

DECISION MAKING BEHAVIOR AS AN INTERPLAY OF VALUE-ORIENTATION AND ECONOMIC REASONING

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ABSTRACT

Decision making and decision making processes can be regarded as an immanent part of human existence. Decisions and decision making processes concern people's personal and private as well as their professional activities. The above formulated research project encompasses the investigation of normative and descriptive elements of decision theory and decision making models, analytically and empirically, by scrutinizing the impact of norms, values and individual convictions on real world decision making behaviour. It turned out that there is a basic behavioural propensity towards a "broad trade-off" between conflicting personal norms and values on the one hand, and economic necessities on the other hand.

Keywords: decision making processes, value-orientation, economic reasoning

INTRODUCTION

Traditionally, two directions of scientific decision research can be distinguished. On the one hand, normative decision theory concentrates on the development of "rational" instruments and heuristics for efficient decision making. On the other hand, descriptive decision theory is dealing with the formulation of sound hypotheses, theorems, and complex theories about actual decision making behaviour, mostly based on empirical induction and probation.

This study encompasses the investigation of normative and descriptive elements of decision theory and decision making models, analytically and empirically, by scrutinizing the impact of norms, values and individual convictions on real world decision making behaviour. In this context, particularly the conflict lines between existing and observable norms and values and situational inherent economic necessities in decision making processes will be investigated.

Based on real world oriented theoretical models of decision making behaviour, outlined in the state of the art findings of decision making research, the theorem of "economethical" decision making contexts is in the forefront of our central research question. The "economethical theory" of decision making

behavior emphasizes the hypothesis that decision makers approach decision making problems in light of their normative predispositions on the one hand, however, on the other hand, they realise that problem situations are also subject to “exogenous” economic constraints like target requirements, scarce resources, budgetary restrictions, etc. In this context, basic hypotheses are being generated, trying to explain the “dissolution” of contradictions between the two conflicting mechanisms, mentioned above, on actual decision making behaviour [1].

Numerous articles and monographs have been published dealing with the academic and scientific aspects of business decision making in relation to business and societal ethics, with a particular emphasis on conflicting situations and behaviour in the field of tension between economic necessities and ethical norms and values [2].

In our investigation we are especially interested in decision making tasks and decision making situations, which – on the one hand – exemplify managerial decision making in businesses and organisations, but – on the other hand – are also somehow related to societal issues, i.e. ecological sustainability, social fairness, human friendly technological developments, etc. The current literature in this context is dealing with theoretical models and empirical studies into ethical decision making in organisations, ethical and economic issues of consumer behaviour, behavioural models of decision making in light of norms, values, fairness, and individual and collective utility, the effects of culture on decision making ethics, the impact of socialisation, education, gender and demographics on decision making behaviour, etc. [3] [4] [5] [6].

In recent years, in various countries, so-called codes of ethics for acceptable business decision making behaviour and good corporate governance have been developed in order to avoid or correct unethical behaviour in organisational and/or public decision making [7] [8]. Quite often it is pointed out that the focus of globally acting companies on the shareholder value approach is only orientated on the fast maximisation of “individual” profits and benefits, but causes serious damage to humans, co-workers, environment and societies [9].

In this context, the question has been raised, how “good corporate behaviour” should look like in order to fulfil not only the economic goals and objectives of individual companies, but also promotes the legitimate interests of individuals and societies in terms of fair distribution of resources, assets and human rights [9].

Our paper therefore investigates the interplay and the tensions of business-related decisions and norms and values from a microeconomic perspective, where usually economic goals are the dominating ones, in comparison and contrast to society-related decisions from a macro perspective, where usually also welfare preferences and pro-social values and norms have to be taken into account.

THEORETICAL FRAMEWORK

Numerous theories and theoretical models of decision making processes and decision making behaviour have been developed in the scholarly literature, aiming on “prescriptions” how to make “efficient” business decisions on the one hand, and on “descriptions” and “explanations” how decisions are actually made in view of different attitudes, personalities, situations and requirements [10] [11].

Our basic research question in this study tries to outline the theoretical foundations and the hypothetical elements of a comprehensive decision making model, which includes the cause-effect relations of decision making behaviour and decision making outcomes in a descriptive manner, but also integrates

societal and individual values and norms in terms of generally acceptable goals and measures for individual and collective behaviour and decision making. It is obvious that in numerous cases and situations individual economic interests may not be in line with societal and “ecological” goals, which leads to the overall question how economic and societal decision making behaviour can be harmonised as a balanced interplay of value-orientation and economic reasoning [12].

In this context, also the question has to be raised, whether individual decision making deviates from collective decision making in terms of economic and pro-social goals and conduct, and if so, shared responsibility leads to different decision making behaviour and decision making outcomes [13].

In classical and neoclassical economics, the image of the “homo oeconomicus”, the economic man model, dominates the theoretical background of rational decision making [14]. Decision making rationality in this context implies the notion that decision makers “radically” try to “maximise” their own advantage and benefits, basically measured in “monetary-like” utility [15]. More recent economic and social science research challenge the economic man rationality model by presenting multiple findings of behavioural economics, outlining the notion of bounded rationality in human decision making and describing various biases and restrictions of individual and collective decision making rationality [16] [17]. In addition, various economic and social scientists and researchers have developed alternative concepts of rationality, not only taking economic efficiency measures into account, but also psychological, sociological, emotional, ecological etc. indicators, which determine decision making behaviour and decision making outcomes, individually and collectively [18] [19].

Based on the research ideas and findings outlined above, we develop our model of the “Econometrical Theory of Decision Making”. This concept tries to include the aspects of economic reasoning in terms of utility-based decision making efficiency and aspects of ethical and normative reasoning, in terms of pro-social and generalisable societal values, welfare goals and human rights orientation.

This model emphasises the notion of dual rationality, comprised of economic rationality and ecological rationality (also called socio-psychological rationality). It is assumed that both rationality concepts can actually be observed in real world decision making processes. The main research question in this context focuses on the question which one of the two rationality concepts may dominate, and, in particular, which factors actually influence the dominance of the one or the other rationality construct. This basic model of dual decision making rationality is composed of the following elements:

- The economic rationality and the ecological rationality form the two dependent variables as the observable ways of decision making behaviour, either dominated by economic/selfish intentions or dominated by ecological/altruistic behavioural patterns.
- The cognitive capabilities and the emotional dispositions of the decision makers (cognitive competences and/or emotive competences) represent the so-called endogenous independent variables of decision making rationality.
- The cognitive competences can be exemplified by the application of instrumental approaches of decision making behaviour, i.e. applying goal orientation, information orientation, process organisation, heuristics utilisation and reflection/control measures in decision making processes.
- The emotive competences are i.e. determined by personality traits and socialisation processes.
- The exogenous independent variables of decision making behaviour in the decision making rationality concept are comprised of situational elements like professional versus private decision situation, transactional versus non-transactional decisions, degree of conflict, ethical and value-orientation etc.

- The dominance or balance of economic versus ecological decision making behaviour depends on the degree of the endogenous and exogenous factors of decision making behaviour.

The cause-effect relations of the above outlined Econometrical Rationality Model of Decision Making can be summarised in the following formula 1:

Formula 1: Types of rationality

$$y_1 + y_2 = a + b * x_1 + c * x_2 + d * x_3 \tag{1}$$

y_1 ... economic rationality	x_1 ... cognition (endogenous)	a ... constant factor of d.m. behaviour
y_2 ... ecological/socio-psychological rationality	x_2 ... emotion (endogenous)	b, c, d, \dots weighting factors
	x_3 ... situation (exogenous)	

The Econometrical Rationality Model of Decision Making is supposed to improve the understanding of simultaneously occurring behavioural patterns in decision making processes, demonstrating economic behaviour and pro-social behaviour at the same time and in the same situation, either conflicting each other or partially harmonising with each other. Also, the model will be subject to an empirical investigation, trying to test its validity and its applicability for the explanation and the design of decision making processes and regulations.

BASIC HYPOTHESES

It is assumed that in decision making processes dealing with business, economic and societal issues, hard fact economic indicators as well as human-oriented soft-fact indicators will form an interplay, partially in a conflicting, partially in a complementary manner.

It is also assumed that it makes a difference, whether decisions are made individually or collectively, and it makes a difference, whether decisions of individuals are made for themselves or for others.

In addition, it is assumed that formulated preference relations actually guide the observable decision making behaviour. This should lead to the fact that actual choices comply with the communicated individual/collective goal systems of decision makers.

This leads to the further assumption that the satisfaction with the taken decision corresponds with the actual economic and ethical goal preferences.

Finally, it is assumed that the dominance of cognitive factors in decision making over emotional factors leads to a higher degree of economic rationality (in terms of emphasising economic measures) in comparison to the ecological rationality (in terms of emphasising ethical measures) and vice versa.

Those hypothetical propositions will now be reflected partially by an empirical investigation, based on a laboratory experiment.

RESEARCH DESIGN

The empirical design of our research project consists of a laboratory experiment with a sample of advanced business students in their postgraduate masters and doctoral studies. The test persons were

exposed to so-called “real life business case studies”, for which they had to develop problem solutions and justifiable argumentations for conflicting and antagonistic initial situations. In addition, based on a testing battery, the basic value systems of the test persons were supposed to get recorded.

The overall research objective intended to examine, if and if so, to which extent, value predispositions dominate individual decision making behaviour, or trying to find out whether economic considerations or personal norms and values exert the decisive impact on the development of problem solutions.

The experimental task was based on the Piper’s case study. This business case was frequently used as a procedure in real world companies’ assessment centers, in order to test the applicants’ for managerial positions strategic decision making capabilities. It has also often been used as a learning tool in business management classes at universities worldwide.

The participants of the experiment had to develop their strategic choices concerning various strategy alternatives, outlined by the various business function managers in the Piper’s case study design. In addition, the experimentees had to prioritise a list of strategic business objectives according to their own preferences. Also, they were supposed to prioritise a list of socio-economic goals on a societal decision making level, again according to their preferences. In the first experimental round, the participants had to find their individual strategic choices, isolated from the other probands, and to deliver their decision to the experimenter. In a second round, the participants were randomly assigned to decision making groups of three or four members, again being supposed to make their strategic choices for the case alternatives.

The experimenters collected the following data for interpretation:

- Individual strategic choices according to the individual rankings of the functional managers’ reasoning for their resp. decision suggestions including their individual rankings of the managers’ suggestions plausibility and the managers’ suggestions assessment;
- individual list of prioritised business decision making objectives;
- individual list of prioritised societal objectives;
- individual satisfaction with their resp. decisions;
- decision making groups’ agreed list of rankings of functional managers’ decision suggestions including their rankings of the managers’ suggestions plausibility and the managers’ suggestions assessment;
- decision making individuals’ and groups’ satisfaction with their resp. decisions.

The experimental sample (as an initial study) consisted of 63 participants altogether, comprised of professionals, masters and doctoral students. Ultimately, 44 participants’ data could be included into the statistical analyses. The detailed experimental design is available upon request from the authors.

TENTATIVE RESEARCH FINDINGS

Concerning the priorities of business-related goals and objectives, the following ranking emerged according to the experimental participants’ assessment:

Table 1: Business-related goals

No.	ethical/economic	Factors	Mean
1	ethical	maintenance of liquidity	2.55
3	economic	profits	2.98
7	economic	return of capital employed	3.48
2	ethical	employee satisfaction	3.66
5	economic	sales growth	4.16
4	ethical	societal responsibility	5.34
6	ethical	environmental protection/sustainability	5.80

This means that the economic factors of “maintenance of liquidity”, “profits” and “return of capital employed” dominate individual decision makers’ goal systems, whereas the ethical factors “employee satisfaction”, “societal responsibility” and “environmental protection/sustainability” rank lower, partially significantly beneath the mean ranking. It can be stated that when it comes to business decisions, economic reasoning is dominant and human-resources-oriented resp. society-orientated objectives only play a subordinate role.

Concerning the priorities of society-related goals and objectives, the following ranking emerged according to the experimental participants’ assessment:

Table 2: Society-related goals

No.	ethical/economic	Factors	Mean
1	economic	economic growth	2.73
4	ethical	appropriate distribution of income and assets	3.70
2	ethical	social justice	3.84
3	economic	price stability	4.09
7	ethical	international/global collaboration	4.30
5	economic	national strength	4.57
6	economic	full employment	4.66

This means that also for societal goal systems the basic factor of “economic growth” ranks first, whereas the array of the pro-social objectives “appropriate distribution of income and assets” and “social justice” follow with a significant distance. The “mixed” objectives of “price stability”, “international/global collaboration” and “full employment” rank lower, in line with “national strength”.

This result leads to the conclusion that also when it comes to societal decisions or decisions on a non-business-related macro level, economic and ethical goals seem to be somewhat equally important.

Concerning the experimental participants’ assessments of the plausibility of the functional managers’ decision making argumentation it is remarkable that the overall rankings are relatively close to each other (ranging from 2.36 to 2.80). Nevertheless, it is somewhat surprising that the personnel director’s point of view ranks highest even though this is the most “ethical” opinion of all directors. This result indicates that at least implicitly a mixture of economic and ethical norms of decision making are observable.

Table 3: Plausibility results (individual)

Plausibility (individual)	Mean
Personnel Director	2.36
Production Director	2.41
Finance Director	2.50
Sales Director	2.57
Marketing Director	2.80

This above-mentioned result is consistent with the functional managers' prioritised assessments through the experimental participants, also substantiated by the resp. correlation analysis between the plausibility evaluation and the decision making argumentation assessment:

Table 4: Ranking results (group)

Ranking (individual)	Mean
Personnel Director	2.73
Sales Director	2.82
Production Director	2.86
Finance Director	2.98
Marketing Director	3.61

Table 5: Correlation analysis (individual plausibility results and individual ranking results)

		F2.1	F2.2	F2.3	F2.4	F2.5
F1.1	Pearson Correlation	,545**	-0.250	-0.089	-0.133	-0.105
	Sig. (2-tailed)	0.000	0.102	0.565	0.391	0.497
F1.2	Pearson Correlation	-0.028	,579**	0.023	-,415**	-0.087
	Sig. (2-tailed)	0.856	0.000	0.881	0.005	0.575
F1.3	Pearson Correlation	-,344*	0.032	,513**	-0.105	-0.090
	Sig. (2-tailed)	0.022	0.835	0.000	0.497	0.561
F1.4	Pearson Correlation	-0.203	-,374*	-0.228	,604**	0.149
	Sig. (2-tailed)	0.187	0.012	0.137	0.000	0.336
F1.5	Pearson Correlation	-0.181	-0.126	-,374*	0.035	,657**
	Sig. (2-tailed)	0.238	0.414	0.012	0.822	0.000

It has to be pointed out that the above results pertain to the individual decision making preferences. Concerning the follow-up group decision making suggestions the empirical findings are as follows:

Table 6: Plausibility results (group)

Plausibility (group)	Mean
Production Director	2.16
Finance Director	2.6
Personnel Director	2.70
Sales Director	2.9
Marketing Director	3

Very interestingly, when it comes to group decisions, there is a different result in comparison to the individual strategic choices. In the group preferences the clearly more economic-oriented views of the production director and the finance director are dominant, whereas the more ethical argumentation of the personnel director ranks lower in terms of the plausibility evaluation of the suggested strategies. This result is again in line with the actual assessment of the various decision strategies suggested by the functional managers in the Piper’s case study design, also substantiated via the correlation analyses.

Table 7: Ranking results (group)

Ranking (group)	Mean
Production Director	2.09
Sales Director	3
Finance Director	3
Personnel Director	3.5
Marketing Director	3.5

Table 8: Correlation analysis (individual plausibility results and individual ranking results)

		F2.1	F2.2	F2.3	F2.4	F2.5
F1.1	Pearson Correlation	,713**	-0.049	-0.163	-0.133	-,327*
	Sig. (2-tailed)	0.000	0.753	0.291	0.388	0.030
F1.2	Pearson Correlation	-0.154	,826**	0.139	-,588**	0.013
	Sig. (2-tailed)	0.317	0.000	0.368	0.000	0.934
F1.3	Pearson Correlation	-0.161	,533**	,611**	-,511**	-0.248
	Sig. (2-tailed)	0.297	0.000	0.000	0.000	0.104
F1.4	Pearson Correlation	-0.293	-,590**	0.017	,856**	-0.287
	Sig. (2-tailed)	0.053	0.000	0.914	0.000	0.059
F1.5	Pearson Correlation	-0.201	,421**	-0.101	-,614**	,693**
	Sig. (2-tailed)	0.192	0.004	0.513	0.000	0.000

It is very interesting to discover that obviously group decision preferences are basically more economic and less ethical-orientated than individual strategy suggestions. This finding obviously complies with a number of study outcomes, which suggest that groups show less “social responsibility” than individuals, because group members can much lesser be held accountable for their preferences and actions than easily identifiable individuals [13].

The analysis whether individually stronger ethical orientation results in a stronger preference for more ethically dominant decision strategy suggestions showed the following outcome:

Table 9: Correlation analysis (employee satisfaction and personal director)

		Personal Director
Employee Satisfaction	Pearson Correlation	-,220
	Sig. (2-tailed)	.493

This means that there is no empirical evidence between the preference for ethical decision factors and more ethics-based strategy preferences.

A similar result can be stated consistently for the relationship between the preferences for strong economic decision making factors in relationship with strong positive assessment for the functional managers' economic emphasis of decision making strategies:

Table 10: Correlation analysis (profits and production director)

		Production Director
Profits	Pearson Correlation	-,173
	Sig. (2-tailed)	.454

This result also indicates no evidence between economic priorities and economic factors' emphasis for decision orientation.

Finally, the experimental participants were asked to assess their satisfaction with the decision making process and the decision making choices, both individually and for the decision of their resp. groups.

The results were as follows:

Table 11: Satisfaction results (decision making process and decision making choices)

Item	Mean (individual)	Mean (group)
decision making process	2.80	1.95
decision making choices	2.73	1.98

Table 12: Group comparison test (individual versus group satisfaction results)

	decision making process	decision making choices
Mann-Whitney-U	370.000	490.500
Wilcoxon-W	1360.000	1480.500
Z	-5.438	-4.405
Sig. (2-tailed)	.000	0.000

The tables show that the satisfaction with the group decision making is significantly higher than in individual decision making processes. This may have to do with the fact that group decisions provide shared responsibility and may indicate a higher degree of security resp. a lower perception of risk with the resp. decisions.

Generally, our basis propositions were substantiated by the experimental findings, pointing out that our Econometrical Decision Making model seems to provide sufficient theoretical validity to explain the interplay between economic reasoning and ethical value-orientation in strategic decision making

processes for business decisions as well as societal-oriented decision making objectives.

PRELIMINARY CONCLUSIONS

Tentatively it can be concluded that economic necessities as well as ethics and normative values actually guide and determine decision making reasoning and choices. In microeconomic contexts it is very obvious that the quantifiable economic aspects clearly dominate over pro-social attitudes. However, in a macro-societal environment economic aspects and ethical-normative dispositions tend to balance each other. This may be explained by the fact that in situations where the decision makers are directly impacted by their actions the pro-economic preferences dominate, whereas on more abstract levels with more indirect consternation of the decision makers pro-social reasoning may take broader place. It has to be pointed out that our study would definitely require additional research efforts, in order to validate our findings, especially in light of our relatively low experimental sample size.

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