

## Τετράδια Ανάλυσης Δεδομένων

Τόμ. 20, Αρ. 1 (2024)

Τετράδια Ανάλυσης Δεδομένων - 20



### The American Elections as context for the Game Theory application in strategic political marketing

*Evangelia Markaki, Theodore Chadjipantelis*

Copyright © 2024, Τετράδια Ανάλυσης Δεδομένων



Άδεια χρήσης [Creative Commons Attribution-NonCommercial-NoDerivatives 4.0](https://creativecommons.org/licenses/by-nc-nd/4.0/).

#### Βιβλιογραφική αναφορά:

Markaki, E., & Chadjipantelis, T. (2024). The American Elections as context for the Game Theory application in strategic political marketing. *Τετράδια Ανάλυσης Δεδομένων*, 20(1), 1–13. ανακτήθηκε από <https://ejournals.epublishing.ekt.gr/index.php/dab/article/view/30576>

# The American Elections as context for the Game Theory application in strategic political marketing

Evangelia Markaki<sup>1</sup> and Theodore Chadjipantelis<sup>2</sup>

<sup>1</sup> School of Political Science / Faculty of Economic and Political Sciences / Aristotle University of Thessaloniki

<sup>2</sup> School of Political Science / Faculty of Economic and Political Sciences / Aristotle University of Thessaloniki

Key Words	Abstract
game theory political marketing elections strategy decision making	<p>The American Elections attract always the interest of political marketing science. As elections they have been innovative with great appeal and their influence has a global perspective. The Game theory approach in political marketing inaugurates a new strategic prospect for the political competition. It combines and evaluates different political marketing strategies and show how they can affect the elections' result. Game theory combines the models of conflict and cooperation for people whose decision-making is considered rational. We consider the political competition as a strategic game, where we have to identify the opposing players, the strategies used during the game and its rules. Using the game theory and the political marketing approach, our study examines the different strategies that politicians used during the American election of 2016, explaining how their strategy influences the result of the elections. We investigated mostly which approach on financial, social and environmental issues, security issues, immigration and international relations has the best results for the political parties. We measure the intensity of the candidates' focus on these issues and we present game theory matrixes as examples to this innovative conceptual framework. This study presents a new conceptual approach that can be used for strategic political marketing design and campaigns.</p>
Correspondence Evangelia Markaki Aristotle University of Thessaloniki University Campus Postal Code 54124 Thessaloniki Email: <a href="mailto:markakievi@yahoo.gr">markakievi@yahoo.gr</a>	

## Political Competition: Persons, Parties, Issues

The formation of voting behavior includes the evaluation of three different factors: the political parties, the candidates and the political programs. Parties, issues and persons shape the context of the electoral competition. Voters vote for political personalities, political parties and programs. In the past, political parties could easily interpret and influence political behavior in an extensive network of voters. There was also some control over the diffusion of information through the gatekeepers (Papathanasopoulos, 2000). Now, the dispersion of the information is no longer exercised by the political parties, but by more powerful centers. The new technological means (web 2.0/3.0) of interaction, the internet and the social media have changed the influence exerted by the political parties (Corner & Pels, 2003). These data influence the development, management, and formation of the electoral competition. Today, politicians and voters have come to a dynamic balance of interaction. There is no need for a voter to be ideologically positioned somewhere in order to make party choices (Markaki & Chadjipantelis, 2013, 2015, 2016, 2018). The party preferences are related to the political agenda of each political pre-election period, thus, the confidence in the program of a political party can very often lead to specific political behaviors (Markaki, 2007). In the 1980s, the theory of media malaise dominates and provides a good explanation for the indifference of the electorate towards the traditional political parties (Markaki, 2007). Recent researches (Markaki & Chadjipantelis, 2013, 2015, 2016, 2018) also certify that the political parties do not exert an important influence anymore, as far as the formation of political preferences is concerned.

The model of the rational voter indicates that the voter is not strictly identified to a particular political party, but is interested in politics and examines the information available before forming a specific voting behavior (Markaki, 2007). In some countries, such as Greece, the political parties have maintained an intense interaction between the

political party and the electorate. They have used the traditional clientelist system to their advantage and become mediators between the voters and the state. It is noteworthy that the voters of 45 years of age and older tend to be far more loyal to a political party than others age groups (Markaki, 2007). Connections with the political parties can affect the voters' ability to get a job, to have educational opportunities and make friends. Often these political connections have additional benefits for the political persons or for the politicians, eg. organize and motivate networks of voters and supporters (Huckfeldt & Sprague, 1987; Markaki & Chadjipantelis, 2013, 2014, 2017). Political parties are involved via party executives in networks where people are motivated to exert influence through interaction with others in a systematic and often organized way. They act as "vote sellers", exerting pressure and influence to less concerned voters (Ascensión & Meléndez-Jiménez, 2009; Inglehart & Norris, 2000; Markaki, 2016). According to Markaki's and Chadjipantelis' research (Markaki & Chadjipantelis 2013, 2018) more than two-fifths of the respondents mention that someone has contacted them so as to influence them about a particular candidate during the pre-election period.

Another important factor of influence is the connection between the candidate and the social activity. That activity provokes impact in the voter's everyday life (Frederick, 1994; Markaki, Sakas, Chadjipantelis 2011). Thus, the socially oriented "activity" of the political persons increases the electoral support towards these persons. This activity is also presented and dispersed in the social and the traditional media channels (Markaki & Chadjipantelis, 2020).

According to a recent research (Markaki & Chadjipantelis, 2013, 2015, 2016, 2018), the candidates constitute the second most important factor of influence in the formation of political preferences. Today the candidates are presented as political personalities that embody specific roles with a strong communicative effect. Forming a strong impact influences the politician's image and fame, which are key factors of political influence. The political image and fame require attention and preparation (McNair, 2003), given the fact that both are related to a politician's reputation, which can motivate specific voting behavior.

On the other hand, most of the times the aestheticization in politics loses the political meaning because it focuses mostly on the mediation and the communication strategy (Corner & Pels, 2003; Markaki, 2007). The post-ideological period and the Americanization of politics have significantly reduced the boundaries between the opposite political parties, e.g. the Right and the Left. Image management, style development, communication strategy are all important components of a candidate's political marketing strategy (Corner & Pels, 2003; Markaki, 2007). The style in politics is important and it is part of a long and difficult process that has both commercial and entertaining characteristics, which are easily supported by the social media environment and the political campaign context.

Successful politicians have a personal style of communication, and the diffusion of their messages is supported by communication strategies, the use of social media and the traditional campaign management. Today lack of political interest has been replaced by interest in political infotainment framed by the new social media (Markaki & Chadjipantelis, 2016, 2018). The importance of the political elections also affects the influence of the political persons. Thus, the municipal elections are mostly focused on the candidates, and the national elections are mostly oriented to the political parties. However, the leading figure of the political party plays a crucial role. In all types of elections, the political persons have a dominant influence, as their role is to develop, implement and adapt policies. Their intelligence, their flexibility, their code of ethics, their insight cannot be attributed to the political parties.

Finally, there is an important discussion about the way political issues and political programs influence voting behavior. Recent research (Markaki & Chadjipantelis, 2013, 2015, 2016, 2018), even though they mention their importance for the political agenda, show that the political program does not play a primary role in voting behavior. More than the 40% of the respondents believe that the political program has no crucial influence as a factor that forms political preferences, even if the 50% of the respondents assess as important issues such as national, financial and social ones, probably because these issues determine people's lives, and affect the standard of living as well as the quality of life in a society.

The information and the data mentioned above show in a clear way that the political marketing strategy and campaign design must take into consideration a wide range of approaches and aspects so as to form a political campaign that can achieve a voter's preference towards a particular candidate.

## ***The Game theory Concept and Applications***

According to Lambertini (2011 p. 26) “a game is a mathematical instrument that serves the strategic interactions among agents, where players are households, firms, public institutions, or nations. Many social, economic and political situations, more or less familiar to all of us, are characterized by the interplay among actors with either converging or conflicting interests”.

Game theory arises in the early 18th century but begins to become more widely known and operating as an independent scientific field in the mid-20th century.

This theory belongs to the field of economic study and science but has been established as an independent field since 1928 with the work of Neumann and in 1944 with a study written by Oskar Morgenstern. Game theory deals with zero or non-zero-sum games in a competitive environment, where emphasis is placed on the decision-making process with strategic interdependence. Game theory explains the way in which players, considered as "opponents", decide their respective strategy and actions towards the other.

The strategies used in this context are either pure strategies, where each player chooses a single strategy, or mixed strategies, where there is a combination of different strategies with different frequencies.

According to Matsumoto and Szidarovszky (2016) the game theory is the fundamental methodology, and has application in many fields of noncooperative and cooperative games including conflict resolution. We can use the game theory concepts in examples, applications and case studies which are selected from economics, social sciences, engineering, the military and homeland security.

In game theory, we come across some general assumptions. We consider players ("opponents") to be rational, not responsive to emotion but purely driven for the purpose of winning over the opponent. There is also the "principle of common knowledge", meaning that each player is aware of the possible choices of himself and his opponent. Finally, players choose strategies at the same time without knowing each other's movements and there is no cooperation for mutual help.

Another fundamental characteristic of Game Theory is the Nash equilibrium, named by the mathematician John Forbes Nash. The Nash Equilibrium is a method of strategically resolving "non-cooperative games", where there are two or more opponents. Nash balance describes a strategy profile  $a^*$  which is the best choice of a player  $i$  and the best option if one chooses other than  $a^*$ .

The application of this theory and formula has influenced many modern sciences in their evolution, such as microeconomics and macroeconomics, engineering, biology, but also disciplines, such as sociology and political science. Competitive games exist not only in the business world, but also in the electoral competition between candidates from different parties.

Every game has certain rules, specific strategies, which the players can choose from and which lead to specific results. These results can arise as a consequence of the players' interdependent behavior. During the game at least two decision makers are interacting. Interactions are strategic, mutual, interdependent decisions. With the implementation of the Game Theory on these interactions, mathematic concepts are applied in the decision-making process. The rules, the strategy and the interaction are three of the main determinants of the game.

Kreps (1990a) states that game theory allows economists to make better explanations and predictions.

According to Bhuiyan (2016) game theory is widely used in political affairs, on the areas of international politics, war strategy, war bargaining, social choice theory, strategic voting, and political economy. The Game theory is an effective tool to analyze a situation of conflict between individuals, companies, states, political parties. Rationality of actors and the choice of strategies are one of the basic assumptions of game theory.

In the current study, we try to examine how the application of game theory in political science can be considered as a tool to form political marketing strategies as well as to make electoral predictions. It can also be used as a tool to produce explanations in political competition as well as to extend the mathematical applications in politics.

### ***The Case Study: American Elections***

The 2016 Presidential Elections in the United States of America are deemed to be a transitional phase in the American politics. It is the fifth time in the American history of elections that the winner of the popular vote eventually lost the elections due to the federal and the electoral system. The mainstream of both political parties was not as stable as in former elections, while significant issues for the role of the USA in the world and the domestic politics played a decisive role in determining the outcome.

The goal in the US election is for each party to win, gaining the largest percentage of electors in the states, who in turn elect the new President and Vice President. Based on the party and electoral system of the United States, the candidates rally first within their parties for each to be able to run into the presidential elections. For the Republicans, these elections featured 17 originally vying for the nomination, while the leading candidates to run for President were Donald J. Trump, Ted Cruz and Marco Rubio. The majority of the candidates rallying for the Republican Nomination held a political position beforehand mostly as Governors or Former Senators, compared to Trump, who first interfered in politics in 2016. Trump very quickly criticized and demonstrated an aggressive attitude towards his fellow candidates, the Democratic Party as well as, in general politics, towards politicians and the media, resulting in a win of 35 States in the primaries. Ted Cruz managed to win 10 States in this polarized scenery, and Rubio only 3 States. After securing his nomination, Trump chose Mike Pence, who was then holding the position of the governor of Indiana, as his running vice president.

On the Democratic Party, the competition in the primaries was clear from the very beginning. Hillary Clinton faced tough competition from the Senator of Vermont, Bernie Sanders. Clinton won 31 States, while Bernie Sanders won the rest of the 20 States. After winning enough delegates for her nomination, she named Tim Kaine, U.S. Senator for the state of Virginia, as her vice-presidential running mate.

In the present study we examine the application of game theory through the strategies followed by the candidates in a series of issues that shaped the political agenda, on account of political marketing and behavior.

As for the election results, 58,8% of the States were won by the Republicans and the remaining 41,2% by the Democrats. The elections featured third-party candidates including Libertarian Gary Johnson and the Green, Jill Stein, who won 3,28% and 1% percent of the popular vote, respectively.

### ***Methodology: Constructing the Conceptual Framework***

In order to gather the necessary data to form the strategies in a game theory context and test them, we put together a dataset based on a state level. We collected the electoral results from the beginning of the electoral process on a party level and for the representatives of both the final party candidates in each state (Donald Trump and Hillary Clinton). In the dataset, we then included the political reference level during the campaign for each candidate in each state using a 3-point Likert-like scale: regional, intermediate, and national level. The intermediate level represents an emphasis on both the regional and the national level. Furthermore, using the content analysis method, we assessed the frequency and intensity in references concerning specific issues with a 5-point Likert-like scale. In an in-depth analysis of key issues, a total of 6 issues, as parameters, have been taken into account with aggregated data deriving from each political campaign in a State level. The content analysis for the collection of the data was performed on different electronic and audiovisual sources of information such as Television, videos, radio, social media, websites, blogs, and interviews in newspapers. The issues that have been taken into account are the following: society, economy, environment, safety, migration and international cooperation. We evaluated for each of the following issues the selected strategy. One more strategy that was taken into consideration is the behavioral attitude during the political competition, which was assessed using a 3-point Likert-like scale: aggressive towards the other candidate, aggressive towards the opposite political party and consensual.

After having completed the evaluation, we created game theory matrixes for each issue. In the left column was placed the winner of each state, which created 4x4 or 3x3 or 3x4 matrixes repeated 50 times, number corresponding to the states in the USA. Then we used the mean for each strategy so as to have one matrix at the end. This representation of the games leads us to find the dominant strategies and therefore ending up mostly with 2x2 matrix games. Then, we solved the game using the mixed strategy process.

### ***Results***

#### ***The political campaigns of Trump and Hillary in a comparative view***

**Table 1 Issues in Clinton's speech (data aggregated per State)**

	Society	Economy	Environment	Security	Migration	International Cooperation
Not at all important	0.0	3.9	19.6	21.6	25.5	41.2
Slightly important	0.0	5.9	23.5	29.4	13.7	7.8
Important	7.8	7.8	11.8	13.7	2	27.5
Fairly Important	11.8	51.0	7.8	11.8	21.6	7.8
Very Important	68.6	19.6	25.5	11.8	23.5	3.9
N/A	11.8	11.8	11.8	11.8	13.7	11.8
Total	100	100	100	100	100	100

*The political campaigns of Clinton and Trump focused on a series of very different discourse choices and were rather an interplay between the two rivals on their way to the White House. An analysis of the basic elements that comprise their political campaigns provides crucial information on how the electoral competition has been shaped before the elections. A collection of information revolves around political discourse, topics and political actions in the level of each State along with an aggregation.*

Analysing Clinton’s discourse, an emphasis on a threefold agenda that entails society, economy and the environment is observed. Specifically, aggregating the references to key topics in her speeches and campaigns in each State, it is clear that topics such as migration, security and international cooperation are not on the top of her agenda, while on the contrary in 80% of the States the importance is being given to society.

On the other hand, Trump’s electoral campaign in the states seems to be focused in security, migration and the American society. Trump’s references to the American economy were also particularly important for the success of the electoral campaign. For Trump the factor environment is of very low importance along with international cooperation, which does not seem to strike high in his agenda.

**Table 2 2 Issues in Trump's speech (data aggregated per State)**

	Society	Economy	Environment	Security	Migration	International Cooperation
Not at all important	0	0	51	3.9	3.9	13.7
Slightly important	3.9	0	27.5	5.9	11.8	27.5
Important	25.5	9.8	5.9	11.8	31.4	17.6
Fairly Important	33.3	21.6	7.8	21.6	21.6	31.4
Very Important	31.4	62.7	2	51	25.5	3.9
N/A	5.9	5.9	5.9	5.9	5.9	5.9
Total	100	100	100	100	100	100

Clinton’s political discourse at her campaign was mainly aggressive towards Trump and less towards the party as an entirety. Similarly, Trump’s discourse also entailed aggressiveness towards Clinton and not towards the Democrats.

This is also explained by the nature of the electoral system, which personifies the electoral process in the faces of the two candidates.

**Table 3 Discourse strategies of Trump and Clinton (data aggregated per State)**

	Clinton	Trump
Moderate Discourse	13.7	5.9
Aggressive Discourse towards the opponent	60.8	70.6
Aggressive Discourse towards the party	13.7	17.6
N/A	11.8	5.9
Total	100	100

Comparing the levels of action of each party leader, it is clear that Clinton’s political campaign was focused mainly on the federal level, with little importance being given at the State level, while Trump mainly focused on an interplay of political actions between the federal and the state level. The emphasis on different levels of governance is also explained by the topics the candidates chose to address in their respective campaigns. Given the political system of the USA and the governance jurisdiction on the federal level, Clinton’s emphasis on the threefold society-economy-environment explains the shift of her campaign on an almost solely federal level, while Trump chose to address topics that do not directly imply a clear jurisdiction format.

**Table 4 Clinton's and Trump's level of action (data aggregated per State)**

	Clinton	Trump
Federal Level	82.4	37.3
Intermediate/ Interplay of the two levels	2	43.1
State Level	11.8	15.7
N/A	3.9	3.9
Total	100	100

Analyzing the elections from the perspective of the cost of each campaign, although Clinton managed to raise more resources, Trump put to use his own personal resources and privileges as an entrepreneur to dominate the media agenda. Trump vastly relied on his own fortune, as well as the infrastructures of his businesses, as he donated a total of \$66 million US dollars, while he cut down the costs of the campaign significantly when he decided to fly across the country in his private jet and use his resorts and businesses to organize and stage events. At the same time, he crowdsourced about \$280 million from small donors giving \$200 or less.

Clinton raised in total \$1.2 billion, as the fundraising operation included mainly wealthy private donors and a small number of volunteers that raised \$100,000 or more from their own networks, and a small-dollar donor crowdsourced operation following the model used by Obama in the 2012 elections. Her campaign was mainly relied on television advertising and a small campaign to encourage voters to vote.

**Table 5 Budget raised and spent of Clinton and Trump in million dollars.**

	Total Raised	Total Spent
Clinton	1.190.7M	1.184.1M
Trump	646.8M	616.5M

Even in the States that Clinton decided to allocate a great amount of her budget, Trump’s resources and his ability to use airwaves and Twitter, secured the Republicans’ victory. In Florida, for instance, that voted for President Obama in the previous elections, Clinton allocated almost 22 million US dollars, while Trump with only 13 million managed to still win the State. Clinton allocated her highest budget in New York, using more than 140 million, Texas, Florida and Massachusetts. Out of the 4 States she managed to win 2 of them, as Florida and Texas voted for the Republican Party. Trump’s highest budgeted States featured Florida and Texas, but with the total amount of money spent on each not going beyond 15 million.

In total, when it comes to the discourse strategies of Clinton and Trump, on the average of cases we observe a clash between aggressive discourses towards the rival, while Trump opts out for a more aggressive in general discourse also for the party.

Comparing the discourse attitude of Clinton in the elections for every State with the results, a win-lose situation is observed. In the 7 States that Clinton opted for a more moderate discourse, it is observed that the lead was given to Trump. On the contrary, when she opted for a more aggressive speech either towards the party or personally towards the rival candidate, it led to an electoral competition without a certain winner. Therefore, a strategy entailing a more aggressive discourse towards the rival was more suitable for Clinton.

Trump’s aggressive discourse strategy either towards Clinton or the Democrats, was for him the catalyst in winning the majority of the States. Contradicting to Clinton’s moderate discourse in the 7 States, Trump chose an aggressive attitude either towards Clinton or the party, leading to a win match for him, with the exception of South Dakota, in which Trump’s discourse is moderate due to the long Republican tradition of the State.

**Table 6 Comparison of results and strategies in selected States**

State	Election Results	Clinton's Dicourse	Trump's Discourse
District of Columbia	Democratic	Moderate	Aggressive towards Clinton
Indiana	Republican	Moderate	Aggressive towards Clinton
Montana	Republican	Moderate	Aggressive towards the party
Rhode Island	Democratic	Moderate	Aggressive towards the party
South Dakota	Republican	Moderate	Moderate
Utah	Republican	Moderate	Aggressive towards the party
Texas	Republican	Moderate	Aggressive towards Clinton

Furthermore, Trump’s emphasis on the interplay between the federal campaign and the state level has also been decisive as a strategy for his electoral results. On the other hand, Clinton’s solid emphasis on a more federal oriented campaign had negative effects on the outcome.

Clinton’s orientation to society, environment and the economy in a cross analysis with the election results, showcases that the priorities of the political campaign was not decisive as a strategy for a positive electoral outcome. In the States that Clinton particularly emphasized on the environment, Trump’s emphasis on migration and security was deemed more successful to the public. According to Pew Research Center, the issues that defined the voters’ decisions were the economy, terrorism and foreign policy, explaining the shortcomings of Clinton’s political campaign.

Observing the orientation of the States based on previous results along with the results of the elections today, on the traditional “Republican” states, Trump’s victory was clear, while on the traditional democratic States a competition in 6 States ended up in a swift towards the Republicans.

***From strategies to Game Theory***

We tried to capture in tables the conflict of different political communication strategies in order to apply game theory. We observe that when different strategies collide regarding the orientation of the attack on the opponent, we have a 2x2 game where both candidates must choose between two strategies: attack on the opponent and consensual approach to the opponent.



Capturing this in a game where the payoffs refer to numbers of votes won or lost in total the following illustration is presented:

**Table 7 Game 1: Trump and Clinton strategies**

TRUMP	CLINTON	
	ATTACK ( $\pi y=6/10$ )	CONSENSUAL ( $1-\pi y=4/10$ )
ATTACK ( $\pi x=3/10$ )	-33,0	81,0
CONSENSUAL( $1-\pi x=3/10$ )	55,0	8,0

First, we need to consider whether opposing players are using pure or mixed strategies. To investigate this, we calculate the equilibrium point. We observe that the maximin is 55 and the minimax is 8. Therefore, they are not identical, and the strategies used by the opponents are not pure, i.e. neither the first nor the second strategy (attack or consensual) is used, but both in combination. Thus, the game is now solved using a mixed strategy in order to understand the possibilities and the frequency of each strategy.

The table above is thus presented in the following form:

**Table 8 Game 1: Pure Strategies of Clinton and Trump**

TRUMP	CLINTON			
	ATTACK ( $\pi y=6/10$ )	CONSENSUAL ( $1-\pi y=4/10$ )		
ATTACK ( $\pi x=3/10$ )	-33,0	81,0	x	81,0
CONSENSUAL( $1-\pi x=3/10$ )	55,0	8,0	1-x	55,0
	y	1-y		
	-33,0	8,0		

As x we symbolize the probability of Trump to use attack as a strategy and 1-x is the probability to use consensual strategy, while as y the possibility of Clinton to use attack and as 1-y the possibility to use consensual strategy.

For x:

$$-33x+55-55x=81x+(8-8x)$$

$$-88x+55= 73x+8$$

$$47=161x$$

$$x= 47/161=0,291$$

For y:

$$-33y+81-81y=55y+8-8y$$

$$-114y+81= 47y+8$$

$$72=158y$$

$$y=72/158= 0,455$$

So, to have Nash equilibrium, to Trump must be indifferent if he will play Attack or Consensual. And therefore, in order to calculate the payoffs:

$$-33\pi x + 55(1-\pi x) = 81\pi x + 8(1-\pi x) \rightarrow \pi x = 0,29 = 3/10$$

Same, for Clinton, in order to calculate  $\pi y$ :

$$-33\pi y + 81(1-\pi y) = 55\pi y + 8(1-\pi y) \rightarrow \pi y = 0,45 = 4/10$$

Therefore, Clinton’s consensual strategy in most cases seems to have cost her the elections, Trump’s attack is of his advantage. When they both attack, Clinton seems to predominate, however, as mentioned above, Clinton chose for most of the States a consensual strategy. Trump’s attack strategy on Clinton’s consensual has a high payoff and also Trump’s consensual strategy predominates on either Clinton’s attack or consensual one.

Furthermore, in another example regarding the reference level, i.e. local, national or intermediate during the election campaign, the depiction of the conflict of strategies is shown in the table below where we kept the strategy "local" and merged the national with the intermediate level. The depiction of the game is presented as follows:

**Table 9 Game 2: Level of Action**

TRUMP	CLINTON	
	Local	Intermediate/ National
Local	-1,0	2,0
Intermediate/ National	49,0	24,0

We also need to consider here again whether opposing players are using pure or mixed strategies. To investigate this, we calculate the equilibrium point: so maximin i.e. the maximum of the minimum values is 2 and minimax i.e. the smallest of the largest values is 2 again. This indicates that there is a point of equilibrium, so this resolution of the conflict comes through a game of clear strategies. Thus, Trump wins when he focuses on the local level during the election campaign, even if Hillary addresses the voters with a focus on intermediate / national orientation.

***Discussion: Game Theory as a mean to win the elections.***

Modern politics consists of three basic elements: the existence of a mass electorate, the competition of two or more parties or candidates who try, using political communication and marketing methods, and a set of rules to control the process, to attract voters who will vote for them and ultimately win the elections. Winning elections is the constituent principal of each political party.

Today, the complexity of communication, the fragmentation of the social web, the ease of changing social order but also the need for transparency, control and participation require the use of modern political communication tools. The new model of political communication is a model of multiple transmitters and receivers. A characteristically important period for political communication was the 1980s, when it was systematized and established in contrast to the past. The management of impressions and publicity is today fully systematized and still exploratory, while it has marginalized political journalism, the apocalyptic one, recovers due to the proliferation of information sources and the competition between them, and has developed and diversified the political media due to the deregulation and digitalization of communications. Political communication with various tools aims at turning the candidate into an eligible figure. In the past, election news was mainly about what candidates were saying and doing. Now, the focus is mainly on how the candidates win or lose the game, i.e. on their strategic mechanisms that adapt to the environment, the personality and the political landscape in which the candidate moves. There are three dimensions of political communication influence: policy evaluation, the degree of commitment of the parties involved and the degree of unanimity of the social agenda on political issues. The effects of communication policy can be summarized as follows: the planned communication behavior of politicians and the means they use to influence the formation of the political attitude and behavior of the target audience, the growing importance of mass communication and its influence on the processes and practices of democratic

societies and political communication as a mediation communication through electronic means (Markaki & Chadjipantelis 2016; McClurg 2006).

According to Soukup (2014) the ties between citizens and political parties become constantly much weaker. The electorate is increasingly wavering and unstable. Political communication through electronic media is undoubtedly the most effective way to promote and secure political support but also to shape political preferences, especially when we refer to unstable or undecided voters, who are the decisive force in shaping the election result. Political communication experts can influence the preferences by projecting the image they want for the political arena using the media in this process. The formation of political preferences is influenced by both elements of the transmitter side of the message and elements of the receiver side. From the transmitter side effect on the electorate has: the reliability of the source of a message, its specialization, the sense of trust that the transmitter creates, the natural attractiveness. A typical example is the Democrats, who in the 2000 presidential election said that George W. Bush's smile hid the irony of a rich boy (Corner and Pels 2003). From the recipient's point of view, there is twofold relationship that needs to be taken into consideration: the pre-existing political beliefs and the level of involvement in politics. A very useful approach to how voters perceives political communication and act politically is the constructionist approach of Newman et al. (Negrine, 1996), who state that we have the world on the one hand and the media on the other. Their interaction is not simplistic and clear. The citizen shapes his personal and party choices through many different experiences and information that affect him differently. According to Himelboim et al. (2012), political communication strategic planning refers to a specific process whose purpose is to establish and maintain relationships between the objective goals of the political party or the political person. It combines the means, resources but also the requirements, needs and conditions that prevail both in society and in the electorate. This is where our proposed conceptual framework finds its application. Party strategies for elections entail the element of communicating a message, with a goal to influence the electorate and ultimately win the elections. Perceiving the political competition in pre-electoral periods as a game between two actors -parties in our case- unveils the features and characteristics that matter the most when forming a strategy. We have beforehand characterized and perceived citizens as rational actors, who thus should be the political marketers and communicators shaping the electoral campaigns. Game Theory presents an opportunity to measure and deeply analyze the rules of a political system, political competition, and ultimately electoral behavior in an attempt to "win" the game. Applying the basic principles of Game Theory, we consider players-political opponents (parties or candidate) to be rational, purely driven for the purpose of prevailing over the opponent and not responsive to emotion. Political Opponents operate under the "principle of common knowledge", as each player is aware of the possible means, systems and choices of themselves and simultaneously the opponent's. As they choose strategies at the same time, they are not aware of each other's movements and there is no cooperation for mutual help. Therefore, game theory allows political marketers to calculate the move of the opponent, respond appropriately and make better explanations and predictions (Lambertini 2011).

In the study, we examined how the application of game theory in political science can be considered as a tool to form political marketing strategies, as well as to make electoral predictions. We identified the added value of using Game Theory as a tool to explain, while predicting, political competition, as well as to interdisciplinarily extend the mathematical applications in politics. Political marketing with the use of game theory fills the gap from the political party to how citizens eventually vote.

## References

- Ascensión, A. D., & Meléndez-Jiménez, M. A. (2009). Voting in small networks with cross-pressure. *Spanish Economic Review*, 11(2), 99-124.
- Bhuiyan, B. A. (2016). An overview of game theory and some applications. *Philosophy and Progress*, 111-128.
- Chadjipantelis, T., & Markaki, E.N. (2016). A Typology of Voters: Creating Voters' Profiles via Clustering. *Journal of Political Science and Public Affairs*. 4(205). doi:10.4172/2332-0761.1000205
- Corner, J., & Pels, D. (Eds.). (2003). *Media and the restyling of politics: Consumerism, celebrity and cynicism*. Sage.
- Frederick, H. C. (1994). Something within: religion as a mobilizer of african-american political activism. *Journal of Politics*, 56, 42-68.
- Himmelboim, I., Lariscy, R.W., Tinkham, S.F. and Sweetser, K.D., (2012). Social media and online political communication: The role of interpersonal informational trust and openness. *Journal of Broadcasting & Electronic Media*, 56,1, 92-115.
- Huckfeldt, R., & Sprague, J. (1987). Networks in context: The social flow of political information. *The American Political Science Review*, 1197-1216.
- Inglehart, R., & Norris, P. (2000). The developmental theory of the gender gap: Women's and men's voting behavior in global perspective. *International Political Science Review*, 21(4), 441-463.
- Kreps, D. M. (1990). *Game theory and economic modelling*. Oxford University Press.
- Lambertini, L. (2011). *Game theory in the social sciences: a reader-friendly guide*. Routledge.
- McClurg, S. (2006). The electoral relevance of political talk: examining disagreement and expertise. Effects in social networks on political participation. *American Journal of Political Science*, 50(3), 737-754.
- McNair, B. (2017). *An introduction to political communication*. Taylor & Francis.
- Markaki, E. N. & Chadjipantelis, T. (2017). Factors that Influence political preferences. A typology of voters. *Data Analysis Bulletin*, 18, (accepted for publication).
- Markaki, E., Chatzipantelis, Th., & Tomaras, P., (2014). How data management helps the information management: regrouping data using Principal Components Analysis. *Procedia – Social and Behavioral Sciences, Elsevier*, 554-560.
- Markaki, E. N. & Chadjipantelis, T. (2017). Multivariable Evaluation via Conjoint Analysis of the Factors that influence voting behavior in networks. *Journal of Political Science and Public Affairs*, 5(1).

Markaki, E. N. & Chadjipantelis, T. (2017). Multivariable Analysis: the challenge of an innovative approach on How influences in voting behavior are exerted in Social Media. *Research Communications in Psychology, Psychiatry and Behavior*, ISSN: 0362 2428(2017), 101-116.

Markaki, E. N. & Chadjipantelis, T. (2016). *Multivariable Analysis: the challenge of an innovative approach on How influences in voting behavior are exerted in Social Media*. 6<sup>th</sup> World Congress on Psychology and Behavioral Science (Management, Psychology, Political and Social Science) E- Book, 129-143. ISSN: 2344-6722.

Markaki, E. N. & Chadjipantelis, T. (2019). The involvement in politics via the social media channels: a multivariable analysis. *Archives of Data Science, Series A. (paper presented at the European Conference on Data Analysis (ECDA) 2019, Germany) – accepted for publication*.

Markaki, E.N. (2019). *Who influences and who is influenced the most in shaping political preference? Study on the roles of mediators in networks*. Epikentro Publications (in Greek).

Markaki, E. N. & Chadjipantelis, T. (2014). Voters' Profiles and Clustering. Factors that influence behavior. *9th South East European Doctoral Student Conference Proceedings*, 494-508.

Markaki, E. N., Chadjipantelis, T. & Ormrod, R.P. (2011). Integrating Human Resource Management into Strategic Political Marketing. *Conference Proceedings 16th International Conference on Corporate and Marketing Communications*, 448-449 ISBN: 978-960-9443-07-4

Markaki, E. N., Chadjipantelis, T., Sakas, D. (2011). Selecting the project's team members. A challenging human resources management process for laboratory research. *Key Engineering Materials*, 495, 159-162. ISBN: 978-3-03785-292-7

Matsumoto, A., & Szidarovszky, F. (2016). *Game theory and its applications*. Tokyo: Springer Japan.

Negrine, R. M. (1996). *The communication of politics*. Sage Publications.

Papathanasopoulos, S. (2000), *Communication and Society from the 20<sup>th</sup> to the 21<sup>th</sup> century*. Kastanioti Publications (in Greek).

Sakas, D., Markaki, E. N. & Chadjipantelis, T. (2011). New political communication practices: no budget event management. The new challenge. *Proceedings for the International Conference for Integrated Information*, 73-77

Soukup, P.A. (2014). Political communication. *Communication Research Tends*, 33(2), 3 – 43.

# Οι Αμερικανικές Εκλογές ως πλαίσιο εφαρμογής της Θεωρίας Παιγνίων στο Στρατηγικό Πολιτικό Μάρκετινγκ.

<sup>1</sup> Ευαγγελία Μαρκάκη<sup>1</sup> και Θεοδωρός Χατζηπαντελής<sup>2</sup>

<sup>1</sup> Τμήμα Πολιτικών Επιστημών /Σχολή Οικονομικών και Πολιτικών Επιστημών / Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης

<sup>2</sup> Τμήμα Πολιτικών Επιστημών /Σχολή Οικονομικών και Πολιτικών Επιστημών / Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης

Λέξεις - Κλειδιά	Περίληψη
Θεωρία παιγνίων Πολιτικό μάρκετινγκ Εκλογές Στρατηγική Λήψη Αποφάσεων	<p>Οι αμερικανικές εκλογές προσελκύουν πάντα το ενδιαφέρον της επιστήμης του πολιτικού μάρκετινγκ. Ως εκλογές έχουν υπάρξει καινοτόμες με μεγάλη απήχηση και η επιρροή τους έχει παγκόσμια προοπτική. Η προσέγγιση της θεωρίας παιγνίων στο πολιτικό μάρκετινγκ εγκαινιάζει μια νέα στρατηγική προοπτική για τον πολιτικό ανταγωνισμό. Συνδυάζει και αξιολογεί διαφορετικές στρατηγικές πολιτικού μάρκετινγκ και δείχνει πώς μπορούν να επηρεάσουν το αποτέλεσμα των εκλογών. Η θεωρία παιγνίων συνδυάζει τα μοντέλα σύγκρουσης και συνεργασίας για άτομα των οποίων η λήψη αποφάσεων θεωρείται ορθολογική. Θεωρούμε τον πολιτικό ανταγωνισμό ως ένα στρατηγικό παιχνίδι, όπου πρέπει να εντοπίσουμε τους αντίπαλους παίκτες, τις στρατηγικές που χρησιμοποιήθηκαν κατά τη διάρκεια του παιχνιδιού και τους κανόνες του. Χρησιμοποιώντας τη θεωρία παιγνίων και την προσέγγιση του πολιτικού μάρκετινγκ, η μελέτη μας εξετάζει τις διαφορετικές στρατηγικές που χρησιμοποίησαν οι πολιτικοί κατά τις αμερικανικές εκλογές του 2016, εξηγώντας πώς η στρατηγική τους επηρεάζει το αποτέλεσμα των εκλογών. Ερευνήσαμε κυρίως ποια προσέγγιση σε οικονομικά, κοινωνικά και περιβαλλοντικά ζητήματα, θέματα ασφάλειας, μετανάστευσης και διεθνών σχέσεων έχει τα καλύτερα αποτελέσματα για τα πολιτικά κόμματα. Μετράμε την ένταση της εστίασης των υποψηφίων σε αυτά τα ζητήματα και παρουσιάζουμε μήτρες θεωρίας παιγνίων ως παραδείγματα σε αυτό το καινοτόμο εννοιολογικό πλαίσιο. Αυτή η μελέτη παρουσιάζει μια νέα εννοιολογική προσέγγιση που μπορεί να χρησιμοποιηθεί για στρατηγικό σχεδιασμό πολιτικού μάρκετινγκ και εκλογικές εκστρατείες.</p>
Στοιχεία Επικοινωνίας	
Δρ. Ευαγγελία Μαρκάκη Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης Θεσσαλονίκη Email: <a href="mailto:markakievi@yahoo.gr">markakievi@yahoo.gr</a>	