



Article

Bargaining Power of Buyers' Collectivism to Enhance Sustainability

Development

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RESUMO

M. Porter, em seu modelo, mostra como o poder de barganha dos consumidores contribui para a concorrência industrial, ajudando a alcançar o fornecimento de produtos de maior qualidade, melhores serviços ao cliente e benefícios de preços mais baixos. Contudo, segundo Lowitt e Tylenda, estes benefícios são factores de desenvolvimento sustentável que é uma preocupação actual dos consumidores. Este artigo tenta colmatar esta lacuna de não só considerar o poder de negociação como uma ferramenta para a estratégia competitiva, mas também estudar como os consumidores responsáveis melhoram colectivamente o desenvolvimento da sustentabilidade. Para atingir este objetivo, foram utilizados o método de revisão integrativa e os dados do acordo verde europeu dos indicadores de desenvolvimento sustentável do Eurostat. Os resultados da investigação são: de acordo com a revisão da literatura, o poder de negociação dos clientes aumenta o alcance da sustentabilidade através da provisão de benefícios competitivos, e isto é feito por meios coletivos. Isto é apoiado pelos indicadores de sustentabilidade da União Europeia, através dos quais foram identificadas uma relação significativa de forças dos clientes e indicadores de desenvolvimento de sustentabilidade.

Palavras-chave: poder de barganha dos consumidores; coletivismo de consumo; desenvolvimento de sustentabilidade.

ABSTRACT

M. Porter in his model shows how consumers bargaining power contributes to industrial competition by helping to achieve provision of higher quality products, better customer services, and lower prices benefits. However, according to Lowitt and Tylenda, these benefits are factors of sustainability development which is a current concern of consumers. This paper tries to close this gap of not only considering bargaining power as a tool for competitive strategy but also to study how responsible consumers collectively enhance sustainability development. To achieve this objective, integrative review method and European green deal data of Eurostat sustainable development indicators were used. Research results are according to literature review, bargaining power of customers enhance sustainability achievement through provision of competitive benefits, and this is done in collective means. This is supported by European Union sustainability indicators by which, a significant relation of customers forces, and sustainability development indicators were identified.

Keywords: bargaining power of consumers; consumer collectivism; sustainability development.



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Introduction

Nowadays, sustainability development is considered by scholars as a business competitive strategy, and M.E. Porter's five forces is one of the most important models to study competitive strategies. Since its publication in 1979, five forces model has played an important role in the analysis of industrial competition and strategic formulation, and now they are known for their rigorous impact in the competitive strategy study (M. E. Porter 2008). However, when it comes to sustainability development as a competitive strategy, the existing literature does not explain much about how this is achieved within industrial environment. What is said by this model is that bargaining power of buyers help to achieve benefits of low prices, better quality of products and more services (M. E. Porter 2008), and according to Lowitt and Tylenda, the benefits are factors of sustainability achievement (Lowitt 2011), (E. Tylenda 2014). Thus, this paper studies how responsible consumers help to achieve sustainability.

This study is related to current customer behavior trend because, according to Mintel, reports that due to increasing uncertainty, customers are working to get full control on their consumption through requiring clarity, transparency, flexibility, and options so that they can be able to make decisions that suite their expectations (Mintel 2022). This shows that businesses are tied to customers' decisions. As far as sustainability is concerned, Mintel states that one of the major factors that motivates customers to force businesses for change is sustainability problems. To be competitive, brands are forced to include sustainability practices into their design which can be for example waste reduction and better use of local resources (Mintel. 2023). However, considering this step taken by venders the way consumers help to achieve sustainability is not shown.

Thus, article uses an integrative review method of keys authors: M. Porter five forces model, Hardin, Olson, Sandler and E. Ostrom theories of collective action, and Mintel, supported European green deal data of Eurostat sustainable development indicators, to identify how consumers collectively interact and force companies to provide higher quality products, better customer services, and lower prices.

It is based on the following hypotheses: H1: Customers bargaining power collectively helps to achieve sustainability development when there is a significant increase of high-quality products like zero emission vehicles among European countries, H2: Customers bargaining power collectively helps to achieve sustainability development when there is a significant decrease in net greenhouse gas emissions, H3: Bargaining power of buyers helps to achieve sustainability development if there is a significant increase in providing products like renewable energy in gross final energy consumption to responsible customers. The structure arrangement of this work is divided into introduction, literature review and hypotheses development, methodology, results, and conclusions.

Literature review and hypotheses development

Conceptual development of bargaining power of buyers

The study of contextual development of bargaining power of buyers¹ has the aim of responding to a question of How bargaining power of buyers has been developed into an attribute of any responsible group to achieve common goal like that of sustainability development. It is studied in reference to P. Kitcher's (1993) perspective of scientific progress by which conceptual, explicative, erotetic, and practical progress of bargaining power of buyers is considered. These types of scientific progress are applied to the term of bargaining power

¹ In this work, bargaining power of buyers is taken in the context that it gives customers/consumers (buyers) the ability to squeeze industry margins by putting pressure to businesses (the suppliers) to provide sustainable products.



of buyers to identify how these forces have been progressively developed and applied to solve significant questions like that of sustainability achievement. Since M. E. Porter's publication in Harvard Business Review in 1979, bargaining power of buyers has got a clear meaning and long development and become later the industry's competition determinants (M. E. Porter 1998), and served to formulate strategies for competitiveness in various disciplines² (M. E. Porter 2008). This process marked a further and a long transformation of this model, and it currently appears in books as in the following figure.

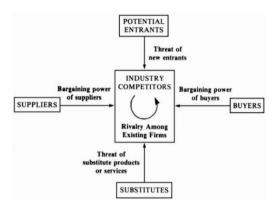


Figure 1: Forces Driving Industry Competition

The development and use of these forces are embedded into a system of interactions of companies and their environment, and it depends on a context of study that their impact is determined (M. E. Porter 2008, 3). Various researchers have been using these forces as a framework to analyze those complex systematic problems, for example: collective urban transport (Ortega, Jalón and Menéndez 2014), analysis of the demand and supply forces in pharmaceutical industry (Nedelcheva and Filipova 2020), human capital change (Anastasiu, Gavriş and Maier 2020). In this article, the concern is to understand the current meaning of bargaining power of buyers and how this helps to achieve sustainability development.

Bargaining power of buyers has been a concern of different authors and in this work, the definition of Corporate Finance Institute Team (CFI Team) is used. According to this institution, bargaining power of customers is referred to "the pressure that customers/consumers can put on businesses to get higher quality products, better customer service, and/or lower prices" (CFI TEAM 2023). This definition is also used by Strategic CFOTM in the analysis of the impact of bargaining power of buyers on industry profitability (Dan 2023). This is for example, Yasushi and Ueki (2016), identifies a positive relationship between customer pressure and manufacturing of high-quality products. Find a positive impact of customers' pressure on green innovation performance (Lestari, et al. 2021), there is positive impact of customer pressure with product innovation and low costs (Tomaszewski 2015). Customers can capture these benefits when they are powerful to exercise their forces upon suppliers (M. E. Porter 2008). These forces are exercised within groups of customers and their amplitude depends on market situation and purchasing market share (M. E. Porter 1998, 50).

According to Lowitt, these groups can be differentiated into institutional and individual consumers. To institutional buyers, costs are minimized by a capture of power between suppliers and buyers, whereas for individual consumers, the power of consumers is exercised through their vote in mass, with their purchasing

² The M. E. Porter model makes an economic directive to study competitive strategy for corporations, regions, nations, and more recently, health care and philanthropy are recognized (M. E. Porter 2008).



power. Thus, a group representation with high purchasing power implies a potential for green-focused shoppers to wield their power to force companies to make socially conscious manufacturing methods the new "traditional" approach to value creation (Lowitt 2011).

According to Mintel (2022), nowadays, customers are motivated by having a sense of control of their lives. To gain competition, industries are forced to respond to customers' claims by providing for example accurate information and options. This sense comes from the fact that customers are much more interested than ever in confronting the common threat of uncertainty of products offered, and this is done through consumers collectivism to achieve common goal. The way companies are aligned for customer satisfaction create power to customers as characterized by brand acceptances and form community brand consumers (Mintel. 2023).

Hence, consumers create group benefits that can be broadly distinguished as social benefits like consumption as social act; this is for example green consumption where it is considered as collective action in terms of Schutz A. and M. G. Sandy (2011) by whom, a collective action is characterized by social movements and community developed efforts to meet common goal, and economic benefits like higher quality products, better customer service, and lower prices (M. E. Porter 1998).

Both benefits collectively impact industrial competition, however, the questions here are why customers find it useful to collectively work together and how this is possible knowing that buyers always want to satisfy individualistic benefits.

Bargaining power of customers in the context of collective action

From the above section, we have seen that bargaining power of customers has got conceptual, explicative, erotic, and practical progress and nowadays characterizes a result of cohesive groups of customers whose aim is to achieve common goals. Now the questions are: how are these groups formed? How do customers work in these groups to achieve common goals like sustainability development? And how are these goals established? To these questions, the theory of collective action and its relation to sustainability development are analyzed in this and next section.

The idea of collective action for exercising higher bargaining power is related to the statement of M. Porter when he proposed bargaining power of buyers as one of the forces for industry competitiveness. The plurality of buyers means higher forces and this statement embeds collective action of the buyers to meet a common benefits. The power of consumers is exercised through their vote in mass (Lowitt 2011). This implies that groups of individual customers are necessary to strengthen their will towards sellers. However, how do customers work in these groups to achieve common goals like sustainability development? In other words, how consumers collectively act to form a competitive force that businesses have to respond to in order to subsist in the market. To respond to this question, the theory of collective action is used.

The individuals that share common interests are attempted to further those interests within groups (Olson 1971, 1-3). It is in this rational idea that customers with individual interests find themselves that they are better off to act as a group, and as a society becomes more complex, a collective action need becomes very important (Sandler 2004, 17). However, as far as collective action of consumers is concerned, it is different from the context where formal rules can be drawn to govern structured interactions (E. Ostrom 1998).

It is natural that members of the groups interact, and efforts of some members influence other members to contribute to group interests (Sandler 2004). Thus, there is a will that benefits are for the group whether it is small or large, and this implies the cost. In small groups, costs are more effective and efficient than in large groups. However, in the case of bargaining power, there is a tendence to achieve common benefits even if there are mayor heterogeneous individuals. This is the case of the buyers' bargaining powers where groups are



infinitely larger and there are no institutions to govern cost and benefits, unless associations and organizations are formed to govern them.

Consumer collectivism and sustainability development

The natural willingness of individuals to work in groups to strengthen efforts is a strategic interaction to achieve social benefits. In the context of enhancing sustainability, it starts with some individual consumers who boycott consuming some products and they increase in number until the problem becomes a social problem. At the beginning individuals bear a burden of conversing companies and with a growth in number to form large groups, the cost is shifted to public policy.

The increase in forming large groups adopting collectivism to achieve social benefits, causes homogeneity of cultural traits like consumption. This activity imposes social attributes to individualists that determine their daily practices which finally define their social relations (Sánchez-Rodríguez, Rodríguez-Bailón and Willis 2020). As far as sustainability is concerned, green customer behavior is adopted and characterizes groups interactions that end up defining the level of collective sustainability achievement. Thus, collectivism is a cultural factor that play a modeling role to consumer behavior towards environment consciousness and green products (Ghali-Zinoubi 2022), and collectivism matters in consumer effectiveness (Czarnecka and Schivinski 2021).

In the case of the European Union, sustainability development is fostered by collectivism formed by responsible consumers. European community is ranked as first region with responsible consumers (SOLABILITY 2023), and 74% are concerned with environmental state (Gurus 2022), and this responsibility is institutionally supported (EU-Commission 2022) which help to get good quality of products, better customer services, and low cost products. In summary, bargaining power of customers is a concept that has been scientifically developed to help design competitive strategies like high quality of products, better services, and low costs. It is done within the collectivism situation of responsible consumers to achieve common goals like for example, in the case of European green deal, consumers are committed to use zero emission vehicles, decrease in net greenhouse gas emissions, and use of green energy. From this, the following hypotheses are proposed:

- H1: Customers bargaining power collectively helps to achieve sustainability development when there is a significant increase of high-quality products like zero emission vehicles among European countries.
- H2: Customers bargaining power collectively helps to achieve sustainability development when there is a significant decrease in net greenhouse gas emissions.
- H3: Bargaining power of buyers helps to achieve sustainability development if there is a significant increase in providing products like renewable energy in gross final energy consumption to responsible customers

Methodology

This work bases its methodology on: An integrative literature review by which a theoretical framework analysis of bargaining power of consumers, collective action, consumer collectivism, and sustainability achievement is done. It is done in the purpose of determining how these theories are interrelated and provide a development trend to explain sustainability achievement (Snyder, Literature review as a research methodology: An overview and guidelines 2019), and it is conformed with the following model.

The mains researchers of these theories are M. Porter, 2008; Mancur Olson, 1978, Todd Sandler, 2004; and Mintel consumer reports, 2022 and 2023. To support the findings from literature review, statistical data of the European green deal of the Eurostat sustainability development indicators are used. The selection of these indicators is based on the purpose of this work and their ability to represent the phenomenon concerned



(Moldan and Dahl 2007), and the following three (3) indicators are considered: share of zero emission vehicles in newly registered passenger cars, share of renewable energy in gross final energy consumption by sector, and net greenhouse gas emissions. To test performance of these indicators, the following hypotheses have been established:

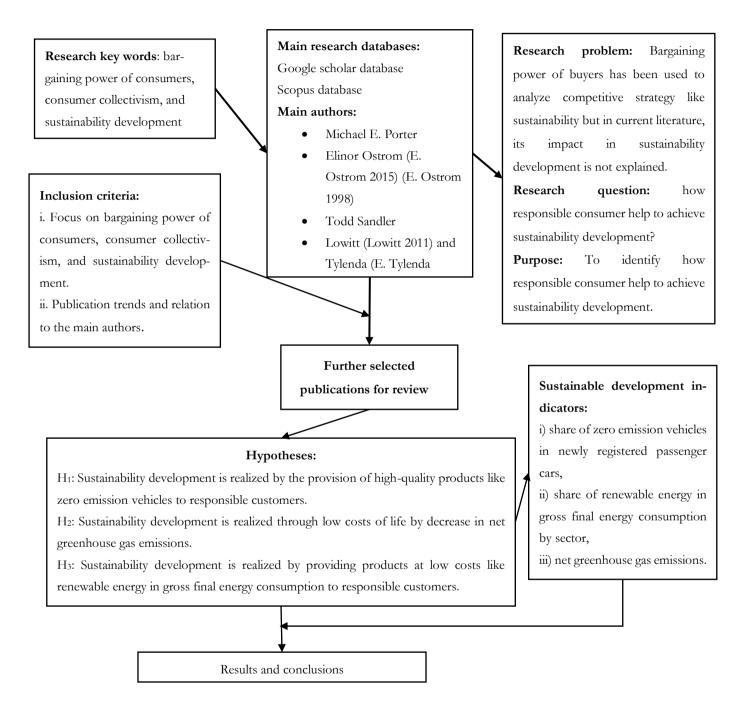


Figure 2: Research design model Source: proper design based on (Snyder, Literature review as a research methodology: An overview and guidelines 2019).

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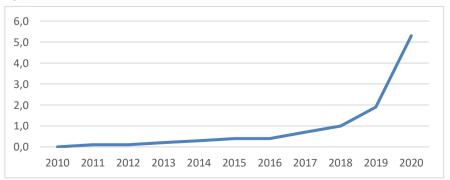
- H1: Customers' bargaining power collectively helps to achieve sustainability development when there is a significant increase of high-quality products like zero emission vehicles among European countries.
- H2: Customers' bargaining power collectively helps to achieve sustainability development when there is a significant decrease in net greenhouse gas emissions.
- H3: Bargaining power of buyers helps to achieve sustainability development if there is a significant increase in providing products like renewable energy in gross final energy consumption to responsible customers

Results

In the purpose of identifying how responsible customers help to collectively achieve sustainability development, analytical literature review and three (3) indicators of sustainability of share of zero emission vehicles in newly registered passenger cars, share of renewable energy in gross final energy consumption by sector, and net greenhouse gas emissions were used, and the following results were identified:

- i. The main results from analytical literature review are that:
 - Bargaining power of customers implicitly force improvement in product quality, better services, and price effective and as consumerism is a social act with main objectives, at large scale this act is converted into collective action. This is supported by the fact of M. Porter sublime expression of collectivism that maximize common benefits within groups.
 - Sustainability is achieved through exercise of bargaining power of customers as the latter is a source of higher quality products, better customer service, and/or lower prices which are attributes of sustainability development.
- ii. These results are empirically supported by the analysis of European deal data where three indicators for sustainability were analyzed. These indicators are to identify how responsible customers explicitly contribute to sustainability development, and the results are the following:
 - ii. 1. Share of zero emission vehicles in newly registered passenger cars.

This indicator as well as other two was chosen due to its implication of buyers' commitment and engagement to sustainability achievement. According to this indicator, since 2010, the use of zero emission vehicles in the European Union area has gotten of high importance. This shows higher commitment of consumers towards common benefits from low emissions. Detailed information is given in the following graph 1, table 1 and graphic 2.



Graphic 1. Share of zero emission vehicles in newly registered passenger cars in 27 countries of European Union from 2010 to 2020. Source: Elaborated according to data from (MOVE) 2022) (European Alternative Fuels Observatory (EAFO) 2023).



According to the above graphic, there is an increase in zero emission vehicles use with sample standard deviation of 1.54 in the European Union. This generally shows how consumers in the European Union collectively contribute to pollution mitigation by adopting the use of vehicles with zero emission. This shift towards improvement in technology and innovation use implies an opportunity cost for customers and implies cost-benefits trade off which shows customers commitment to realize sustainability achievement. The variable increases of zero emission vehicles among European Union countries are given in the following figures of the following table 1.

Table 1. Summary statistics zero emission vehicles among European Union countries:

Variable	Minimum	Maximum	Mean	Std. deviation
Belgium	0.000	3.300	0.664	0.983
Bulgaria	0.000	1.200	0.209	0.375
Czechia	0.000	1.600	0.245	0.461
Denmark	0.000	7.000	1.355	2.042
Germany	0.000	6.400	1.018	1.853
Estonia	0.000	2.600	0.755	0.871
Ireland	0.000	4.500	0.945	1.471
Greece	0.000	0.800	0.118	0.236
Spain	0.000	2.100	0.400	0.610
France	0.000	6.700	1.336	1.870
Croatia	0.000	1.500	0.227	0.441
Italy	0.000	2.300	0.336	0.674
Cyprus	0.000	0.600	0.164	0.211
Latvia	0.000	2.100	0.518	0.681
Lithuania	0.000	1.100	0.227	0.332
Luxembourg	0.000	5.500	0.955	1.593
Hungary	0.000	2.200	0.482	0.705
Netherlands	0.000	20.200	4.073	6.719
Austria	0.000	6.200	1.373	1.837
Poland	0.000	0.800	0.118	0.244
Portugal	0.000	5.200	1.127	1.664
Romania	0.000	2.200	0.364	0.679
Slovenia	0.000	3.100	0.509	0.903
Slovakia	0.000	1.100	0.200	0.316
Finland	0.000	4.300	0.691	1.295
Sweden	0.000	9.300	1.755	2.808
Iceland	0.000	26.200	4.773	7.619
Liechtenstein	0.000	4.300	1.336	1.590
Norway	0.300	51.600	18.373	17.007
Switzerland	0.000	7.900	1.655	2.392
United Kingdom	0.000	6.400	0.964	1.857
Türkiye	0.000	0.100	0.009	0.030

Source: Elaborated according to data from (MOVE) 2022), (European Alternative Fuels Observatory (EAFO) 2023).



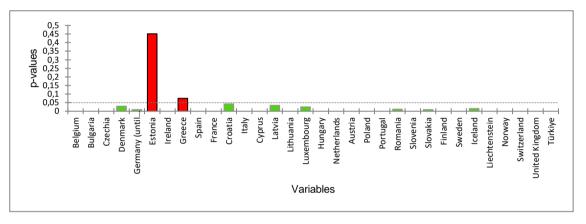
According to this table 1, all countries have got an increase in use of zero emission vehicles within the past 10 years-from year 2010 to year 2020. Based on M.E. Porter, this shows a social commitment of consumerism towards sustainability achievement. However, based on the test of significance, only two countries- Estonia and Greece- have no significance increase. This is shown in the following H₁ test.

Hypothesis test results:

• H0: Data are homogeneous & Ha: There is a date at which there is a change in the data.

As the computed p-value is lower than the significance level alpha = 0.05, the null hypothesis H0 is rejected, and we accept the alternative hypothesis, Ha as it is observed in the following graphic 2.

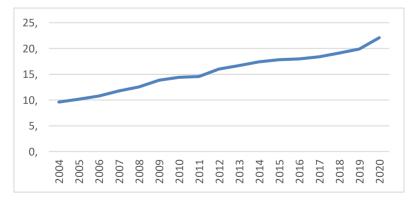
Graphic 2. p-values(Pettitt)



Source: Elaborated according to data from (MOVE) 2022), (European Alternative Fuels Observatory (EAFO) 2023).

• ii. 2. Share of renewable energy in gross final energy consumption by sector.

This indicator shows how consumption of renewable energy has been increasing since 2004 to 2020 in the European Union. The average of this resource is 15.47% with 3.07 standard deviation which shows how importantly this area is concerned with this resource as an alternative resource for sustainability. Detailed information about how this resource has been increasingly used is given in the following graphic 3, table 2, and graphic 4.



Graphic 3: Share of renewable energy in gross final energy consumption by sector. Source: Elaborated according to data from (Eurostat 2023)

The above graphic 3 contained gross data to European Union level. Their detailed analysis is shown in the following table 2.



Table 2. Summary statistics of shared renewable energy in gross final energy consumption by sector:

Variable	Minimum	Maximum	Mean	Std. deviation
Belgium	1.916	13.000	6.579	3.137
Bulgaria	9.098	23.319	15.370	4.811
Czechia	6.773	17.303	12.032	3.567
Denmark	14.839	37.020	25.354	7.370
Germany	6.207	19.312	12.773	3.635
Estonia	16.011	31.730	24.562	5.207
Ireland	2.378	16.160	7.311	3.767
Greece	7.161	21.749	12.988	4.768
Spain	8.345	21.220	13.995	3.726
France	8.936	19.109	13.182	3.074
Croatia	21.986	31.023	26.039	2.740
Italy	6.316	20.359	14.175	4.284
Cyprus	3.071	16.879	8.021	4.089
Latvia	29.615	42.132	35.408	4.036
Lithuania	16.482	26.773	21.566	3.746
Luxembourg	0.899	11.699	4.309	2.849
Hungary	4.364	16.205	11.886	3.429
Malta	0.102	10.714	3.563	3.497
Netherlands	2.030	13.999	5.294	2.863
Austria	22.553	36.545	30.997	3.759
Poland	6.859	16.102	10.486	3.015
Portugal	19.205	33.982	26.123	4.552
Romania	16.811	25.032	22.064	2.950
Slovenia	18.397	25.000	21.162	1.783
Slovakia	6.360	17.345	10.497	3.241
Finland	28.814	43.802	35.334	5.175
Sweden	38.427	60.124	48.634	5.914
Iceland	58.899	83.725	71.464	6.511
Norway	58.417	77.358	66.116	5.365
United Kingdom	1.096	12.336	5.878	3.937
Montenegro	32.290	44.098	39.176	3.778
North Macedonia	14.976	19.636	17.506	1.496
Albania	29.621	45.015	34.124	3.678
Serbia	12.724	25.983	19.268	3.631
Bosnia & Herzegovina	16.708	37.578	23.432	7.094
Kosovo	17.598	24.616	20.435	2.586

Source: Elaborated according to data from (Eurostat 2023).

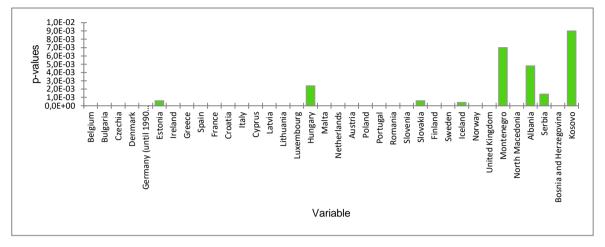
Hypothesis test analysis:

• H0: Data are homogeneous & Ha: There is a date at which there is a change in the data.



As the computed p-value is lower than the significance level alpha = 0.05, the null hypothesis H0 is rejected, and accept the alternative hypothesis Ha is accepted. This can be viewed in the following graph 4.

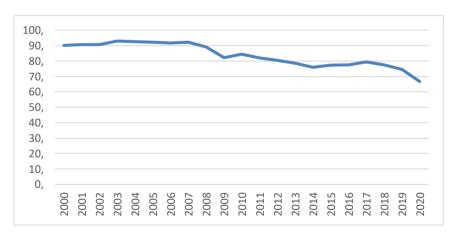
Graphic 4. p-values(Pettitt)



Source: Elaborated according to data from (Eurostat 2023).

• ii 3. Net greenhouse gas emissions

The net greenhouse emissions in the European Union area have significantly reduced from 2000 to 2020. The average consumption for this period is 83.78% with 6.58 standards deviation. Detailed information can be checked in the following graphic 5, table 3 and graphic 6.



Graphic 5: Net greenhouse gas emissions. Source: Elaborated according to data from European Environment Agency (EEA 2023)

Detailed information of the above table is given in the following table 3

Hypothesis test analysis

- H0: Data are homogeneous.
- Ha: There is a date at which there is a change in the data

As the computed p-value is lower than the significance level alpha = 0.05, one should reject the null hypothesis H0, and accept the alternative hypothesis, Ha. This can be observed in the following graphic 6

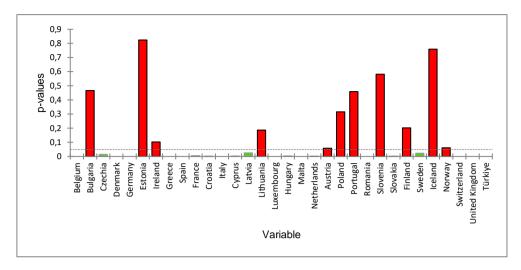


Table 3. Summary statistics of net greenhouse gas emissions

Variable	Minimum	Maximum	Mean	Std. deviation
Belgium	75.200	99.200	87.093	6.879
Bulgaria	49.300	69.200	62.100	5.117
Czechia	63.900	77.000	69.000	3.963
Denmark	57.500	103.500	77.027	13.454
Germany	57.100	79.200	70.880	5.488
Estonia	34.700	53.600	45.760	6.267
Ireland	106.800	130.700	115.873	7.469
Greece	69.600	131.600	103.240	18.242
Spain	94.900	163.100	127.927	17.698
France	73.200	96.200	87.173	5.848
Croatia	71.300	96.900	80.747	7.673
Italy	67.700	109.800	86.960	12.536
Cyprus	139.200	176.500	159.407	11.337
Latvia	36.400	90.100	63.660	16.599
Lithuania	24.500	45.600	32.713	6.930
Luxembourg	78.100	102.600	92.460	7.029
Hungary	58.600	78.800	66.067	5.945
Malta	79.900	123.000	105.367	15.731
Netherlands	75.600	98.400	90.707	5.706
Austria	109.100	128.800	118.973	5.024
Poland	79.200	86.100	82.713	2.214
Portugal	85.500	138.800	104.427	12.812
Romania	34.600	53.800	42.187	6.337
Slovenia	78.000	131.700	101.807	19.616
Slovakia	44.700	65.800	56.800	5.760
Finland	53.400	109.600	77.813	15.370
Sweden	20.600	89.200	54.507	15.892
Iceland	105.300	115.800	111.007	2.624
Norway	64.200	103.600	84.713	11.585
Switzerland	79.600	103.400	96.513	6.279
United Kingdom	51.100	87.700	70.727	10.632
Türkiye	173.900	287.400	230.400	33.336

Source: Elaborated according to data from European Environment Agency (EEA 2023).





Graphic 6. p-values(Pettitt). Source: Elaborated according to data from European Environment Agency (EEA 2023).

Conclusion

This study brought to the conclusion of that as bargaining power of customers theory has been used to study business competition problem, it can also be used to study current problem of sustainability development since some of the benefits of these forces are attributes of sustainability achievement. This can be identified when sustainability is treated as social problem hence its achievement must be a social goal like European green deal in which some indicators like share of zero emission vehicles in newly registered passenger cars, share of renewable energy in gross final energy consumption by sector, and net greenhouse gas emissions clearly show consumers commitment. In this case, sustainability achievement is embedded and explained by general social achievement as it is shown by three indicators used in the analysis. In this sense a collective and responsible consumerism is presumably manifested.

Research contribution, Limitations and Directions for future Research

Research contribution

Normally, the analysis of bargaining power of buyers and the use of five forces were initially thought as a tool to analyze business competitivity with an industry i.e their analysis must be conducted from the perspective of the seller (the company) to analyze how these forces, especially how customers respond to products/services provided. Thus, in this research, the introduction of collective action provides a new concept of customers' bargaining power and how it mobilized to form strategic solutions about social challenges like sustainability development.

Limitations, directions for future research and declarations

Research limitations

The scope of this paper is limited to:

- The paper is not aimed to explain the development of bargaining power of buyers as scientific progress, it takes this concept only to show how widely this model was adopted to study the problems of competition like sustainability.
- It does not identify individual motive for green consumption, rather it shows how at macroeconomic level, bargaining power of consumers can also be seen as social interactive power to achieve social goals.



• It does not show how consumers interact with producers in action situation to exercise their power. It does not identify how green consumers interact to maximize benefits for sustainability achievement, rather it shows that as far as a social goal like sustainability, consumerism as a social force is directed to achieve that goal which was explained with M.E. Porter through consumer bargaining power theory.

Future research

Considering the limitations of this research paper, the future research is directed to identify how consumers bargaining power is exercised within action arena in some European countries towards sustainability achievement

Declarations

- Ethical approval: Not applicable.
- **Competing interests:** The authors declare no conflict of interests.
- Authors' contributions: The three authors developed a conceptualization of the problem and a methodological framework; E.H collected, analyzed the data, and wrote the paper; E.M.D prepared the tables and graphics and D.M.M.B reviewed and edited the final draft. All authors read and agreed to the published version of the manuscript.
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- Availability of data and materials: The data analyzed and presented in this study are available on request from the corresponding author.

References

Anastasiu, Livia, Ovidiu Gavriș, and Dorin Maier. 2020. "Is Human Capital Ready for Change? A Strategic Approach Adapting Porter's Five Forces to Human Resources." *Sustainability* 12 (6): 2300. doi:https://doi.org/10.3390/su12062300.

Baugh, Christopher W., Stephen C. Dorner, David M. Levine, Nathan R. Handley, and Kathi H. Mooney. 2022. "Acute home-based care for patients with cancer to avoid, substitute, and follow emergency department visits: a conceptual framework using Porter's Five Forces." *Emergency Cancer Care*.

CFI TEAM. 2023. "resources/management/bargaining-power-of-buyers/." corporatefinanceinstitute.com. 01 11. https://corporatefinanceinstitute.com/resources/management/bargaining-power-of-buyers/.

Czarnecka, Barbara, and Bruno Schivinski. 2021. *Individualism/collectivism and perceived consumer effectiveness: The moderating role of global–local identities in a post-transitional European economy.* Journal of Consumer Behaviour. doi:21. 10.1002/cb.1988.

Dan. 2023. "Strategic CFOTM." *Strategic CFO*TM *Web Site* . June 13. https://strategiccfo.com/articles/financialleadership/buyer-bargaining-power-one-of-porters-five-forces/#.

EEA. 2023. "Net greenhouse gas emissions." *eurostat.* 01 12. https://ec.europa.eu/eurostat/databrowser/product/page/SDG_13_10__custom_1300365.



EU-Commission. 2022. *Circular Economy: Commission proposes new consumer rights and a ban on greenwashing*. European Commission - Press release. https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2098.

European Alternative Fuels Observatory (EAFO), Directorate-General for Mobility and Transport (DG MOVE). 2023. "Share of zero emission vehicles in newly registered passenger cars." *eurostat.* 01 12. https://ec.europa.eu/eurostat/databrowser/view/CLI_ACT_NOEC__custom_2233679/default/table.

Eurostat. 2023. "Share of renewable energy in gross final energy consumption by sector." *eurostat.* 01 12. https://ec.europa.eu/eurostat/databrowser/product/page/SDG_07_40__custom_2190966.

Eurostat. 2023. "Material flow accounts in raw material equivalents - modelling estimates." *eurostat.* 01 12. https://ec.europa.eu/eurostat/databrowser/view/ENV_AC_RME__custom_1315684/default/table.

Ghali-Zinoubi, Zohra. 2022. "Examining Drivers of Environmentally Conscious Consumer Behavior: Theory of Planned Behavior Extended with Cultural Factors." *Sustainability* 14 (8072). doi:https://doi.org/10.3390/su14138072.

Gurus, FMCG. 2022. European Consumer Trends in 2022. file:///C:/Users/he575/Downloads/European%20Consumer%20Trends%20in%202022.pdf.

Kitcher, Philip. 1993. THE ADVENCEMENT OF SCIENCE. SCIENCE WITHOUT LEGEND, OBJECTIVITY WITHOUT ILLUSIONS. First . New York and Oxford : Oxford University Press .

Lestari, E R, W A P Dania, C Indriani, and I A Firdausyi. 2021. "The impact of customer pressure and the environmental regulation on green innovation performance." *Earth and Environmental Science*. IOP Publishing. doi:10.1088/1755-1315/733/1/012048.

Lowitt, Eric. 2011. *How Sustainability is* Reshaping Competition. 9. https://magazine.wharton.upenn.edu/digital/how-sustainability-is-reshaping-competition/.

Mintel. 2022. "Global consumer trends." mintel.com. 01 12. www.mintel.com.

Mintel. 2023. *Global Consumer Trends*. https://www.mintel.com/.

Moldan, Bedrich, and Arthur Lyon Dahl. 2007. "Challenges to Sustainability Indicators." In *Sustainability Indicators*. A Scientific Assessment, by Tomás Hák, Bedrich Moldan and Arthur Lyon Dahl, 9-24. Island Press.

MOVE), European Alternative Fuels Observatory (EAFO) & Directorate-General for Mobility and Transport (DG. 2022. *Share of zero emission vehicles in newly registered passenger cars.* Eurostat, 07 25. Accessed 11 12, 2021. https://ec.europa.eu/eurostat/databrowser/view/CLI_ACT_NOEC__custom_2233679/default/table.

Nedelcheva, Yulia, and Milena Filipova. 2020. "APPLYING FIVE FORCES MODEL TO PHARMACEUTICAL INDUSTRY." Revista Inclusiones 8 (1): 162-173. https://revistainclusiones.org/index.php/inclu/article/view/191.

Olson, Mancur. 1971. *The Logic of Collective Action: Public Goods and the Theory of Groups*. . Cambridge-Massachusetts, London-England: Harvard University Press.



Ortega, Alba Gómez, María Luisa Delgado Jalón, and José Angel Rivero Menéndez. 2014. " A strategic analysis of collective urban transport in Spain using the Five Forces Model." *Investigaciones europeas de dirección y economía de la empresa*.

Ostrom, Elinor. 2015. GOVERNING THE COMMONS. The evolution of institutions for collective action. . Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo, Delhi, Tokyo, Mexico City: Cambridge University Press 1990, 2015.

Ostrom, Elinor. 1998. "DESIGN PRINCIPLES OF ROBUST PROPERTY-RIGHTS INSTITUTIONS: WHAT HAVE WE LEARNED?" Workshop in Political Theory and Policy Analysis.

Porter, Michael E. 1998. *Competitive strategy: techniques for analyzing industries and competitors: with a new introduction.* . New York, NY 10020: THE FREE PRESS. A Division of Simon & Schuster Inc.

Porter, Micheal E. 2008. "The five competitive forces that shape strategy." Edited by Peter Crowther. *Harvard Business Review*. *Editor's notes*. (Harvard Business Review) 79: 78-93. hbr.org.

Rice, John F. 2022. "Adaptation of Porter's five forces model to risk management." *Defense Acquisition Research Journal* 29 (2): 126-139.

SAĞLAM, Mehmet. 2021. "THE IMPACT OF HOFSTEDE'S CULTURAL DIMENSIONS ON CONSUMER BEHAVIOUR INTENTIONS." *International Journal of Commerce and Finance* 140-164.

Sánchez-Rodríguez, Ángel, Rosa Rodríguez-Bailón, and Guillermo B. Willis. 2020. "Efectos de la actividad económica sobre el individualismo-colectivismo." *Escritos de Psicología - Psychological Writings* 1-12. doi:https://doi.org/10.24310/espsiescpsi.v13i1.10073.

Sandler, Todd. 2004. *Global Collective Action*. Cambridge, New York, Melbourne, Madrid, Cape Town, Singapore, São Paulo: cambridge university press.

Schutz, Aaron, and Marie G. Sandy. 2011. "Collective Action in Twentieth-Century America: A Brief History." In *Collective Action for Social Change. An Introduction to Community Organizing*, by Aaron Schutz and Marie G. Sandy, 47-90. 175 Fifth Avenue, New York, NY 10010: Palgrave Macmillan.

Snyder, Hannah. 2019. "Literature review as a research methodology: An overview and guidelines." *Journal of Business Research*, 333-339. doi:10.1016/j.jbusres.2019.07.039.

Snyder, Hannah. 2019. "Literature review as a research methodology: An overview and guidelines." *Journal of Business Research* (104): 333-339. doi:https://doi.org/10.1016/j.jbusres.2019.07.039.

SOLABILITY. 2023. "Sustainable Competitiveness Index 2022." 06 13. https://solability.com/solability/the-global-sustainable-competitiveness-index/the-index.

Tomaszewski, Marek. 2015. "INFLUENCE OF CUSTOMER PRESSURE ON THE INNOVATIVE ACTIVITY OF A COMPANY." *ARGUMENTA OECONOMICA* 35 (2): 203-219. doi:10.15611/aoe.2015.2.11.



Tylenda, Evan. 2022. *Sustainability and the Five Forces Model.* 10 15. https://www.sasb.org/blog/five-forces/#:~:text=Bargaining%20Power%20of%20Buyers,and%20ultimately%20sell%20to%20consumers.

Tylenda, Evan. 2014. *Sustainability and the Five Forces Model.* 9 2. https://www.sasb.org/blog/five-forces/#:~:text=Bargaining%20Power%20of%20Buyers,and%20ultimately%20sell%20to%20consumers.

Yasushi, Ueki. 2016. "Customer pressure, customer–manufacturer–supplier relationships, and quality control performance." *Journal of Business Research*. 69 (6). doi:10.1016/j.jbusres.2015.12.035.