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Hungarian business students' knowledge of the current Hungarian gas market and gas consumption practices during the energy crisis

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Abstract. The pandemic and the war have had a negative economic impact on the world economy. The current structure of the energy market poses a major challenge to national governments, businesses, and households alike, and new strategies need to be developed to focus on energy efficiency. Hungary has also been strongly affected by this situation, which has had an impact on all areas of residential consumption. The present study, based on a primary questionnaire survey carried out in October-November 2022 with 273 evaluable responses, aims to explore the opinions and perceptions of students at a business university in Hungary regarding the energy crisis. The goal is to establish their knowledge about the gas situation and how it is reflected in their consumption practices and savings. The results of a survey of students at the Budapest University of Economics and Business show that young people studying economics are not really aware of the gas market situation in Hungary, but their gas saving habits are characterized by awareness and not primarily motivated by their financial situation.

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1. INTRODUCTION

The global wave of recession in the 2020s started with Covid-19 and related travel restrictions, and was exacerbated by the Russia-Ukraine war, which has huge global economic consequences. Among other things, energy prices have risen more than previously estimated. According to the calculations of Kovalszky et al. (2022) regarding electricity, the one-year forward price was €60.4 per megawatt-hour on 1 May 2021, while the price on 6 July 2022 was 515.4% higher, and forward prices for energy commodities have been rising ever since. Gas futures have increased more than seven and a half times in a year since the July expiry. In the face of this staggering surge, Member States need to secure their winter gas and oil supplies and avoid fuel shortages. To this end, gas storage is being replenished across Europe, which has added to the upward pressure on prices in recent months.

Accelerating inflation has caused a cost-of-living crisis across Europe, and governments in different countries are taking different approaches to protect households, businesses, and families from the gradual rise in energy prices. Food and fuel prices continue to climb, rents are rising, and utility bills are getting harder to pay. Inflation in the euro area remained close to record highs, at 9.9% in September 2022, compared with 9.1% in August. "Looking at the main components of euro area inflation, energy is expected to have the highest annual rate in September (40.8%, compared with 38.6% in August), followed by food, alcohol & tobacco (11.8%, compared with 10.6% in August), non-energy industrial goods (5.6%, compared with 5.1% in August) and services (4.3%, compared with 3.8% in August)" (Eurostat, 2022a**,** p. 1.)

Hungary has the highest rate of monetary deflation in Europe, with inflation at 21.7% in November, according to Eurostat (2022b). The Russian economy is currently under unprecedented sanction pressure from Western countries and the United States following Russia's unjustified attack on Ukraine on 24 February 2022. The war has been raging ever since and the consequences are not yet fully foreseeable.

In the short term, the OECD (2022) recommends that governments should diversify energy sources and expand efficiency where possible. Countries, which are most affected by consequences of war will be supported by more production from OECD countries. Therefore special emphasis is put on minimising the dependence on Russia. In today's turbulent, changing, economically, politically, and socially difficult environment, we investigated how students in higher education save, what they save, focusing primarily on their gas use and consumption. The paper's novelty is to study the opinion of Hungarian students with business knowledges in this topic. The main research questions that will be investigated in this article: From which sources and platforms current students obtain information? How they are informed and whether they check the sources of the information they receive. We conducted our primary questionnaire survey among students at the Budapest Business School, one of Hungary's leading business universities. The structure of the paper is organised as follows: Section 2. provides theoretical background by depicting the ongoing situation in a scientific way especially based on the latest global news, and information, which justifies the novelty of the current paper. Part 3 delivers the research methodology including the data sources, research plan and model, serving as part of niche study, as it is focusing on young adults, universities students in business field. Section 4 offers reports discussions on results, and Section 5 concludes the research.

2. LITERATURE REVIEW

2.1. Hungary in the crisis

From August 2022, the government has declared an energy emergency, citing an energy crisis in large parts of Europe. The government's aim was to prepare people for the crisis and strengthen energy security. It has been announced that the cuts will remain in place up to the level of average consumption, which, according to calculations, could mean that around three quarters of families could continue to benefit from the cuts, i.e. pay the reduced price. The band limit for electricity is 210 kW per month and for gas the band limit is 144 cubic metres. This means 2523 kWh of electricity and 1729 cubic metres of gas per year (Magyar Közlöny, 2022). According to Portfolio (2022) the 7 points of the government's programme are:

1. Hungary increases gas production from 1.5 billion cubic metres to 2 billion cubic metres.
2. The Minister for Foreign Affairs is authorised by the Government to acquire additional gas stocks.
3. An export ban on energy carriers and firewood has been imposed.
4. 4. Increase coal mining.
5. Restart the units of the Mátra Power Plant as soon as possible.
6. In order to ensure a secure electricity supply, an initiative is taken to extend the operating life of the Paks nuclear power plant.
7. Those who consume more energy than the average should pay the market price for the surplus.

The plans also included maintaining the large family discount on gas consumption and introducing a new discount for condominiums with a single gas meter. Households will also not have to pay a market price on top of the average consumption, with the new regulation of the gas rebate, as a residential market price will be introduced, well below the competitive market price. The residential market energy prices are as follows: (Portfolio, 2023) 1 EUR/ about 410 HUF at the time of writing (2023, January).

- for electricity up to 2523 kilowatt-hours/year 36 HUF/kWh,
- 70.1 HUF/kilowatt-hour after the limit is exceeded,
- for night-time electricity, the reduced price is HUF 23,
- 62,9 forints above that,
- the competitive price is 268,9 forints.
- for natural gas, the preferential tariff is valid up to 1729 cubic meters,
- the price per cubic metre is HUF 102,
- for consumption over the limit, HUF 747 per cubic metre,
- the market price is HUF 1020.

Due to the increased utility bills, there are more and more savings tips on the internet, such as unplugging chargers at night, as the phone charger consumes electricity even when the phone is not plugged in, or regular maintenance of gas appliances, as experts say that regular cleaning of gas appliances can increase their efficiency by up to 20 percent and reduce costs (Portfolio, 2023). Another useful tip is to avoid heating rooms that are not used as much as possible, and if you can afford it, you can use alternative heating solutions. If someone uses electricity for heating and does not use gas at all, the monthly limit still applies, but there is no credit, i.e. gas and electricity consumption cannot be counted against each other, the monthly limit is calculated separately.

Several questions have been raised and answers have been formulated on the details of the measure. One of the most frequently asked questions concerned families using district heating, and it was finally clarified that families using district heating are not affected by the measures. But what about those who have

been charging their electric cars at reduced rates? A car connected to the household electricity grid is a consumer in the same way as a mobile phone, laptop, or computer. The monthly limit applies to the total consumption of the household.

According to Portfolio (2022) the runaway energy prices could fundamentally reshape house-buying patterns. According to property analysts (Portfolio, 2022), the cost of overheads and possible renovation could drive buyers towards new-build properties. Perhaps more than ever, it has become important to choose energy-efficient homes - whether for purchase or rent - which typically fall into the higher energy rating category, so that maintenance costs may be lower. Already the housing market is showing the trends that have emerged because of increased overheads. For example, buying a new home is an excellent investment, as it can be sold or rented more easily, quickly and at a higher price, and tenants are becoming more conscious of their choice of sublet.

In addition to saving money as a possible alternative to reducing overheads, there are other ways and means of reducing overheads. Energy savings can also be achieved by providing homes with a ceiling heating and cooling system using heat pump technology, which can be controlled room by room and remotely controlled from a smartphone. According to experts on Porfolio (2023) in buildings under construction, low-temperature ceiling heating/cooling systems replacing traditional radiator heating and building structures with high thermal insulation and thermal bridges, the annual energy consumption of properties is typically between 50-70 kWh/m2. One of the key objectives is therefore to move away from fossil energy before it is used and to use only renewable energy to meet heating, cooling, and hot water needs.

2.1. Some thoughts on saving

The literature exploring this topic is rather scarce, due to its topicality, but there is already some research on the subject. In a 2017 study, Zhang and colleagues focused on the relationship between electricity consumption and economic growth in China. Tariq et al. (2023) found that economic growth is positively correlated with renewable energy consumption in the long run and negatively correlated in the short run.

The research of Dinca (2022) and co-authors aimed to identify the factors that influence energy-saving habits in the everyday life of the Romanian population. Their research covered environmental consciousness, energy efficiency, changes in perceived costs by respondents, perception of different environmental problems and respondents' attitudes towards change. The results of their research showed that the perceived cost of becoming more energy efficient has a negative and significant effect on the way people incorporate different energy saving habits into their daily lives, while the perceived threat of environmental problems has a positive but not significant effect on their daily habits. Burganov et al. (2021) during examining households' energy-saving behaviour found that "A key factor in changing household behaviour is the use of digital technologies in the process of energy consumption of all types. The state should create a system of incentive measures in the field of the formation of rational household behaviour, including postponing an effective organizational mechanism "supply-pay" in energy supply." (Burganov et al., 2021, p. 5.) Research by Al Mamun et al. (2023) has shown that green issues and awareness are the one of the most important factors in energy conservation.

According to a representative survey of the Hungarian internet-using population, Hungarian internet users aged 20-65 "are primarily doing their bit for the environment by collecting selective waste, avoiding food and energy waste and cutting down on shopping. Among the environmental activities that can be done at home, saving lighting and separate waste collection are the most popular. Most respondents also save water and heating. The use of renewable energy is mentioned in one in 10 households, while electric or hybrid cars are used in 4% of them." (Alteo, 2021). The 2022 study by Wei Pan and co-author Wei Pan aimed to explore gender differences in energy-saving behaviour among university students.

Differences in attitudes and behaviour were examined using statistical methods. In their article, they proposed a social psychological model for the development of energy-saving behaviour. The researchers' results show that there are clear gender differences in the energy saving attitudes and practices of university students in favour of women. In their research, Kukkonen et al. (2012) sought to find out how university students from different disciplines are informed about sustainable development and which environmental issues they consider to be the most important. Their study found that, although students get information about sustainable development mainly from television and newspapers, almost the same percentage of students said that they get information from the Internet. Climate change and the lack of clean water were the most important environmental problems identified by students who responded, with biodiversity loss coming second. Interestingly, students whose main source of information was television did not consider biodiversity to be such an important environmental problem.

3. METHODOLOGY

In October-November 2022, research was launched at one of Hungary's leading business universities, the Budapest Business School, University of Applied Sciences, in two faculties (Faculty of International Management and Business and Faculty of Finance and Accountancy), with the aim of exploring the savings of university students in the current economic situation, with a special focus on gas consumption. The study was a questionnaire-based quantitative survey, in which students at the university were asked to fill in an online questionnaire voluntarily and anonymously. The survey was carried out by the researchers in compliance with the university's GDPR and ethical requirements.

Of the 20 questions in the questionnaire, two were open questions and the rest were closed questions. The questionnaire was designed by the researchers themselves and has not been tested in other studies before. Therefore, to test the validity of the questionnaire, the existing questionnaire was re-tested with a small group of respondents and the responses showed similar results. At the beginning of the research, the authors conducted a pilot questionnaire in which five respondents were asked to complete. The respondents had no problems with interpretability and were therefore uploaded to the website unchanged. The authors were not able to measure the willingness to respond because the questions were accessed via the social media platform by university students. The questionnaire is divided into three major blocks of questions (Table 1), the first block of questions is related to the demographic situation of the student, the second block of questions looks at heating habits and the third block explores the evolution of the gas situation.

Table 1

Structure of the questionnaire

1. group of questions: Student specification	2. group of questions: Heating habits	3. group of questions: Development of the gas situation
Gender Age How many people live together in the property? Location? Cost of living? What heating solution do you use?	How did you previously monitor your gas consumption? How will you save on heating? What will your gas bill be? How difficult is the current situation for you to make a living?	How do you get information about the gas situation? What is the cause of the world gas situation? What do you know about the gas price limit in Hungary?

Source: own table

At the time of the survey, the number of students in the two faculties of the university was around 12,000. The authors used the Creative Research Systems calculator (Survey system, 2021) to determine the sample size. The confidence level was 95% for the Hungarian sample and the confidence interval (the margin of error) was 5.86. During the survey, 273 students completed the questionnaires in a way that they could be used.

During the research, the authors examined the topic in terms of several objectives. The following objectives could be formulated:

- What factors do respondents think are causing the gas situation?
- Where do they get their information on this issue?
- Is there a correlation between past gas consumption patterns and current gas consumption patterns?
- What factors influence current conservation?

Based on the above objectives, the authors formulated a single set of research objectives (Figure 1).

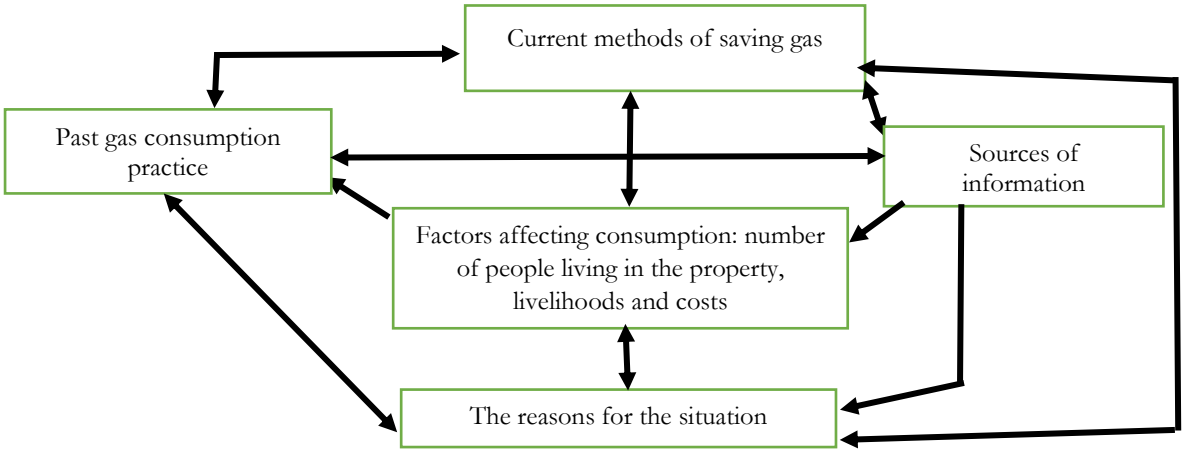

Figure 1. The research objectives
Source: own figure

In the target structure, the authors illustrate the hypothetical relationships between each variable. They suggest that past gas consumption and conservation practices may be closely related to the current situation and that these consumption patterns have been communicated and are reflected in various forums. So are new gas consumption patterns and related saving situations. They certainly have a back-and-forth effect on the evolution of the situation.

An important factor to examine is how both current and past consumption and saving are influenced by the individual's particular living situation: who he/she lives with, who pays the costs, what his/her source of income is. From the model given, past phenomena have a major impact on present developments and that several factors influence future events.

Along the given objectives, the authors in this paper present evidence for two hypotheses:

Hypothesis 1.

Among the young people surveyed, the situation has led to changes in past gas consumption and conservation practices, and the new practices are influenced by aspects related to the individual's living

situation, such as sources of livelihood, who pays for gas consumption and with whom the young person lives in the household.

Hypothesis 2.

The young people interviewed are aware of the reasons for this situation and are concerned about their livelihoods.

The data were analyzed using SPSS version 28 with univariate and multivariate analysis methods, including Amos version 28.

4. EMPIRICAL RESULTS AND DISCUSSION

The presentation of the results starts with the specification of the sample. 273 respondents provided evaluable answers. The average age of respondents was 20.58 with a standard deviation of 3.3

The sample characteristics were as follows:

Table 2

Specification of the sample (%)

Property	**Frequency (%)**
Gender	43.4% Male 56.6% Female
Place of residence of respondents	47.4% Budapest 5.1% Large city (100 000 or more inhabitants) 41.5% Small town (between 1000 and 100 000 inhabitants) 5.9% Village (settlement with less than 1000 inhabitants)
Type of property where you currently live	4.9% Dormitory 22.3% Apartments for rent 5.3% Apartment room 64.0% With family in own property 3.4% With family in rented property
Number of people living in the property	1 person 4% 2 people 26.1% 3 people 28.3% 4 people 24.3% 5 or more people 17.3%
Who pays the gas bill?	Myself 4.8% Together with a roommate 15.4% My parents 66.5% Me and my parents together 8.1% Other 5.1%

Source: own elaboration

The survey asked students to rate statements about gas consumption on a five-point Likert-scale, a scale of one to five. One meant no and five meant yes. This shows that they are aware of how much gas they use each month (mean: 2.88, standard deviation: 1.375) and know how much they pay each month for gas consumption (mean: 3.38, standard deviation: 1.317). 17.3% of respondents do not pay attention to how much gas they use, 17.3% are aware, while 65.4% are aware of their gas use.

The ANOVA test nicely showed that there is a significant difference between the mindfulness of knowing how much they consume (F: 15.711 df: 2 sign.: 0.00 p< 0. 05) and the amount of the bill they must pay (F:17.995 df: 2 sign.: 0.00 p< 0.05). Those who are aware of their gas consumption are more aware of the amount and value of gas than those who are not aware.

The research focused on how research participants used to save gas in the past and how these practices have changed in the current situation. They had to rate the options listed on a scale of five. One was not at all typical and five was completely typical. The mean and variance of the responses are summarised in Table 3:

Table 3

Saving practices before and during the crisis (mean, standard deviation)

Procedures	Before the crisis		During the crisis		
	Mean	Std. Deviation	Mean	Std. Deviation	Average difference
We only heat the living rooms (e.g. bedrooms, bathrooms), not the other corridors.	2.99	1.460	3.29	1.456	0.30
We use a thermostat.	3.45	1.572	3.61	1.456	0.16
I cook less often.	2.15	1.220	2.29	1.285	0.13
I turn the heating off when I leave the house.	3.64	1.423	3.81	1.344	0.17
I rarely ventilate.	2.36	1.138	2.71	1.281	0.34
I dress warmer at home.	3.66	1.142	3.97	1.090	0.31
I pay attention to home insulation.	3.44	1.324	3.30	1.469	-0.14
I regularly watch the gas meter to see how much gas I use.	2.14	1.237	2.77	1.419	0.63

Source: own elaboration

The table shows that even students have become more aware of saving solutions during the crisis. In the previous period, dressing up, insulating the home, turning off the heating and using a thermostat were the most common choices among respondents. It was almost uncommon to watch the gas consumption meter. In contrast, in the current energy climate, there is a greater awareness of monthly gas consumption and a greater awareness of the need to save. The biggest differences are seen in tracking consumption, sharing the heating of dwellings, dressing the home and ventilation frequency. However, the results also confirm that the high variance indicates that the sample was not unanimous on this issue, neither before the crisis nor during the crisis. For further investigation, the authors grouped the variables of practice during the crisis into factors using the Varimax method.

The only variable that did not lend itself to factorization was the one about taking the heating off when you leave home. KMO Bartlett test results. Chi-Square: 302.127, df: 21, sign.: .000, explained coefficient of variance: 65.903 %, The authors have included the factor names in the first column of the tables. Cronbach's alpha values are also shown for each factor. 3 factors were developed by the authors.

Table 4

Factors

Factors	Features	1	2	3
Conscious gas monitoring	Heating of residential premises only. G1	0.836		
	I regularly check the gas meter to see how much gas I use. G2	0.601		
	Cronbach Alpha	0.544		
Home activity optimisation	I rarely ventilate. A1		0.856	
	I cook less often. A2		0.727	
	I dress more warmly at home. A3		0.562	
	Cronbach Alpha		0.659	
Property modernisation	I pay attention to the insulation of my home. M1			0.817
	We use a thermostat M2			.809
	Cronbach-Alpha			0.546

Source: own elaboration

The authors have created three factors according to the components: conscious gas monitoring, optimising home activities, and upgrading the property. The analysis included how individual living situations affect gas use patterns. These aspects are livelihoods, who pays for gas consumption and who the young person lives with. Based on the cost of living, we can distinguish three groups: living below HUF 200,000, living between HUF 200,000 and 400,000, and living above HUF 400,000. At the time of the studies, the exchange rate between EUR and HUF was 1EUR= 410 HUF. The authors divided the sample into three groups based on the cost-bearer of gas consumption: the first group when the student pays the gas bill independently of his/her parents, the second when the student pays the gas bill with his/her parents or with his/her parents, and the third when the student pays the gas bill by other means. Based on the number of occupants in the dwelling, the first group is 1-2 persons, the second group is 3-4 persons, and the third group is 5 or more persons.

The authors used SPSS AMOS 28 to see if there is any relationship between the factors and the factors influencing consumption. The researchers tested the relationships in an SEM model. SEM (Structural Equation Modelling) represents the relationship between one or more exogenous (independent) variables and one or more endogenous (dependent) variables. Endogenous variables can be affected directly and indirectly by exogenous variables. In the figures, arrows indicate the effect of one variable on another, and back and forth arrows indicate the covariance or correlation between variables. Indicator names are shown by the letter symbols in Table 4. The error variables are symbolized by the circles in the figure.

Absolute fit of the model: the Khi-square was significant (53.894 df: 26 p: .000). With a sample size of 273, the significance of the Khi-square is stronger at 0. The RMSEA (Root Mean Square Error Approximation) value is 0.063, which should typically be below 0.08. The GFI (Goodness of Fit Index), which is acceptable for a value higher than 0.9, was .962 for this model, so it was adequate. In terms of Incremental Model Fit, the indices tested were AGFI, CFI, NFI, TLI, all of which were considered good at values above 0.9. In the model, AGFI: .920, CFI: .918, NFI: .860, TLI: .858, between which there are good, and some values close to the limit. For the Parsimony Fit, the Chi-squared/df value is 2.073, which is less than the threshold of 5. Overall, the model was considered adequate by the authors.

Figure 2 and Table 5 show the model values and system:

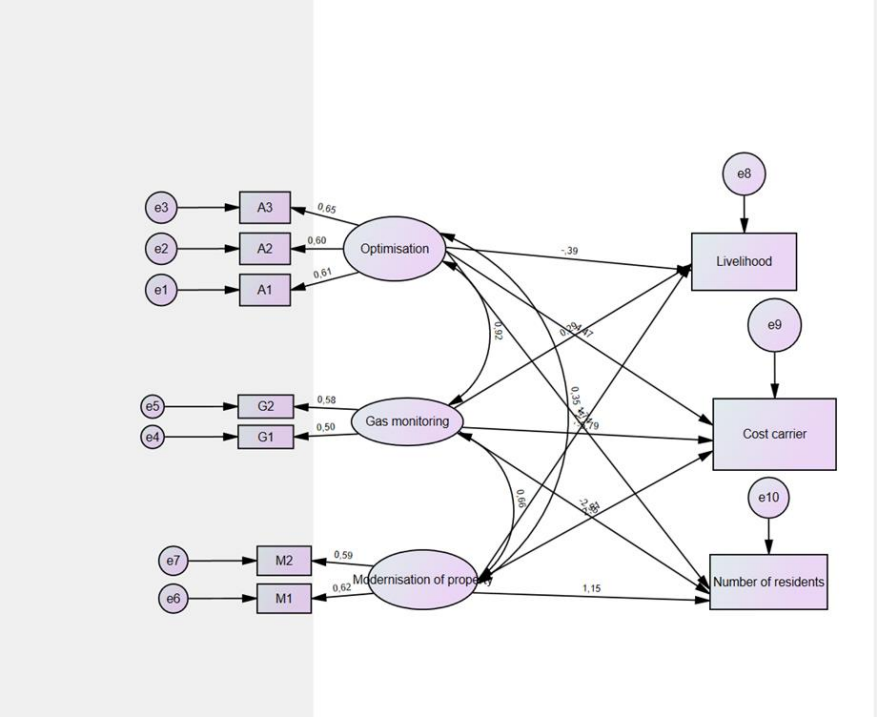

Figure 2. Correlations of gas saving factors in the light of cost-bearing, cost-of-living and number of occupants

Source: own elaboration

Table 5

Regression values (p=0.05)

Non-Standardized							Standardized
			Estimate	S.E.	C.R.	P	Estimate
Livelihood	<---	Optimisation	-0.279	0.343	-0.813	0.416	-0.392
Cost carrier	<---	Optimisation	1.508	1.245	1.211	0.226	1.745
Number of residents	<---	Optimisation	2.747	4.523	0.607	0.544	4.473
Livelihood	<---	Gas monitoring	0.223	0.450	0.495	0.620	.289
Cost carrier	<---	Gas monitoring	-3.852	6.112	-0.630	0.529	--5.790
Number of residents	<---	Gas monitoring	1.334	1.856	.719	.472	2.506
Livelihood	<---	Modernisation of property	.859	.511	1.683	.092	1.147
Cost carrier	<---	Modernisation of property	-2.197	1.640	-1.340	0.180	-2.346
Number of residents	<---	Modernisation of property	-0.084	0.140	-0.603	0.546	-.137

Source: own elaboration

It can be seen from the data that there is no correlation between the factors and the factors examined, such as optimal gas use, gas use monitoring and retrofitting of the dwelling. Thus, these factors do not influence the current level of attention to gas use and conservation among the young people in the study. The results are also interesting because one would think that those who live on a lower income, perhaps not with their parents, should be more aware of their attention than those who live on a higher income, perhaps

not paying the utility bill alone. In the light of the above studies, the authors do not accept their first hypothesis.

For the analysis of the second hypothesis, the authors considered that in Hungary, a decree came into force on 1 August 2022, under which the price of gas is subsidised up to a limit set by the government. This implies a partial elimination of the surge because more consumers will have monthly consumption above the subsidised threshold. The cheaper price is only available up to the annual limit of 1729 cubic metres at 102 HUF, above this limit it is 747 HUF. The survey asked how aware students are of the limit for gas consumption. The results showed that only 34 students knew the correct value. They gave a very wide range of answers. Some students admitted that they did not know the exact value, but they guessed between 0 and 5300 cubic metres. The reason why they guessed is that an annual value of 20-30 is probably far from the reality, similarly a consumption of 5300 cubic metres. The value of 1729 was based on average residential consumption, so it can be said that most students were not aware of this value.

The authors investigated what the economics students surveyed attributed to the current gas situation. Several reasons were listed by the authors and rated by the respondents on a scale of one to five. One was a complete no, five a complete yes. The reasons are summarised in Table 6:

Table 6

Reasons for the gas situation

Reasons	Mean	Std. Deviation
The Russian-Ukrainian war.	3.85	0.975
Running out of energy in the world.	3.46	1.106
Excessive past consumption.	3.29	1.193
Inefficient use of energy.	3.44	1.099
Scarce energy supplies.	3.42	1.107
Inefficient heating systems.	3.25	1.089
Buildings not up to date in terms of energy efficiency.	3.56	1.071
Use of electrical equipment that is not up to date.	3.32	1.085
Unreliable information on energy and electricity market developments.	3.20	1.126
Lack of social promotion of energy saving.	3.32	1.163
High cost of energy upgrades.	3.45	1.004
Limited use of renewable energy sources.	3.71	1.001
EU sanctions.	3.17	1.164
The Covid epidemic, which is still with us.	2.31	1.171

Source: own elaboration

Students blame war, the relatively limited use of renewable energy sources and the existence of substandard housing. The least blamed are covid, EU sanctions and unreliability of information on the energy market. The results also showed that the authors analysed whether there is a difference in the perception of the reasons based on the cost bearer of gas consumption, the source of livelihood and the number of inhabitants in the dwelling, in the context of the variables previously studied. Those living on less than 200,000 Ft perceived the scarcity of supply resources more strongly than those on higher incomes. Moreover, there were differences of opinion in the perception of EU sanctions in relation to cost bearers (F: 3.932 sign.: 0.026 $p<0.05$). Where parents or, together with parents, students are the cost bearers, they were much less likely to blame EU sanctions for the situation than those who are the sole cost bearers.

The survey also looked at how young people find out about the gas situation. On a scale of one to five, students were asked to rate how typically they use the sources of information. A one was not at all typical,

while a five was completely typical. The most important sources were family members (mean: 3.48), internet news portals (mean: 3.31), while the least important were TV (mean: 2.65) and radio (mean: 2.86). Correlation tests confirmed that those who were informed by TV and radio mainly used the Russian-Ukrainian war (r: .197, r: .191) and EU sanctions (r: .267, r: .262), while those relying on family sources blame EU sanctions (r: .161) and the covid epidemic (r: .128) most for the current situation.

Finally, 22.8% of students are worried about their livelihoods because of the energy situation, while only one in 10 is not. For this question, respondents did not differ (Khi-square tests were not significant) by cost of living, number of co-habitants, or cost bearers. 50% of the survey respondents think their cost of living will increase, while 6.8% think it will not change and 1.8% think it will even decrease.

Overall, most of the students surveyed are not aware of the domestic limit on gas consumption. However, they do have an opinion on the reasons, which they mainly get information about at home. The majority are concerned about their future livelihoods. In the light of the above analysis, the authors accept their second hypothesis.

5. CONCLUSION

Nowadays, suddenly occurring macro-environmental effects, i.e. the Covid-19 epidemic coming in waves, the Russian-Ukrainian war, accelerating inflation, limited access to energy sources has all presented serious difficulties and challenges to the actors of individual countries across Europe (Mbah-Wasum, 2022). Not only directly, but also indirectly through rising food prices, the transforming real estate market, the changed demand for electric cars, the growing demand for energy-saving devices, and the importance of renewable energy sources. In all these circumstances, it is necessary to re-evaluate our energy awareness and rethink the possibilities of saving, the strategies that can be used in the energy crisis.

The OECD draws the attention of governments to increase efficiency. The individual countries are trying to create energy security through different action plans, and they are trying to support both businesses and households through different support programs. However, EU unity is undermined by member states competing for limited resources (Batlle-Schittekatte-Knittel, 2022).

The 2022 crisis also had a significant negative impact on EU countries. The energy problem can spread to all sectors of the economy (Gilbert-Bazilian-Gross, 2021). However, many authors argue that a number of factors could influence the development of the gas market: for example, how much gas is consumed by the market as a whole; the extent to which new floating terminals are used; how quickly additional terminals can be installed; and finally the weather, which is important for gas consumption for heating (Kedziersky, 2023).

The crisis is of course also affecting household consumption, especially home heating. In England, there may already be disruptions to supply and prices could remain high for two or more years, at three times or more the pre-crisis level. In the UK, for example, where there is a heavy reliance on natural gas as a domestic fuel, many households face 'fuel poverty' when they have to choose between adequate food and fuel supplies, i.e. adequate heating for their homes (Milne, 2022). Hungary is highly exposed to gas sources outside its borders. It is therefore no coincidence that the current situation has had and may continue to have an impact on household gas prices and consumption.

The issue has also attracted the interest of researchers, who are now also looking at the energy-saving habits of the population from a scientific point of view. The present study targeted a social group of young people studying at a Hungarian prestigious university. The authors deliberately sought out an institution where they assumed that students would be up to date with developments in the gas market and related economic events.

The authors presented some of the results of a survey conducted at the end of last year, in which students at the 2 faculties of Budapest Business School –Faculty of International Management and Business and Faculty of Finance and Accountancy– one of Hungary's most important business universities were asked about the current energy crisis and the methods of changing consumer habits in response to it. The authors deliberately sought out an institution where they assumed that students would keep abreast of developments in the gas market and related economic events.

On the one hand, the results suggest that students consider their own direct contacts as a credible source of information, and least the mass media, in contrast to international research, where students' primary sources of information on sustainable development are television and newspapers. However, only a very small percentage were aware of the limits set by consumption standards, which in turn can have a major influence on how people pay attention to their consumption. Another reason for the results could be that at the time of writing the present paper there were not yet cold weather conditions that would have increased gas consumption, so large bills would still be waiting for consumers in winter months, which is why they do not follow the limits. However, it was clear from the responses that, in line with international research, awareness of saving is already strong among students, although this is not necessarily related to their financial situation or to the housing situation of a young person.

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