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Material Comfort Influence
upon the Life Fulfilment during Covid-19

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Abstract

Material comfort has been an important component of human life and continues to be during our days as it influences the quality of life. But material comfort is only a component of our life, and more than this, the material comfort could be only a reflection of the other components of everyday life of each of us and of society, of the community where we are living in.

In this paper is presented an analysis of the influence of the material comfort upon the sentiment of life fulfilment. The paper also presents the analysis of the influence of age, income or gender upon the sentiment of life fulfilment. The analysis is performed using data obtained from National Institute of Statistics, the European Commission and from an experimental study on a sample of 200 persons with higher education in the South of Romania. Data were analysed using SPSS and Microsoft Excel and contain descriptive tables.

Following the analysis, it was revealed that there is a strong association between the material comfort and the sentiment of life fulfilment, but variables as gender or age have no influence upon the feeling of life fulfilment.

Keywords: Material Comfort, Life Fulfilment, Influences, Associations, Statistics.

JEL Classification: O12

1. Introduction

Covid-19 pandemic brought a massive change in the behaviour of most people in the world. Major human rights like freedom of movement, or freedom of meeting other people were affected for finding an answer to the major difficulty of the health crises.

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In Romania the State of emergency started on 17th of May, with closure of schools and universities, national movement restrictions, international movement restrictions, flight restrictions, non-essential shops closure and event stop. On May 15 the national movement restrictions were reduced marking the end of the state of emergency, and an alert state was declared. At that moment over 17,000 of persons were positive to the new coronavirus, 9,930 persons were recovered, and the number of fatalities was 1,107. The next moment important in the Covid-19 restriction in the Romanian market was 1th of June when the international and national movement restrictions were eliminated. Schools continued to be closed, non-essential shops were opened, and events were allowed but with a low number of people.

During this difficult period the different national and international measures imposed by authorities affected the life of the society, of communities and the life of each of us, as human beings.

The objectives of this paper include a presentation of the evolution of the major economic indicators for Romania in the context of European evolution and an evaluation of the influence of the material comfort upon the sentiment of life fulfilment during this period. The research starts with the analysis of macroeconomically indicators like GDP, salary evolution and consumer confidence and also provides an analysis of the data obtained through an experimental survey organised in the South of Romania, which was organised in the first week of May 2020 on 200 persons.

2. Problem Statement

Moeinaddini M. et al. (2020) analyse the factor that influences urban life satisfaction in European cities. The results show that "five main variables perform an important role in urban life satisfaction: safety in the city, satisfaction regarding healthcare services, satisfaction regarding the state of streets and buildings in the neighbourhood, satisfaction with public transport, and accessibility of retail shops". Nakamura and Managi (2020) research showed that the subjective city evaluation indicator is positively associated with the life satisfaction indicator. Coman (2019), Coman and Mihăiță (2019) analysed the influence of material comfort upon life fulfilment. The research revealed that material comfort manifests an important influence upon life fulfilment, such as the influence of the presence of art upon the feeling of life fulfilment.

Pinto et al (2017) present an analysis of the following concepts: Quality of Life, Comfort and Well-being, showing that Quality of Life is mainly characterized by the satisfaction with life generally, depending on perceptions, comfort is related to the practice of nursing in health context and well-being is used in the context of psychology.

Shin J., (2016) analyses a new theoretical framework of environmental satisfaction and human comfort, highlighting the role of human agency in the interaction between humans and environment and the context within which such interactions occur.

3. Research Questions/Aims of the research

This paper aims to present the socio-economic context generated by the Coronavirus Crisis in the Romanian society and to evaluate the influence of material comfort upon the feeling of life fulfilment during this period.

The socio-economic context will be presented taking into consideration different macroeconomic indicators. The objectives of the paper also include the evaluation of the influence of different other variables like incomes, gender or age upon the feeling of life fulfilment for having a widest image of the influence manifested by material comfort upon the feeling of life fulfilment.

4. Research Methods

The first part of the paper presents an analysis of the macroeconomic indicators using data from the National Institute of Statistics and the European Commission.

In the second part of the research an experimental study was organized, during the first week of May 2020 on a sample of 200 people in the South of Romania. The data collection was organized using TalkOnlinePanel, a company specialized in online interviews. The structure of the sample was defined using the next sampling rates: education (persons with university studies); gender: 50% men and 50% women; age: 35% of respondents with ages between 31 and 40 years, 47% with ages between 41 and 50 years and 18% others.

The material comfort, the sentiment of life fulfilment, and the presence of art are some of the factors analysed in the experimental survey.

The methods used in the research included the coefficient of association Yule and Onicescu Informational Correlation. Both indicators allow identifying the associations and the intensity of associations and were used in the social analysis.

To determine the numerical value of the Yule coefficient of association, indicating the existence and intensity of the influence, the next steps were defined. Using Microsoft Excel we constructed a table that includes the contingency table for the variables generated by the two questions analysed, plus a column with the Product of the two diagonals of the contingency table. On the line Total of this column, we included R = the ratio of the two Products. The Yule coefficient is calculated as

$Q = (R-1) / (R + 1)$. An example of the computation for Yule Coefficient is presented in the table 1.

Table 1. Yule coefficient calculation - association between presence of art and the sentiment of life fulfilment

		Cause (Presence of Art)				
		Partial Acc. or Disagreement	Total Agreement	Total	Diagonals' product	Yule Coef.
Effect (Fulfilled Life)	**Partial Agr. or Disagr.**	128	23	151	3968	
	Total Agr.	18	31	49	414	
	Grand Total	146	54	200	9.58	81%

Source: Authors' own research

For evaluating the association

If:

$Q = 0$ lack of association between the two variables

$Q \rightarrow 0$ weak association

$Q \rightarrow \pm 1$ strong association

$Q = \pm 1$ perfect association

The Yule coefficient in the table 1 shows that there is a strong association between the two variables.

Going further, the Onicescu Informational Correlation Coefficient (denoted Kcor) computation is presented.

Academician Octav Onicescu (1892-1983) is one of the greatest mathematicians of Romania with a remarkable international reputation. The Informational Energy Onicescu, according to the description given by Rizescu and Avram (2014), Dragnea and Mihăiță (2017), comprises the amount of information generated by the diversity of a context. The informational energy drops proportionally with the increase in uniformity, or the strength of the influences present in the system.

The basic concept of the Onicescu information statistics is the Onicescu Informational Correlation. In order to describe the Onicescu Informational Correlation, the methodology presented by Mihăiță and Stanciu-Capotă (2005) or Oprea (2017) were used. For the computation of the Onicescu Informational Correlation we used Microsoft Excel and a table was developed, starting from the table of contingency of the two variables and including two new columns. In the first new column we included the Informational Energy of those two alternatives, on the total line of this column we included the sum of the two informational energies - representing the Informational Energy of the system.

In the second column we calculated the sum of the squares of the weights of the two segments generated by the variable effect, applied in each of the two segments generated by the variable cause.

In the first line of the column we placed the square of the weights of the segments generated by the variable effect on the first segment generated by the variable cause, and in the second the square of the weights generated by the variable effect in the second segment generated by the variable cause.

In the last line of the column (total line), we calculated the Onicescu Informational Correlation as a ratio between the Informational Energy and square root of the product of the two values in line 1 and line 2 of the same column.

Table 2. Coefficient of correlation Onicescu - association of the presence of art and the feeling of life fulfilment

		Cause (Presence of Art)				
		Partial Agr. or Disagr.	Total Agr.	Total	Informational Energy	Kcor
Effect (Fulfilled Life)	Partial Agr. or Disagreement	128	23	151	0.37	0.78
	Total Agr.	18	31	49	0.07	0.51
	Grand Total	146	54	200	0.44	0.70

Source: Authors' own research

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The Onicescu Informational Correlation Coefficient also indicates the presence of an association between the two analysed variables.

The two computations presented above were used for analysing different associations between the variables investigated in the paper, whose results are presented further.

5. Findings

5.1. Macroeconomic Context

In January – March 2020 Romanian economic growth continued its increasing trend. Trading Economics.com shows that the 2.7% growth in the quarter for Romania was the highest economic growth amongst the EU state members, followed by Lithuania and Bulgaria. On the other hand, France, Italy and Spain registered the highest economic decline.

The GDP evolution in January – March 2020 is only impacted towards the end of March when the lockdown was in place and social distancing required. The measures taken by the government also impacted the manufacturing industry, their activity being limited during the lockdown and the production index plunging to -14.5 at the end of April. The Retail has also just started to reflect the measures starting with March; the turnover dropped more on Do It Yourself and Non-food retail but started to get back on track in May.

For Romanian businesses, once with the state of emergency, the government put in place a bonusing system of 5% tax reduction for large businesses and 10% for small and medium businesses if taxes were paid during a given period. Besides this, other measures of relaxation were taken, in order to stimulate the local businesses during the pandemic. The political tensions started to decrease once with the shifting of attention towards the global pandemic and the pressure on improving the safety measures for the population culminating with the state of emergency starting with 16th of March 2020. Improvements in population's confidence and optimism started to show after 15th of May when the state of emergency was removed. Towards the end of Q1 we start to notice an unstable labour market in which the unemployment rate started to grow after the imposition of social distancing ruling that limits manual labour, industrial manufacturing and traditional retail. Unemployment rate peaks at 5.2% registering constant growth since March. Beside this, the food inflation takes a leap going up to 5.7% in April and slightly lower in May (5.25%). The rush for household stocks towards the end of March when the state of emergency was announced and installed impacted the prices too. All these put a pressure on the Romanian consumers' purchasing power.

On the 1st of April over 1 mil. employees entered in technical unemployment or terminated their working contract due to pandemic eruption. Unemployment issues are expected to be present during the following months too as many companies are still working at lower capacity and some restrictions are still in place even after the state of emergency.

According to the European Commission, the consumer confidence indicator registered an increasing trend during last years, reaching a value higher than the European average in December 2019. In the first months of 2020, the consumer confidence indicator began its decreasing trend. Romanians' confidence index went below the EU average in Q1 starting to decrease more in March 2020 and taking a plunge in April once the state of emergency was in place. The lower optimism is present across EU state members, jobs being threatened and household financial stability being at stake. Romanians' confidence is just in line with the EU average under the same pressure driven by the newly announced measures and pandemic evolution. In May the EU confidence index average went up slightly, consumers from most of the countries starting to be more optimistic.

The macroeconomic indicators presented reflect the impact of Covid-19 crisis in the Romanian economy. These different macroeconomic indicators quantify the context which affects the material comfort of the population. The evolution of the Consumer Confidence indicator in Romania and in Europe reflects the feeling of confidence of the population.

For having a deeper image of the impact of material comfort upon the feeling of life fulfilment, an analysis of data obtained in the experimental survey organised in the South of Romania in first week of May will be presented.

5.2. The influence of material comfort upon the feeling of life fulfilment

In order to evaluate the influence of material comfort upon the sentiment of life fulfilment we analysed the association between the answers received for the question regarding material confront and the question regarding the sentiment of life fulfilment. The association between the two variables generated by these questions were analysed using the coefficient of association Yule and the Onicescu Informational Correlation.

Yule coefficient calculated for this association (0.91) shows that there is a strong association between the two variables. The Onicescu Informational Correlation Coefficient (0.66) also indicates the presence of an association between the two analysed variables. Both coefficients indicate that material comfort manifests a strong influence upon the feeling of fulfilment in life.

The research also evaluated the influence of the presence of art upon the feeling of life fulfilment, and the Onicescu Informational Correlation and Yule Coefficient show that the two variables are in a moderate association.

A synthesis of the values calculated for Yule Coefficient and the Onicescu Informational Correlation for the variables analysed in association with the feeling of life fulfilment is presented in the table 3.

**Table 3. The Onicescu informational correlation
and Yule coefficient calculated for life fulfilment**

Cause / Effect	Onicescu Informational Correlation	Yule Coefficient
Material Comfort / Fulfilled Life	66%	91%
Art Presence / Fulfilled Life	84%	65%
Income / Fulfilled Life	92%	43%
Age / Life fulfilled	98%	-34%
Gender / Fulfilled Life	100%	5%

Source: Authors' own research

The results of the analysis show that Income, Age and Gender do not manifest influence upon the feeling of life fulfilment. The strongest association is manifested between Material Comfort and the Feeling of Life fulfilment.

The research also includes the evaluation of the influence manifested by Gender, Age and Income upon Material Comfort. The results are presented in the table 4.

**Table 4. The Onicescu Informational Correlation
and Yule Coefficient calculated for Material Comfort associations**

Cause / Effect	Onicescu Informational Correlation	Yule Coefficient
Income / Material Comfort	95%	56%
Age / Material Comfort	99%	-15%
Gender / Material comfort	100%	4%

Source: Authors' own research

The research revealed that income has a small influence upon the material comfort, and Age and Gender doesn't have influence upon the material comfort.

Analysing the associations presented, the stronger association that resulted was the influence of material comfort upon the life fulfilment. An important aspect is that income does not influence the feeling of fulfilment in life, although income influences material comfort. The difference between the perception of material comfort and income level is generated by the broad context that defines the life of each of us.

5.3. The influence of Material Comfort upon the feeling of life fulfilment

For a deeper analysis, several control variables were used. These variables were applied for segmenting the population and evaluating how the associations manifest themselves within the segments.

The control variables used and the segments generated by their application are: Age, 44% of respondents are younger than 40 years old, and 56 are older than 40 years old; Education, 71% of respondents have graduated higher education, and 29% of respondents have graduated post university education and Gender, 50% of respondents are women, and 50% are men.

Table 5. The Onicescu informational correlation and Yule coefficient calculated for association between material comfort and sentiment of life fulfilment

Cause (Material Comfort)/ Effect (Fulfilled Life)	Onicescu Informational Correlation	Yule Coefficient
Total	0.66	0.91
<40 years old	**0.62**	**0.97**
>40 years old	0.69	0.86
Postgraduate studies	**0.39**	**0.97**
University studies	0.72	0.89
Men	0.67	0.88
Women	**0.64**	**0.95**

Source: Authors' own research

Analysing the values registered by the two coefficients, it was observed that material comfort has a greater influence on the feeling of fulfilment in life in the case of people under 40. If the influence of the presence of art on the feeling of fulfilment in life is less pronounced in the case of people over the age of 40, material comfort has a greater impact among younger people.

Among those with postgraduate studies, we also found a stronger association between the feeling of fulfilment in life and material comfort. In the same segment, the influence of the presence of art was also stronger comparing with the association manifested for the segment of respondents with university studies.

Women are another segment where material comfort has had a strong influence on the feeling of fulfilment in life, compared to men. There was also a stronger influence of the presence of art among women compared to men.

The influence is present in all segments, and these results prove that the influence of material comfort upon life fulfilment is a strong influence.

6. Conclusions

The crisis period generated by Covid-19 brought changes on the economic and social level both in Romania and in Europe. It has led to increased unemployment, decreased consumer confidence, while lowering political tensions and several government measures supporting the economies. Analysing the influence of material comfort on the feeling of fulfilment in life in this period marked by uncertainty, it was found that material comfort continues to have a strong influence upon the feeling of fulfilment in life. An important aspect is that income does not show influence on the feeling of fulfilment in life, although it influences material comfort. The difference between the perception regarding the material comfort and income is generated by the context that defines the life of each of us. Within the population segments, it was observed that material comfort has a stronger influence on people under the age of 40, among people with postgraduate studies and among women. Material comfort continues to be one of the strongest factors influencing the feeling of fulfilment in life.

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