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Corporate Social Responsibility in Bargaining Solution by the "Win-Win-Win Papakonstantinidis Model", For Customer, Business And Society (Cbs) - Research: Environmental Protection

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Abstract: This work deals with the Corporate Social Responsibility (CSR) as an application of the "win-win-win papakonstantinidis model"-the social wellbeing, bargaining (A-B-Community) Model which leads in a more justice more equality, more faith in the state and law
Starting from Ramzi Souleiman (2013) findings, on the "economic-harmony" equilibrium, this study goes one step more, in a synthesis between market(NE) and ethical economics(Economic Harmony equilibrium), so called the "equi-harmony" –the end of the sensitization process
The suggested model's theoretical background is analyzed as the main "interaction's methodological tool" focusing on Utility Function

Keywords: CSR win-win-win papak model, Bargaining Theory, Nash Solution, Equilibrium

1. Introduction

Recent Researches showed that at the organizational level, CSR is generally understood as a private firm policy. As such, it must align with and be integrated into a business model to be successful. With some models, a firm's implementation of CSR goes beyond compliance with regulatory requirements and engages in "actions that appear to further some social good, beyond the interests of the firm.

From this point of view, the importance of my presentation is focused on the "Ethical side" of business, which is the "cutting edge" of the modern capitalism This awareness generates value, especially for the consumer, in a "more social bargain" between A-B and the Community (according the suggested model: the 3-ple corner-stones customer-business-society which is main Foundation's objective)

Since 2002-08-14-the first presentation in Visby University-SW, till now the "win-win-win papakonstantinidis model" seems to turn a lot of times, but remains in the same base:

Generally, the philosophy of "Action-Reaction" could be the "Theory of all", especially in nowadays. Any living (not only human) "activity" is dominated by the "action-reaction Rule" Even the baby crying is a reaction against their parents to give more care to him/her

From this point of view, the "game theory" approach, and even more the "bargaining theory" may match to a new perception

On this "step" the "win-win-win papakonstantinidis model" is a concept for socialized human relations, taking into consideration the COMMUNITY's "profit" coming from any bargain between the two bargainers (A-B)

1.1 Problem Statement

"Community"-the "C" Factor participates-as a "third person"- at any bargain between 2

This participation is visible or invisible, defining the legal framework for negotiation for 2 persons involved in any bargain So far, Community involvement is invisible, neutral and ends in legislative intervention, eg labor law which defines the legal framework within the which employers and workers determine, for example, the remuneration of the latter

ends in legislative intervention, eg labor law which defines the legal framework within the which employers and workers build a relation for example, the payoff of the latter

In some of 2-persons bargains, the community participation is more visible, for example, to every 2-person financial negotiation, the Community (the State here) clearly participates in a "share" of this Negotiation However, this is not enough to describe how we imagine "community participation"

By this we mean the coincidence of the overall GLOBAL: Climate change behavior, towards the CSR Principles/free will-see at the scheme

Interaction[1] does exist at any relation of live It's the payoff for "dealing with" the others' system Interaction is a kind of action that occur as two or more objects have an effect upon one another. The idea of a two-way effect is essential in the concept of interaction, as opposed to a one-way causal effect. A closely related term is interconnectivity, which deals with the interactions of interactions within systems: combinations of many simple interactions can lead to surprising emergent phenomena. Interaction has different tailored meanings in various sciences. Changes can also involve interaction[2] As any thought, any behavior, in any place, reacts with real human needs and therefore behaviors, let me study this reaction, by the prism of strategies, mainly individual strategies In such a system, conflict is the only concluding

1.

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2. Human–computer interaction (HCI) researches the design and use of computer technology, focused on the interfaces between people (users) and computers. Researchers in the field of HCI both observe the ways in which humans interact with computers and design technologies that let humans interact with computers in novel ways. As a field of research, human–computer interaction is situated at the intersection of computer science, behavioral sciences, design, media studies, and several other fields of study

Suppose that any human reaction must have-it is forced to have- a social welfare step, has been launched-since 2002- an alternative price strategy approach: Any reactive, instant reflection winning strategy (DECISION) could be approached by the game theory-especially, the bargaining theory and its Nash win-win solution. [So, this let us to see human reaction as a game, especially as a part of the whole holistic equilibrium, under the [Nash hypothesis AND Pareto efficiency constraints] That is the "win-win-win papakonstantinidis model" Of course, the John Nash' game –non cooperative game theory with its famous N.E gives an answer But it is not enough for a meta-capitalist global society Capitalist perception has adopted the bi-polar system of thinking (black-white, 0-1, the religious "filioque" etc In such a system, conflict is the only concluding perception. In a post-capitalist system, or inside the capitalism, a third possibility may facilitate human and not only, relations, in the base of re-action.

The launched "win-win-win papakonstantinidis model", may give some new ideas for a meta-capitalist economic organization cooperative bargaining game theory" has often been concerned with whether expected bargaining outcomes could be altered by certain contractions of the feasible set. There is strong theoretical support on both sides - while there are allocation rules that require that certain contractions of the feasible set are immaterial in terms of the predicted final outcome (Nash, 1950), there are also others that suggest that those very contractions should significantly alter the predicted outcome (Kalai-Smorodinsky, 1950). Nydegger and Owen (1974) provided empirical support for the former set of allocation rules by experimentally demonstrating that certain contractions of the feasible set leave the expected bargaining outcome unchanged. Since then the ineffectiveness of such contractions has never been questioned.[3] From this point of view, "reaction concept" meets with a number of the scientific fields as, Management, Marketing, Sociology, Decision Making, Strategy, History, folklore study, Psychology, Medicine, Biology, Biochemistry, the Science of Culture and Plants, the Science of livestock, Engineering, the Science of Electricity, Astronomy, Physics, Space Aeronautics, Philosophy, Arts, Scenography, the Art of Movie or Theatre Actors, Sculpture, Art, Painting, "Consumer Attitude, Brand Awareness, Brand Association, Perceived Quality and Brand Loyalty scales" are included in the "behavioral economics" From this point of view, it could be possible to see-alternatively-all these expressions [Consumer Attitude, Brand Awareness , Brand Association….) as a part of "reaction behavior" that matches the whole LIFE and its evolution In this frame, GAME THEORY seems to match better than any other, in your important question. A click forward, your question could be analyzed in the frame of the "bargaining theory, focusing on Nash solution-Nash Equilibrium As "competition" does not match any more to our "meta-capitalist era", a more "socialized economic environment" in a fairer world with more equal opportunities is feasible This does not a wish, it is the reality

1.2 Aim of the Study

The presentation intends to prove that "social welfare" can coexist with the capitalist economic model but if based on a "tri-polar" (instead of bipolar) perception of any interaction between people, local communities, organizations, states, blocs Member ...including the Community (The Intermediate Community- the "C" factor), in 3D space, with the community as "rainbow" synthesis/analysis It is the "rainbow concept". If it is true, then a social welfare policy will be feasible, in a new world frame. In particular, to highlight the "SENSITIZATION ability" that everyone of us either relates to refugees, or in countries, whether in claiming or even in our daily transactions It is time to stop looking only personal interest or "individual defense"

to realize the collecting, classifying and comparing the theoretical material from various sources on the functioning of Social Welfare Function (SWF), towards building a strong case with logical and coherent arguments, towards the one Triple Pole (A-B-COMMUNITY) Equilibrium (TPE), different from N.E, that leads to the Social Bargaining Solution" (SBS) and coincide with the

3. Any human on even more, living activity is included in the "reactive decision, or behavior For example, When a baby cries, he actually reacts with his parents, drawing their attention to him.

"optimal" Community Collective Choice (CCC) in order to create a highly versatile tool, "the win-win-win Papakonstantinidis model" of well-formed formulas (wffs),

To prove that a "social wellbeing" is within our grasp. To create a highly versatile tool, "win-win-win papakonstantinidis model" able to adapt or be adapted to many different functions or activities, by well-formed formulas (wffs), thus contributing in changing the 2-pole (black – white) perception, in a three pole [0,01,1] welfare cognition, to document the necessity and usefulness of the "win-win-win" based on incompatibilities of five classical theorems and 4 theories, as each of them exclude others. To find a base-role for the third win (=the Community) in any bargain between 2

Focused on

In a post-capitalist system, or inside the capitalism, a third possibility may facilitate human and not only, relations, in the base of re-action

The launched "win-win-win papakonstantinidis model", may give some new ideas for a meta-capitalist economic organization

The win-win perception: based on when each side of a dispute feels they have won. Since both sides benefit from such a scenario, any resolutions to the conflict are likely to be accepted voluntarily. The process of integrative bargaining aims to achieve, through cooperation, win-win outcomes

the "win-win-win papakonstantinidis model" is-or, may be- an extension of the win-win model; based –not only-on when each side of a dispute feels they have won, but even more the two sides feel that their own community has also won, in the context of a social contract between them (moral contract, beyond the strict interpretation of the Law: that's the limit of the sensitization process toward the absolute social cohesion-the "angel's point"[4]

2. Definitions

1. **C**orporate **S**ocial **R**esponsibility **(CSR)**[5] is a type of international private business self-regulation. While once it was possible to describe CSR as an internal organizational policy or a corporate ethic strategy, that time has passed as various international laws have been developed and various organizations have used their authority to push it beyond individual or even industry-wide initiatives. Corporate social responsibility (CSR) is a self-regulating business model that helps a company be socially accountable — to itself, its stakeholders,

4. Papakonstantinidis LA (2019) "The win-win-win papakonstantinidis Model-Sensitization towards the absolute cooperation-the marginal-**Angels moment** Journal of International Business, Research and Marketing

5.

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and the public. Social welfare organized public or private social services for the assistance of disadvantaged groups[6]

2. **Well-being**, **wellbeing**, or **wellness** is the condition of an individual or group. A high level of well-being means that in some sense the individual's or group's condition is positive. Wellness refers to diverse and interconnected dimensions of physical, mental, and social well-being that extend beyond the traditional definition of health. It includes choices and activities aimed at achieving physical vitality, mental alacrity, social satisfaction, a sense of accomplishment, and personal fulfillment[7]
3. Social wellbeing is the extent to which you feel a sense of belonging and social inclusion; a connected person is a supported person in society. Lifestyles, ways of living together, value systems, traditions and beliefs are all important to our social well being and quality of life. With so many diverse cultures in our environment, there are ample opportunities to be involved in groups, programs or multicultural events. Involvement with your own culture can be very rewarding; giving freedom to retain, interpret and express arts, history, heritage and traditions[8]
4. Social wellbeing involves a person's relationships with others and how that person communicates, interacts and socializes with other people. It can also relate to how people make friends and whether they have a sense of belonging. For example, going to the movies with friends is being social[9].
5. **COMMUNITY:** By the term "Community" the "social cohesion" is described; COMMUNITY has the main role in the model Considering "Community", then it is easy to imagine that "wealth" is no more, no less than a "loan" that Community gave to the owner of the individual wealth One of the "Community" expressions, is the well-known Corporate Social Responsibility (CSR) with which the loan to the community is debited
6. **Welfare economics** focuses on the optimal allocation of resources and goods and how the allocation of these resources affects social welfare. This relates directly to the study of income distribution and how it affects the common good. Welfare economics is a subjective study that may assign units of welfare or utility to create models that measure the improvements to individuals based on their personal scales. Welfare economics looks at the distribution of resources and how it affects an economy's overall sense of well-being.

ii. Ethical economics

It is tried a first comprehensive treatment of the major ethical and social issues resulting from the use of ionizing radiation. It covers topics such as nuclear fuel cycles, radioactive waste treatment, nuclear bomb testing, nuclear safety management, stakeholder engagement, cleanup after nuclear accidents, ecological risks from radiation, environmental justice, health and safety for radiation workers, radiation dose standards, the ethics of clinical radiology, and the principles of radiation protection and their ethical underpinnings[10].

Ethical issues andw assumptions underlying standard welfare economics[11].

These include:

- the moral significance of consumers' sovereignty, the aggregation of consumers preferences in the concept of the social welfare function;
- the boundaries of the 'society' in whose welfare we are interested;
- the relationship between GDP and some concept of 'happiness';

6. https://www.merriam-webster.com/dictionary/social%20welfare
7. Huseyin Naci; John P. A. Ioannidis (June 11, 2015). "Evaluation of Wellness Determinants and Interventions by Citizen Scientists". JAMA. 314 (2): 121–2
8. https://www.uow.edu.au/student/wellbeing/UOW112638.html
9. https://www.answers.com/Q/What_is_the_definition_of_social_well-being
10. Deborah Oughton (2013) Social and ethical aspects of radiation risk management Amsterdam : Elsevier Science, 2013.
11. ECON0074 - Ethics in Welfare Ec5onomics

- and aspects of distributive justice.

Moral Aggregation

Moral 'Aggregation' is the core of this work, due to its "properties", from the following. Ethics or moral philosophy is a branch of philosophy that involves systematizing, defending, and recommending concepts of right and wrong conduct. The term ethics derives from the Ancient Greek word "ήθικός" ethikos, which is derived from the word ἦθος ethos (habit, "custom"). The branch of philosophy axiology comprises the sub-branches of ethics and aesthetics, each concerned with values.

As a branch of philosophy, ethics investigates the questions "What is the best way for people to live?" and "What actions are right or wrong in particular circumstances?" In practice, ethics seeks to resolve questions of human morality, by defining concepts such as good and evil, right and wrong, virtue and vice, justice and crime. As a field of intellectual enquiry, moral philosophy also is related to the fields of moral psychology, descriptive ethics, and value theory

Comparing the "2-win with the 3-win perception

The win-win perception: based on when each side of a dispute feels they have won. Since both sides benefit from such a scenario, any resolutions to the conflict are likely to be accepted voluntarily. The process of integrative bargaining aims to achieve, through cooperation, win-win outcomes the "win-win-win papakonstantinidis model" is-or, may be- an extension of the win-win model; based –not only-on when each side of a dispute feels they have won, but even more the two sides feel that their own community has also won, in the context of a social contract between them (moral contract, beyond the strict interpretation of the Law: that's the limit of the sensitization process toward the absolute social cohesion-the "angel's point"[12] [13]

3. Research Methodology

Paper's Methodology is built on different approaches' synthesis Specifically,

- ✓ giving useful definitions
- ✓ analyzing the bargaining problem-the Nash's Frame
- ✓ approaching the 3ple-folder strategies, by sequential's limit

This work intends to approach the bargaining problem by the extension of the Nash Equilibrium (win-win) so that a new bargaining (win-win-win) Equilibrium the will be found out, and to manipulate with Incompatibilities, by the utility theory:

1. The impossibility theorem (1951 Kenneth Arrow: book: Social Choice and Individual Values, as well as the Amartya Sen "liberal paradox"

2. The theorem of incompleteness (Kurt Gödel (1931)

3. The Nash Equilibrium in Nash "Non cooperative Game Theory 1951(annals of Mathematics,1951 Vol. 54, No. 2 (Sep., 1951), pp. 286-295)

12. Papakonstantinidis LA (2019) "The win-win-win papakonstantinidis Model-Sensitization towards the absolute cooperation-the marginal-**Angels moment** Journal of International Business, Research and Marketing
13. Even if independent variables, in fact there are correlations among them

4. The "Pareto optimality in a 3D space according to which ,the 3 players (the COMMUNITY included), form a state of allocation of resources from which it is impossible to reallocate so as to make any one individual or preference criterion better off without making at least one individual or preference criterion worse off. Pareto efficiency or Pareto optimality, is a state of allocation of resources in which it is impossible to make any one individual better off without making at least one individual worse off.

$$\max..Utility..Function:...\max U(x_1...x_n)$$

$$\Sigma p_i x_i \le M,....x_i \ge 0,..\forall x_i \in \{1,2..n\}$$

The study uses four main methodological tools, thus depended on three different aims[14] as bellow:

nr	*Aims to be proved*	*tools*
1	*Social wellbeing exists*	*Kaldor-Hicks efficiency*[15]
2	*Utility function –profit maximization*	*Marginal economics*
3	*Bargaining Behavior*	*Nash-Cournot Equilibrium*
4	*Measuring wellbeing*	*Math sequences*

Papakonstantinidis, 2019

4. Frame and Implementation of The Nash's Ncg Theory

The base-line –as also difference from the other tri-pole conceptions, it that now COMMUNITY operates inside any negotiation between 2, as Mediator, Arbitrator, Agent (in the Principal-Agent Theory) and as Leader in the LMX theory (Leader-Member Exchange). That's the NEW, in human socio-economic, political, ethical…relations. That's also the difference between human and other living been behavior difference. Introducing the "COMMUNITY" as the "total good" we created a new player with increased responsibilities in the GAME: these responsibilities are arisen in the bargain and for the bargain, thus transforming a TWO –players anticipation, in a THREE-players anticipation, thus proposing a new view in our (capitalist) system.

A "win-win-win holistic proposal includes the COMMUNITY, or the "C" factor, not only as "a third player", but more a "person" with more than one responsibilities:

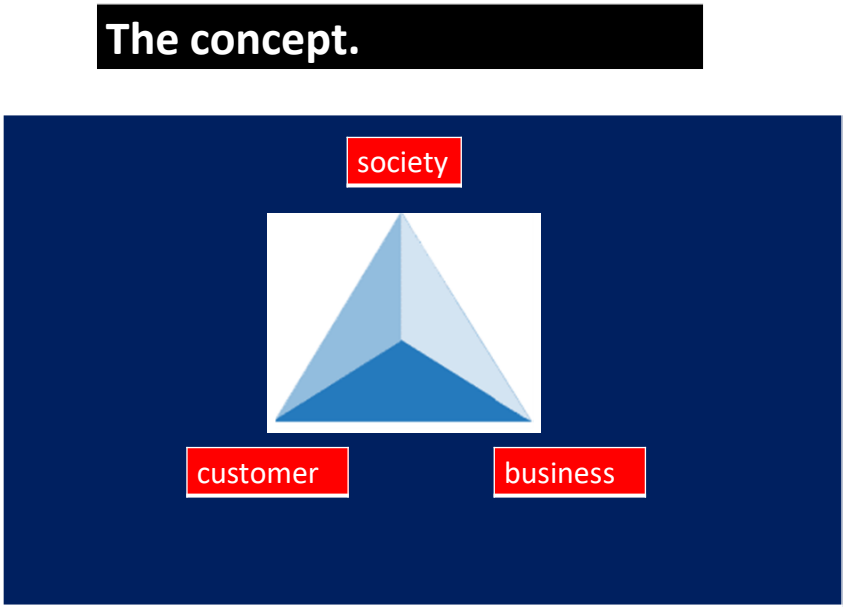
This "fantastic person" [i.e a family, a neighborhood, a place, an area, a city, a town, a state, AND history, tradition, behavior code, ethic, race…." (something that produces cohesion links) MUST play a 3D responsibility, concerning as "mediator" of all "cohesion forces". So, a new form, the form of a tri-pole reaction is launched, with the CMMUNITY –as an idea, as a local cohesion perspective (traditions, local ethical code of communication…may substitute the "hard"

14. Thomas Kronberger AND Leonidas A Papakonstantinidis (2019) "The Win-Win-Win Papakonstantinidis Model": Bargaining Possibilities When there are Three Involved Parties on a Labour Market and two of them are Active Decision-Makers. –Cases Greece-Germany" International Journal of Innovation and Economic Development ISSN 1849-7020 (Print) ISSN 1849-7551 (Online)
URL: http://dx.doi.org/10.18775/ijied.1849-7551-7020.2015.46.2005 DOI: 10.18775/ijied.1849-7551-7020.2015.46.2005 Volume 4 Issue 6 February, 2019 Pages 68-98
15. See appendix 2

bi-polar conflict system. The base-line –as also difference from the other tri-pole conceptions, it that now COMMUNITY operates inside any negotiation between 2, as Mediator, Arbitrator, Agent (in the Principal-Agent Theory) and as Leader in the LMX theory (Leader-Member Exchange). That's the NEW, in human socio-economic, political, ethical…relations. That's also the difference between human and other living been behavior difference. Introducing the "COMMUNITY" as the "total good" we created a new player with increased responsibilities in the GAME: these responsibilities are arisen in the bargain and for the bargain, thus transforming a TWO –players anticipation, in a THREE-players anticipation, thus proposing a new view in our (capitalist) system. Where, should big corporations be spending their CSR resources? Extend to a change in the end itself, to the reduction of profits or to the non-distribution of profits among stockholders in order to devote them to other purposes.[16]

It should be possible to "outline" some basic CSR potentials, in purpose, impact, benefits

5. The Win-Win-Win Papakonstantinidis Model: The Concept



1. Considered at the organizational level, CSR is generally understood as a private firm policy. As such, it must align with and be integrated into a business model to be successful.

2. a firm's implementation of CSR goes beyond compliance with regulatory requirements and engages in "actions that appear to further some social good, beyond the interests of the firm (Mc Williams, Abagail; Siegel, Donald 2001) and that which is required by law"

16. Zachary Cheers (2011)"The Corporate Social Responsibility Debate"- A Senior Thesis submitted in partial fulfillment of the requirements for graduation in the Honors Program Liberty University Spring 2011

3. From this point of view, the importance of my presentation is focused on the "Ethical side" of business, which is the "cutting edge" of the modern capitalism

4. This awareness generates value, especially for the consumer, in a "more social bargain" between A-B and the Community (according the suggested model: the 3-ple corner-stones customer-business-society which is main Foundation's objective)

5. CSR pre-supposes ethical behavior: but what is ethical behavior and how is this integrated in a bargain

6. Starting from Ramzi Souleiman (2013)[17], we propose CSR work in the cutting edge between market(NE) and ethical economics(Economic Harmony equilibrium), so called the "equi-harmony", signed by (hlp=1.888) the end of the sensitization process[18]

As CSR pre-supposes Ethical Behavior, each of the 2-pole bargainers, in any bargain between 2, (A-B) has to 3-pole thinking :

- ✓ "What's the best for me(A)"
- ✓ What's the best for the other bargainer (B)
- ✓ What's the best for the all the other people, who doesn't participate in this bargain(The "C" factor)

- ❖ We must imagine that any reactive decision-even the smaller one constitutes an autonomous "system" highly sensitive to initial conditions[19].
- ❖ Focusing on the behavior of dynamical systems that are highly sensitive to initial conditions, are examined in the frame of Chaos theory
- ❖ We suggest that "conditions" in a quite different field could be resulted as an impact of any reactive behavior in any bargain , or any instant reflection's strategy
- ❖ The win-win-win papakonstantinidis model is based on this very small instant reflection, highly sensitive to initial conditions.
- ❖ A "win-win-win holistic proposal includes the COMMUNITY, or the "C" factor, not only as "a third player", but even more a "person" with more than one responsibilities:

- Mediator
- Arbitrator
- A trust and justice institution
- LMX [Leader-Member-Exchange] institution

17. Ramzi Suleiman(2018) On Gamification and fair men: explaining fairness in non-cooperative bargaining games- Royal Society Open Science 2018
18. Papakonstantinidis L. A (2004) "Sensitization and Involvement the Community: A Rural Tourism Application of the win-win-win Model" Review of Economic Sciences -TEIEP, issue 6
19. the Lyapunov exponent measures the sensitivity to initial conditions. Given two starting trajectories in the phase space that are infinitesimally close, with initial separation $\delta|Z_0|$ the two trajectories end up diverging at a rate given by $\delta Z(t) \approx e^{\lambda t}\delta|Z_0|$ where t is the time and λ is the Lyapunov exponent.

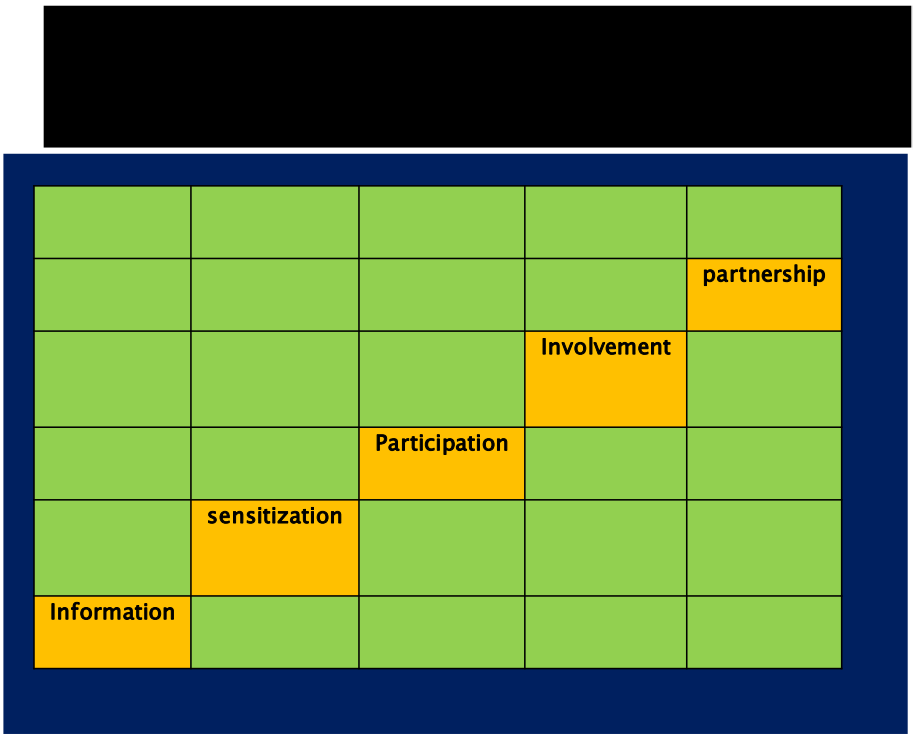
- The Agent in the "Principal-Agent Theory"
- The intuitive **coherence** of «We belong in a community (family, village, town, city, nomos, province, periphery, state, unions of states...global cohesion

This "fantastic person- "C" factor [i.e a family, a neighborhood, a place, an area, a city, a town, a state, AND history, tradition, behavior code, ethic, race…." (something that produces cohesion links) MUST play a 3D responsibility, concerning as "mediator" of all "cohesion forces"

So, a new form, the form of a triple pole reaction is launched, with the COMMUNITY –as an idea, as a local cohesion perspective (traditions, local ethical code of communication…may substitute the "hard" bi-polar conflict system

By the "sensitization's approach", a number of parallel steps could be achieving, specifically,

1. Steps on the ladder (ARNSTEIN, 1967
2. CSR: Objectives and Actions: STEPS BACKWARD
3. Types of Knowledge-Behavior resulted from the knowledge synthesis



the win-win-win papakonstantinidis model

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Steps on the ladder (ARNSTEIN, 1967)
The "sensitization and involvement process, toward the wellbeing, through the interaction in the bargain (any bargain, between 2)

Type of Knowledge-1	Type of Knowledge-2	Synthesis	Resulted Behavior
tacit	tacit	Sympathetic	Socialization
tacit	codified	Conceptual	Externalization
codified	tacit	Procedural	Internalization
codified	codified	Systemic	Networking
sympathetic	systemic	Conceptual	Sensitization
systemic	systemic	Procedural	**Strategic**

Papakonstantinidis, 2003

the win-win-win papakonstantinidis model 7

Types of Knowledge-Behavior resulted from the knowledge synthesis

In this table, a combination of simple forms of knowledge is given, thus new forms of behavior could be resulted•

c. Math Approaches

Hypothesis: H_o perfect cooperation:

$$H_o = m.ax[(u_1 - t_1)(\bar{u}_1 - t_1)(\bar{u}_2 - t_2)$$

$$= m.ax[(u_1 - t_1)(u_2 - t_2)],..u \in P...or$$

$$\forall i,..x_i \in S_i \therefore f_i(x_i^*,..x_{-i}^*) \geq f_i(x_i,..x_{-i}^*)$$

The simple "win-win" math form is: (S, f) $S = S_1 X S_2 ... X S_n$

$f = (f_1(x), f_2(x),..., f_n(x))$ x ∈ S. except for player i. When each player i ∈ {1, ..., n}

$x = (x_{1,} x_2, ..., x_{n)}$ then player i obtains payoff $f_i(x) \in$ S is a Nash equilibrium (NE) if no unilateral deviation in strategy by any single player is profitable for that player, that is $f_i(x_i^*, x_{-1}^*) \geq f_i(x_i, x_{-1}^*$

$$\forall_{i,} x_i \in S_{i,} x_i \neq x_i^* :$$

Starting from Ramzi Souleiman (2013) findings, on the "economic-harmony" equilibrium, this study goes one step more, in a synthesis between market(NE) and ethical economics(Economic Harmony equilibrium), so called the "equi-harmony" –the end of the sensitization process[20] A common finding of experiments on sequential bargaining with shrinking pies is that the opening demands of first players fall somewhere between the equality and the Sub-game Perfect Equilibrium-SPE. prediction As a consequence, several experimental studies attempted to probe the significance of fairness considerations in ultimatum and sequential bargaining games In the ultimatum game the subgame perfect equilibrium (SPE) prescribes that the proposer should demand the entire pie, minus an infinitesimally small epsilon $(\varepsilon - epsilon)$ to be offered to the responder- The ultimatum bargaining[21] is based on offer-rejection" concept
Subgame Perfect Equilibrium (SPE) [22]Experiments on bargaining games have repeatedly shown that subjects fail to use backward induction.

Prof.Ramzi Suleiman (2018) proposed an alternative model, termed 'economic harmony' in which we modified the individual's utility by defining it as a function of the ratio between the actual and aspired pay-offs. He also abandoned the notion of equilibrium, in favour of a new notion of 'harmony', defined as the intersection of strategies, at which all players are equally satisfied. He showed that the proposed model yields excellent predictions of offers in the ultimatum game, and requests in the sequential common pool resource dilemma game. Strikingly, the predicted demand in the ultimatum game is equal to the famous Golden Ratio (approx. 0.62 of the entire pie).

1. **sequential bargaining games i.e chess**

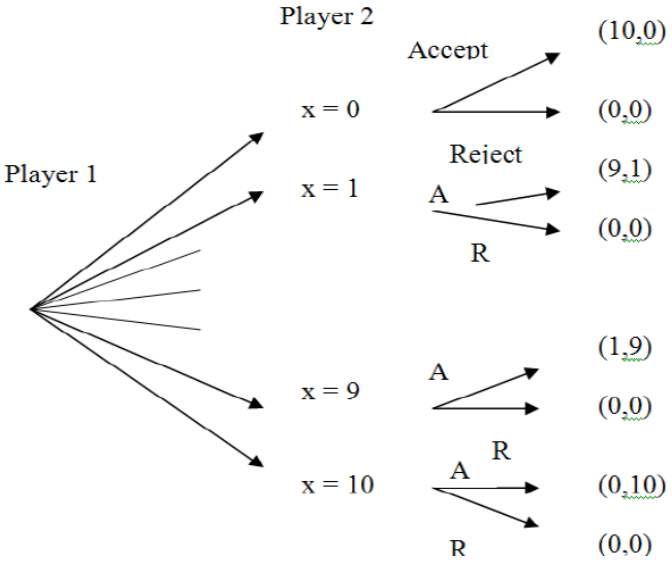
In game theory, a sequential game is a game where one player chooses their action before the others choose theirs Importantly, the later players must have some information of the first's choice, otherwise the difference in time would have no strategic effect. Sequential games hence are governed by the time axis, and represented in the form of decision trees.

Ultimatum game a simple representation of alternating offers[23]

20. Ramzi Suleiman(2018) On Gamification and fair men: explaining fairness in non-cooperative bargaining games- Royal Society Open Science 2018
21. Güth, W., Schmittberger, R., & Schwarze, B. (1982) An Experimental Analysis of Ultimatum Bargaining. Journal of Economic Behavior & Organization, 3, 367-388. Sanfey, Alan; Rilling; Aronson; Nystrom; Cohen (13 June 2003). "The Neural Basis of Economic Decision-Making in the Ultimatum Game" Science 300 (5626): 1755–1758 [… One player, the proposer, is endowed with a sum of money. The proposer is tasked with splitting it with another player, the responder. Once the proposer communicates their decision, the responder may accept it or reject it. If the responder accepts, the money is split per the proposal; if the responder rejects, both players receive nothing. Both players know *in advance* the consequences of the responder accepting or rejecting the offer.
22.
- Osborne, M. J. (2004). An Introduction to Game Theory. Oxford University Press.
- Joel., Watson,. Strategy : an introduction to game theory (Third ed.). New York
- Takako,, Fujiwara-Greve,. Non-cooperative game theory. Tokyo

23. W. Güth, R. Schmittberger and B. Schwarze: "An experimental analysis of ultimatum bargaining", JEBO 1982.

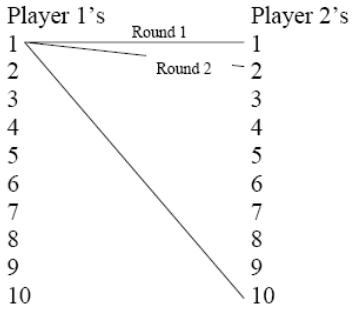
• Player 1 offers 0≤x ≤M to Player 2 • Player 2 Accepts (π1,π2) = (M-x, x) or rejects • If Player 2 rejects the offer, the pie shrinks to M'<M • Player 2 makes offer 0≤x' ≤M' to Player 1	• Repeat according to number of rounds of the game Ultimatum game • Alternating offer bargaining where pie vanishes after 1 round: M'=0 • The offer x is a take it or leave it offer (an ultimatum)-



M=10

2. Although a lot of general conclusions have been offered at this point, you can't avoid the feeling that a large universe has been sampled at only a few, unsystematically chosen points. So an obvious next step is to systematically vary some of the variables that have been looked a in isolation—discount factors (and hence perfect equilibrium predictions), and length of game. This is straightforward to do. The only technical experimental design issue was how to vary the discount factors within members of a bargaining pair. The previous experiments had all used the shrinking pie method to induce the same discount factor for both bargainers.

3.



Dictator and Ultimatum Game: To separate motivations of proposers and responders: Game that is as similar to the ultimatum game as possible, but where the responder cannot express his preferences in any way. Hence eliminating motivations of responders

Ultimatum Game: Proposer proposes a division of M (10), responder accepts and division is implemented, or rejects, and M is destroyed, both agents get 0.

The Dictator Game: Proposer proposes a division of M (10), responder has to accept

The hlp suggested Equilibrium

1st approach: the 3 sequences, converging in: $\phi \prec hlp \prec e$

The "win-win-win concept": Sensitization Process: terms of a continuous sequence $u_n, ..with.. \lim_{n\to\infty} u_n = .h^*_{lp} .. = community..win - ..The....end..of..senitization..process$

STATEMENT (Papakonstantinidis, 2018)

The **sensitization process** - which is the core of this Work -may be formulated by the three (3) world constants, as limits of u_n, v_n, z_n :

$$\phi, e, \pi$$

The 3 main Math Constants $\varphi - e - \pi$

In this section, the math constants combination is examined, in relation with their impact in building a new bargaining equilibrium: The equi-harmony point hlp in the intersection of тhe customer-business-society cycles, responsible to the math constants 1-1, $\varphi - e - \pi$
The win-win-win papakonstantinidis model is, thus, the limit-up of a continuous sensitization procedure, at any (A-B) bargainers AND Community "C" symbolized by the three sequences', i.e

$u_n ... for..the..BARGAINER ....A$

$v_n .... for...the..BARGAINER ...B$

$z_n .... for...the...COMMUNITY , AS...THE...THIRD...BARGAINER$

Table: φ, π, e numerical values

$\phi = \frac{1+\sqrt{5}}{2} = 1{,}618..$

$\pi = \frac{22}{7} = 3.14159...$

$e = \left(1+\frac{1}{n}\right)^n = 2{,}7182818..$

φ=1,61803398874989484820……

π=3,14159 26535 89793 23846 26433 83279 50288 41971 69399 37510……

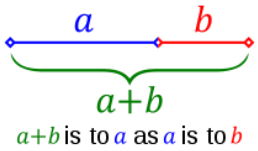
e= 2, 71828182845904523536028747135 27 ……..

In the 2nd phase, we suppose that ϕ, e, π form a NEW sequence converging in h^*_{lp} W_n,..so..that.. $\lim_{n\to\infty} W_n = h^*_{lp} = 1{,}888..$ such that[24]:

$$\ell n2 \prec \phi = 1{,}618.. \prec hlp = 1{,}888.. \prec e = 2{,}7182818.$$

The number φ

$$\frac{a+b}{a} = \frac{a}{b} \overset{\text{def}}{=} \varphi, \varphi = \frac{1+\sqrt{5}}{2} = 1.61803\,39887\ldots \varphi = \frac{1-\sqrt{5}}{2} = -0.6180\,339887\ldots$$



$a+b$ is to a as a is to b

24. We use ln2 and e to "describe" the W_n as a sequence bounded up and down , by ln2 and the e sequences

$$x_n = \frac{F_n}{F_n + F_{n-1}} = \frac{1}{1 + x_{n-1}}$$

$$\lim_{n\to\infty} \frac{f_n}{f_{n+1}} = \frac{1}{\phi}, .. \phi = \frac{f_{n+1}}{f_n}, convergent.to..1{,}618.....$$

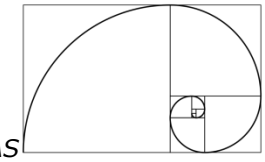
$$\phi = \frac{1+\sqrt{5}}{2} = 1{,}6180339888..... .....$$

According to Ramzi Suleiman (2017) […while a harmony point is not an-equilibrium in the formal definition referred to above, it constitutes a critically stable state. The first player can increase her utility by keeping a larger portion of the total amount than the one prescribed by the harmony point, but this will result in decreasing the satisfaction level of the second player, who might reject the unfair offer…].[25] Instead of assigning the monetary pay-off, x, as the argument of the utility function, we assign as an argument the variable x/a, where a is the individual's aspired pay-off in the interaction. As such, the proposed utility function is a measure of the player's level of satisfaction, Ramzi Suleiman (2017) showed that the proposed theory yields excellent predictions of the offers observed in ultimatum bargaining and the requests in the sequential common pool resource (CPR) dilemma game. His solution also predicts several unexplained findings, Strikingly, he found that the predicted opening demand in the alternating offers game is also equal to the Golden Ratio.

From all these notions, the two approaches- Souleiman-Papakonstantinidis[26] converge in the note that Bargaining Equilibrium (the Market Side) is no longer accepted definitely May be "Harmony" (Ramzi Suleiman 2017) could be considered to be the important factor in a bargain Our concept includes both (the Nash Equilibrium and the Suleiman "Harmony", under a NEW word **"EQUI-HARMONY"=** $hlp = 1.888..$

GRAPH 3. The PHI (φ) NUMBER-GOLDEN RATIO: Graphs and Images

them to converge on 1,618…= φ *…..phi, from FIDIAS*



25. Ramzi Suleiman (2017) "On gamesmen and fair men: explaining fairness in non-cooperative bargaining games, rsos, 2017
26. The 888 triangular approach: The "win-win-win papakonstantinidis model (2002/8/14) VISBY, SW summer-school

The number e

The number e is a mathematical constant that is the base of the natural logarithm: the unique number whose natural logarithm is equal to one. It is approximately equal to 2.71828 and is the limit of $\left(1+\frac{1}{n}\right)^n$ as n approaches infinity, an expression that arises in the study of compound interest. It can also be calculated as the sum of the infinite series[The number e [27] constant or Euler's number is a mathematical constant. The e constant is real and irrational number

$$e = \lim_{n\to\infty}\left(1+\frac{1}{n}\right)^n = 2.7182818.....$$

$$e = \sum_{n\to\infty}\frac{1}{n!} = 1+\frac{1}{1\times 1}+\frac{1}{1\times 2}+\frac{1}{1\times 2\times 3}+\ldots\ldots\ldots = 2.7182818284\,59\ldots$$

the...number....π

The number π is a mathematical constant. Originally defined as the ratio of a circle's circumference to its diameter, it now has various equivalent definitions and appears in many formulas in all areas of mathematics and physics. It is approximately equal to 3.14159.

A diagram of a circle, with the width labeled as diameter, and the perimeter labeled as circumference $\pi = \frac{C}{d}$

The π is commonly defined as the ratio of a circle's circumference C to its diameter d:

$$\pi = \frac{22}{7} = 3{,}14.....$$

Table 3: The intermediate Sequence: The hlp eui-harmony point-1.888..

The intermediate sequence g(x) between two sequences:

Suppose that $f(x) \le g(x) \le h(x)$.. in the area of x_0

If $\lim_{x \to x_0} f(x) = \lim_{x \to x_0} h(x) = L \in \mathbb{R}$

Then , $\lim_{x \to x_0} g(x) = L$

$$\ell n2 \prec \underset{n\to\infty}{\phi} \prec \ell im u_n \le \underset{n\to\infty}{\ell im} v_n \le \underset{n\to\infty}{\ell im} z_n \prec e$$

$$\underset{n\leftarrow\infty}{\ell n.2} \approx \frac{1}{n} + \frac{1}{n+1} + ... \frac{1}{2n-1} \prec \phi \prec \underset{n\to\infty}{\ell im}\left(\frac{\phi\pi}{e}\right) \approx 1{,}888.. \prec \frac{1}{n} + \frac{1}{n+1} + .. \prec \left(1+\frac{1}{n}\right)^n \approx e$$

The "3-win Lemma[28]

$$if..for..the..sequences.u_n,..v_n,...z_n,....n = 1,..2,..n$$

$$we..have,..that..u_n \prec v_n \prec z_n,... for..all..n..and..that..they..are..all..converging,..i.e$$

$$we..have.that..a = \ell im_{n\to\infty} u_n,....b = \ell im_{n\to\infty} v_n,...and..c = \ell im_{n\to\infty} z_n,..then..(conclusion)$$

$$we..will..have..\ell im_{n\to\infty} u_n \le \ell im_{n\to\infty} v_n \le \ell im_{n\to\infty} z_n,....i.e,....a \le b \le c$$

$$we.'ll..use..the..\ell n.2,..to..start..with$$

$$If..c..is..the..\ell im_{n\to\infty}..of..z_n = \left(1+\frac{1}{n}+\frac{1}{n+1}+\frac{1}{n+2}+....\frac{1}{2n}\right) = \left(1+\frac{1}{n}\right)^n \le e \approx 2{,}7182816..$$

$$If....a...is..the..\ell im_{n\to 0}...of..u_n = \left(\frac{1}{n}+\frac{1}{n+1}+....\frac{1}{2n-1}\right) \ge \ell n2$$

$$then,$$

$$..... ....\ell n2 \le u_n,..v_n,...z_n \le e$$

We will now show that the sequence [29]

28. starting from: Lambros Iossif-Leonidas A. Papakonstantinidis (1990) "Observation on a Limit" Mathematical Review, issue 37,

29. The same for the other two, v_n and z_n

$$u_n = \frac{1}{n+1} + \frac{1}{n+2} + ... + \frac{1}{2n}, ...n = 1,..2,..$$

converges and we have:

$$\lim_{n\to\infty}\left(\frac{1}{n+1} + \frac{1}{n+2} + ... + \frac{1}{2n}\right) = \ell og_e 2 = \ell n2$$

MEASUREMENT: DEVIATION % from the hlp *suggested Equilibrium*

SOCIAL WELFARE could be measured by the win-win-win papakonstantinidis model:

At any case there is a constant C , which has been measured by the suggested model to be the limit of the sensitization process[30] for each bargainer, the community included:

$$\lim_{n\to\infty} u_n = 1 + \frac{1}{n} + \frac{1}{n+1} + \frac{1}{n+2} + ... \frac{1}{2n} = \sum_{n=0}^{\infty}\frac{1}{n!} = e = 2,7182818284\mathbf{5}904.....$$

THE MATH CONSTANTS:

$$e = 2.718281828$$
$$\phi = 1.618033988$$
$$\pi = 3.14159265\mathbf{3}$$

φ, e, π relationship's manipulation

$\binom{n}{k} = \frac{n!}{k!(n-k)!} = \frac{(n(n-1..).....(n-k-1)}{k(k-1...1)} = \frac{3*2*1}{2*1(3-1)(3-2)} = 3$ ways for ϕ, e, π combination

Taking into account the three mathematical constants (π,φ,e), as the limits of $(u_n,..v_n,..z_n)$ i.e $\lim_{n\to\infty}.(u_n,..v_n,..z_n)$, then it is easy to manipulate their combination One of these math combinations seems to be $\phi : \frac{e}{\pi}$

Even,

30. The $W_n, converging.in..h_{lp}^* \approx 1,888$

$$\phi : \frac{e}{\pi} = \left(\frac{\phi}{\frac{e}{\pi}} \right) = \left(\frac{\frac{\phi}{1}}{\frac{e}{\pi}} \right) = \frac{\phi\pi}{e} = \left(\frac{1{,}618 * 3{,}14159}{2{,}7182818} \right) = \frac{5{,}083092}{2{,}7182818} \approx 1{,}888..$$

$$\underset{n\to\infty}{\ell im}.. F_n = \phi \le hlp = 1{,}888... \prec \ell im\left(1+\frac{1}{n}\right)^n = e,.....$$

$$.7 \approx \ell n_e 2 \prec \phi \prec hlp \prec e \prec \pi \approx 3.14$$

6. Conclusions

1. Identification "win-win-win" as a key tool for the approach to social wellbeing by clicking on the incompatibility of five basic theorems that define it - each one of its own side-either positive (justice theorem) or negative (the impossibility theorem)
2. The suggested "win-win-win papakonstantinidis model" is built up on these incompatibilities, in particular as regards the pairs" Pareto efficiency – Impossibility Theorem" "paradox liberty (Amartya Sen) - Pareto Efficiency" , "Theorem of Justice –Pareto Efficiency" and (the most important) "the Theorem of incompleteness-the Impossibility Theorem"
3. The "win-win-win papakonstantinidis model" (2002, August, SW) may, thus, transform individual winning –instant reflection –strategies (the win-win Nash Theory) in a NEW –three poles-equilibrium point, including the COMMUNITY (Environmental Protection, Value Systems, Ethic etc), which is the "absolute cooperation" limit point in the bargain between TWO

Papakonstantinidis conjectures:

1. At any bargain between two, each one from the 2 bargainers represents the whole of the community and (at the same time) him/her self From this point of view, Community may be concerned as an aggregate entity that participates in a social welfare game. So, "what is good for the Community (the third "win") and what is no, incorporated in each one from the bargainers' expectations (in the frame of the "agency theory" or "the principal-agent - problem

At...any...case,the...(A – B)...BARGAINERS ...and..the...Community... – as..the..3rd...player..in..the..BARGAIN in..the.. form..of ....LAW , or, even..more..of ..the.."contract..social"(J.J.Rousseau,..1752) – ..must.." push"...their...own..." DISAGREEMENT ...POINTS ..as... far...as... possible– beyond...INDIVIDUAL EXPECTATIO NS..so..to..MAXimise...their..own... profits....and..all...of ...them..to..MAX ..the..social..profit If ...this...will...hapen,...then...a...new...situation..will..be..resulted..even..in..dt..period : ..the..Angels"..Moment

2. *People have by nature, a strong trend to cooperate each-other. From this point of view, "a win-win-win situation may be possible if and only if the human mind (as expressed in terms of interaction), is built to accept this situation (the universal cooperation) bargainers think double, as separate rational units AND as "the COMMUNITY" AND*

3. *The problem of interaction in a bargain is transferred from the negotiators' intentions into share's distribution in a possible solution by agreement*

a. People want to cooperate, but in the depth of their mind seek such an agreement that will give them shares such that to maximize the satisfaction of personal needs

b. This point is very important for our work: Social welfare is the product of "ordinal" (and not cardinal) individual/personal utilities (to maximize the satisfaction of personal needs)

c. The product of individual ordinal utilities becomes maximum when the product of marginal utilities tends, or is equal to zero, as there is nothing else to be added such as to increase personal or individual satisfaction beyond the existing level

RESEARCH ID :

Field: Environmental Protection

Sample: 213 high level educated staff with high level hierarchy positions

RURAL AREAS in PELOPONNESUS

[as categorized by R. 1262/82] –analysis[31],[32]

PERIOD : [2018 -01-01 till 2018-12-31]

QUESTION: Is environmental protection a CSR objective?

AREA	***STATISTIC CATEGORIZATION***	***TIME PERIOD***	***SAMPLE***	***m-education post graduated***	***m-profession agro-business leaders***
PELOPONNESUS RURAL AREA	***STRATIFICATION***	***1-1-2018 till 31-12-18***	***213***	***107***	***106***

1

The sample	*Agribusiness CEO*	*Agribusiness leaders*	*marketing planners*	*dealers*	*Post graduate*	*Students*

31. Papakonstantinidis LA (2002) "The **S**ensitized **L**ocal **C**ommunity" **(SLC)** DARDANOS/GUTENBERG/TYPOTHITO [six editions FIRST EDITION: EVRYTANIA S.A (1980) , 2nd SELF-EDITION, "To Anapodon", 1994, 3rd Edition NIKAL-MAREL, 1995,4th edition Dimitropoulos/5-6 Editions DARDANOS/GUTENBERG/TYPOTHITO, 2000-2002

32. Papakonstantinidis LA, Vafeiades G,Kondogeorgis P (1984) Regional Development Incentives in E. E. C Countries (perspectives and changes for the Greek Regional Development Problem (ATE Ed No 16) – 1984

					Students [MBA]	In marketing schools
Nr	1	7	78	112	4	11

1a

	AGES						total
	18	25	34	45	77	77+	
MALE	10	20	30	55	18	3	***136***
FEMALE	25	30	17	5	-	-	***77***
							213
EDUCATION[33] LEVEL	No Scholl	Primary School	High School	Bachelor Diploma	M.Sc MBA	Ph. D	SUM
	-	12	94	77	28	2	***213***
HOUSEHOLD INCOME/ EUROS/YEAR 000	-	…3	..8	...15	…30	…50..	
	-	15	42	101	55	-	***213***

2

THE QUESTIONAIRE

		Disagree complete	Disagree	Indifferent : Neither agree non-disagree	Agree mostly	Agree complete	***Total Agree***
1.1	I work in a non-well-defined MARKETING SPACE [focus on NATURAL ENVIRONMENT]						
1.2	New MARKETING technologies will surely come along to solve environmental problems before they get out of hand						

33. The 'GREEK STATISTICAL AYTHORITY"-2013

1.3	*Some pollution is inevitable if we are going to continue to make improvements in our standard of living: marketing campaign*						
1.4	*If business is forced to spend a lot of money on environmental protection' MARKETING, it won't be able to invest in research and development to keep us competitive in the international market*						
1.5	*As an MBA student, just don't have the time to worry about how all of my actions affect the environment*						
.1.6	*I think I do my (marketing) work good when I take steps to help the environment by the*						
1.7	*I try to pass the message that I would be embarrassed if people I know caught me not recycling my trash*						
1.8	*A manufacturer that reduces the environmental impact of its production process and products is making a smart business decision: The NEW profile of marketing concerning the environmental protection*						
1.9	*Local governments should provide more incentives for people to recycle: Marketing message , which I focus on*						
1.10	*Marketing Message for environmental Protection: We should wait until the economy gets better before we make the environment a major policy*						

3

$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

The chi-square formula: ***interdependence between human variables***

METHOD:

0=Observing Payoffs

E= Expected Payoffs

4. Papakonstantinidis LA (2017)

34. papakonstantinidis la (2002) "the **s**ensitized **l**ocal **c**ommunity" **(slc)** dardanos/gutenberg/typothito [six editions first edition: evrytania s.a (1980) , 2nd self-edition, "to anapodon", 1994, 3rd edition nikal-marel, 1995,4th edition dimitropoulos/5-6 editions dardanos/gutenberg/typothito, 2000-2002

Behavioral attitude on environmental protection	Characteristics In Relation With The Environmental Protection
1	I work in a non well defined MARKETING SPACE [focus on NATURAL ENVIRONMENT]
	A manufacturer that reduces the environmental impact of its production process and
2	New MARKETING technologies will surely come along to solve environmental problems before they get out of hand
3	Some pollution is inevitable if we are going to continue to make improvements in our standard of living: marketing campaign
4	If business is forced to spend a lot of money on environmental protection' MARKETING , it won't be able to invest in research and development to keep us competitive in the international market
5	As an MBA student, just don't have the time to worry about how all of my actions affect the environment
6	I think I do my (marketing) work good when I take steps to help the environment, by the SENSITIZATION Method [39]
7	I try to pass the message that I would be embarrassed if people I know caught me not recycling my trash
8	A manufacturer that reduces the environmental impact of its production process and products is making a smart business decision: The NEW profile of marketing concerning the environmental protection
9	Local governments should provide more incentives for people to recycle: Marketing message , which I focus on
10	Marketing Message for environmental Protection: We should wait until the economy gets better before we make the environment a major policy priority

BEHAVIOR	*OBSERVED*	*EXPECTED* ***frequencies***	*RESIDUAL (OBS-EXP)*	*$(OBS-EXP)^2$*	*$COMPONENT=(OBS-EXP)^2/EXP$*
1	*29*	*21,3*	*7,7*	*59,29*	
2	*24*	*21,3*	*2,7*	*7,29*	
3	*22*	*21,3*	*0,7*	*0,49*	
4	*19*	*21,3*	*-2,3*	*5,29*	
5	*21*	*21,3*	*-0,3*	*0,09*	
6	*18*	*21,3*	*-3,3*	*10,89*	
7	*19*	*21,3*	*-2,3*	*5,29*	
8	*20*	*21,3*	*-1,3*	*1,69*	
9	*23*	*21,3*	*1,7*	*2,89*	
10	*18*	*21,3*	*-3,3*	*10,89*	
TOTAL	*213*	*213*			

6

BEHAVIOR	*OBSERVED*	*EXPECTED* ***frequencies***	*RESIDUAL (OBS-EXP)*	*(OBS-EXP)²*	*COMPONENT=(OBS-EXP)²/EXP*
1	*29*	*21,3*	*7,7*	*59,29*	*2,7835680*
2	*24*	*21,3*	*2,7*	*7,29*	*0,3422535*
3	*22*	*21,3*	*0,7*	*0,49*	*0,0230048*
4	*19*	*21,3*	*-2,3*	*5,29*	*0,2483568*
5	*21*	*21,3*	*-0,3*	*0,09*	*0,0044225*
6	*18*	*21,3*	*-3,3*	*10,89*	*0,5112676*
7	*19*	*21,3*	*-2,3*	*5,29*	*0,2483568*
8	*20*	*21,3*	*-1,3*	*1,69*	*0,0793427*
9	*23*	*21,3*	*1,7*	*2,89*	*0,1356807*
10	*18*	*21,3*	*-3,3*	*10,89*	*0,5112676*
TOTAL	*213*	*213*	*25.6*		*4.888….*

7

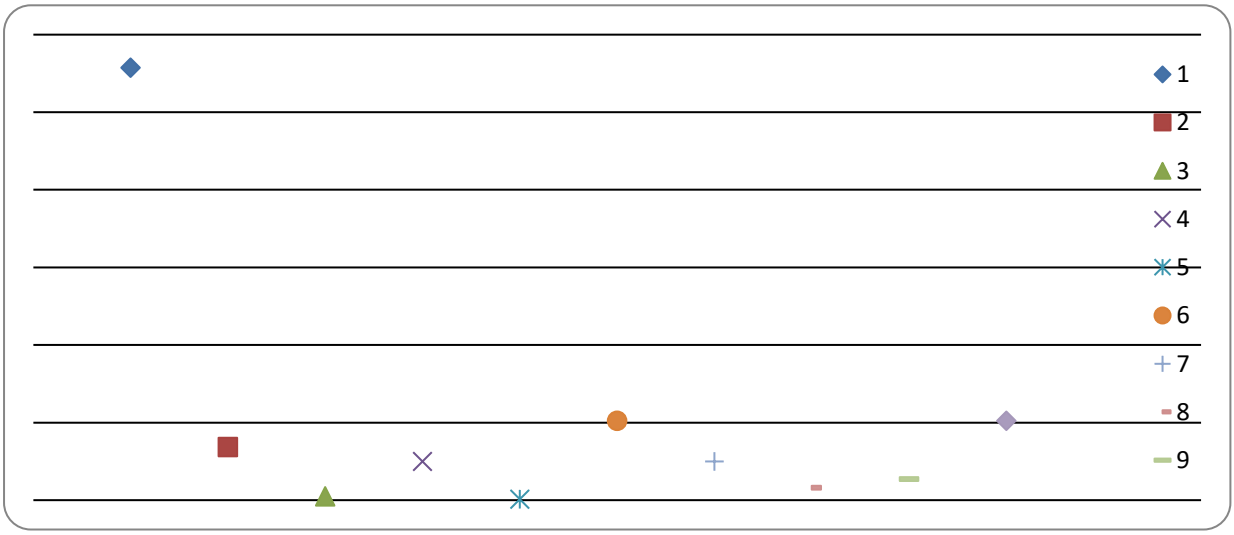
$$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$$

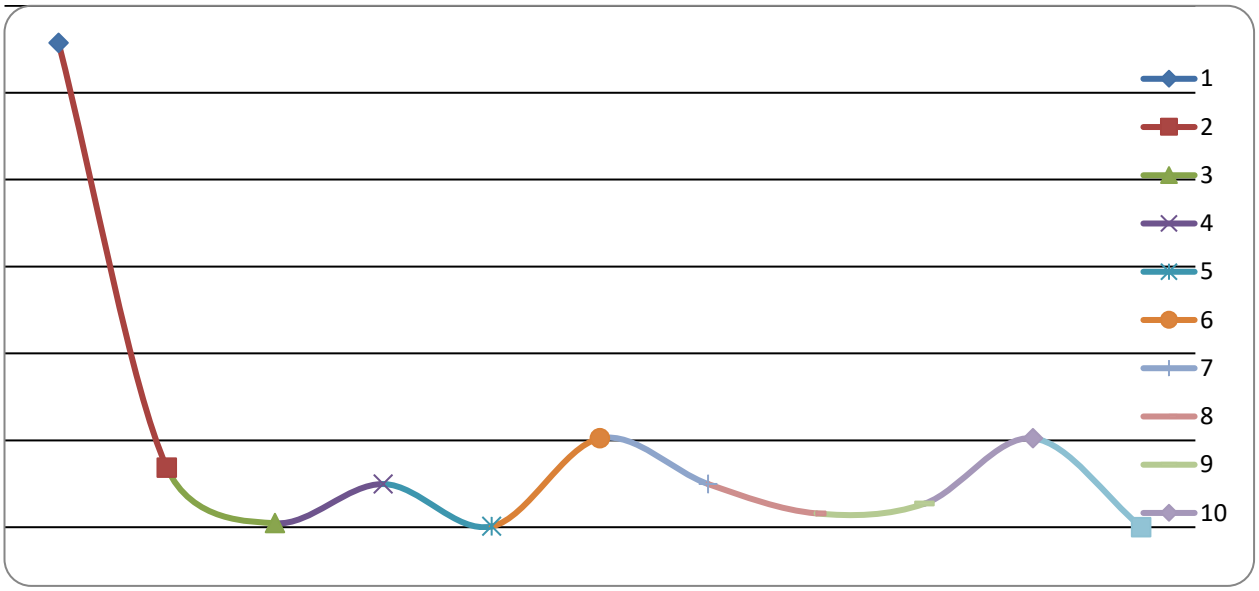
BEHAVIOR	***OBSERVED***	***EXPECTED frequencies***	***RESIDUAL (OBS-EXP)***	***(OBS-EXP)²***	$\chi_c^2 = \sum \frac{(O_i - E_i)^2}{E_i}$	***notes[35]***
1	***2***	***3***	***4***	***5***	***6***	***7***
1	*29*	***21,3***	*7,7*	***59,29***	***2,7835680***	
2	*24*	*21,3*	*2,7*	*7,29*	*0,3422535*	
3	*22*	*21,3*	*0,7*	*0,49*	*0,0230048*	*1,618[36]*
4	*19*	*21,3*	*-2,3*	*5,29*	*0,2483568*	
5	*21*	*21,3*	*-0,3*	***0,09***	***0,0044225***	***Max/min (61,8)[37]***
6	*18*	*21,3*	*-3,3*	*10,89*	*0,5112676*	
7	*19*	*21,3*	*-2,3*	*5,29*	*0,2483568*	
8	*20*	*21,3*	*-1,3*	*1,69*	*0,0793427*	
9	*23*	*21,3*	*1,7*	*2,89*	*0,1356807*	
10	*18*	*21,3*	*-3,3*	*10,89*	*0,5112676*	
TOTAL	*213*	*213*			***4,888…***	***4.888/2.78***

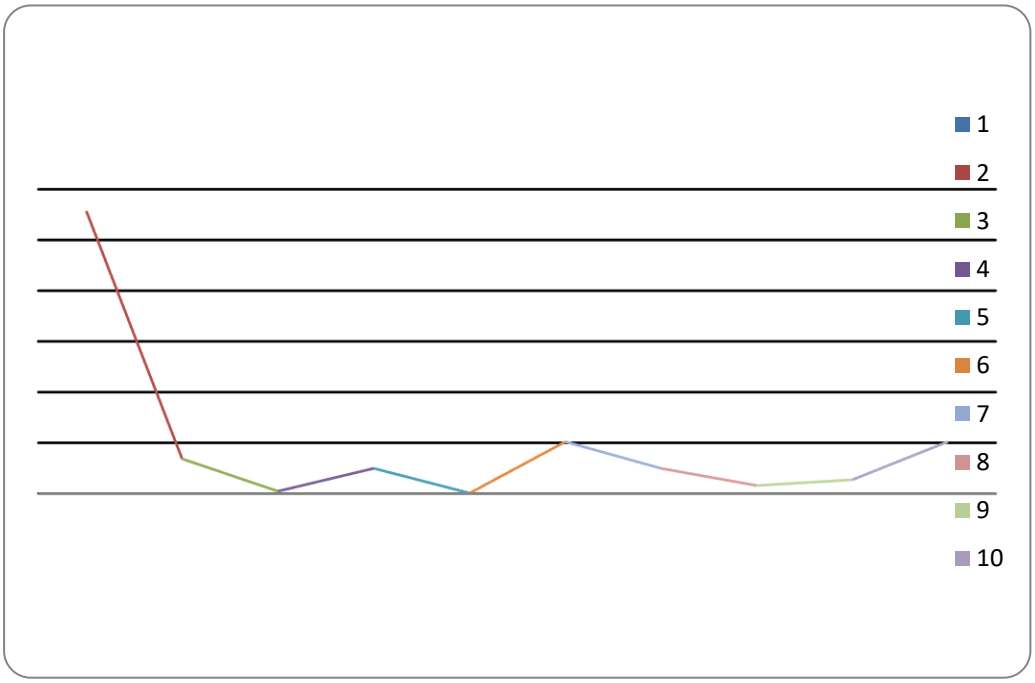
8

36. Suleiman R. 2018 On gamesmen and fair men: explaining fairness in non-cooperative bargaining games. *R. Soc. Opensci (triangular relation):* "economic Harmony (EH) theory":
37. Max value (column 6) / min value(column 6) =61,8

GRAPH:







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38. In any CHI SQUARE variables, two (at least) values have a φ=1.618, or h_{lp}=1. 888.. relation

on a Labour Market and two of them are Active Decision- Makers. -Cases Greece-Germany" International Journal of Innovation and Economic Development ISSN 1849-7020 (Print) ISSN 1849-7551 (Online) Crossref

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