



## Effect of time pressure and human judgment on decision making in three public sector organizations of Pakistan

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### Abstract

This study attempts to widen the effect of time pressure and human judgment on decision making. A census of three organizations named Project Management Organization (PMO), Accountant General Pakistan Revenues (AGPR) and Controller General of Accountant (CGA) was occupied. To demeanor this study a questionnaire tagged Decision Making, Time Pressure and Human Judgment was used for the assortment of data. The questionnaire was predominantly designed to accomplish the objectives of the study. The total number of observations was eighty two and the Arithmetic Mean Score of decision making, time pressure and human judgment were 2.532, 2.527 and 2.395 respectively. The significance level of the model was 0.000 which illustrates maximum significant level. As p-value is less than .05 so it can be assumed that the variables elected for the study are decidedly significant.

**Keywords:** time pressure, human judgment, decision making, AGPR, CGA, PMO

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## **Introduction**

There are many studies accomplished to recognize the association amid time pressure, human judgment and decision making. A handful studies were based on behavioral decisions by presenting different psychological and economic theories. Few studies accomplished about stressed, risky and individual decision making practices where as several authors discussed regarding the strategies and sophisticated decision making models with time constraints but the majority of the authors failed to establish the relationship and its real consequences. In resultant, the studies analyzed that time pressure possibly diminish both the real quality of judgment and decision making and an individual's confidence inside the quality of this action. It becomes obvious when individuals have been formerly educated the most favorable strategy. However, some studies demonstrate nix effect or even reverse effect. The evidence strongly counseled that the effects of time pressure on quality depend crucially on the strategy adopted.

### ***Problem Statement***

Researchers have scrutinized various practices that affect decision making power but majority of authors botched to ascertain the relationship and its real consequences. Determining the effect of time stress and human judgment on decision making power and the liaison between them is the problem statement of this research.

### ***Objectives of Research Study***

The core rationale of this study is to identify the relationship among time pressure, human judgment and decision making on personals. The taxonomy of objectives is to analyze the effect of Time Pressure and Human Judgment on Decision Making.

### ***Significance of Study***

This research is originated from psychological practices that are time pressure, human judgment and decision making. It is a deliberated actuality that, few Pakistani researchers or institutes are working in this area, and it's still confusing that how time pressure effect is positively or negatively correlated with human judgment and decision making, therefore we opt this area for research that would be supportive for other researchers and exploration of new ideas in this field. Moreover it will provide an insight into the fact that how effect of time pressure can be positively enhanced in the organizations. In emergent

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countries like Pakistan, it is vital to work on such area to boost the productivity of the organizations.

### *Delimitation*

The study was delimited to three Public sector organizations in Islamabad.

### **Literature Review**

Before going into the investigation of different researcher's vis-à-vis Time pressure, Human judgment and Decision making, the author presents the history of former deliberations lying on these variables from 1961 to 2006. Edwards (1961) originally build the foundation wherein he firstly evaluates the behavioral decision theory by presenting diverse psychological and economic theories of riskless preference, risky choice, and games. Becker and McClintock (1967) afterward discussed about decision theory, philosophies and social sciences in which utilities and principles take part as mediating role to bond decision theories with philosophy and social sciences. Wright, P. (1974) confers concerning stressed decision maker, time pressures, and distractions with the use of evidence. Whereas, Janis & Mann (1977) did psychological study of conflict, choice, and commitment in decision making. In 1978, Beach and Mitchell argued about the contingency model for the selection of decision strategies. Einhorn and Hogarth (1981) attempted to resolve judgmental biases with functional arguments that involve decisions ought to be rational and intelligent. Pitz & Sachs (1984) discussed judgment and decision making in the milieu of human information processing. Payne et al (1992) stressed draw of multiple decision strategies in the foundation of preferences. Pennington and Hastie (1993) did research on reasoning in explanation based decision making cognition. Stevenson (1993) conversed about the alliance of decision making with long-term consequences. Diederich, A. (1997) presented dynamic stochastic models for decision making with time limitation and in (2003) Decision making has been discussed under conflict wherein researcher originated decision time as a gauge of conflict strength. Kocher, Strauß and Sutter (2006) presented decision making of personage or team with causes and consequences of self-selection. **If investigator examine the previous studies, he comes to an end that the majority of the studies** were qualitative based while in this study, the author espouse quantitative based method to find out the liaison between, time pressure, human judgment and decision making.

### ***Time Pressure***

Stress and pressure are the circumstances in which can be characterize as where such events, situation faced by individual wherever they can experience chance of loss, risk physically as well as mentally (Atkinson, Atkinson, Smith, Bem, & Nolen-Hoeksema, 1996). In addition we can say stress and tension is a state where physical and psychological frontiers of anyone is controlled and threatened by a force (Baltas & Baltas, 1996). Altuntas (2003) talks about stress in his research as a dissatisfaction which bring in physical and mental strain which amplify the burden and weight to our emotional psychology. Time is used in a moderately restricted resource in terms of human judgment and decision making. If the time is not adequate many activities which are of main concerns and precedence are just left for the reason that of choice can not be perform or made accordingly. Universal statement is made about time management is that it increases the burden and trims down the ability of making decision. Our true adversary is time, managers and others expert has revealed time pressure on the important major constrained which have affected their decision power. There has many corroboration which has been effected directly and or to determine the denotation of their beliefs Isenberg (1984). Payne et al. (1993, 1995) in his research define the effect of time strain in terms of gambling decision in which the quality is influenced by the percentage and the event that reply to make us decide a choice between the substitute decision with the highest expected value. They demonstrate that time burden reduced the characteristic of making decision and this reduction varied as a process of implementing strategies are used (Ordonez, L., Benson, L. III 1997 Kocher, M., Sutter, M., 2006).

The mainstream of studies have considered time pressure as a work quality in which you get to make all the important choice correspondingly in one variety to other, the characteristics such as the number of different choices or else numerous of attributes (Payne et al., 1993) whereas Maule and Edland (1997) squabbled that the effect of time stress and pressure may also varied from individual to individual because some of the individual can not consider time as a panorama and some consider time as opportunity. In addition, time stress can change the priorities and in rank of individual which work differently and assigns more credence to best alternative according to the gathered information (Wright, 1974).

### ***Human Judgment***

According to the Dictionary judgment is “the rational or intellectual course of action of making an estimation or appraisal by discerning and comparing,” and the capacity for judging is “the power or ability to decide on the basis of evidence.”

Gigerenzer (1991, 1996) portrayed that we are very much fascinated in judging of people and supreme judgment always require the substance all the way through analysis. In addition Gigerenzer (1996) and Cosmides&Tooby (1996) argued that better judgment is an area detailed which ought to reflect the generic principles of survival and adoption of living standard. Einhorn&Hogarth (1981) attempts to bring together judgment biases with systemic arguments that implement decision orderly rational and taken by intelligent on other hand psychology judgment and power in of decision make us learned a great agreement about the errors and mistake.

### ***Decision Making***

There are a lot of situations comes in everyday of life with different types of difficulties like emergency or disasters which requires sudden decisions to get rid of these situations while pressed by deadlines. People always prefer options which eventually maximize their output and important needs to lessen the cognitive pressure of decision task given to them (Ben Zur and Breznitz 1981). Thus Kuzgun (1992) depicted decision-making is a tendency to conquer the current problem when there are a lot alternatives are available which lead us to a reasonable objective to meet the requirement. Decision-making process begins when the individual approach the problem in the decision making and the methods that can be followed during the decision-making process to resolve the issues. (Kuzgun, 2000).

Kowalski-Trakofler, K. M., Vaught, C., and Scharf, T. (2003) recommended different steps of decision making process whilst individual engaged in decision making. The first step is to identify the problem then searching for possible solutions. In the third step, the authors choose that option which gives optimum output and truly meet the demand. Implementation of final decision is the last step of this process. There are many factors during the process that significantly impact ones ability to solve i.e. limited time and complex problem that create stress. The Psychomotor skills, knowledge complexity of elements and Information quality could be a factor. The resulting model assumed mutual action between major

components, so that high stress could interfere to accurately diagnose the problem, where as accurate diagnosis would lead lower stress.

In 2001, Kneeland expressed that if an individual wants to make useful and productive decisions consequently there is a need of accurate and timely implementation of decision making process. As we know, choosing one option among different alternatives is defined as a cognitive process therefore if an individual desire to make a strong decision, the cognitive process ought to be carried out (Eldelekliog̃lu, 1996) and options must be evaluated effectively (Yesilyaprak, 2003).

There are a lot of risky situations comes in daily life where decision makers have much time to execute the task. Yet many big decisions have been taken under time restriction. If a driver seeing a yellow light so he have to think either to cross the signal before it moves to red or just brakes to stop. Do decision makers attempt the same strategy for making risky decision during time constraint? Researchers suggests that during time restraint, decision makers try to boost up the decision making process and if it's not possible then shifted toward the simplest strategy (Edland & Svenson, 1993; Johnson, Payne, & Bettman, 1993; Svenson & Benson, 1993a, 1993b; Smith, Mitchell & Beach, 1982; Wright, 1974). In addition, when faced with high levels of time constraint, a decision maker focuses to negative information (Wright, 1974). Moreover, decision makers also narrow the information needed for the task during time constraint and sometimes he omit the information due to this limitation (Miller, 1960).

### ***Correlation among Time pressure, Human judgment and Decision making***

It's an eminent practice of making decision under pressure. Research on judgment and decision making under time pressure stipulates the chances of selecting alternatives ought to be change by the individuals caused by time constrained (e.g., Edland & Svenson, 1993).

There are two hypothetical approaches have been anticipated for decision making under pressure. One approach presume the decision maker is endow with decision strategies (decision rules, decision heuristics).these strategies are provided based on decision condition, and the decision maker decides which decision strategy is superior for making decision under the mandatory circumstances. The second approach infers that the decision maker can compare the alternatives eventually and this process of comparing alternative will be finished upon decision makers enough evidence in conjunction with final decision.

### ***Hypothesis***

This study was conducted to test the following hypothesis:

- Time Pressure and Human Judgment has a significant effect on Decision Making

### **Methodology**

#### ***Population***

Public Sector Organizations in Islamabad was our population of the study.

#### ***Sample and Response Rate***

The target population of the study was personnel working in public organizations, Islamabad, Pakistan. A census of three organizations named Project Management Organization (PMO), Accountant General Pakistan Revenues (AGPR) and Controller General of Accountant (CGA) was taken. A total enumeration sampling technique was 82 personnel independent of age.

#### ***Instrument***

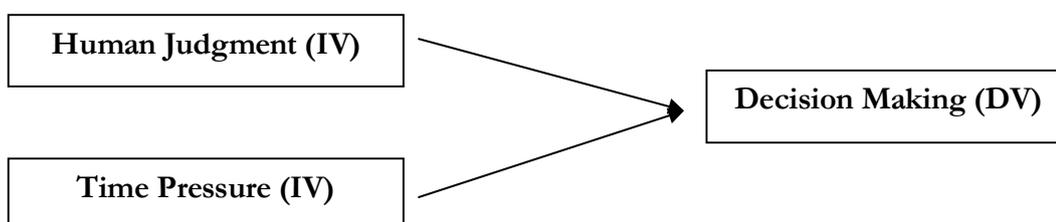
To conduct this study a questionnaire tagged Decision Making, Time Pressure and Human Judgment was used for the collection of data. The questionnaire was specially designed to accomplish the objectives of the study. The first section consists of gender, age, qualification and management level but researchers don't consider this in the analysis. The second section was divided in three parts.

- **Part1.** This measures Decision Making, which included 10 questions.
- **Part2.** This measures Time Pressure, which included 10 questions.
- **Part3.** This measures Human Judgment, which included 7 questions.

#### ***Description of the Instrumentation***

- Questionnaire – to find the effect of Time pressure and human judgment on decision making.
- Interviews – All level Management, students
- Time Pressure & Human Judgment – the Independent Variables.
- Decision Making – the Dependent Variable.
- Case – Private Organizations Employees.

#### ***Theoretical Framework***



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### ***Data Analysis***

The following statistical tools have been used:

- Means and Standard Deviations were calculated, since the number that is coded can give us a feel for which direction the average answer is.
- Regression Analysis was carried out to determine the effect of independent variables on dependent variables. **DV**

## **Findings**

### ***Data Representation***

The frequency table of Decision Making, Time Pressure and Human Judgment is showing the scattered data in a group form.

<b><i>DM</i></b>	<b><i>Frequency</i></b>	<b><i>TP</i></b>	<b><i>Frequency</i></b>	<b><i>HJ</i></b>	<b><i>Frequency</i></b>
1	1	1.4	1	1.1428	1
1.355	1	1.7	1	1.476	0
1.711	6	2	11	1.809	7
2.067	4	2.3	19	2.143	20
2.422	20	2.6	21	2.476	27
2.778	22	2.9	17	2.809	15
3.133	19	3.2	6	3.143	8
3.489	5	3.5	1	3.476	0
3.844	1	3.8	0	3.809	0
More	3	More	5	More	4

### ***Descriptive Statistics***

The total number of observations was eighty two we have, and the mean for Decision Making, Time Pressure and Human Judgment are 2.532, 2.527 and 2.395 respectively.

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	<i>Decision Making</i>	<i>Time Pressure</i>	<i>Human Judgment</i>
<i>Mean</i>	2.532927	2.526829	2.39547
<i>Standard Deviation</i>	0.586274	0.542297	0.515958
<i>Sample Variance</i>	0.343717	0.294086	0.266213
<i>Count</i>	82	82	82

The standard deviations are showing the diversity of data which is indicating that there is a variety of opinions between the employees.

Analysis of variance shows that how much the model is valid and what is the significance of the model. In this research work, significance level is 0.000 that is highly significant level for the model that was selected.

#### ANOVA<sup>b</sup>

Model	Sum of Squares	df	Mean Square	Sig. F
<b>Regression</b>	13.504	2	6.752	4.1E-12 <sup>a</sup>
<b>Residual</b>	14.336	79	0.181	
<b>Total</b>	27.841	81		

a. Predictors: (Constant), Time Pressure , Human Judgment

b. Dependent Variable: Decision Making

The regression data for the beta and the R square are given below.

Summary Data for Regression					
Beta (Constant)	Beta (TP)	Beta (HJ)	R	R- square	P- values
0.502	0.489	0.331	0.696	0.472	0.019

The p-value shows the significance of variable. As p-value is less than .05 so it can be said that the variables chosen for the study are highly significant. The value of R square is high enough to show the relationship between the variables, we can say that the time pressure and human judgment are contributing in the decision making above 47%. The value of beta is showing the strong direct relationship between the dependent and independent variables.

The table shows the positive correlation between Decision Making, Time Pressure and Human Judgment.

	<i>Decision Making</i>	<i>Time Pressure</i>	<i>Human Judgment</i>
<i>Decision Making</i>	1		
<i>Time Pressure</i>	0.668	1	
<i>Human Judgment</i>	0.626	0.738	1

### Results and Discussion

- Decision making is part of everyone's daily routine.
- Time pressure effects the decision making of individuals.
- Widely the human judgments are used for making decisions.
- Age factor counts when consider human judgment as it is based upon the past experiences.
- There is a positive correlation between time pressure and human judgment.

### *Suggestions and Recommendations*

To improve the decision making process of the individuals, the time pressure and human judgment ought to be considered as integral parts of decision making.

- The quality of decision, no only depends upon the human judgment but also on the pressure created by time constraints.
- There may be other factors that have some input in the decision making process and the ultimate decision quality.

### *Limitations of Study*

However data is collected with full level of our efforts, yet there remain some flaws in our study. While doing research, many problems are there to be faced by the researchers. The prime limitations of this study are discussed below:

1. **Short time period:** The time period for carrying out the research was short as a result of which many facts have been left unexplored.
2. **Lack of resources:** Lack of time and other resources as it was not possible to conduct survey at large level.
3. **Small no. of respondents:** Only eighty employees have been chosen that is a small number, to represent whole of the population.

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4. **Unwillingness of respondents:** While collection of the data, very few respondents were unwilling to fill the questionnaire. They were having a feeling of wastage of time for them.
5. **Small area for research:** The area for study was limited to specific organizations that are quite a small area to identify decision making level.

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