

National Seminar on Effect of Ecopreneurship on Environment Protection & Sustainable Development

Challenges and Problems of Ecopreneurs

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Abstract

Introduction: Ecopreneurship, or ecological entrepreneurship, has emerged as a sustainable approach to addressing environmental challenges while fostering economic growth, and in India it presents both significant opportunities and hurdles such as regulatory hurdles, financial constraints and cultural barriers. In literature, theorists characterizing managerial decision processes usually adopt the normative (rational theory) or descriptive (bounded-rational theory) approach. The paper examines whether managers, when making loosely-structured decisions, typically assume guesses and focus only on intuitive and judgemental thinking rather than on informational sources supporting conscious decisions.

Methodology: In the process of collecting empirical data, an internet questionnaire survey was used; before the measurement instrument was posted on the website it was checked in an offline pilot study (N = 50). A direct link to the questionnaire was sent via personal emails to respondents working in enterprises located in the area of southern India, invited through LinkedIn and Golden Line. The research was conducted between June 1 and December 31 in 2017, using judgmental and snowball sampling. For 1100 invitations sent, 289 responded, and after eliminating companies that did not conduct marketing research projects the sample equalled N = 213, mainly medium and large firms from FMCG, finance and insurance, retail and wholesale, and media. Two ordinal dependent variables, "Intuition" and

"Information", measured on a 5-point Likert scale, were analysed with ordinal regression models using the predictors "Position" and "Education".

Results & Discussion: Kolmogorov-Smirnov and Shapiro-Wilk tests indicated large deviations from normality (Information 0,21 and 0,89; Intuition 0,29 and 0,77; all Sig. 0,00), so the variables were verified on non-parametric principles. "Intuition" was strongly skewed towards categories 1 and 2 and a negative log-log function was applied, whereas "Information" was evenly distributed and estimated by a logit function. For "Intuition", the chi-square statistics for the negative log-log (4,34) and complementary log-log (4,44) functions are larger than that with the logit function (1,80). Both regression models exceeded the level of $p = 0,05$ and proved adequacy, with Pearson chi-square values of 24,97, 16,27 and 22,65 for "Intuition" and 13,01, 16,27 and 12,55 for "Information". Parameter estimates for "Intuition" were all positive and larger (Pos.=1: 3,92, Wald 28,35; Pos.=2: 3,62, Wald 32,48; both Sig. 0,00) than for "Information" (Pos.=1: 0,88, Sig. 0,28; Pos.=2: 0,72, Sig. 0,13). Only product managers and respondents with a master degree displayed significant relationships with the "Information" variable.

Conclusion: The results indicate that decision makers are more inclined towards intuition or gut-feeling than information, and that functional managers pay more attention to information and the market research than their colleagues from higher levels in the company hierarchy. Intuition helps to reduce the time needed to undertake prompt decisions, but its frequent use is not a panacea for all the managerial problems and may needlessly facilitate the decision problems at the expense of their accuracy, since biases committed by managers can largely be avoided with objective information. Although intuition can be practiced in many decision processes, it cannot completely replace information; managers balancing between these two spheres would behave more reasonably.

Keywords: Ecopreneurship; Managerial Decision Making; Intuition; Marketing Information; Bounded Rationality; Ordinal Regression; Link Functions; Likert Scale; Marketing Research; India.

1. Introduction

In literature, theorists characterizing managerial decision processes usually adopt the normative (rational theory) or descriptive (bounded-rational theory) approach. The former theory roughly demands high skills of managers to optimize choices (Ansoff

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1965, Porter 1985). In contrast, in descriptive theory, it is argued that managers are hardly capable of making optimal choices (Cyert & March 1963, Starbuck 1985), since their decisions are largely biased by cognitive limitations. They are also much closer to the sphere of intuition which reflects subjective way of generating alternative source of thinking in supporting the decisions. Second, factors which contribute to the predominance of intuition (instead of information) in the decision making processes, belong to psychological dimension. In practice, it often appears that human being lacks of the self-control, or is unable to capture sequentially elements in decision making process. Third, decision makers, especially top executives, often hesitate to actively participate in the intellectual effort, (e.g., by reading the stats derived from marketing research), not to mention their systematic and personal involvement in the research programmes. In summing up, managers when making the loosely-structured decisions, typically assume guesses and focus only on intuitive and judgemental thinking (Hambrick & Mason 1984, Simon 1987), than informational sources supporting the conscious decisions. These issues become a subject of research and presented by the author empirical results.

2. The rationality and bounded-rationality theory of making decisions

This restriction on the meaning of rationality draws us attention to the fact that rationality does not guarantee that the value-maximizing outcome will be obtained; only that it is the most likely outcome. This approach largely views humans (*homo economicus*) as “omniscient calculators” (Lupia, McCubbins & Popkin 2000) who can readily perform the cognitive manipulations required to reach a decision given adequate motivation. Therefore, managers although theoretically are obliged to seek out relevant information, in reality, when considering the costs of gathering and processing information (Vriend 1996, Gigerenzer & Todd 1999), look for simpler solutions.

Therefore, in the bounded-rationality theory managers are, by analogy, often compared to computers as the limited information processors, with no motivation nor the ability to make “consequential” calculations as described by rational choice theory (Hastie & Dawes 2001, Gilovich & Griffin 2010). A bounded-rationality theory highlights human limitations on information processing and limitations on information retrieval.

3. Methodology of empirical research – data collection

Data collection In the process of collecting empirical data, the internet questionnaire survey was used, however, before this measurement instrument was posted on website, it was checked in the offline pilot study (N = 50). Next, to the chosen group of respondents working in enterprises located in the area of southern India (invited to the survey through the two social networking sites: LinkedIn and Golden Line), a direct link to the questionnaire was sent via personal emails. The whole empirical research was conducted between June 1 and December 31 in 2017, and the process of choosing the appropriate respondents to the sample was conducted with the use of two techniques: judgmental and snowball sampling. The last mentioned here technique was particularly useful, for it helped to increase the chance of reaching the specific individuals in the companies such as: owners, managing directors, product managers, etc. In sum, for 1100 sent invitations by email to the potential respondents - 289 responded. However, after eliminating companies that did not conduct the marketing research projects at all, the size of sample equaled N = 213. The structure of sample included professionals who were in charge of strategic and tactical marketing activities. The sample structure consisted mainly of the respondents responsible for decision-making processes (Table 1), and the structure of companies (concerning their level of employment) included mainly the medium and large firms, based on their marketing research budgets. Managers in such firms tend to have more resources available for the research projects

and have more technically sophisticated research instruments, methods, etc. Finally, instead of predicting the actual cumulative probabilities, ordinal regression model predicts a function of those values.

Category	Respondent type	Percent	Employment level in companies conducting marketing research	Percent
Position	Director of Marketing/Sales Department	43	Less than 15 [at least 6]	9
	Product manager	37	From 16 to 99	17
Occupied in the company	Co-/Owner, Vice-/Chairman, Managing Director – CEO	20	From 100 to 249	16
	Total	100	From 250 to 499	8
Education	Master degree	73	Above 499	50
	MBA	27		
	Total	100	Total	100

Table 1. Respondents according to their positions and education, and employment in companies, N=213

In sum, for 1100 sent invitations by email to the potential respondents - 289 responded. However, after eliminating companies that did not conduct the marketing research projects at all, the size of sample equaled $N = 213$. As a consequence, other companies, which didn't yet conduct any marketing research, and at the same time didn't meet the requirements of the empirical research, were excluded from further analysis.

The structure of sample included professionals who were in charge of strategic and tactical marketing activities. The sample structure consisted mainly of the respondents responsible for decision-making processes (Table 1), and the structure of companies (concerning their level of employment) included mainly the medium and large firms, based on their marketing research budgets. Managers in such firms tend to have more resources available for the research projects and have more technically sophisticated research instruments, methods, etc. At the same time, in the process of selecting sampling units, the main focus was on the companies from industries as FMCG, finance and insurance, retail and wholesale, media. The choice of companies from such

industries resulted indirectly from their big share of expenditures on research in the marketing budget, where for years the FMCG manufacturers are the leaders.

The linear regression models are hence sensitive to the categorization. More importantly, in the ordinal regression, thresholds or constants (corresponding to the intercept in linear regression models) depend only on the category's probability that is predicted. Values of the predictors do not affect the part of the model, and the prediction part of the model depends only on predictors and is independent of the outcome category. Finally, instead of predicting the actual cumulative probabilities, ordinal regression model predicts a function of those values.

Types of tests applied in the analysis				
Variables	Kolmogorov-Smirnov*		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Information	0,21	0,00	0,89	0,00
Intuition	0,29	0,00	0,77	0,00

Table 2. Tests of normality of the dependent variables: "Intuition" and "Information", N=213

Legend: *Lillie for significance correction.

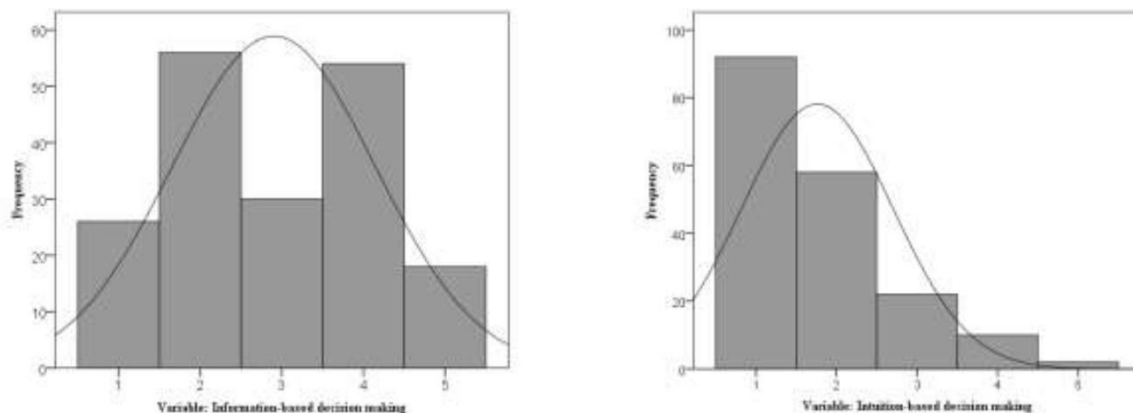


Figure 1. The histograms of dependent variables "Intuition" and "Information" applied in ordinal regression models, N = 213

The process of constructing regression models in the present study was based on several decisions., we started initially with a location-only model, and after estimation of the model, we decided if the scale component might be warranted.

- 1) In the process of making decisions I profit mainly by intuition and gut-feelings ("Intuition" variable);
- 2) In the process of making decisions I profit by information, derived from marketing research studies ("Information" variable) - where response answers were measured on 5-point Likert scale in agree/disagree format:
1 = I completely agree, 2 = I agree, 3 = In either agree nor disagree, 4 = I disagree, 5 = I completely disagree.

On the other hand, in choosing predictors, we identified variable: *Formal position occupied by the respondent in the company* (abbreviation - "Position"), measured on three levels: "Director of marketing/sales department", "Product manager", "Co-/Owner, Vice-/Chairman, Managing Director – CEO" and his/her *Education level* ("Education"), measured on two levels respectively: "Master degree" and "MBA degree"

In some cases where the initial model performs poorly, we need to test alternative link functions in order to see if a better optional model can be constructed with a different option, i.e., a link function.

Function type	Mathematical form	Typical application
Logit	$\log(x/(1-x))$	Evenly distributed categories
Probit	$F-1(x)$	Latent variable is normally distributed
Cauchit (inverse Cauchy)	$\tan(\pi(x-0,5))$	Latent variable has many extreme values

Table 3. Five different types of link functions that can be used in ordinal regression models

Regression model with configuration of variables: Position, Education regressing on Intuition*									
Function	Logit			Complementary log-log			Negative log-log		
Model fitting information									
Model	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.
Intercept	94,13	-	-	63,26	-	-	94,13	-	-
Final	92,33	1,801	0,61	58,82	4,44	0,22	89,79	4,34	0,23
Goodness-of-Fit									
	Chi-Square	df	Sig.	Chi-Square	df	Sig.	Chi-Square	df	Sig.
Pearson	24,97	17	0,09	16,27	12	0,18	22,65	17	0,16
Regression model with configuration of variables: Position, Education regressing on Information°									
Function	Logit			Complementary log-log			Negative log-log		

Regression model with configuration of variables: Position, Education regressing on Intuition*									
Model fitting function									
Model	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.
Intercept	63,26	-	-	63,26	-	-	63,26	-	-
Final	56,48	6,77	0,08	58,82	4,44	0,22	56,33	6,93	0,07
Goodness-of-Fit									
	Chi-Square	df	Sig.	Chi-Square	df	Sig.	Chi-Square	df	Sig.
Pearson	13,01	12	0,37	16,27	12	0,18	12,55	12	0,40

Table 4. Model-fitting information for both ordinal regression models applied in the empirical study

Approaching now the interpretation of the empirical results, as it can be observed, the variable "Intuition" has been strongly skewed, showing asymmetry towards two categories: 1 and 2. Thus, for that variable a negative log-log function was applied, as the lower response categories seemed to be more probable. The bulk of cases were located in the lower range of the measurement scale (1 and 2). In contrast, values of variable "Information" were evenly distributed across all response categories, so the variable should be estimated according to a logit function. However, due to analytical comparisons, we will use both functions: negative log-log and logit, as well as complementary log-log function. The results of comparisons were presented in Table 3. Another aspect of the analysis was the question whether both regression models can provide an adequate fit to data. For example, in case of variable "Intuition", the chi-square statistics for the negative log-log (4,34) and complementary log-log (4,44) functions are larger than that with the complementary logit function (1,80). This suggests that they are much better than logit function.

Finally, The same situation repeats with variable "Education", within which category no. 2 (representing managers with MBA level of education) has obtained non-significant result. In fact, there were only two categories which displayed significant results of the relationships with "Information" variable, namely: product managers (defined by

category with no. 3 of the variable "Position") and respondents with master degree (category no. 1 of variable "Education").

4. Respondents according to their positions and education, and employment in companies, N=213

In sum, for 1100 sent invitations by email to the potential respondents - 289 responded. However, after eliminating companies that did not conduct the marketing research projects at all, the size of sample equaled $N = 213$. As a consequence, other companies, which didn't yet conduct any marketing research, and at the same time didn't meet the requirements of the empirical research, were excluded from further analysis.

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5. The ordinal regression models in diagnosis of empirical data

Because responses in the measurement instrument were prepared on the basis of ordinal scale, for their analysis we applied ordinal regression model. According to performed analysis (see Table 2 and Figure 1) we noticed that the data did not meet the assumptions of normality. Both Kolmogorov-Smirnov's and Shapiro-Wilk's tests

indicated on large deviations from normality within the measured variables. Therefore variables were verified on the basis of non-parametric principles of measurement. It is worth mentioning that these types of data and measurement scales (The classification of scales, depending on the nature of collected data, and description their relevance to the statistical procedures employed, can be found in Steven's works (1951), who distinguished nominal, ordinal interval and ratio scales.), as well as the class of problems related with them are often encountered in social sciences (McCullagh 1980).

Types of tests applied in the analysis				
Variables	Kolmogorov-Smirnov*		Shapiro-Wilk	
	Statistic	Sig.	Statistic	Sig.
Information	0,21	0,00	0,89	0,00
Intuition	0,29	0,00	0,77	0,00

For example, in physical sciences the overwhelming proportion of data is essentially of the quantitative nature, while in social sciences (like in marketing, management, psychology, sociology and consumers studies), the qualitative data are more common. The qualitative measurements, whether subjective or objective, typically take values in a limited set of categories which may be on an ordinal or purely nominal scale (Pearson 1913, Plackett 1965). Thus, analytical methods and model which are useful in one discipline can be of little use or interest to researcher in another area.

The applied ordinal regression procedure, allowed for evaluation the importance of particular predictors (factors) in relation to two selected dependent variables of the ordinal nature. Just to remind, in case of ordinal measurement, the linear regression models do not work well because linear regression reflects high sensitiveness to the way we define categories of the dependent variables. In case of ordinal variables, researcher needs an ordering of the response categories. If two adjacent categories are collapsed into one larger category, only a small change will be made, and the models built using the old and new categorizations will be very similar. Any model that is built before combining categories will be different from model that built after. The linear regression

models are hence sensitive to the categorization. More importantly, in the ordinal regression, thresholds or constants (corresponding to the intercept in linear regression models) depend only on the category's probability that is predicted. Values of the predictors do not affect the part of the model, and the prediction part of the model depends only on predictors and is independent of the outcome category. Finally, instead of predicting the actual cumulative probabilities, ordinal regression model predicts a function of those values.

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*Legend: *Lillie for significance correction.*

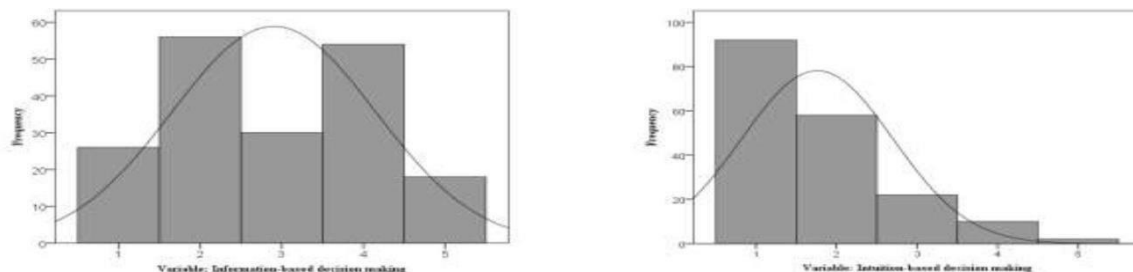


Figure 1. The histograms of dependent variables “Intuition” and “Information” applied in ordinal regression models, N = 213

The process of constructing regression models in the present study was based on several decisions. First, the author defined the range of dependent variables and then decided which of the predictors to use for location the component of the model. A decision whether to include or not a scale component in regression analysis was a turning point, because the location-only model provides a summary of the data. In the interest of keeping things simple, it is best to start with a location-only model, and further add a scale component only if there is evidence that the location-only model is inadequate for the data. Accepting this methodology, we started initially with a location-only model, and after estimation of the model, we decided if the scale component might be warranted.

The ordinal-dependent variables were expressed in the form of short statements as follows:

- 1) In the process of making decisions I profit mainly by intuition and gut-feelings ("Intuition" variable);
- 2) In the process of making decisions I profit by information, derived from marketing research studies ("Information" variable) - where response answers were measured on 5-point Likert scale in agree/disagree format:
1 = I completely agree, 2 = I agree, 3 = In either agree nor disagree, 4 = I disagree, 5 = I completely disagree.

On the other hand, in choosing predictors, we identified variable: Formal position occupied by the respondent in the company (abbreviation - "Position"), measured on three levels: "Director of marketing/sales department", "Product manager", "Co-/Owner, Vice-/Chairman, Managing Director – CEO" and his/her *Education level* ("Education"), measured on two levels respectively: "Master degree" and "MBA degree"

In the next phase, an appropriate link function, in order to match the structure of the data with the hypothesized models, was selected. The problem is that, in literature one can find at least a new options which are worth considering (Table 3 with functions – the link function is a transformation of the cumulative probabilities that allows estimation of the model) and there is no clear consensus over the best choice of link function that fits best to the empirical data. And although some of the functions behave similarly, in many instances (particularly the logit, complementary log-log and negative log-log function), there appear situations where choice of link function can break the assumptions of regression model. In some cases where the initial model performs poorly, we need to test alternative link functions in order to see if a better optional model can be constructed with a different option, i.e., a link function.

Function type	Mathematical form	Typical application
Logit	$\log(x/(1-x))$	Evenly distributed categories
Complementary log-log	$\log(-\log(1-x))$	Higher categories more probable
Negative log-log	$-\log(-\log(x))$	Lower categories more probable
Probit	$F-1(x)$	Latent variable is normally distributed
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Source: McCullagh 1980

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Model fitting information									
Model	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.
Intercept only	94,13	-	-	63,26	-	-	94,13	-	-
Final	92,33	1,801	0,61	58,82	4,44	0,22	89,79	4,34	0,23
Goodness-of-Fit									
	Chi-Square	df	Sig.	Chi-Square	df	Sig.	Chi-Square	df	Sig.
Pearson	24,97	17	0,09	16,27	12	0,18	22,65	17	0,16
Regression model with configuration of variables: Position, Education regressing on Information°									
Function	Logit			Complementary log-log			Negative log-log		
Model fitting function									
Model	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.	-2Log Likelihood	Chi-Square	Sig.
Intercept only	63,26	-	-	63,26	-	-	63,26	-	-
Final	56,48	6,77	0,08	58,82	4,44	0,22	56,33	6,93	0,07
Goodness-of-Fit									
	Chi-Square	df	Sig.	Chi-Square	df	Sig.	Chi-Square	df	Sig.
Pearson	13,01	12	0,37	16,27	12	0,18	12,55	12	0,40

Table 4. Model-fitting information for both ordinal regression models applied in the empirical study

Approaching now the interpretation of the empirical results, as it can be observed, the variable "Intuition" has been strongly skewed, showing asymmetry towards two categories: 1 and 2. Thus, for that variable a negative log-log function was applied, as the lower response categories seemed to be more probable. The bulk of cases were located in the lower range of the measurement scale (1 and 2). In contrast, values of variable "Information" were evenly distributed across all response categories, so the variable should be estimated according to a logit function. However, due to analytical

comparisons, we will use both functions: negative log-log and logit, as well as complementary log-log function. The results of comparisons were presented in Table 3. Another aspect of the analysis was the question whether both regression models can provide an adequate fit to data. To answer this question, the model-fitting information (see Table 4) was reexamined on the basis of $-2\log$ -like values for the intercept only in regarding the base line and final model with the predictors. While the log-likelihood statistics themselves are suspect due to the large number of empty cells in the model, the difference of log-likelihoods may usually be interpreted as chi-square distributed statistics. Therefore, (see Table 4) chi-square represents difference between -2 times the log-likelihood for the intercept-only model and that for the final model with in rounding error. Consequently, we could observe no significant values pertaining to chi-square statistics, which may indicate that each model as yielded a significant improvement over the base line intercept-only model. If we additionally compare the models with different link functions, we will notice that model (which included dependent variable "Intuition"), has obtained a slight improvement in case of negative log-log function and complementary log-log function, as compared to logit function. For example, in case of variable "Intuition", the chi-square statistics for the negative log-log (4,34) and complementary log-log logit function (1,80). This suggests that they are much better than logit function. The output of Table 4 presents also information about the goodness-of-fit (Pearson's chi-square statistic) for both models. This statistic tests whether the observed data are possibly inconsistent with the fitted model. If it is not, that is, if the significance values are large, then we would conclude that data and the model predictions are similar and the model, which is being under investigation, is good. Now, as can be observed, both regression models exceeded the level of $p = 0,05$ and proved adequacy, although one must admit it, they are still far from perfect

configuration. Finally, Table 5 presents the parameter estimates of both models. This information summarizes the effect of each predictor on dependent variable, and while the interpretation of coefficients in such models is difficult due to the nature of the link function, the relative values of the coefficients for factor levels (independent variables) provide insights into the effects in the model. Hence, a given factor level with a greater coefficient indicates a greater probability of being in one of the outcome (dependent variable) categories. As observed, the significance level of test for the model with variable "Information" estimated by logit function which was regressed by predictor "Position", is greater than 0.05 in two categories: 1 (represented by respondents as: Co-/Owner, Vice-/Chairman, Managing Director – CEO) and 2 (Director of Marketing/Sales Department) suggesting that their contribution to explanation of whether they use information, is due to chance.

The same situation repeats with variable "Education", within which category no. 2 (representing managers with MBA level of education) has obtained non-significant result. In fact, there were only two categories which displayed significant results of the relationships with "Information" variable, namely: product managers (defined by category with no. 3 of the variable "Position") and respondents with master degree (category no. 1 of variable "Education").

That means, functional managers pay more attention to information and the market research, than their colleagues from higher levels in the company hierarchy.

Regression model with variables Position and Education regressing on Information						Regression model with variables Position and Education regressing on Intuition					
Logit	Variable	Estimate	Std. Er	Wald	Sig.	Negative	Variable	Estimate	Std. Err	Wald	Sig.
Location	Pos.=1	0,88	0,35	1,16	0,28	Location	Pos.=1	3,92	0,32	28,35	0,00
	Pos.=2	0,72	0,38	2,14	0,13		Pos.=2	3,62	0,36	32,48	0,00

Table 5. Parameter estimates of regression models based on location, contribution of "Position" and "Education" to dependent variables "Intuition" and "Information"

Legend: Categories with their short terms: "Position" defining: Pos. 1 = Co-/Owner, Vice-/Chairman, Managing Director – CEO, Pos. 2 = Director of Marketing/Sales Department, Pos. 3 = Product Managers; and "Education" defining: Edu. 1 = Master, Edu. 2 = MBA.

Applying the same class of predictors ("Education" and "Position") in relation to another dependent variable describing "Intuition", as the source of making decisions in business environment, we could notice that all coefficients have obtained positive values. Therefore the probability associated with particular category of "Education" and "Position", of being in one of the lower categories (1 = I completely agree, 2 = I agree) of the outcome variable "Intuition", has increased. Especially, co-/owners, vice-/chairmen, managing directors were more likely to be located in the lower outcome categories, proving their stronger relationships with intuition. For the third group (i.e, product managers) although their relationship with intuition was also important, the parameter estimates were much smaller as compared with parameters in the group of top executives.

In general, the use of intuition vs. information can be seen as critical in differentiating levels, from top executives and board members to lower-level managers (product managers). The last group mentioned here pays more attention on informational sources.

6. Discussion and conclusions

It is a truism to say that all good decisions need constant monitoring and careful analysis, and there is no argument that managers need to acquire a great deal of information about the industry and social environment in which they operate. However, are these assumptions for managers in companies obvious? The results indicate on something different. It appears that decision makers are more inclined towards intuition or gut-feeling than information. The results might be surprising, especially if we consider the large share of intuition in the decision makers' life. To be clear, intuition although

cannot be completely excluded from the process of decision making, it cannot also predominate that process's intent practice, there are many proofs where only information derived from marketing research can be of real help. Since, managers pay attention to intuition prevails over the information, we can infer, it is due to the nature of problems they encounter in their work. For instance, the complexity of decisions and difficult tasks associated with information processing, makes managers to opt for effortless and simplified ways of comprehending the external environment. Perhaps, too much information discourages them from using information to a larger extent. Another argument tells us that decision users make their choices under pressure time (Eisenhardt 1989, Hitt, Keats & DeMarie 1998, Perlow, Okhuysen & Reppenning 2002). Given this, intuition helps to reduce the time needed to undertake prompt decisions. The frequent use of intuition, however, is not a panacea for all the managerial problems, especially it cannot denote a simple replacement over information which delivers objective understanding of the external market conditions surrounding the company. The frequent use of intuition may needlessly facilitate the decision problems at the expense of their accuracy. In fact, biases which are often committed by managers, can be largely avoided with objective information. Although intuition can be practiced in many decision processes, it cannot completely replace information. It can, however, be a real support for the managerial judgments and thinking (the intuition, under certain conditions may indeed facilitate rapid and effective decision making in business organizations). Marketing information contributes to increased validity of the decisions in its own unique way. Perhaps, managers using partially intuition and information in specific situations, and balancing between these two spheres would behave more reasonably

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