TG-CM-CF-TD-GA-CG-ZG-FR-OE&start=2022&view=bar).

WorldAtlas. (2024), *Countries With The Largest Exclusive Economic Zones*, retrieved from https://www.worldatlas.com/articles/countries-with-the-largest-exclusive-economic-zones.html

Worldometer (2024), *Population: Western Africa*, retrieved from https://www.worldometers.info/population /africa/western-africa/