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Decision Making using Vroom-Yetton-Jago Model with a Practical Application

M Vignesh

Fourth year, Department of Mechanical Engineering, Sri Sivasubramaniya Nadar College of Engineering, Chennai (603110), Tamil Nadu (INDIA)

Abstract: *The Vroom-Yetton-Jago decision Model is a tool for decision-making that's based on situational leadership. The model can be used by anyone, regardless of rank or position and helps to choose the right management style in various decision situations. The Vroom-Yetton model is designed to help one identify the best decision-making approach and leadership style to take, based on the existing circumstances.*

This paper provides a practical explanation of Vroom-Yetton-Jago model, its implementation procedure, advantages and applications in effective decision making. This paper entails an implementation example of the model in a real-life scenario using graphical illustrations. The shortcomings and limitations of the model have also been discussed.

Keywords: *Vroom-Yetton-Jago model, decision making, leadership styles, contingency theory and normative decision model.*

I. INTRODUCTION

Sometimes it's better that the leader takes all the decisions, whereas in other situations it's better if the group has a say. Most often leaders and managers are put in a state of quandary where they have to either choose between group unanimity or compromise on team consensus, either root for empathetic leadership or an autocratic style. In order to tackle such ethical conundrums, a decision-making methodology called Vroom-Yetton-Jago model is used.

Every leader needs to be astute and make good decisions. A methodical approach to decision making, such as the Vroom-Yetton decision model (with additional collaboration from Arthur Jago in 1988), allows us to bring consistency and order to a process that might otherwise feel idiosyncratic and instinctive. It can also help us to determine the most effectual means of reaching a decision. It suggests that the best way to make a decision is to base it on the current situation or problem; not the personal traits or style of the decision maker. The model was originally developed by Victor Vroom and Philip Yetton in their 1973 book, "Leadership and Decision Making." Vroom-Yetton-Jago model emphasizes that there is no single decision-making process that fits every scenario. Instead, it offers a number of different processes and directs us toward the one that is appropriate for the situation. For instance, if speed and divisiveness are required, then it will point towards an autocratic process. If collaboration is what's needed, then it will nudge us towards a more democratic process.

Researchers have found that leaders are more effective, and their teams more productive and satisfied, when they follow the model. The simplicity of Vroom Yetton model also means that anyone – from the boardroom to the factory floor – can use it. It can be particularly helpful in unprecedented or unusual situations; whether while making a decision about a day-to-day issue or dealing with a more complex problem, Vroom-Yetton-Jago model comes in handy.

II. OBJECTIVES

- A. To present a brief overview of Vroom-Yetton-Jago model
- B. Apply the model to a real-life scenario and appreciate its utility.

III. THREE FACTORS INFLUENCING A DECISION

According to the model, the decisions we make are affected by three main factors that work together: quality, the potential for collaboration, and the amount of time available.

- 1) **Quality:** This factor is concerned with the quality of the decision and the importance to make the best choice. It also considers the future consequences of the decision taken. The higher the quality of the decision, the more time and team members should be involved in the decision-making process.
- 2) **Commitment:** Is this a unitary decision that a manager can make without consulting the team or does it require collaboration and consultation from the team involved in the project? Involving team members to the decision-making process increases the quality of the output as well as the time taken to reach a decision.

- 3) **Time Constraints:** What is the time limit for making the decision? The more time available to the manager, the better-quality verdict can be reached and more team members can be consulted.

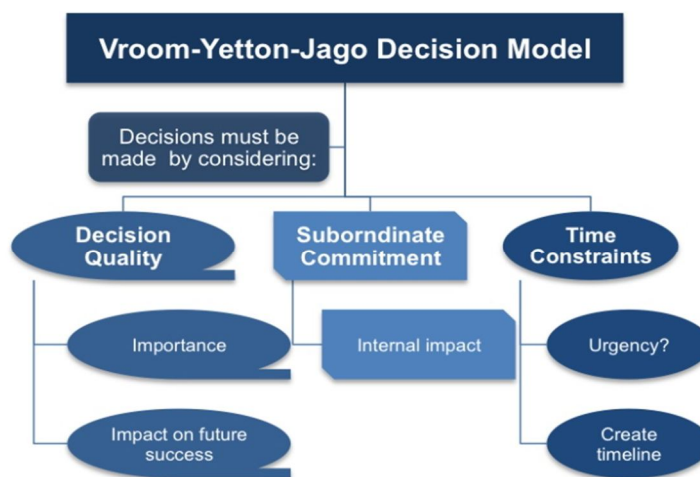


Fig. 2 Three factors influencing a decision

IV. VROOM-YETTON-JAGO MODEL QUESTIONS

In order to determine the influence each of the above three factors will have on a decision, Vroom, Yetton, and Jago defined the following catechism.

It comprises of eight Yes or No questions. They must be asked in a specific sequence in order to accurately identify the apt style of leadership that a particular decision must be presented and managed in.

This sequence is outlined below:

- 1) **Quality Requirement (QR):** How important is the quality of the decision?
- 2) **Commitment Requirement (CR):** How important is team members' commitment to the decision?
- 3) **Leader's Information (LI):** Does the leader have sufficient information to make a high-quality decision on his own?
- 4) **Problem Structure (ST):** Is the problem well structured (e.g., defined, clear, organized, lend itself to solution, time limited)?
- 5) **Commitment Probability (CP):** If the leader makes the decision by himself, is it reasonably certain that the subordinates would be committed to the decision?
- 6) **Goal Congruence (GC):** Do subordinates share the organizational goals to be attained in solving the problem?
- 7) **Subordinate conflict (CO):** Is conflict among group members over preferred solutions likely?
- 8) **Subordinate information (SI):** Do team members have sufficient information to make a high-quality decision?

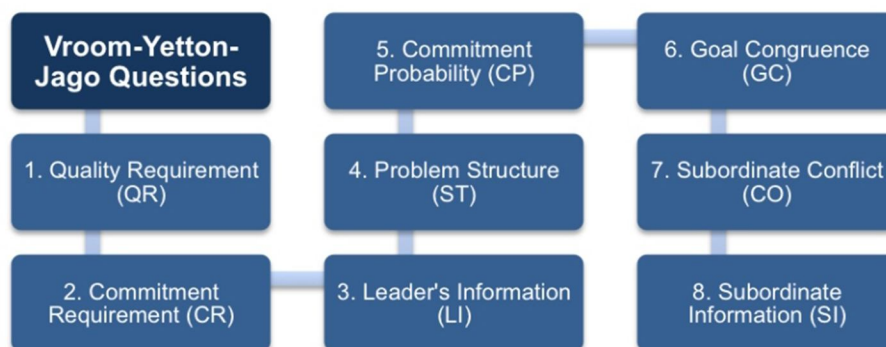


Fig 2 Vroom-Yetton-Jago model questions

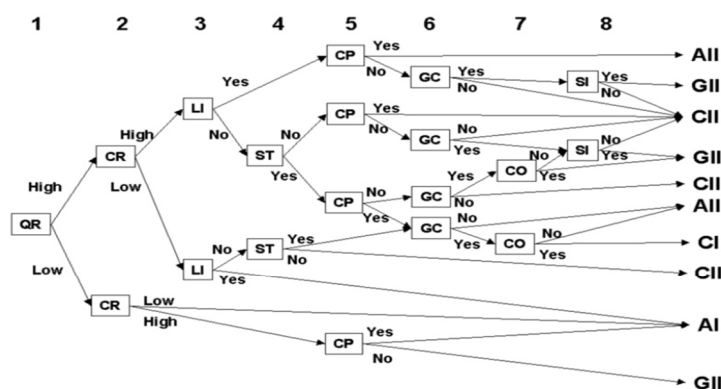
V. DECISION TREE AND LEADERSHIP STYLES

After answering the eight questions listed above, a decision tree is followed to arrive at the preferred and most effective leadership style and decision method.

There are five different types of leadership styles. They are described below:

(Note the significance of the annotations on the decision chart)

- 1) *Autocratic (AI)*: The leader makes the decision by himself using existing information without any communication with the team.
- 2) *Autocratic (AII)*: The leader consults with team members to get information, but makes the decision by himself or herself without informing the group.
- 3) *Consultative (CI)*: The leader consults the team members to get their opinion about the situation, but he or she makes the decision for themselves.
- 4) *Consultative (CII)*: The leader consults the team members seeking opinions and suggestions, but he or she makes the decision for himself or herself. In this type of leadership style, the leader is open to suggestions and ideas.
- 5) *Collaborative (GII)*: The leader shares the decision-making process with team members. He or she supports the team in making the decision and finding an answer that everyone agrees on.



Adapted from Vroom, V. H., & Jago, A. G. (1988). The new leadership: Managing participation in organizations. Englewood Cliffs, NJ: Prentice Hall.

Fig 3 Decision chart or Decision tree

VI. MERITS OF THE MODEL

- A. The method has a mechanical procedure to reach at a decision-making process.
- B. The model is highly flexible and the options allow the leader to make the perfect decision based on any situation.
- C. The model can provide a process for leaders to experience the decision-making process as an objective.
- D. The capability to organise the decision process is a quality of the model that many leaders could use to their advantage.
- E. It is especially useful for managers and leaders who are trying to balance the benefits of participative management with the need to make decisions effectively.

VII. LIMITATIONS OF THE MODEL

- A. The questions used in the model aren't always precise enough to reach ideal use.
- B. The questions used are imprecise too. Quality, for example, is a vague term and it can be difficult to give a straight "Yes" or "No" answer to the factors or questions.
- C. The personal factors and characteristics of the leader aren't considered.
- D. It fails to take into account subtleties, such as the emotions and dynamics of your team, and the task's complexity.
- E. The model may not be efficient when applied to a large team or group of people.

VIII. APPLICATION OF THE MODEL

A. Scenario

In an endeavour to excel through continuous improvement, a private university wanted to revamp its organizational climate survey by adding new measures and attributes to it.

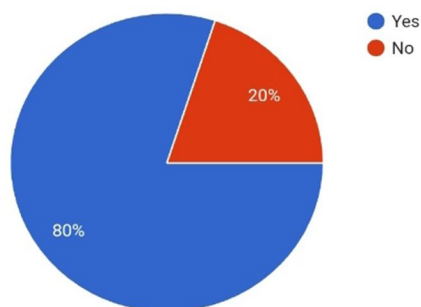
A team of 10 student volunteers (team leaders) were assigned to oversee the project, each leader designated for a specific task. Each volunteer had 4 team members to coordinate the activities.

The ten leaders were asked to adopt their convenient leadership style. However, before the start of proceedings, a form was circulated by the organisation to the leaders to answer the eight fundamental questions of Vroom-Yetton-Jago model.

The summary of the responses was recorded and analysed.

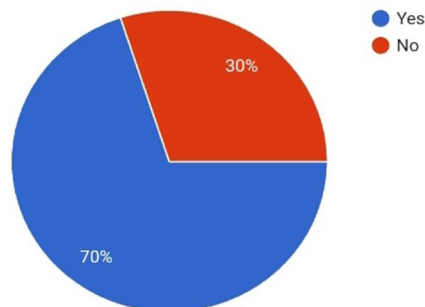
Q1. Is the quality of the decision very important?

10 responses



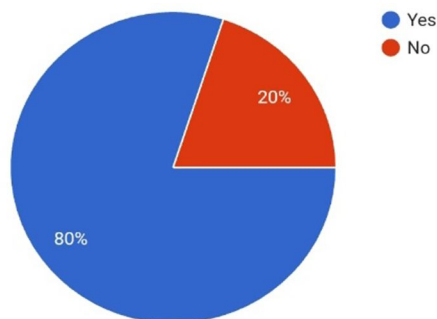
Q2. Is team commitment important for the decision?

10 responses



Q3. Is there enough information to make the decision independently

10 responses



Q4. Is the problem well structured?

10 responses

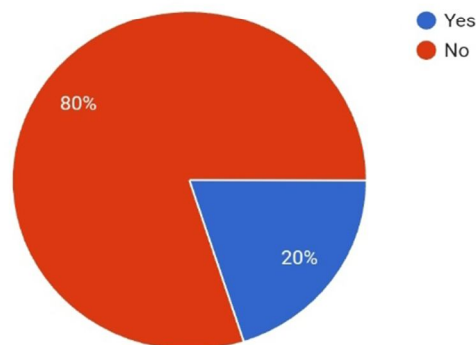
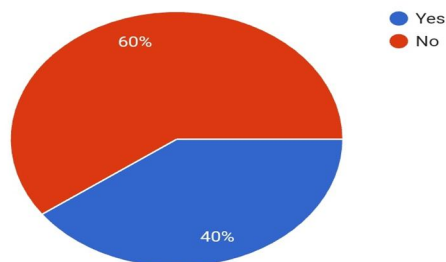


Fig 4 Responses from team leaders for Q1, Q2, Q3 and Q4

- 1) From the recorded responses, it was found that 80% of the leaders felt that the quality of the decision was important.
- 2) 7 out of 10 leaders valued team consensus or commitment as paramount.
- 3) 8 out of 10 leaders felt they had sufficient information to take the decision independently.
- 4) However only 2 felt that the problem was well defined properly or well structured.
- 5) 6 out of 10 leaders felt that the team members will not support the decision if made alone without consultation.
- 6) 7 leaders felt that their teams were consistent with the goals of the organisation.
- 7) 8 of them felt that conflict may ensue amongst the team over the decision.

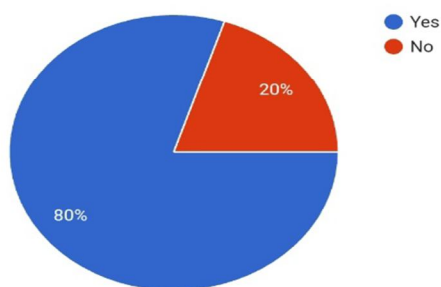
Q5. Will the team support the decision if made alone?

10 responses



Q7. Is conflict amongst the team over the decision likely

10 responses



Q6. Does the team share common organizational goals?

10 responses

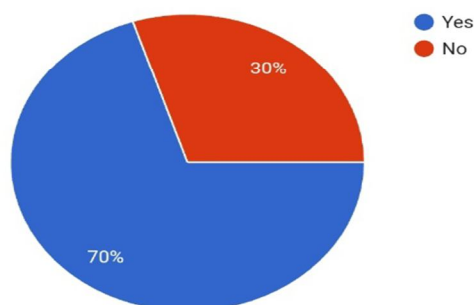


Fig 5 Responses from team leaders for Q5, Q6 and Q7

The organization decided to use the decision chart (Fig 3) to find out the ideal leadership style. Later the same leadership style was suggested to the leaders for rolling out a seamless management.

The majority option or choice to the individual questions was selected. The majority responses are listed below:

Is the quality of the decision important?	Yes	80%
Is team commitment important for the decision?	Yes	70%
Is there enough information to make the decision independently	Yes	80%
Is the problem we'll structured?	No	80%
Will the team support the decision if made alone?	No	60%
Does the team share common organizational goals?	Yes	80%
Is conflict amongst the team over the decision likely	Yes	70%

Table 1 Majority of recorded responses

Vroom-Yetton-Jago Model

Decision Tree

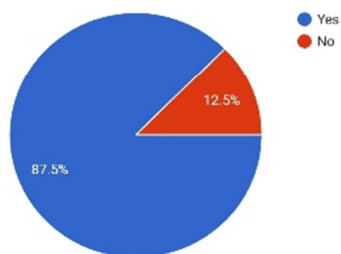
Question	Response	Outcome
Q1: Is the quality of the decision important?	Yes	Yes
Q2: Is team commitment important for the decision?	Yes	Yes
Q3: Do you have enough information to make the decision on your own?	Yes	Yes
Q4: Is the problem well-structured?	Yes	Yes
Q5: Would the team support your decision if you made it alone?	Yes	Yes
Q6: Does the team share the organizational goals?	Yes	Yes
Q7: If the conflict amongst the team over the decision likely?	Yes	Yes

The diagram illustrates the Vroom-Yetton-Jago Model, a decision tree for selecting a decision-making style based on seven situational factors. The factors are listed on the left, and the corresponding decision outcomes (A1, A2, C1, C2, G2) are shown on the right. The tree starts with 'Situation' at the top, branching into 'Yes' and 'No'. The 'Yes' branch leads to a series of questions (Q1-Q7) with 'Yes' and 'No' responses. The 'No' branch leads to 'A1'. The 'Yes' branch leads to 'A1' if Q1 is 'No', 'C2' if Q1 is 'Yes' and Q2 is 'No', and 'A2' if Q1 is 'Yes' and Q2 is 'Yes'. The 'Yes' branch leads to 'G2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'No', and 'C2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes'. The 'Yes' branch leads to 'A2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'No', and 'C2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes'. The 'Yes' branch leads to 'A1' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'No', and 'G2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'Yes'. The 'Yes' branch leads to 'A2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'Yes' and Q6 is 'No', and 'C2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'Yes' and Q6 is 'Yes'. The 'Yes' branch leads to 'C1' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'Yes' and Q6 is 'Yes' and Q7 is 'No', and 'A2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'Yes' and Q6 is 'Yes' and Q7 is 'Yes'. The 'Yes' branch leads to 'G2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'Yes' and Q6 is 'Yes' and Q7 is 'Yes' and Q8 is 'No', and 'C2' if Q1 is 'Yes' and Q2 is 'Yes' and Q3 is 'Yes' and Q4 is 'Yes' and Q5 is 'Yes' and Q6 is 'Yes' and Q7 is 'Yes' and Q8 is 'Yes'.

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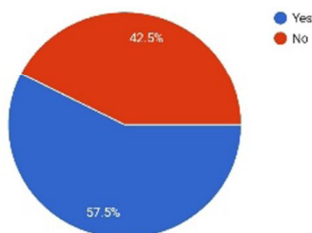
Was your leader open to your suggestions?

40 responses



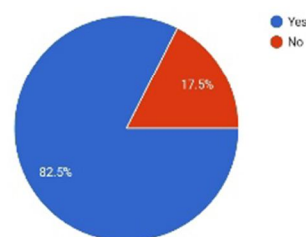
Was your leader able to settle disputes efficiently?

40 responses



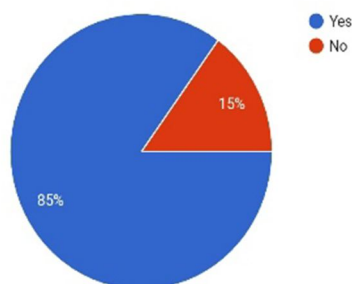
Was the team able to deliver the intended results?

40 responses



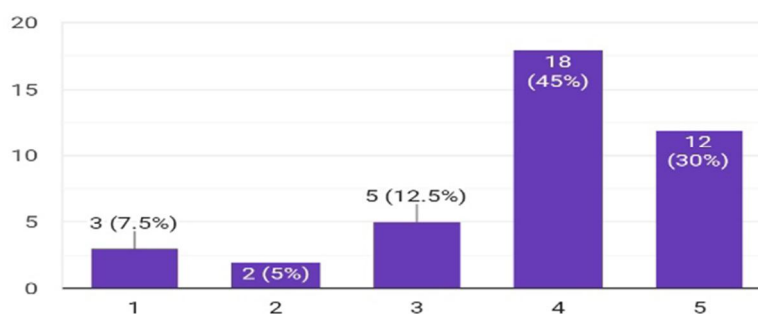
Will you work under the same leader if asked to work again?

40 responses



Rate the technical quality of your team's final decision

40 responses



How satisfied are you with your team leader?

40 responses

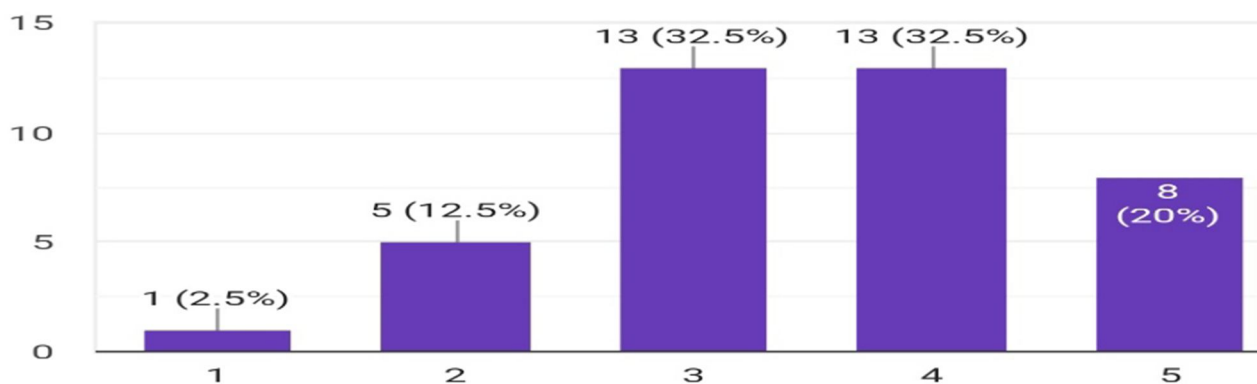


Fig 7 Summary of feedback from team members

IX. CONCLUSION

Palpable and fruitful outcomes of Vroom-Yetton-Jago model in the above scenario:

- A. 88% of the team members found their leaders to be empathetic and amenable.
- B. 58% of the members found their team leaders to be efficient in solving disputes and conflicts within the team.
- C. 3 out of 4 members in each team were satisfied with the performance of their team.
- D. 85% of members were willing to work under the same leader again if and when asked to.
- E. 53% of the team members rated their team leader's performance as 5/5 or 4/5.
- F. 30% of the team members have rated 5/5 for the technical quality of their team's decisions.

Thus, it can be concluded that, despite limitations and shortcomings, the Vroom-Yetton-Jago model provides an elegant and effective tool for leaders and design managers to decide which route to take to make a decision while promulgating the fact that every situation needs a different style of leadership.

Vroom and Arthur Jago addressed the weaknesses of the model and amended the original model in their 1988 book, "*The New Leadership*." The new model is more complex and encompasses several additional questions, which allow users to take other constraints, like geographic location, into account when making their decision. It also uses a mathematical relationship to help people to pinpoint the optimum decision-making process for their situation. The newer version of the model is often referred as either Vroom-Jago or Vroom-Yetton-Jago.

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