

Time to Choose: Preference for Gains/Losses in Multiple Time Periods of University Students¹

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Abstract

Time, as a physical, psychological, and social phenomenon today, deserves, beyond doubt, much more than current researches. When we consider current studies, it is seen that likening, which is accepted between money and time, is still effective in the studies related to time which have been conducted. Within this context, although time, as a multilateral subject, necessitates different approaches from different disciplines, when the subject is considered from time to time within the framework of perception of people, there are few researches on whether people regard time different from money when faces with gains and losses. As hypothesis in this study, whether people who have high motivation of obtaining use of long-term discretionary uninterrupted time try to organize the time required for their activities which are non-discretionary (obligatory) or they tend to integrate a couple of obligatory activities was experimented. As a result, people tend to integrate their multiple money gains and losses rather than to segregate them. Such case is not compatible with hedonic editing theory which defends the reverse for multiple money gains and losses. The proposition of the research was supported with four studies which were conducted with the participation of 205 senior students by following methodology in the study conducted by Chang and Chang (2013). In the first experiment, it was tried to be understood how people chose one day off in addition to Saturday and Sunday. Similarly, in three consecutive studies, participants were given different scenarios and it was tried to be determined respectively how they made a choice for a break, which days in a week they chose for the duties to be performed and how they met their two-part time losses. It is considered that findings of the study may contribute to increasing managing effectiveness of today's employees, whose intellectual level is high, who perceive time as an essential element in balancing work and family life.

Keywords: use of time, the perception of time, time gain and loss,

1. Introduction

“Time is money.”

This phrase, which is mostly referred to Benjamin Franklin, has been adopted in almost all cultures to a large scale so that it will be claimed as a proverb. This wise saying help us understand the importance of time by comparing time with money and also forms an analogy between time and money and it creates an effect towards shaping our time perception with reference to a likening which is quite more concrete than time like money. Time and money likening directs us to compare use of time, in other words, spending, with money. If so, to what extent, actually, does comparing time with money coincide? Do the findings to be obtained as a result of this comparison differ from culture to culture? As emphasized above, if it is thought that “Time is Money.” Phrase is accepted in almost all cultures, searching answers to these questions deserves to be an area of interest of scientists.

Use of Time is the life itself. Time is a dimension in all types of activities which are performed. Perception of time, preference for time use will be effective on behaviours of individuals. On the contrary to this characteristic of time which is the only phenomenon which is distributed equally to everyone, it is impossible for time to be perceived, used by everybody as the same or preferences for use of time to be the same.

Once time has been used once, it is a resource which cannot be replaced and renewed again. Time, as a physical, psychological, and social phenomenon, deserves, beyond doubt, much more than current researches with this characteristic. When we consider current studies about time, it is seen that likening, which is widely accepted between money and time, is still effective in the studies related to time which have been conducted. (e.g., Saini & Monga, 2008; Linville & Fischer, 1991; Leclerc et al, 1995; Chang & Chang, 2013). Within this context, although investigating time phenomenon necessitates different approaches and different disciplines, when the subject is considered within the framework of perception of people, there are few researches on whether people regard time different from money when they face with gains and losses (Chang & Chang, 2013).

Questioning subject of time in scientific literature by using today's time terminology dates back to the past. According to that Wackermann (2014:1) conveyed, although time term was first used academically by Nichols (1891) a century ago, what “time psychology” is or what it should be has not been able to be made clear, yet. “Time Perception” in the study of Mach (1865) with psychology origin and “Time feeling” in the study of Vierordt (1868) with physiology origin formed the essential subject of this concept. Time and time perception are

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a dimension which is used in scientific disciplines, which are used and questioned as a universal concept from philosophy to biology, from physics to palaeontology on archaeology (Wackermann, 2014; Sucala & David, 2013).

Indeed, there has been significant increase in the number of researches in the area of time and time perception in the 21st century. It is not surprising to see a number of new research questions related to relation between time and time perception and close variations of these subjects in academic magazines. (Block & Grondin, 2014: 648). Researchers are becoming more and more conscious of great importance that time has for individuals within different contexts, especially within the context of social interaction (Fayolle & Droit-Volet, 2014: 1). However, it is seen that when it is considered scientific research past, studies related to time perception bring a number of biologic and cognitive question with them (Sucala & David, 2013: 244). Especially, developments in neuroscience area also supported scientific findings in the subject of time perception (Block & Grondin, 2014: 648).

Both this study and studies of time conducted which are dominant over social sciences focused on phrases such as “perception of time” “Experience of Time”, “preference for time use”. It is seen that these phrases are used interchangeably and that especially, phrases of “experience of time” and “perception of time” are used synonymously (Wackermann, 2014: 1). But phrase “preference for time use” is the phrase which means researchable state of time by concretizing. Preference for time use affects individuals’ decisions of sparing time from education and training to a number of subjects and activities during all their lives (Becker, 1975; Mincer, 1974, Song, 2011: 350), it is seen as the main characteristic of their economic behaviours and even its effect on health is investigated (Bradford et al, 2010: 1005).

People’s perception and use of time has recently become a subject on which researches focus importantly and for which deeper and comprehensive studies are conducted. For example, anatomic bases of subjective perception and experience of time in individuals were investigated, (for example, Trojano et al, 2017), role of time orientation in prediction of participation to websites of social network was examined (Makri & Schlegelmilch, 2017), and it was emphasized that there are important changes in time and place perceptions of people with the effect of new technologies (Burgese, et al, 2017). In addition, researches in which tools used in gaining and saving money are examined more detailed and towards effect of intelligence and personality in this use were made (For example, Navarro & Osiurak, 2017). Although it is very important for our society, little is still known about time and money use of individuals relatively (Bauer et al., 2013).

Even it has an important place with regard to life, people have difficulty in ratiocinating time as an independent dimension and interpret time of an occurrence wrongly. Researchers who make researches about decision determined that people are not generally sensitive to time of realization of occurrences (for example, Fredrickson & Kahneman 1993), it was stated that time evaluations becomes hard when they are isolated from past experiences (Ariely & Loewenstein, 2000).

Perception of time will be the most important phenomenon in deciding in the near future (Bilgin & LeBoeuf: 2010: 520). When recent studies have emphasized on importance of perception of time, they state that individuals’ subjective perception of time is related to their interperiod preferences (Zauberman et al, 2009).

Researches about time in social sciences are generally made by adapting an existing theory to the related perception in time. One of the theories used for this purpose is “Hedonic Editing Theory”. Thaler (1985) presented the theory of Hedonic Editing Theory in order to experiment intellectual integration and segregation of the two events before evaluation of these events in order to maximize happiness of individual. The theory on which the study conducted is based is also “Hedonic Editing Theory”. According to “Hedonic Editing Theory”, people prefer to segregate monetary gains which are more than one and integrate their monetary losses in order to maximize their happiness. There are a lot of researches aimed at experimenting “Hedonic Editing Theory” which has attracted attention widely (For example, Kahneman & Tversky, 1979; Thaler & Johnson, 1990; Benartzi & Thaler, 1995; Gneezy & Potters, 1997; Thaler et al, 1997; Lim, 2006; Chang & Chang, 2013).

The purpose of this study, which was conducted within the scope of questioning subject of time, which is the hypothesis “Hedonic Editing Theory” presented, is to research whether people who have high motivation of obtaining long-term discretionary uninterrupted time use try to organize the time required for their activities which are non-discretionary (obligatory) or they tend to integrate a couple of obligatory activities was experimented. As far as it is examined in domestic literature, there is no study on this subject and also there are few studies in foreign literature. Within this context, research question of the similar study conducted by Chang and Chang (2013) was dealt with, methodology of the study mentioned was followed, so it was aimed at being able to compare findings obtained from the research with similar studies related to the subject.

2. Research Studies

Method used in the study is the method which was applied by following the methodology in the similar study conducted by Chang and Chang (2013) Sampling of the study involves senior students who are studying business administration at two different faculties. Research hypothesis was researched with four experiments

conducted in parallel with the study of Chang and Chang (2013). Each participant was given a different scenario in each experiment and in the end questions aimed at determining their preferences of time use. In the first experiment, it was tried to be understood how people chose one day off in addition to Saturday and Sunday. Similarly, in three consecutive studies, participants were given different scenarios and it was tried to be determined respectively how they make a choice for a break, which days in a week they choose for the duties to be performed and how they meet their two-part time loses. Finding and interpretations of the research are separately given for four studies mentioned respectively below.

2.1. Experiment-1: Multiple time gains in choosing one day off

2.1.1. Method

The first experiment in which there were 178 participants was conducted to determine how individuals would behave while choosing one day off. In the scenario presented to participants in this experiment, they were told that they were employees working five days a week (weekdays) and had weekend holidays and they were told that one day off would be granted to them. After then, they were told that they could choose one day off granted from any one of weekdays. Next, they were requested to mark the day off, which was granted to them, they chose (Monday?, Tuesday?, Wednesday?, Thursday?, Friday?) In addition to this, they were requested to explain why they chose those days after they made their choices. Individuals who prefer to integrate their discretionary time gains tended to choose Monday or Friday as one day off in order to extend their holidays and on the contrary, individuals who prefer to segregate their discretionary time gains tended to choose Tuesday, Wednesday and Thursday as one day off.

2.1.2. Findings and Conclusion

Participants who chose Monday or Friday as one day off were included in “Integrating Group” and those who chose Tuesday, Wednesday or Thursday were included in “Segregating Group”. Two doctorate students worked as coders independent from each other in order to evaluate answers that participants gave to open ended question (Why did you choose that day?). These coders learned definitions and contents of main categories related to answers which may be given to the question mentioned before starting coding. Within this scope, answers of participants were categorized under the codes below;

- Extending holiday
- Reducing Monday and Friday syndrome.
- Taking one weekday off to rest
- Other reasons
- Those without reasons (those leaving the option blank)

Consistency of two separate evaluators (coders) in themes that coders revealed from answers that participants gave to the question (Why did you choose that day?) was calculated with the formula, $\text{Agreement} / (\text{disagreement} + \text{Agreement}) \times 100$, which was presented by Miles and Huberman (1994) for five categories. According to this, coefficient of inter-rater reliability between coders was determined to be 92%, which is at sufficient level, and disagreements were resolved by reciprocal discussions.

According to findings obtained in the first experiment, 29, 8 % of participants chose Monday, 1, 1% of those chose Tuesday, 21, 3% of those chose Wednesday, 2, 2 % of those chose Thursday, 45, 5% of those chose Friday.

Within this scope, 134 (75, 2%) of participants chose Monday or Friday, and preferred to integrate their multiple discretionary time gains. Of the participants who chose Monday or Friday, 50 % (67 participants) made their choices to extend their holidays, 17.2% (23 participants) to reduce Monday Friday syndrome, %22 to rest in a weekday, 23, 1 (31 participants) for other reasons. Of the participants who chose Monday or Friday, 7, 5 % (10 Participants) did not answer these questions.

The results of the first experiment show that individuals tended to integrate their multiple time gains. Generally, it is seen that individuals chose Monday or Friday to extend their holidays.

2.2 Second Experiment: Multiple time loses in waiting

2.2.1 Method

In the second experiment, 97 participants were presented a scenario about a waiting situation. The scenario presented was about a waiting situation at a place where they went for purchasing process. They were told to imagine that they had to wait because of purchasing processes and that there were too many customers in the store for about 6 hours. And they were told that they were entitled two hours of rests (breaks), that they could use these as 1 hour separately or by integrating these as 2 hours according to their choices. But under any circumstances, they had to stay in sales department for a total of 6 hours. That is, former ones could not come late and latter ones could not leave even if they finished their process early.

Answers given were encoded according to whether they were two conjunctive hours or not. For example, whereas the first and second breaks' being chosen as a block in a way that they would follow one another was

categorized as integration of multiple time savings, (the first and second breaks' being chosen at different hours from each other) the first and third breaks' being chosen was categorized as segregation of multiple time savings. Two different hours to be chosen for 6-hour period is possible with a total of 15 combinations. Of these combinations, only five of them were encoded as integration (the first and second hours, the second and third hours, the third and fourth hours, the fourth and fifth hours, and fifth and sixth hours). The other ten were encoded as 10 alternative segregation.

2.2.2. Findings and Conclusion

60 participants (61.9 %) preferred integrated hours, 37 participants (38.1%) preferred segregated hours. Of the participants who preferred integrating group, whereas 30 people marked the third and fourth hours, 6 people marked the first and second hours, 10 of them marked the second and third hours, 5 of them marked the fourth and fifth hours, and 9 of them marked the fifth and sixth hours. The reason why participants chose mainly the third and fourth hours by integrating them may be that they thought four-hour waiting for a break would be too boring. This experiment shows that individuals prefer to spare two different non-discretionary times in order to obtain long term discretionary time.

2.3 Third Experiment: Multiple Time Loses in organizing working days

2.3.1. Method

In this study 120 participants were given a scenario. It was emphasized that they were freelancing and they got two works and that they were going to get the same pay for each job and they would spend the same labour to complete the works, both works needed to be completed in a day each (8-hour work). Participants were told that they had a week to complete the works and they were asked which day they would chose to do the works from a 7-day week. Similar to the first experiment, those who chose the two working days one after another were encoded as "integrated" and the others were encoded as "segregated" in this study.

2.3.2. Finding and Conclusion

79 participants (65.8 %) preferred integrated days and 41 participants (34.2%) preferred segregated days. This result shows that individuals prefer to integrate their time losses. However, some individuals preferred to work in two different days. The reason for it may be the thought that working two days one after another would be hard. Another reason may be an evaluation that 5-day holiday might be too many if they chose two conjunctural days. Of participants who preferred integrating group, 30 people marked the third and fourth days, 6 people marked the first and second days, 10 people the second and third days, 5 people the fourth and fifth days and 9 people fifth and sixth days. One statement to be made for these results may be that the reason why participants chose mainly third and fourth days and hours by integrating with each other is that they thought 4-day wait was too boring for the break. This experiment shows that individuals preferred to segregate two different non-discretionary times in order to obtain a long discretionary time.

2.4. Fourth Experiment: Multiple time losses in completing two works

2.4.1. Method

This experiment was conducted on 178 participants. A scenario related to multiple time losses in completing two works was given to participants. According the scenario, two unplanned works which must be done came up at the weekend. That firstly, they had to buy a concert ticket and they would wait for this for 30 minutes and secondly, they would have their motorcycles repaired and they would wait for this for 15 minutes was the point in question. In addition to this, participants were told in the scenario that these places where they would go for these two works were open only on Saturdays and Sundays and factors such as traffic were the same in both days. They were requested to determine on which they would do these works and to choose one of the two options below;

- a. I do both works in the same day.
- b. I do one on them on Saturday and the other on Sunday.

In addition to this, the participants were requested to make a statement why they made such a choice.

2.4.2. Findings and Conclusion

156 participants (87.6%) stated that they would complete the work in single day and 22 participants (12.4%) in two different days. In this experiment, in a similar way to the first experiment, two coders were assigned for open ended question to be evaluated. Answers of participants were categorized under the codes below;

- Doing both works together, taking the day off and resting
- Ambition to complete the works as quickly as possible (impetuosity)
- Desire not to tire themselves by doing both in a single day
- Those who did not answer.
- Coefficient of inter-ratter reliability between coders was determined to be 89 % and disagreements were resolved by reciprocal discussions. According to this, 34,6 % (54 participants) who did the works in the same day made their choices to take the other day off and to rest, 0,6 % (1 participant) to segregate the works into two

different days and doing works properly and by absorbing them, 28,2 (44 participants) for ambition to complete the works as quickly as possible (impetuosity), 1.3 % (2 participants) for the desire not to tire themselves by doing both in a single day. 35,2 % (55 participants) did not answer to this question.

When the answers given in this study are evaluated, it is seen that individuals generally tend to complete their works as soon as possible and take a one complete day off for resting.

3. General Conclusion and Discussion

According to findings obtained, people tend to integrate their multiple time losses and gains rather than to segregate them. Such case is not compatible with studies of hedonic editing theory which defends the reverse for multiple money gains and losses. The result obtained is compatible with the studies of Chang and Chang (2013). In addition, findings obtained is compatible with the results of a study which was conducted by Chatterjee, Rai and Heath (2016) and in which it was investigated how customers behaved in the situation whether opportunity cost in money changes was reminded or not.

When the findings obtained in the first experiment of the research are taken into consideration, when participants choose a day off, it is seen that they bring their multiple time gains into the forefront. Indeed, $\frac{3}{4}$ of participants expressed their opinion in this direction. In such case, individuals tend to maximize their time gains in order to extend their holidays. However, one fifth of participants chose an intermediary day, which is Wednesday, that is, as one day off. It shows that existing of a group, which cannot be underestimated as a count, should not be ignored. On the other hand, rate of choosing Tuesday and Thursday, which we can consider as intermediary days, is as low as 3 %. Such case shows that individuals base their uses of time and especially time gains mostly on a logic and that they do not evaluate them coincidentally. It is thought that this research made on undergraduates may give valuable information to executives and especially experts of human resources, with regard to the fact that this research was made at a time when flexibilities within working hours and days in today's organizations were being discussed, with regard to understanding what kind of approach of time perception, use of time or time gains and losses employees of the future are in. Giving a gain of one day off to employees by preferring mostly on Mondays and Fridays will mean a higher value in terms of employees. In addition, that executives know attitudes and expectations of employees considering time perception will be able to give more effective results in the motivation of employees.

In the second and third experiments of the research, questions and scenarios about how participants would behave in multiple time losses in arranging waiting and working days were asked. In this case, similarly to the first experiment, how participants preferred conjunctural days and hours was determined. This case shows that individuals have an expectation towards the use of time they have as uninterruptedly as possible, without intervention, within their own initiative, and longer. Today, when it is considered that individuals who have been in search of self-realization in a number of different environments and systems, thanks to developing technological opportunities, use their time in virtual environment, that is, social media or similar situations, it means the necessity that attitudes of individuals' use of time in not only weekdays but also daily working hours should be taken into consideration by executives.

As stated above, research question of similar study conducted by Chang and Chang (2013) was taken in the study conducted and the same methodology was followed. Thus, it was aimed at being able for the findings to be obtained from the research to be compared with other studies related to this subject. Within this scope, research of Chang and Chang (2013) finding obtained from this researched was summarized in the table below:

Table 1. Comparison Table

	1st Experiment (those choosing Monday or Friday)	2nd Experiment (those choosing conjunctural hours)	3rd Experiment (those choosing conjunctural days)	4th Experiment (those choosing to complete in a single day)
Chang and Chang (2013)	% 87.6	% 73.9	% 65	% 97.7
Ours	% 75.2	% 61.9	% 65.8	% 87.6

When findings of two research in the table are compared, it is seen that participants in both researches generally have a similar approach in use of time. Besides, in the study we conducted, (on the findings towards people's tendencies of integrating their multiple losses and gains) slightly lower percentages were obtained than the results obtained in the study Chang and Chang (2013) conducted. Within this context, it is thought that lowness of cultural characteristics may be tackled as a reason in the explanation. Each nation has different population, physical and natural environment, different historical development in time. This situation creates a common set of different values and behaviours specific to countries (Hofstede and Bond, 1988). Indeed, Effect of national culture characteristics which is widely defined as (common intellectual programming which separates members of a group from others) (Hofstede, 2001) on people's use of money are being discussed in current

studies (For example, Hua and Wei, 2017). Individuals' Perception of opportunity cost towards time in the use of time may vary from country to country (Bauer et al., 2013).

When the findings that we obtained in our research and study conducted in Taiwan are compared, about 10% variation in the findings obtained from the first, second and fourth experiments is seen. It was determined that this variation was in a way which was slight decrease in Turkish sampling when compared with Taiwan example. It may be evaluated that this situation resulted from differences in sociocultural characteristics of Turkey and Taiwan. When sociocultural dimensions of Hofstede are examined, it is seen that Taiwan and Turkish societies are totally equal in the dimensions of masculine culture and tolerance, however, that there is an important difference between Taiwan (93%) and Turkey (40%) in terms of long-term orientation. In addition to this, although both countries have collectivism cultures, it was determined that individualism in Taiwan was 17 % and in Turkey was 37%. It may be evaluated that these cultural differences can be effective in explaining variation of results obtained, even if it is little, when compared with Taiwan society (<https://geert-hofstede.com/taiwan.html>, 25.07.2017).

It is evaluated that research findings may contribute to increasing management effectiveness of today's employees whose intellectual level is high, who perceive time as a main factor in balancing job and family life. Tendency of individuals to integrate multiple recorded gains shows that they tend to vary the time they spare for their life and private lives and to segregate them from each other more clearly. In this case, it is thought that it is suitable for academicians who research on work-life balance to make researches on balance between work and life where variables towards perception and use of time are also included by considering findings obtained from this and similar researches.

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