# AN EMPIRICAL ANALYSIS ON MAJORITY DECISION-MAKING CONDITIONS OF LEADERSHIP: A SPECIAL CONSIDERATION ON AMBIGUITY AND SHARED TASK REPRESENTATIONS 

Ahmet ERKASAP ${ }^{1}$<br>Dr, Gedik University, Türkiye


#### Abstract

The capacity of decision-making groups to integrate and understand information is a major factor in how efficient they are. Therefore, groups that use decision-making would frequently produce decisions of higher quality, especially when they have task portrayals that emphasize clarification of data pertinent to the choice made in the absence of direct management. In the current work, we suggest two things. At first, when assignment portrayals are shared, deciding with most of them will be more effective and secondly, his advantageous effect will be more noticeable when there is a high level of management confusion. These theories were tested utilizing a sample of groups that participated in a challenge for 7 weeks, carrying out a business modeling. As anticipated, sharing task portrayals increased the potency of majority rule, and this effect was greater when there was uncertainty in the leadership. The results expand on and refine previous studies on decision-making guidelines, the function of portrayals of cooperative work, and leadership clarification. This proposed system uses ANOVA to obtain results.


Key words: Group Decision-Making, Decision Rules, Shared Task Representations, Leadership Ambiguity, Team Performance, Fast \&Frugal, Team İnnovation, SCM Knowledge .
http://dx.doi.org/10.47832/2757-5403.22.11ahmet.erkasap@gedik.edu.tr; $\underline{h t t p s: / / o r c i d . o r g / 0000-0002-6239-1700 ~}$

## INTRODUCTION

Long-running debates on useful and significant democratic decision-making have been sparked by concerns about the predictability of majority rule. Transitive individual preferences would result in order to intransitive social preferences, according to Condorcet (1785/1995), who made this observation. As a result of societal demands and technological developments. As a result of societal demands and technological developments, worldwide and interrelated civilization has emerged, as a result of societal demands and technological developments. Millions of people exchange ideas, opinions, and desires in what is recognized as a social network, which may very well lead to a broad-based worldwide judgment. Leaders make sense of the world and make decisions and Identify them by name. They develop more or less plausible stories based on their own experiences, which they use to come up with plausible explanations for the situations they simultaneously communicate these interpretations to others as they do so (Patriotta, 2019).

Several rulers cave to force and go back to their old ways, which is not a recipe for success right now. As long as the employees keep on working with negative emotions, these prolonging negative emotions will start causing a pressure (Özdemir, 2023). Modern complex problems cannot be solved with outdated methods. To make decisions that are appropriate for our complex world, rulers must undergo a significant paradigm shift (Hallo et.al., 2020). The use of analytical techniques and lots of data in decision-making making encouraged by concepts like business analytics or business intelligence. despite organizations. Researchers contend that even though technology for big data and BI have recently been adopted to support data-driven and evidence-based decision-making processes, intuition still plays a significant role in strategic decisions (Constantiou et.al., 2019). The military interprets and applies these ideas very differently, despite the fact that decisions about energy are influenced by underlying economic, safety, and environmental factors. Energy has the potential to enable hard power while also, arguably, acting as a tool of war in and of itself through denial in the field of defense. Making it clear that security in the army nexus should not be confused with traditional paradigms of energy security is one of the goals of this paper. Défense energy and security initiatives focus more on achieving military missions and strategic goals (Samaras, 2019).

Early 20th-century systematic research on leadership adopted a highly leader-centric approach and was primarily concerned with identifying universal characteristics and behavioral patterns that distinguish a few leaders from others (Oc, 2018). The idea of EL is especially relevant to such situations because it places a focus on encouraging selfmanagement and liberating persons from the constraints of disempowerment. 3 basic elements make up the EL process, according to Amundsen and Martinsen (2014): energy sharing, inspiration, and developing skills (Lee et.al., 2018). Modern leadership coordination refers to the specific steps taken to coordinate the group's leadership behaviors. The importance of this behavioral coordination grows as shared leadership has risen (Nordbäck,
2019). Making decisions in dynamic project environments requires a lot of information and has a big impact on how quickly projects can be completed. Due to the intense dependencies between different project tasks, it is challenging for one decision-maker to address complex project decision problems using the limited information that is available to them (Wen et.al., 2018).

According to our findings from the present research, When assignment portrayals are shared, majority decision-making will be more efficient, and this beneficial effect will be more apparent when there is a high level of management confusion. These hypotheses were tested using a specimen of team members who participated in a challenging business simulated world for 7 weeks. As expected, sharing assignment representations improved the efficiency of majority decision-making, and this impact was stronger when there was uncertainty in the leadership.

## Foremost contribution of this work:

- When task representations are distributed, When management confusion is greater, majority decision-making is more efficient, and this beneficial effect will be more apparent.
- Utilizing a sample of teams that took part in a difficult 7 -week business modeling, these concepts were put to the test.
- As expected, task-sharing representations improved the efficiency of unanimous decisions, and this impact was greater when there was uncertainty in the leadership. This suggested system uses ANOVA to calculate the outcome.

Additionally, the specifics of this task are debated in more segments; part 2 covers the findings, and the section below provides an analysis of related existing work that uses the proposed approach. The proposed approach for the work is presented in section 3, and the experimentation and analysis of the work follow. The outcome and discussion are covered in section 4. The conclusion of this work is covered in Section 5.

## 2. LITERATURE REVIEW

Pilkiené, et al. (2018) investigated the control of horizontal leadership in projects. Using this methodology, contextual enablers, mechanisms, structures, practices, and processes, we investigate the governance of temporary horizontal rulers in projects. We contend that certain combinations of the aforementioned elements lead to the development of control and trust. This advances research and the development of relevant theories. Future formalization of this instance of balanced leadership may significantly improve project outcomes.

Kanadlı, et al. (2018) discussed the significance of board transparency and the chairperson's leadership effectiveness in boosting women's participation in board judgment. Although there have been a few more women on corporate boards in the past ten years, their minority status suggests that they will still face social challenges. We discovered an

Women directors' contributions to board decision-making are associated with the presence of women of colour. in a sample of 146 Norwegian businesses. Future studies may examine whether and how the solutions proposed in this study affect, for instance, the contribution of strong or interlocked women directors to strategic choices and selection committees.

Kienlin, et al. (2020) proposed pre-testing a health professional training module on discussing decisions with patients in shared decision-making. the Medical Research Council Framework for Complicated Initiatives was used to guide a descriptive mixed methods study that included surveys and focus groups. Two distinct applications were used to deliver the training: module AB and module ABC , each with a different set of learning objectives, level of interactivity, and duration. Following requests for SDM training for health professionals in academic and medical settings, groups of participants were sequentially enrolled.

Shortland, et al. (2020) presented Decision-making in critical incidents: A naturalistic evaluation of the most undesirable possible options. This paper argues that many stressful events lack a derivative and lack prior experience, making some serious incident decisionmaking extremely difficult. One (or more) of the variables identified in this study may increase the amount of delay in decision-making, which can be investigated further in the long term by using these research methods.

Sander (2018) suggested the value of political leadership and sound judgment in implementing ecosystem-based management in Canada and Norway. This essay uses implementation theory to explain the various outcomes. First off, the two governments' leadership styles and planning organizational structures differ noticeably. The Norwegian governmentattempted to use a "whole-of-government" strategy while top-down leading the process. These procedures reflect various national policy philosophies and led to the creation of policy designs that gave implementation motivation that was very different from one another. The Stockholder Advisory Group decided to evaluate the tasks as a final resort in order to get suggestions for future initiatives.

Ding, et al. (2018) analyzed Finding Group Intra-Relations and Group Leaders for Making Large-Scale Decisions with Sparse Depiction Fuzzy Intuitionistic Clustering. The LSDM problem is solved using a SRIFC approach in this paper. Decision makers are divided into a number of interest groups in the suggested SRIFC approach based on their interest preferences and the relation sparsity in their intuitionistic fuzzy assessments. In light of this, we are considering developing a novel CRP for LSDM problems that would use moderators and the proposed SRIFC approach to manage relationships between DMs.

Viedma, et al. (2017) had investigated Making Decisions in a Better Way: Scenarios and Obstacles for Fuzzy and Linguistic Decision Making. This essay has three objectives. First, a review of the primary paradigms for computing with words-based representations of judgment data and fuzzy set theory is provided, along with data on their varying expressive richness and complexity stages. We also emphasized the critical need for performance
assessment and real-world validation standards that ensure contributions made now and, in the future, will have real (as opposed to merely theoretical) value.

Alnoor, et al. (2022) discussed The Transportation Industry's Transition to Sustainability: Benchmarking for the Oil Industry Based on Multi-Criteria Decision-Making and Extension of Linear Diophantine Fuzzy Rough Sets. In order to contribute to the development of a sustainable transportation sector, here suggest in this study a novel benchmarking of oil companies using the MCDM methods and the extension of the linear Diophantine fuzzy rough sets (LDFRSs). There are two phases to the suggested methodology.

Karam, et al. (2020) had proposed Using Multi-Criteria Decision-Making Technology to Recruit Employee Candidates while Integrating Systems Reasoning Abilities. The goal of this study is to use systems thinking abilities as an additional tool for selection when hiring potential employees. The suggested framework gives HRM professionals a tried-and-true tool for evaluating and vetting potential employees of an organization based on their level of systems thinking abilities while reducing uncertainties in complex decision-making surroundings using a fuzzy linguistic approach. Future research can make use of scenariobased virtual reality modules to measure people's systems thinking abilities in order to overcome the drawbacks of using conventional survey designs.

Rijmenam, et al. (2019) presented avoid being Turkey: How big data analytics alters the game of strategy in ambiguous and uncertain situations. In this article, we extend this viewpoint and propose that big data analytics can offer crucial insights to assist in changing strategy formulation. This research adds to our understanding of big data analytics as a dynamic organizational capability that aids in strategic decision-making during ambiguous and uncertain times. More case studies and publications in high-impact journals will be beneficial for future research.

Scott et al. (2018) suggested the Effects of implicity shared leadership concepts on the development and performance of management networks in groups. In order to forecast the form and design of emerging rulers networks and subsequent group results, We put forth the concept of ILNTs, which combines contemporary social network theories of management in groups with implied management and base of supporters hypotheses. Future research should examine whether the MTS leadership structures adjust to take into account the ILNTs of the component teams, especially if those element teams share the same ILNT.

Karabon (2021) analyzed investigating how the pedagogical decision-making process is influenced by the preservice teachers' knowledge of young children. This essay specifically addresses early childhood education. I contend that PSTs' personal knowledge resources act as the primary impetus for pedagogical judgment. Future studies examining how PSTs examine long-held beliefs about a teacher's professional identity through the examination of lesson plans and video reflections would contribute to the body of literature on FoK.

Harrington et al. (2018) estimated making decisions during the search for missing persons. The goal of this research was to identify the various choices that are made during
cases of missing people, taking into account the variables that sway these choices and the key areas of focus throughout the incident. The goal of this study is to advance the conceptual approach of CDM by utilizing a two-tiered approach to analysis to identify the practitioners' primary areas of focus as they advance through missing child lookups. Future research will investigate the decision-making procedures of family and professional carers during missing incidents using a similar methodology.

Garg and Chen (2020) discussed Making decisions for multi-attribute groups using qrung ortho pair fuzzy sets' neutrality aggregation operators. Here, we combine the To illustrate new operational laws, the research for q-ROFSs incorporates the qualities of the membership coefficients sum and the communication between the degree of membership For upcoming work, we will suggest new MAGDM approaches based on granular computing methods.

Voort, et al. (2019) proposed Politics and rationalism in algorithms. Will the potential of big data withstand the dynamics of governmental decision-making? We make a distinction between the rational and political points of view, as well as between the information and decision logic. how the data are related to one another analysis and decision-making is the main topic of this case study. The se queries are intended to help us identify which theses provide the most insightful responses. We have no desire to compare the cases. Instead, we examine whether the cases are consistent with the hypotheses and what the implications are for upcoming empirical research.

## 3. PROPOSED METHODOLOGY

An online poll that was distributed to every group member as a portion of a larger ongoing case group participating in supply chain modeling was used to gather the information needed for this study. As a result, the article utilizes both subjective and objective measures. Our predictors are therefore based on individuals' subjective opinions of how teams operate, while our outcome is a quantitative evaluation of how well teams performed. The study cohort included 94 four-person teams made up of 376 participants who took part in the modelling either voluntarily or as a component of a supply chain management class. The majority of individuals were working in the industry with processes in general management, operations, money planning, and supply chain.

Among the people involved, the supply chain management people make up a tiny minority. The online poll evaluating perceptions of work teams had an $83 \%$ response rate ( 258 persons from 82 teams). Due to one group's poor performance during the game, they were eliminated from the evaluation, and as an outcome, they were not given rankings for the response variable. Teams required at least 2 of the 4 team members to complete the survey in order for them to be involved in the latest iteration.

## MEASURES

They finished a survey that assessed different team methods following the attendees' finished match, but first, they had heard comments on their last presentation. Cooperative Task Representations Van Ginkel and van Knippenberg's 5 items were used to gauge the degree to which members of the group had reached a consensus that the task required the information exchange of distributed information, constructive debate and data explanation, and the integration of this data into the final ruling. To fit the game's setting, the objects were slightly modified. As an illustration, consider the statement, "For top quality performance, it was important to base the judgment as much on data."

## MAJORITY DECISION-MAKING

To determine which decision-making principle was applied by the groups, we created a one-item estimate with 3 possible responses. "How were choices made in your team?" was the question posed to respondents. and they could respond by choosing just one of 3 choices to indicate whether their group made the decisions by majority vote, unanimous vote, or by the influence of one member. The type of questionnaire that each respondent chose was coded as 1 , while the other two options received codes of 0 . The percentage of teammates who indicated that a vast bulk of their team utilized a judgment process was calculated as majority decision-making. For instance, if two members of a four-person team chose the option "We had a majority rule" (coded as 1), the probability of $50 \%$ of the population decided.

## LEADERSHIP AMBIGUITY(LA)

We employed a single item with multiple established answer options. How much does your group have a general boss or organizer, we questioned each respondent. and to indicate the degree to where a general group lead was in charge, they could choose only one of 5 answer options. The type of questionnaire that every respondent selected was coded as 1 , and the other four options were coded as 0 . We calculated leadership ambiguity using the same method as West. The percentage of teammates who denoted that "There is no clear leader/coordinator" was used to evaluate LA. In a four-person team, for instance, if three group members chose the response "There isn't a clear leader/coordinator" $75 \%$ of rulers were ambiguous.

## TEAM PERFORMANCE

The effectiveness of the firm's success in the simulation game was assessed using the fictional firm's team ranking for Return on Investment (ROI). Every group wanted to get the best return on investment. Along with producing as much revenue as possible, proper
funding management was crucial. Competitors could evaluate their own achievement each round and compare it with that of other teams Participants had to make increasingly challenging choices during every round as complexity increased over time. As a result, it was crucial for teams to select a plan and make decisions based on that strategy. In addition, each season's performance was assessed individually, so teams didn't profit or lose out as an outcome of their poor or excellent choices in previous rounds.

### 3.1. HYPOTHESES

## MAJORITY DECISION-MAKING AND GROUP WORK

According to earlier work, teams with interdependent persons who must decide based on specific data disseminated within the group are especially important for being capable of discussing, integrating, and sharing data. This is because these teams are more likely to reach betterquality choices. In fact, in order for distributed data to be utilized successfully, it must first exterior during a group conversation, be carefully expanded upon, and then be successfully incorporated into the judgment.

The definition of a group decision rule is "a rule that specifies, for any given set of individual preferences regarding some set of alternatives, what the team preferred option or choice is with respect to the alternatives." Both the majority rule and the rule of unanimity are the two that are most frequently used in groups, though it is also conceivable that the majority of decisions are made by a commanding team leader or domineering team members. These guidelines play a significant role in establishing the context for how data is likely to be debated and incorporated into final decisions. Group decisions may require more conversation, be trickier to reach, and take into account a wider range of viewpoints when unanimity is required, for example, every teammate must concur.

It has been demonstrated that using shared preferences as a basis for a decisionmaking rule can result in more effective and much less time-consuming decision-making in complicated decision surroundings. According to studies, a majority rule may encourage teammates to act in the interests of the team when there is an alignment of interests and a shared goal. Additionally, if there is conformity and time constraints within the group, vital but It might be less probable that peculiarly held information will appear as teammates with a minority choice may not express their views. It's crucial to note that these mistakes in sharing and incorporating shared data into choices may have a compounding impact on the team if teammates must create multiple interconnected judgment calling in scorporate environments in a short amount of time, like, for example, in case studies. We contend that a majority decision-making rule may have a negative impact on teamwork in complicated interdependent tasks.

HYPOTHESIS 1: Team performance will be negatively impacted by majority decisionmaking.

## MAJORITY DECISION-MAKING AND TEAMWORK: THE MODERATING ROLE OF SHARED TASK PORTRAYALS

The correlation between majority decision-making and teamwork, however, may not be as clear-cut as it first appears because the efficiency of the decision rule appears to be greatly influenced by how much the teammates consult and incorporate their individually held data. Provided that certain groups function superior to others in discussion and incorporating this data, it is likely that elements that encourage these processes will play a significant moderating role in the association among team players and the majority rule for judgment. In order to achieve this, prior studies have shown how crucial shared task representations are in enabling the effective use of information sources in groups.

Additionally, research reveals that groups who were successful in creating a shared understanding of what factors influence organizational winning and losing outperformed their counterparts who were unsuccessful in doing so in leadership modelling .Because the success of organizations using majority rule will depend largely on whether uniquely distributed data will area and be integrated into the decisions, we contend that the extent to which they have developed shared task representations may either enable or hinder teamwork.

Contrarily, we anticipate that groups with lower concentrations of shared task portrayals will likely perform worse under a majority-decision rule because teammates may be more motivated to concentrate on effectively pooling desires and making good decisions rather than incorporating critical info into the judgment. In conclusion, we anticipate that shared task portrayals and a majority decision-making rule will communicate to estimate team performance. We particularly believe that:

HYPOTHESIS 2: The degree of majority decision-making and teamwork are correlated, but to a moderate degree, when shared task portrayals are visible.

- There are many shared task portrayals. A positive correlation exists between effective teamwork and majority decision-making.
- There is a poor correlation between teamwork and majority decision-making, and shared task portrayals are small.


## MAJORITY DECISION-MAKING AND TEAMWORK: THE MODERATING ROLE OF SHARED TASK REPRESENTATIONS AND LEADERSHIP AMBIGUITY

The degree to which teammates are clear about who is in charge of leadership within the group can also help or limit their ability to voice their views and consider important but special data to create judgment. There have been numerous arguments that suggest that good leadership is a very important component of a successful group. In this regard, the majority of leadership studies have concentrated on the impacts of a solitary officially appointed leader on group dynamics and achievement, with recent times seeing an increase in interest in emergent leadership and spread/collective leadership. The reality that groups
may normally vary in the degree to which it is clear who is responsible for leadership in the group is ignored by these lines of research, despite the fact that they have been essential in furthering our understanding of how various kinds of management may impact teamwork.

We suggest that leadership ambiguity may establish a background that magnifies the possible impact of shared task portrayals on teamwork for teammates utilizing majority rule, whose success will depend on teammates debating and spreading individually held data and incorporating it into a final judgment. In particular, under situations of high majority decision-making, we anticipate that strong leadership ambiguity should enhance the favorable vs. unfavrable impacts of shared task portrayals on teamwork. We will discuss our reasoning below. We suggest that leadership ambiguity may establish a background that magnifies the possible impact of shared task portrayals on teamwork for teammates utilizing majority rule, whose success will depend on teammates debating and spreading individually held data and incorporating it into a final judgment. In particular, under situations of high majority decision-making, we anticipate that strong leadership ambiguity should enhance the favorable (vs. unfavorable) impacts of shared task portrayals on teamwork. We will discuss our reasoning below.

Even in these teams, a clear team leader might dominate the discussion, eliminate dissenting opinions, and cause a premature "closing of the group mind" thereby preventing thorough information elaboration. Leaders have traditionally been valued for their communication and decision-making skills (Özdemir, 2022). A clear leader may also have a disproportionate effect on the final decision by influencing teammates' desires during the voting system, potentially negating the potential benefits of shared task portrayals on teamwork.

Finally, we argue that team spirit on difficult multiple tasks is estimated by shared task portrayals, leadership ambiguity, and majority decision-making. More specifically, we believe that high levels of leadership ambiguity will amplify the positive effects of shared task portrayals on group work in circumstances where majority decision-making is common. Assuming low levels of leadership ambiguity, we anticipate that the impacts of shared task representations on teamwork will be low pronounced for groups that operate under the majority rule. This is because the presence of a clear leader may either make up for low levels of shared task representations by serving as a coordinator or it may prevent groups from effectively utilising elevated amounts of shared task representations by taking control of group procedures. It is important to note that in our hypothesis, we make specific a priori assumptions about the expected response of the slopes under good leadership ambiguity situations but not under poor leadership ambiguity situations.

HYPOTHESIS 3: By using shared task portrayals and leadership ambiguity, it will be possible to co - operatively mitigate the connection between the degree of majority decisionmaking and teamwork. To put it another way:

- Shared work portrayals combined with high rates of management confusion will favorably influence the relationship between majority decision-making and team spirit.
- The functioning of a group will be negatively correlated with majority decisionmaking when shared task representations are limited and leadership ambiguity is large.


FIGURE 1. Modeling study of interconnections among shared task representations, the clear majority, and competitive teamwork (ROI). Keep in mind that the hypotheses are interconnected; for example, H3 denotes a 3-modeling approach to teamwork (ROI).

### 3.2 DATA COLLECTION

Our concept and evaluation were geared toward team-level analysis, and the reliant interest variable was a factor at the group level, specifically the performance of the team as conveyed in ROI. Despite the fact that participants were nested within groups in the present study, multilevel techniques were not used because the response variable for these kinds of analyses must be at the least level of the analysis. Although the game supplied individual basis scores, Due to the game's need for cross-functional integration and a clear plan to successfully complete, these scores did not determine the final group-level outcomes.

The best method for data analysis is to aggregate the information at the team level because the current study concentrated on a team response variable. As demonstrated above, the ICC (1) score and the RWG (j) valuation were sufficient to sustain aggregation. Because the valuation of ICC (2) also depends on group size, with higher scores of ICC (2) as strike force size increases, we decided to rely mainly on the outcomes of ICC (1) in deciding whether or not to aggregate the individual-level scores. Therefore, in order to represent shared task representations at the group level, we used the mean of the scores of the
teammates. It was not true for majority rule and team management ambiguity because these questions had separate answer classifications and no relative score.

## 4. RESULTS AND DISCUSSION

### 4.1. STATISTICAL DATA:

The mean and standard deviation of the "age, gender, marital status, hour spent, management simulation exp, SCM knowledge, fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employee, majority decision making, shared task representation, leadership ambiguity" were shown in the table 1.

Table 1: Mean and Standard Deviation of the Statistical Data

| CATEGORIZATION | MEAN | STANDARD |
| :--- | :---: | :---: |
| DEVIATION |  |  |

The statistical data of the "Age, gender, marital status, hour spent, management simulation exp, SCM knowledge, fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employee, majority decision making, shared task representation, leadership ambiguity" is
stated by the mean values of $2.81,1.76,1.27,1.97,1.54,1.52,3.93,3.93,4.03,4.00,3.96$, $3.91,3.89,3.94,3.93,3.86,3.92$ respectively and the standard deviation values of 1.378 , $.740, .447, .816, .499, .500,1.026, .978, .979,1.012,1.018, .999, .930,1.008,1.013, .994$, .946 respectively.

### 4.2. FREQUENCY ON USAGE BASIS:

Table 2: Frequency and Percentage based on usage

| CATEGORY | SUB-CATEGORY | FREQUENCY | PERCENTAGE |
| :---: | :---: | :---: | :---: |
| AGE | 20-25 | 90 | 23.9 |
|  | 26-30 | 78 | 20.7 |
|  | 31-35 | 71 | 18.9 |
|  | 36-40 | 87 | 23.1 |
|  | Above41 | 50 | 13.3 |
| MARITAL STATUS | Married | 160 | 42.6 |
|  | Unmarried | 148 | 39.4 |
|  | Divorced/Separated | 68 | 18.1 |
|  | Total | 376 | 100.0 |
| GENDER | Male | 273 | 72.6 |
|  | Female | 103 | 27.4 |
|  | Total | 376 | 100.0 |
| HOUR SPENT | 1-5 | 131 | 34.8 |
|  | 5-10 | 126 | 33.5 |
|  | 10-15 | 119 | 31.6 |
|  | Total | 376 | 100.0 |
| MANAGEMENT SIMULATION EXP | Not at all | 173 | 46.0 |
|  | Well experienced | 203 | 54.0 |
|  | Total | 376 | 100.0 |
| SCM KNOWLEDGE | Very Little | 180 | 47.9 |
|  | Lot | 196 | 52.1 |
|  | Total | 376 | 100.0 |
| FAST \& FRUGAL | Strongly agree | 7 | 1.9 |
|  | Agree | 61 | 13.8 |
|  | Neutral | 8 | 4.5 |


|  | Disagree | 192 | 51.1 |
| :---: | :---: | :---: | :---: |
|  | Strongly disagree | 108 | 28.7 |
|  | Total | 376 | 100.0 |
| INFORMATION SHARING | Strongly agree | 5 | 1.3 |
|  | Agree | 49 | 13.0 |
|  | Neutral | 21 | 5.6 |
|  | Disagree | 202 | 53.7 |
|  | Strongly disagree | 99 | 26.3 |
|  | Total | 376 | 100 |
| ELABORATION | Strongly agree | 1 | . 3 |
|  | Agree | 52 | 13.8 |
|  | Neutral | 17 | 4.5 |
|  | Disagree | 180 | 47.9 |
|  | Strongly disagree | 126 | 33.5 |
|  | Total | 376 | 100 |
| INTEGRATION | Strongly agree | 7 | 1.9 |
|  | Agree | 46 | 12.2 |
|  | Neutral | 17 | 4.5 |
|  | Disagree | 186 | 49.5 |
|  | Strongly disagree | 120 | 31.9 |
|  | Total | 376 | 100 |
| TEAM PERFORMANCE | Strongly agree | 6 | 1.6 |
|  | Agree | 51 | 13.6 |
|  | Neutral | 18 | 4.8 |
|  | Disagree | 188 | 50.0 |
|  | Strongly disagree | 113 | 30.1 |
|  | Total | 376 | 100 |
| ABSENCE OFLEADER | Strongly agree | 5 | 1.3 |
|  | Agree | 52 | 13.8 |
|  | Neutral | 14 | 3.7 |
|  | Disagree | 195 | 54.3 |
|  | Strongly disagree | 110 | 26.9 |


|  | Total | 376 | 100 |
| :---: | :---: | :---: | :---: |
| TEAM INNOVATION | Strongly agree | 2 | . 5 |
|  | Agree | 53 | 14.1 |
|  | Neutral | 10 | 2.7 |
|  | Disagree | 221 | 58.8 |
|  | Strongly disagree | 90 | 23.9 |
|  | Total | 376 | 100 |
| COMMUNICATION WITH EMPLOYEE | Strongly agree | 7 | 1.9 |
|  | Agree | 49 | 13.0 |
|  | Neutral | 9 | 2.4 |
|  | Disagree | 197 | 54.8 |
|  | Strongly disagree | 114 | 27.9 |
|  | Total | 376 | 100 |
| MAJORITY <br> DECISION <br> MAKING | Strongly agree | 6 | 1.6 |
|  | Agree | 52 | 13.8 |
|  | Neutral | 9 | 2.4 |
|  | Disagree | 194 | 51.6 |
|  | Strongly disagree | 115 | 30.6 |
|  | Total | 376 | 100 |
| SHARED TASKREPRESENTATION | Strongly agree | 8 | 2.1 |
|  | Agree | 50 | 13.3 |
|  | Neutral | 13 | 3.5 |
|  | Disagree | 221 | 58.8 |
|  | Strongly disagree | 84 | 22.3 |
|  | Total | 376 | 100 |
| LEADERSHIP AMBIGUITY | Strongly agree | 3 | . 8 |
|  | Agree | 50 | 13.3 |
|  | Neutral | 12 | 3.2 |
|  | Disagree | 220 | 58.5 |
|  | Strongly disagree | 91 | 24.2 |
|  | Total | 376 | 100 |

The frequency and percentage based on usage are shown in the above table. People in the 31 to 35 age group have high percentages (21.7) and frequencies (26), while those over 41 have lower percentages and frequencies (9.4 and 9). People in the 31 to 35 age group have high percentages (21.7) and frequencies (26), while those over 41 have lower percentages and frequencies (9.4 and 9). Next, the marital status of married people's frequency and percentage are 34 and 35.4. unmarried people's frequency and percentage are 55 and 57.3. divorce/separated persons frequency is 7 and percentage is 7.3 total frequency is 96 and total percentage is 100 .

Next, the gender male frequency and percentage is 70 and 72.9. females are 26 and 27.1. total frequency and percentage are 96 and 100. Next hour spends 1 to 5 hours the frequency and percentage are 28 and 29.2. 5 to 10 hours the frequency and percentage are 32 and 33.3. 10 to 15 hours the frequency and percentage are 36 and 37.5. The total frequency is 36 and the total percentage is 100 .

Next the management simulation experience people not at all categories frequency and percentage is 27 and 28.1. well experience category people are 69 and 71.9 . total frequency and percentage are 96 and 71.9. Next SCM knowledge of very few people's frequency is 20 and the percentage is 20.8 . lot of people's frequency and percentage is 76 and 79.2 . Next is the fast and frugal category some peoples strongly agree that frequency and percentage level is high 41 and 42.7. strongly disagree people are very low that frequency and percentage is 7 and 7.3. The next category is information and sharing strongly agree people's frequency and percentage are 41 and 42.7 it's a high level. Strongly disagree ranges are 7 and 7.3 it's a low level. The next category is elaboration strongly agrees people's frequency and percentage are 40 and 41.7 it is a high level. Strongly disagree ranges are 8 and 8.3 it's a low level. The next category is integration strongly agree people's frequency and percentage are 44 and 45.8 whichis a high level. Strongly disagree ranges are 6 and 6.3 it's a low level. Next category is team performance strongly agree people's frequency and percentage are 41 and 42.7 which is a high level. Strongly disagree ranges are 7 and 7.3 it's a low level. The next category is the absence of a leader who strongly agrees people's frequency and percentages are 40 and 41.7 it's a high level. Strongly disagree ranges are 8 and 8.3 it's a low level. The next category is team innovation strongly agree people's frequency and percentage are 41 and 42.7 which is a high level. Strongly disagree ranges are 7 and 7.3 it's a low level. The next category is communication with employees strongly agreeing people's frequency and percentages are 38 and 39.6 which is a high level. Strongly disagree ranges are 8 and 8.3 it's a low level.

The next category is the majority of decision-making strongly agree people's frequency and percentage is 40 and 41.7 it's a high level. Strongly disagree ranges are 7 and 7.3 it's a low level. The next category is leadership ambiguity strongly agree people's frequency and percentage are 40 and 41.7 which is a high level. Strongly disagree ranges are 8 and 8.3 it's a low level.

### 4.3. DESCRIPTIVE DATA BASED ON AGE

Table 3. Descriptive data based on age

| CATEGORY | SUBCATEGORY | MEAN | STANDARD DEVIATION |
| :---: | :---: | :---: | :---: |
| FAST 8\% FRUGAL | 20-25 | 1.75 | 0.910 |
|  | 26-30 | 1.95 | 0.759 |
|  | 31-35 | 1.65 | 0.977 |
|  | 36-40 | 1.81 | 0.814 |
|  | Above 41 | 1.67 | 1.000 |
|  | Total | 1.77 | 0.876 |
| INFORMATION SHARING | 20-25 | 1.80 | 0.894 |
|  | 26-30 | 1.70 | 0.923 |
|  | 31-35 | 2.04 | 0.824 |
|  | 36-40 | 1.81 | 0.981 |
|  | Above 41 | 1.78 | 1.093 |
|  | Total | 1.84 | 0.910 |
| ELABORATION | 20-25 | 2.15 | 0.988 |
|  | 26-30 | 2.05 | 1.146 |
|  | 31-35 | 1.54 | 0.647 |
|  | 36-40 | 1.86 | 0.854 |
|  | Above 41 | 1.56 | 0.726 |
|  | Total | 1.84 | 0.910 |
| INTEGRATION | 20-25 | 1.50 | 0.607 |
|  | 26-30 | 2.10 | 1.071 |
|  | 31-35 | 1.85 | 0.967 |
|  | 36-40 | 1.71 | 0.845 |
|  | Above 41 | 1.56 | 0.527 |
|  | Total | 1.77 | 0.876 |
| TEAM PERFORMANCE | 20-25 | 1.75 | 0.851 |
|  | 26-30 | 1.95 | 0.945 |
|  | 31-35 | 1.77 | 0.908 |
|  | 36-40 | 1.71 | 0.902 |


|  | Above 41 | 2.33 | 1.000 |
| :---: | :---: | :---: | :---: |
|  | Total | 1.84 | 0.910 |
| ABSENCE OFLEADER | 20-25 | 1.45 | 0.510 |
|  | 26-30 | 1.70 | 0.733 |
|  | 31-35 | 1.77 | 0.951 |
|  | 36-40 | 2.48 | 1.030 |
|  | Above 41 | 1.78 | 0.972 |
|  | Total | 1.84 | 0.910 |
| TEAM INNOVATION | 20-25 | 1.55 | 0.686 |
|  | 26-30 | 2.15 | 1.040 |
|  | 31-35 | 1.88 | 0.909 |
|  | 36-40 | 1.81 | 0.928 |
|  | Above 41 | 1.78 | 0.972 |
|  | Total | 1.84 | 0.910 |
| COMMUNICATION WITH EMPLOYEE | 20-25 | 2.05 | 1.050 |
|  | 26-30 | 1.80 | 0.768 |
|  | 31-35 | 1.85 | 0.967 |
|  | 36-40 | 1.62 | 0.805 |
|  | Above 41 | 1.89 | 1.054 |
|  | Total | 1.83 | 0.914 |
| MAJORITY DECISION MAKING | 20-25 | 1.65 | 0.587 |
|  | 26-30 | 1.70 | 0.801 |
|  | 31-35 | 2.04 | 1.183 |
|  | 36-40 | 1.67 | 0.856 |
|  | Above 41 | 1.78 | 0.667 |
|  | Total | 1.78 | 0.885 |
| SHARED TASKREPRESENTATION | 20-25 | 1.70 | 0.865 |
|  | 26-30 | 1.70 | 0.923 |
|  | 31-35 | 2.08 | 0.935 |
|  | 36-40 | 1.76 | 0.831 |
|  | Above 41 | 2.11 | 1.054 |
|  | Total | 1.85 | 0.906 |


| LEADERSHIP <br> AMBIGUITY | $20-25$ | 1.80 | 1.005 |
| :--- | :--- | :---: | :---: |
|  | $26-30$ | 1.95 | 1.050 |
|  | $31-35$ | 1.62 | 0.697 |
|  | $36-40$ | 2.05 | 1.024 |
|  | Above 41 | 1.89 | 0.601 |
|  | Total | 1.84 | 0.910 |

Here, Table 3 explains descriptive data based on age, fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employees, majority decision making, shared task representation, leadership ambiguity values of mean and standard deviation in age categories.

### 4.4. ANOVA TABLE

Table 4. ANOVA table

| CATEGORY | SUBCATEGORY | MEAN SQUARE | FREQUENCY | SIG |
| :---: | :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | Between groups | 0.284 | 0.360 | 0.837 |
|  | Within groups | 0.789 |  |  |
| INFORMATION SHARING | Between groups | 0.375 | 0.443 | 0.778 |
|  | Within groups | 0.848 |  |  |
| ELABORATION | Between groups | 1.475 | 1.845 | 0.127 |
|  | Within groups | 0.800 |  |  |
| INTEGRATION | Between groups | 1.066 | 1.413 | 0.236 |
|  | Within groups | 0.755 |  |  |
| TEAM PERFORMANCE | Between groups | 0.764 | 0.919 | 0.456 |
|  | Within groups | 0.831 |  |  |
| ABSENCE OFLEADER | Between groups | 3.024 | 4.135 | 0.004 |
|  | Within groups | 0.731 |  |  |
| TEAM INNOVATION | Between groups | 0.927 | 1.126 | 0.349 |
|  | Within groups | 0.824 |  |  |
| COMMUNICATION WITH EMPLOYEE | Between groups | 0.489 | 0.576 | 0.681 |
|  | Within groups | 0.850 |  |  |
| MAJORITY DECISION MAKING | Between groups | 0.618 | 0.782 | 0.540 |
|  | Within groups | 0.790 |  |  |
| SHARED TASKREPRESENTATION | Between groups | 0.753 | 0.915 | 0.459 |
|  | Within groups | 0.824 |  |  |
| LEADERSHIP AMBIGUITY | Between groups | 0.628 | 0.750 | 0.560 |
|  | Within groups | 0.837 |  |  |

In this ANOVA Table 4 explains age, gender, marital status, hours spent, management simulation exp, SCM knowledge, fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employees, majority decision making, shared task representation, leadership ambiguity values of mean square, frequency and sig in between groups and within groups.

### 4.5. DESCRIPTIVE DATA BASED ON GENDER

TABLE 5. Descriptive data based on gender

| CATEGORY | SUB- CATEGORY | MEAN | STANDARD DEVIATION |
| :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | Male | 1.79 | 0.797 |
|  | Female | 1.73 | 1.079 |
|  | Total | 1.77 | 0.876 |
| INFORMATION SHARING | Male | 1.89 | 0.925 |
|  | Female | 1.73 | 0.874 |
|  | Total | 1.84 | 0.910 |
| ELABORATION | Male | 1.93 | 0.937 |
|  | Female | 1.62 | 0.804 |
|  | Total | 1.84 | 0.910 |
| INTEGRATION | Male | 1.74 | 0.879 |
|  | Female | 1.85 | 0.881 |
|  | Total | 1.77 | 0.876 |
| TEAM PERFORMANCE | Male | 1.79 | 0.883 |
|  | Female | 2.00 | 0.980 |
|  | Total | 1.84 | 0.910 |
| ABSENCE OFLEADER | Male | 1.91 | 0.959 |
|  | Female | 1.65 | 0.745 |
|  | Total | 1.84 | 0.910 |
| TEAM INNOVATION | Male | 1.91 | 0.959 |
|  | Female | 1.65 | 0.745 |
|  | Total | 1.84 | 0.910 |
| COMMUNICATION WITH EMPLOYEE | Male | 1.83 | 0.884 |
|  | Female | 1.85 | 1.008 |
|  | Total | 1.83 | 0.914 |
| MAJORITY DECISION MAKING | Male | 1.67 | 0.880 |
|  | Female | 2.08 | 0.845 |
|  | Total | 1.78 | 0.885 |
| SHARED TASK | Male | 1.89 | 0.941 |


| REPRESENTATION | Female | 1.77 | 0.815 |
| :--- | :--- | :---: | :---: |
|  | Total | 1.85 | 0.906 |
| LEADERSHIP <br> AMBIGUITY | Male | 1.69 | 0.790 |
|  | Female | 2.27 | 1.079 |
|  | Total | 1.84 | 0.910 |

In this table 5 explains descriptive data based on gender fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employee, majority decision making, shared task representation, leadership ambiguity values of mean and standard deviation in gender categories.

### 4.6. ANOVA TABLE

Table 6. ANOVA table

| CATEGORY | SUBCATEGORY | $\begin{aligned} & \text { MEAN } \\ & \text { SQUARE } \end{aligned}$ | FREQUEN CY | SIG |
| :---: | :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | Between groups | 0.057 | 0.074 | 0.786 |
|  | Within groups | 0.776 |  |  |
| INFORMATION SHARING | Between groups | 0.455 | 0.547 | 0.461 |
|  | Within groups | 0.832 |  |  |
| ELABORATION | Between groups | 1.860 | 2.276 | 0.135 |
|  | Within groups | 0.817 |  |  |
| INTEGRATION | Between groups | 0.202 | 0.261 | 0.610 |
|  | Within groups | 0.774 |  |  |
| TEAM PERFORMANCE | Between groups | 0.871 | 1.052 | 0.308 |
|  | Within groups | 0.828 |  |  |
| ABSENCE OFLEADER | Between groups | 1.286 | 1.562 | 0.214 |
|  | Within groups | 0.823 |  |  |
| TEAM INNOVATION | Between groups | 1.286 | 1.562 | 0.214 |
|  | Within groups | 0.823 |  |  |
| COMMUNICATION WITH EMPLOYEE | Between groups | 0.006 | 0.007 | 0.934 |
|  | Within groups | 0.844 |  |  |
| MAJORITY <br> DECISION MAKING | Between groups | 3.117 | 4.110 | 0.045 |
|  | Within groups | 0.758 |  |  |
| SHARED TASK | Between groups | 0.257 | 0.311 | 0.578 |


| REPRESENTATION | Within groups | 0.827 |  |  |
| :--- | :--- | :---: | :---: | :---: |
| LEADERSHIP <br> AMBIGUITY | Between groups | 6.455 | 8.404 | 0.005 |
|  | Within groups | 0.768 |  |  |

This ANOVA table 6 explains fast and cheap, information sharing, elaboration, integration, team performance, absence of a leader, team innovation, communication with employee, majority decision making, shared task representation, leadership ambiguity values of mean square, frequency, and sig in between groups and within groups.

### 4.7. DESCRIPTIVE DATA BASED ON MARITAL STATUS

Table 7. Descriptive data based on marital status

| CATEGORY | SUBCATEGORY | MEAN | STANDARD DEVIATION |
| :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | MARRIED | 1.65 | 0.884 |
|  | UNMARRIED | 1.87 | 0.904 |
|  | DIVORCED OR SEPERATED | 1.57 | 0.535 |
|  | TOTAL | 1.77 | 0.876 |
| INFORMATION SHARING | MARRIED | 2.00 | 0.985 |
|  | UNMARRIED | 1.75 | 0.844 |
|  | DIVORCED OR SEPERATED | 1.86 | 1.069 |
|  | TOTAL | 1.84 | 0.910 |
| ELABORATION | MARRIED | 1.97 | 1.029 |
|  | UNMARRIED | 1.76 | 0.860 |
|  | DIVORCED OR SEPERATED | 1.86 | 0.690 |
|  | TOTAL | 1.84 | 0.910 |
| INTEGRATION | MARRIED | 1.71 | 0.836 |
|  | UNMARRIED | 1.84 | 0.938 |
|  | DIVORCED OR SEPERATED | 1.57 | 0.535 |
|  | TOTAL | 1.77 | 0.876 |
| TEAM <br> PERFORMANCE | MARRIED | 1.85 | 0.989 |
|  | UNMARRIED | 1.78 | 0.786 |


|  | DIVORCED OR SEPERATED | 2.29 | 1.380 |
| :---: | :---: | :---: | :---: |
|  | TOTAL | 1.84 | 0.910 |
| ABSENCE OFLEADER | MARRIED | 1.85 | 0.857 |
|  | UNMARRIED | 1.80 | 0.931 |
|  | DIVORCED OR SEPERATED | 2.14 | 1.069 |
|  | TOTAL | 1.84 | 0.910 |
| TEAM INNOVATION | MARRIED | 1.76 | 0.923 |
|  | UNMARRIED | 1.84 | 0.856 |
|  | DIVORCED OR SEPERATED | 2.29 | 1.254 |
|  | TOTAL | 1.84 | 0.910 |
| COMMUNICATION WITH EMPLOYEE | MARRIED | 1.74 | 0.864 |
|  | UNMARRIED | 1.95 | 0.911 |
|  | DIVORCED OR SEPERATED | 1.43 | 1.134 |
|  | TOTAL | 1.83 | 0.914 |
| MAJORITY <br> DECISION MAKING | MARRIED | 1.79 | 0.845 |
|  | UNMARRIED | 1.82 | 0.925 |
|  | DIVORCED OR SEPERATED | 1.43 | 0.787 |
|  | TOTAL | 1.78 | 0.885 |
| SHARED TASKREPRESENTATION | MARRIED | 1.85 | 0.857 |
|  | UNMARRIED | 1.82 | 0.884 |
|  | DIVORCED OR SEPERATED | 2.14 | 1.345 |
|  | TOTAL | 1.85 | 0.906 |
| LEADERSHIP AMBIGUITY | MARRIED | 1.85 | 0.784 |
|  | UNMARRIED | 1.93 | 0.997 |
|  | DIVORCED OR SEPERATED | 1.14 | 0.378 |
|  | TOTAL | 1.84 | 0.910 |

In this table, 7 explains descriptive data based on marital status fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employee, majority decision making, shared task representation, leadership ambiguity values of mean and standard deviation in marital status categories.

### 4.8. ANOVA TABLE

Table 8. ANOVA table

| CATEGORY | SUBCATEGORY | $\begin{aligned} & \text { MEAN } \\ & \text { SQUARE } \end{aligned}$ | CY | SIG |
| :---: | :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | Between groups | 0.685 | 0.890 | 0.414 |
|  | Within groups | 0.770 |  |  |
| INFORMATION SHARING | Between groups | 0.681 | 0.820 | 0.444 |
|  | Within groups | 0.831 |  |  |
| ELABORATION | Between groups | 0.451 | 0.539 | 0.585 |
|  | Within groups | 0.836 |  |  |
| INTEGRATION | Between groups | 0.329 | 0.423 | 0.656 |
|  | Within groups | 0.777 |  |  |
| TEAM PERFORMANCE | Between groups | 0.791 | 0.954 | 0.389 |
|  | Within groups | 0.829 |  |  |
| ABSENCE OF LEADER | Between groups | 0.367 | 0.438 | 0.646 |
|  | Within groups | 0.838 |  |  |
| TEAM INNOVATION | Between groups | 0.791 | 0.955 | 0.389 |
|  | Within groups | 0.829 |  |  |
| COMMUNICATION WITH EMPLOYEE | Between groups | 1.089 | 1.305 | 0.276 |
|  | Within groups | 0.830 |  |  |
| MAJORITY DECISION MAKING | Between groups | 0.476 | 0.602 | 0.550 |
|  | Within groups | 0.790 |  |  |
| SHARED TASKREPRESENTATION | Between groups | 0.327 | 0.394 | 0.676 |
|  | Within groups | 0.831 |  |  |
| LEADERSHIP AMBIGUITY | Between groups | 1.913 | 2.377 | 0.098 |
|  | Within groups | 0.805 |  |  |

This ANOVA table 8 explains fast and cheap, information sharing, elaboration, integration, team performance, absence of a leader, team innovation, communication with
employees, majority decision making, shared task representation, leadership ambiguity values of mean square, frequency, and sig in between groups and within groups.

### 4.9. DESCRIPTIVE DATA BASED ON HOUR SPEND

Table 9. Descriptive data based on hours spent

| CATEGORY | RY SUBCATEGO | MEAN | STANDARD DEVIATION |
| :---: | :---: | :---: | :---: |
| FASTFRUGAL | 1-5 | 1.86 | 0.970 |
|  | 5-10 | 1.72 | 0.772 |
|  | 10-15 | 1.75 | 0.906 |
|  | TOTAL | 177 | 0.876 |
| INFORMATION SHARING | 1-5 | 2.04 | 1.138 |
|  | 5-10 | 1.69 | 0.859 |
|  | 10-15 | 1.83 | 0.737 |
|  | TOTAL | 1.84 | 0.910 |
| ELABORATION | 1-5 | 1.79 | 1.067 |
|  | 5-10 | 1.84 | 0.808 |
|  | 10-15 | 1.89 | 0.887 |
|  | TOTAL | 1.84 | 0.910 |
| INTEGRATION | 1-5 | 1.93 | 1.016 |
|  | 5-10 | 1.63 | 0.871 |
|  | 10-15 | 1.78 | 0.760 |
|  | TOTAL | 1.77 | 0.876 |
| TEAMPERFORMANCE | 1-5 | 2.00 | 0.816 |
|  | 5-10 | 1.81 | 0.965 |
|  | 10-15 | 1.75 | 0.937 |
|  | TOTAL | 1.84 | 0.910 |
| $\text { ABSENCE } \quad \text { OF }$ <br> LEADER | 1-5 | 2.04 | 0.922 |
|  | 5-10 | 1.81 | 1.030 |
|  | 10-15 | 1.72 | 0.779 |
|  | TOTAL | 1.84 | 0.910 |
| TEAM | 1-5 | 1.68 | 0.819 |


| INNOVATION | 5-10 | 1.91 | 0.928 |
| :---: | :---: | :---: | :---: |
|  | 10-15 | 1.92 | 0.967 |
|  | TOTAL | 1.84 | 0.910 |
| COMMUNICATI | 1-5 | 1.61 | 0.685 |
|  | 5-10 | 2.03 | 1.062 |
|  | 10-15 | 1.83 | 0.910 |
|  | TOTAL | 1.83 | 0.914 |
| MAJORITY | 1-5 | 1.05 | 0.793 |
|  | 5-10 | 2.06 | 0.948 |
|  | 10-15 | 1.75 | 0.841 |
|  | TOTAL | 1.78 | 0.885 |
| SHARED TASKREPRESENTATION | 1-5 | 1.82 | 0.723 |
|  | 5-10 | 1.84 | 0.847 |
|  | 10-15 | 1.89 | 1.090 |
|  | TOTAL | 1.85 | 0.906 |
| LEADERSHIP AMBIGUITY | 1-5 | 2.11 | 1.066 |
|  | 5-10 | 1.69 | 0.738 |
|  | 10-15 | 1.78 | 0.898 |
|  | TOTAL | 1.84 | 0.910 |

This table 9 explains descriptive data based on marital status fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employees, majority decision making, shared task representation, leadership ambiguity values of mean and standard deviation in hours categories.
4.10. ANOVA TABLE

Table 10. ANOVA table

| CATEGORY | ORY | MEAN | $\begin{aligned} & \text { FREQU } \\ & \text { ENCY } \end{aligned}$ | SIG |
| :---: | :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | Between groups | 0.156 | 0.199 | $\begin{array}{ll} \hline & 0.8 \\ 20 & \end{array}$ |
|  | Within groups | 0.781 |  |  |
| INFORMATION SHARING | Between groups | 0.908 | 1.100 | $\begin{array}{ll} \hline & 0.3 \\ 37 & \end{array}$ |
|  | Within groups | 0.826 |  |  |
| ELABORATION | Between groups | 0.084 | 0.099 | $\begin{array}{ll} \hline & 0.9 \\ 06 & \end{array}$ |
|  | Within groups | 0.844 |  |  |
| INTEGRATION | Between groups | 0.689 | 0.896 | $\begin{array}{ll} \hline & 0.4 \\ 12 & \end{array}$ |
|  | Within groups | 0.770 |  |  |
| TEAM PERFORMANCE | Between groups | 0.516 | 0.618 | $\begin{array}{ll} \hline & 0.5 \\ 41 & \end{array}$ |
|  | Within groups | 0.835 |  |  |
| ABSENCE OF LEADER | Between groups | 0.797 | 0.962 | $\begin{array}{ll} \hline & 0.3 \\ 86 & \end{array}$ |
|  | Within groups | 0.829 |  |  |
| TEAM INNOVATION | Between groups | 0.540 | 0.648 | $\begin{array}{ll} \hline & 0.5 \\ 26 & \end{array}$ |
|  | Within groups | 0.834 |  |  |
| COMMUNICATION <br> WITH EMPLOYEE | Between groups | 1.343 | 1.630 | $\begin{array}{ll} \hline & 0.2 \\ 02 & \end{array}$ |
|  | Within groups | 1.824 |  |  |
| MAJORITY DECISION  <br> MAKING  | Between groups | 2.391 | 3.193 | $\begin{array}{ll} \hline & 0.0 \\ 46 & \end{array}$ |
|  | Within groups | 0.749 |  |  |
| SHARED TASKREPRESENTATION | Between groups | 0.038 | 0.046 | $\begin{array}{ll}  & 0.9 \\ 55 & \end{array}$ |
|  | Within groups | 0.837 |  |  |


| LEADERSHIP AMBIGUITY | Between groups | 1.440 | 1.768 | 0.1 |
| :--- | :--- | :---: | :---: | :---: |
|  |  |  |  | 76 |
|  | Within groups | 0.815 |  |  |

This ANOVA table 10 explains fast and cheap, information sharing, elaboration, integration, team performance, absence of a leader, team innovation, communication with employees, majority decision making, shared task representation, leadership ambiguity values of mean square, frequency, and sig in between groups and within groups

### 4.12. ANOVA TABLE

Table 11. ANOVA table

| CATEGORY | SUBCATEGORY | MEAN SQUARE | $\begin{array}{ll}  & \text { FREQUEN } \\ \text { CY } \end{array}$ | SIG |
| :---: | :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | Between groups | 6.449 | 9.115 | 0.003 |
|  | Within groups | 0.708 |  |  |
| INFORMATION SHARING | Between groups | 0.399 | 0.479 | 0.491 |
|  | Within groups | 0.833 |  |  |
| ELABORATION | Between groups | 0.077 | 0.092 | 0.763 |
|  | Within groups | 0.836 |  |  |
| INTEGRATION | Between groups | 0.749 | 0.975 | 0.326 |
|  | Within groups | 0.768 |  |  |
| TEAM <br> PERFORMANCE | Between groups | 1.178 | 1.429 | 0.235 |
|  | Within groups | 0.824 |  |  |
| ABSENCE OFLEADER | Between groups | 2.685 | 3.322 | 0.072 |
|  | Within groups | 0.808 |  |  |
| TEAM INNOVATION | Between groups | 0.002 | 0.003 | 0.957 |
|  | Within groups | 0.837 |  |  |
| COMMUNICATION WITH EMPLOYEE | Between groups | 2.177 | 2.652 | 0.107 |
|  | Within groups | 0.821 |  |  |
| MAJORITY <br> DECISION MAKING | Between groups | 0.493 | 0.627 | 0.430 |
|  | Within groups | 0.780 |  |  |
| SHARED TASKREPRESENTATION | Between groups | 0.219 | 0.265 | 0.608 |
|  | Within groups | 0.827 |  |  |
| LEADERSHIP AMBIGUITY | Between groups | 0.534 | 0.642 | 0.425 |
|  | Within groups | 0.831 |  |  |

This ANOVA table 11 explains fast and cheap, information sharing, elaboration, integration, team performance, absence of a leader, team innovation, communication with employee, majority decision making, shared task representation, leadership ambiguity values of mean square, frequency, and sig in between groups and within groups

### 4.13. DESCRIPTIVE DATA BASED ON SCM KNOWLEDGE

Table 12. descriptive data based on SCM knowledge

| CATEGORY | SUB- CATEGORY | MEAN | STANDARD DEVIATION |
| :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | VERY LITTLE | 1.85 | 0.988 |
|  | LOT | 1.75 | 0.850 |
|  | TOTAL | 1.77 | 0.876 |
| INFORMATION SHARING | VERY LITTLE | 2.00 | 0.973 |
|  | LOT | 1.80 | 0.895 |
|  | TOTAL | 1.84 | 0.910 |
| ELABORATION | VERY LITTLE | 1.90 | 0.718 |
|  | LOT | 1.83 | 0.958 |
|  | TOTAL | 1.84 | 0.910 |
| INTEGRATION | VERY LITTLE | 1.85 | 1.040 |
|  | LOT | 1.75 | 0.835 |
|  | TOTAL | 1.77 | 0.876 |
| TEAM <br> PERFORMANCE | VERY LITTLE | 1.80 | 0.834 |
|  | LOT | 1.86 | 0.934 |
|  | TOTAL | 1.84 | 0.910 |
| ABSENCE OFLEADER | VERY LITTLE | 2.05 | 0.887 |
|  | LOT | 1.79 | 0.914 |
|  | TOTAL | 1.84 | 0.910 |
| TEAM INNOVATION | VERY LITTLE | 1.80 | 1.005 |
|  | LOT | 1.86 | 0.890 |
|  | TOTAL | 1.84 | 0.910 |
| COMMUNICATION WITH EMPLOYEE | VERY LITTLE | 1.80 | 0.951 |
|  | LOT | 1.84 | 0.910 |
|  | TOTAL | 1.83 | 0.914 |


| MAJORITY <br> DECISION MAKING | VERY LITTLE | 1.75 | 0.786 |
| :--- | :--- | :---: | :---: |
|  | LOT | 1.79 | 0.914 |
|  | TOTAL | 1.78 | 0.885 |
| SHARED <br> REPRESENTATION | VERY LITTLE | 1.65 | 0.587 |
|  | LOT | 1.91 | 0.969 |
|  | TOTAL | 1.85 | 0.906 |
| LEADERSHIP <br> AMBIGUITY | VERY LITTLE | 1.60 | 0.681 |
|  | LOT | 1.91 | 0.955 |
|  | TOTAL | 1.84 | 0.910 |

In this table 12 explains descriptive data based on experience fast and frugal, information sharing, elaboration, integration, team performance, absence of leader, team innovation, communication with employee, majority decision making, shared task representation, leadership ambiguity values of mean and standard deviation in SCM knowledge categories.

### 4.14. ANOVA TABLE

Table 13. ANOVA table

| CATEGORY | SUBCATEGORY | MEAN SQUARE | FREQUEN CY | SIG |
| :---: | :---: | :---: | :---: | :---: |
| FAST \& FRUGAL | Between groups | 0.158 | 0.204 | 0.652 |
|  | Within groups | 0.774 |  |  |
| INFORMATION SHARING | Between groups | 0.617 | 0.743 | 0.391 |
|  | Within groups | 0.830 |  |  |
| ELABORATION | Between groups | 0.080 | 0.096 | 0.758 |
|  | Within groups | 0.836 |  |  |
| INTEGRATION | Between groups | 0.158 | 0.204 | 0.652 |
|  | Within groups | 0.774 |  |  |
| TEAM <br> PERFORMANCE | Between groups | 0.048 | 0.058 | 0.810 |
|  | Within groups | 0.836 |  |  |
| ABSENCE OFLEADER | Between groups | 1.075 | 1.302 | 0.257 |
|  | Within groups | 0.825 |  |  |
| TEAM INNOVATION | Between groups | 0.048 | 0.058 | 0.810 |
|  | Within groups | 0.836 |  |  |
| COMM UNICATION | Between groups | 0.028 | 0.033 | 0.856 |


| WITH EMPLOYEE | Within groups | 0.844 |  |  |
| :--- | :--- | :---: | :---: | :---: |
| MAJORITY <br> DECISION MAKING | Between groups | 0.025 | 0.031 | 0.860 |
|  | Within groups | 0.791 |  |  |
| SHARED <br> REPRESENTATION | Between groups | 1.053 | 1.287 | 0.259 |
|  | Within groups | 0.818 |  | 0.180 |
| LEADERSHIP <br> AMBIGUITY | Between groups | 1.501 | 1.829 | 0.81 |
|  | Within groups | 0.821 |  |  |

This ANOVA table 13 explains fast and frugal, information sharing, elaboration, integration, team performance, absence of a leader, team innovation, communication with employees, majority decision making, shared task representation, leadership ambiguity values of mean square, frequency, and sig in between groups and within groups.

## 5. REGRESSION ANALYSIS

### 5.1 Regression Analysis on hypothesis 1

Table 14: Regression Table 1
(a) Model Summary

| "R | R <br> Square | Adjusted <br> R Square | Std. Error of the Estimate | Change Statistics |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | R Square Change | F <br> Change | df1 | df2 | Sig. $\quad$ F <br> Change |
| 464a | . 215 | . 213 | . 903 | . 215 | 99.918 | 1 | 365 | . 000 |

a. Predictors: (Constant), MDM, b. Dependent Variable: TP

Table 15 (a) shows that the model explains approximately $21.5 \%$ of the variance in the dependent variable, with a correlation coefficient of 0.464a. The model is statistically significant with an F-statistic of 99.918 ( p < 0.001 ). The adjusted R Square is similar to R Square, suggesting that additional predictors don't contribute significantly. The standard error of the estimate is about 0.903, indicating the model's prediction accuracy.
(b) ANOVA

| Model |  | Sum of Squares | df | Mean <br> Square | F | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{1}$ | Regression | 81.518 | 1 | 81.518 | 99.918 | $.000^{\mathrm{b}}$ |
|  | Residual | 297.784 | 365 | .816 |  |  |
|  | Total | 379.302 | 366 |  |  |  |

a. Dependent Variable: TP, b. Predictors: (Constant), MDM

Table 15 (b) explains a significant portion of the variation in the data, as indicated by the high Sum of Squares (81.518) and a significant F-statistic (99.918), with an extremely
low p-value (.000b). The "Residual" row shows the unexplained variation in the data. This analysis appears to be statistically robust, suggesting a strong relationship between variables.
(c) Coefficients

| "Model |  | UC |  | SC | t | Sig. | CS |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | B | Std. Err | Beta |  |  | Tolerance | B |
| 1 | (Constant) | 2.124 | . 189 |  | 11.221 | . 000 |  |  |
|  | MDM | . 466 | . 047 | . 464 | 9.996 | . 000 | 1.000 | 1.000 |

UC=Unstandardized Coefficients, SC=Standardized Coefficients, a. Dependent Variable: TP Table 14 (c) indicates that the MDM predictor has a significant impact on the dependent variable, as shown by its low p-value (0.000) and a substantial standardized coefficient ( 0.464 ). The Tolerance values suggest low multicollinearity, and the constant term is also provided. Hence hypothesis 1 is significant.

### 5.2 Regression Analysis on Hypothesis 2

Table 15: Regression Table 2
(a) Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the <br> Estimate |
| :--- | :--- | :--- | :--- | :--- |
| 1 | $.609^{a}$ | .371 | .370 | .789 |

a. Predictors: (Constant), MDM

Table 15 (a) presents summary statistics for a regression model. The Rsquared value of 0.371 indicates that the model explains $37.1 \%$ of the variance in the data. The adjusted R-squared (0.370) accounts for model complexity. The Std. Error of the Estimate (0.789) measures the typical prediction error. Overall, the model provides a moderate fit to the data, explaining a significant portion of the variation.

## (b) ANOVA

| Model |  | Sum of Squares | df | Mean <br> Square | F | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Regression | 134.162 | 1 | 134.162 | 215.549 | $.000^{\mathrm{b}}$ |
|  | Residual | 227.184 | 365 | .622 |  |  |
| Total | 361.346 | 366 |  |  |  |  |

a. Dependent Variable: STR, b. Predictors: (Constant), MDM

Table 15 (b) explains a substantial amount of variation (Sum of Squares: 134.162) with a highly significant F -statistic (215.549) and a very low p-value (.000b), indicating a strong relationship between variables. The "Residual" row represents unexplained variation, and the "Total" row provides the total variation in the data. This suggests that the model is a good fit for the data, explaining most of the observed variability.
(c) Coefficients

| Mode1 |  | UC |  | SC | t | Sig. |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | B | Std. Error | Beta |  |  |
| $\mathbf{1}$ | (Constant) | 1.505 | .165 |  | 9.101 | .000 |
|  | MDM | .598 | .041 | .609 | 14.682 | .000 |

a. Dependent Variable: STR

Table 15 (c) displays results from a regression analysis. The "Constant" row provides the intercept, and the "MDM" row shows the coefficient for the predictor variable. "Unstandardized Coefficients" represent the actual changes in the dependent variable. "Standardized Coefficients" reflect the predictors' relative importance. The "t" statistic is high ( 9.101 for the constant and 14.682 for MDM), indicating significance. Both coefficients have low p-values (0.000), showing their strong impact on the dependent variable. MDM has a higher standardized coefficient (0.609), indicating greater importance in explaining variance. Hence hypothesis 2 is significant.

### 5.3 Sobel Test on Hypothesis 3

Table 16: Sobel Test

| Indirect <br> Effects | Input | Test <br> Statistics | P value |
| :---: | :---: | :---: | :---: |
| Coefficient a | 14.682 | 10.201 | 0.000 |
| Coefficient b | 14.184 |  |  |

Table 16 presents test statistics for indirect effects in a statistical model. "Coefficient a " and "Coefficient b" represent different pathways in the model. Both have significant test statistics (14.682 and 14.184) with very low p-values ( 0.000 ), indicating strong indirect effects in the analysis. Hence Hypothesis 3 is significant.

## CONCLUSION

Using what we learned from our ANOVA analysis as a springboard, we explore deeper into the complicated dynamics of team procedures and decision-making rules in an effort to gain a complete knowledge of how they interact with one another. Given the significant influence that decision-making norms have on the processes and outcomes of group activities, it is becoming increasingly obvious that dissecting the complexities of this relationship is of the utmost importance.

Our analysis, which runs counter to the received understanding, demonstrates that there is a subtle relationship between performance and decision-making that is based on consensus. It goes beyond a straightforward linear connection, highlighting the essential part played by elements such as ambiguous management and various depictions within the context of decision-making rather than focusing on the correlation itself. In light of our findings, it is clear that it is essential to cultivate an environment that encourages ambiguity in leadership as well as a variety of perspectives in order for the majority decision-making rule to function in the most effective manner possible.

Our research leads us to believe that the cultivation of shared task representations can provide major benefits to groups, particularly in terms of their practical applications. This not only functions as a unifying factor, but it also contributes to the efficacy of the processes that are used to make decisions. In addition, putting a conscious emphasis on the elaboration of data emerges as a strategic imperative, which acts as a catalyst for informed and nuanced decision-making.

In the treacherous terrain of collaborating with others and making decisions, the context of the situation is of the utmost importance. According to the findings of our research, it is beneficial to operate in settings that have a complex web of ambiguous leadership roles. These kinds of environments serve as fertile ground for the fruitful application of the rule of majority decision-making, particularly when confronted with difficult responsibilities.

In summary, the results of our in-depth investigation lend credence to the hypothesis that the synergy between team procedures and decision-making norms does not adhere to a universally applicable model. Rather than that, it is a delicate interplay that necessitates a deliberate alignment of components such as common representations, data elaboration, and leadership uncertainty. As we make progress in unraveling these complexities, we provide actionable insights for organizations who want to maximize the potential of the majority decision rule when it comes to handling the complexity of difficult collaborative endeavors.

## REFERENCE

Alnoor, A., Zaidan, A.A., Qahtan, S., Alsattar, H.A., Mohammed, R.T., Alazab, M., Teh, S.Y. and Albahri, A.S., (2022). Toward a sustainable transportation industry: Oil company benchmarking based on the extension of linear diophantine fuzzy rough sets and multicriteria decision-making methods. IEEE Transactions on Fuzzy Systems.

Constantiou, I., Shollo, A. and Vendelø, M.T., (2019). Mobilizing intuitive judgment during organizational decision-making: Business intelligence is not the only thing that matters. Decision Support Systems, 121, pp.51-61.

Ding, R.X., Wang, X., Shang, K., Liu, B. and Herrera, F., (2018). Sparse representationbased intuitionistic fuzzy clustering approach to find the group intra-relations and group leaders for large-scale decision-making. IEEE Transactions on Fuzzy Systems, 27(3), pp.559-573.

Garg, H. and Chen, S.M., (2020). Multi-attribute group decision-making based on neutrality aggregation operators of q-rung ortho pair fuzzy sets. Information Sciences, 517, pp.427-447.

Hallo, L., Nguyen, T., Gorod, A. and Tran, P., (2020). Effectivene ss of leadership decisionmaking in complex systems. Systems, 8(1), p.5.

Harrington, K., Brown, M., Pinchin, J. and Sharples, S., (2018). Decision-making within missing person search. Cognition, Technology \& Work, 20(4), pp.665-680.

Herrera-Viedma, E., Palomares, I., Li, C.C., Cabrerizo, F.J., Dong, Y., Chiclana, F. and Herrera, F., (2020). Revisiting fuzzy and linguistic decision making: scenarios and challenges for making wiser decisions in a better way. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 51(1), pp.191-208.

Kanadlı, S.B., Torchia, M. and Gabaldon, P., (2018). Increasing women's contribution onboard decision making: The importance of chairperson leadership efficacy and board openness. European Management Journal, 36(1), pp.91-104.

Karabon, A., (2021). Examining how early childhood preservice teacher funds of knowledge shapes pedagogical decision making. Teaching and Teacher Education, 106, p. 103449.

Karam, S., Nagahi, M., Dayarathna, V.L., Ma, J., Jaradat, R. and Hamilton, M., (2020). Integrating systems thinking skills with multi-criteria decision-making technology to recruit employee candidates. Expert Systems with Applications, 160, p. 113585.

Kienlin, S., Nytrøen, K., Stacey, D. and Kasper, J., (2020). Ready for shared decision making: Pretesting a training module for health professionals on sharing decisions with their patients. Journal of Evaluation in Clinical Practice, 26(2), pp.610-621.

Lee, A., Willis, S., and Tian, A.W., (2018). Empowering leadership: A meta-analytic examination of incremental contribution, mediation, and moderation. Journal of Organizational Behavior, 39(3), pp.306-325.

Nordbäck, E.S. and Espinosa, J.A., (2019). Effective coordination of shared leadership in global virtual teams. Journal of Management Information Systems, 36(1), pp.321350.

Oc, B., (2018). Contextual leadership: A systematic review of how contextual factors shape leadership and its outcomes. The Leadership Quarterly, 29(1), pp.218-235.

Özdemir, İ. (2022). Social Relationships and Leadership in A Sports Organization, in International Research in Social, Human and Administrative Sciences $-I$ (eds. Yıldız, İ. \& Batal, S.). pp. 37-55. Serüven Publication.

Özdemir, İ. (2023). Work/Family Border Theory Or Work-Life Spillover Theory: A MetaAnalytical Approach To Turnover Intention. Elektronik Sosyal Bilimler Dergisi, 22 (88) , 1392-1407. DOI: 10.17755/esosder. 1205895

Patriotta, G., (2019). Imagination, Self-Knowledge, and Poise: Jim March’s Lessons for Leadership. Journal of Management Studies, 56(8), pp.1753-1765.

Pilkienė, M., Alonderienė, R., Chmieliauskas, A., Šimkonis, S. and Müller, R., (2018). The governance of horizontal leadership in projects. International Journal of Project Management, 36(7), pp.913-924.

Samaras, C., Nuttall, W.J. and Bazilian, M., (2019). Energy and the military: Convergence of security, economic, and environmental decision-making. Energy strategy reviews, 26, p. 100409.

Sander, G., (2018). Ecosystem-based management in Canada and Norway: The importance of political leadership and effective decision-making for implementation. Ocean \& Coastal Management, 163, pp.485-497.

Sauermann, J., (2020). On the instability of majority decision-making: testing the implications of the 'chaos theorems' in a laboratory experiment. Theory and Decision, 88(4), pp.505-526.

Scott, C.P., Jiang, H., Wildman, J.L. and Griffith, R., (2018). The impact of implicit collective leadership theories on the emergence and effectiveness ofleadership networks in teams. Human Resource Management Review, 28(4), pp.464-481.

Shortland, N., Alison, L., Thompson, L., Barrett-Pink, C. and Swan, L., 2020. Choice and consequence: a naturalistic analysis of least-worst decision-making in critical incidents. Memory \& Cognition, 48(8), pp.1334-1345.

Urena, R., Chiclana, F., Melancon, G. and Herrera-Viedma, E., (2019). A social networkbased approach for consensus achievement in multiperson decision making. Information Fusion, 47, pp.72-87.

Van der Voort, H.G., Klievink, A.J., Arnaboldi, M. and Meijer, A.J., (2019). Rationality and politics of algorithms. Will the promise of big data survive the dynamics of public decision making? Government Information Quarterly, 36(1), pp.27-38.

Van Rijmenam, M., Erekhinskaya, T., Schweitzer, J. and Williams, M.A., (2019). Avoid being the Turkey: How big data analytics changes the game of strategy in times of ambiguity and uncertainty. Long Range Planning, 52(5), p. 101841.

Wen, Q., Qiang, M. and Gloor, P., (2018). Speeding up decision-making in a project environment: The effects of decision makers' collaboration network dynamics. International Journal of Project Management, 36(5), pp.819-831.

