A quantitative study on Timebank

Understanding the impact of drivers/barriers and personal values on commitment

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ABSTRACT

Title	A quantitative study on Timebank - Understanding the impact of drivers/barriers and personal values on commitment
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Paper type	Master's thesis (30 credits)
Keywords	Sharing economy, P2P exchange, Timebank, Timebanking, Drivers, Barriers, Commitment, Values
Background	Understanding how coherently commitment and basic human values shaping and affecting Timebank, one of the popular peer-to-peer exchange system. With time banking, a person with own skill set can trade hours of work for equal hours for another member using hours for paying or being paid for services.
Thesis aim	Understanding the impact of drivers/barriers and personal values and how these are connected to the commitment
Methodology	A quantitative study with forty-seven timebanks across three different country – USA, New Zealand and India. Survey were conducted to collect data and later SPSS has been used for analyzation
Findings	Values play significant role to shape commitment to timebank and commitment and personal values has relationship with drivers and barriers of participation in timebank

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"Co-production is really a call for restoring balance — balance between the two economies, market and nonmarket; balance between the two sides of our nature, competitive and cooperative. Timebanking provides the medium of exchange to restore that balance."

-Dr. Edgar Cahn, CEO, TimeBanks USA

Cofounder, David A. Clarke School of Law, University of the District of Columbia

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ABREVIATIONS

Peer-to-peer	P2P
Consumer-to-consumer	C2C
Portrait value questionnaire	PVQ
New Zealand	NZ
Correlation coefficient	CC
Commitment	C

CHAPTER 1: INTRODUCTION

The introduction provides a brief background of the research field and give the readers insights into our motivation behind our thesis topic, the concept of timebanking and its relevance in the economy. Also, the chapter aims to explain our research questions and what this research can contribute with.

1.1 Thesis motivation:

As business students, the terms "peer-to-peer exchange", "collaborative consumption" or "sharing economy" are not new for us. Collaborative consumption is a socio-emerging model based on sharing, renting, gifting, bartering, swapping, lending and borrowing (Piscicelli et al., 2015). It has been already identified that there is a trend of growing exchanges among consumers or peers in last couple of years. As a result, consumer-to-consumer (C2C) or peer-to-peer (P2P) either transforming or creating new markets by this exchanging trend (Valor et al., 2017). P2P exchange is a form of C2C exchange which has been occasionally been leveled as P2P in literatures (Plouffe, 2008). P2P is defined as, system that enable "two or more peers who collaborate spontaneously in a network of equals (peers)" (Schoder and Fischbach, 2003). By the definition of P2P platform, many authors identified timebank as a P2P exchange platform (Schor, 2015; Shih et al., 2014; Carroll et al. 2015; Bellotti et al., 2015). Timebank is an organization where the members exchange services through it. Thus, studying P2P exchanges between timebank members as a part of marketing study is an interesting focus because of its exceptionality from the conventional market and its significance on overall economy (see 1.3 Timebank and its relevance in economy section). As Dwyer et al. (1987) stated, in the study of marketing the primary focus is the exchange relationship and the exchange between buyer-seller is an ongoing relationship. The participants in those exchanges can be expected to build personal, complex, noneconomic satisfactions and even social exchange (Dwyer et al., 1987). Thus, timebanking can also form a relationship marketing[1] with the perspective that the members here can play both role of a service provider and consumer (in other words, seller and buyer). There is a phase where commitment plays role in building the

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[1] Defined as marketing activities that attract, develop, maintain, and enhance customer relationships (Berry, 1983)

buyer-seller relationship in relational exchange (Dwyer et al., 1987). We assume that the commitment of the members to the timebank are also linked to the participation in timebanking. Besides, individuals' personal values may shape the commitment to their timebanks and also may have link to the participation. Therefore, we choose to study timebank as a part of marketing to understand the consumer behavior in a non-monetary exchange platform.

We intend to write this research paper for researchers in marketing management field, especially in the exchange marketing, P2P or C2C exchange system. This paper also may consider as useful to the reviewer for timebank related studies and theoretical concepts and timebank itself.

1.2 Background:

Sharing practices and exchanges between communities such as gifting, renting, swapping, or bartering have been existed for ages in the society. They traditionally used to take place at the individual or community level and in the domestic sphere, outside the normal money market logic, but with a strong sense of informality and social reciprocity (Acquier et al., 2016). But currently, the sharing and exchange practices being expanded and redefined into an exploding economy of sharing and P2P exchanges. Such exchanges and sharing economy encompass very diverse practices and sectors and cover a wide spectrum of organizational forms, ranging from for-profit to non-profit initiatives (Acquier et al., 2016). For example, initiatives such as Airbnb (online rental marketplace), Couch Surfing (free home sharing), Uber (ride sharing), Guest to Guest (home exchange), and Fairbnb (fair and non-extractive vacation-rental movement) (Acquier et al., 2016). P2P exchanges as defined by Papaoikonomou and Valor (2016) as a new domain that demands to revisit the antecedents and mediators of the relationship between the exchange parties. This domain presents the following differential characteristics: the exchange is conducted between peers, although the organization acts as facilitator; skills and time are the objects of exchange; the benefits accruing from such exchanges are economic, but also social, which could suggest hybridized modes of exchange; members perform a dual but asynchronous role as providers and receivers. Such P2P markets, collectively known as the sharing economy (Zervas et al., 2014).

1.3 Timebank and its relevance in economy:

In the sharing economy, services and goods are exchanged among peers, thus with the establishment of P2P form of relationship sharing or collaborating is formed without a traditional market actor mediator (Fitzmaurice and Schor, 2015). Sharing economy is an emerging concept and getting popularity across the world. Thus, it shows a clear threat to the companies who do not take the C2C structures into account. According to the empirical evidences of Zervas et al., (2014), the local hotels revenues have had impacted negatively by Airbnb. Besides, collaborating consumption not just impacting on the economy, it is also changing the habits and pattern of consumption which is reforming consumers as well. According to Valor et al. (2017), the prosumers [2] rather than consumers, is becoming more familiar and relevant to the companies where companies and consumers are creating value by co-participating. Hence, understanding and studying consumers' personal values in the co-participating or co-production process, is crucial for any service firms or other sharing platforms. Platforms like timebank can also change consumers habitus by increasing socialization and participation of users in C2C structures by creating P2P exchange network (Valor et al., 2017). Uber, Task Rabbit, Car sharing, secondhand marketplaces emerging in the accommodation, transportation and other form of service sectors are the examples of monetary shared economy platform. The other phenomenon in the sharing economy is non-monetary service exchange platform like timebank. Timebank is yet limited by the participation of commercially oriented firms, but companies, such as Viceroy and Info jobs, created timebank for their users with not implementing timebank in the core of their offer (Valor et al., 2017).

Studied by Knapp et al. (2010), since resources are scarce, individuals and organizations have interest in greater cost-effectiveness by involving in partnerships with voluntary and community sector bodies such as timebanks. Though most researches on timebanks focus more on processes (numbers of participants, issues solved, skills developed) and qualitative studies rather than economic or quantitative results but timebanking has the long-term potential to effect local and national level economy. Below two are examples mentioned by Knapp et al. (2010) to show how timebank influence economic conditions in a greater scale:

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[2] Prosumers – Blend of producers + consumers; a word composed by Alvin Toffler, The Third Wave. USA, 1980.

- "At a timebank implemented in the US, it was shown that more than 30% of the activities offered and requested were web design and other IT skills. The focus of this timebank on skills development in areas which are highly valued in the job market suggests that a relatively large number of people are likely to return to employment and would not ask for social benefits.

- Research by a health maintenance organization in Richmond, Virginia (USA) found that their timebank, which provided peer support for people with asthma, reduced hospital admissions, visits to casualty and asthma services to the extent that $217,000 was saved over two years (Timebanking UK 2001)."

Before moving forward, as Acquier et al. (2016) stated, "one of the rare points scholars agree on is how hard it is to define the sharing economy and to draw clear conceptual and empirical boundaries." Agreeing with that we would like to mention, we proceed with definition of the shared economy as an umbrella construct (Acquier et al., 2016), i.e. a broad concept or idea used loosely to encompass and account for a set of diverse phenomena (Hirsch and Levin, 1999). So, the sharing economy concept to different audiences tend to have different meanings, including P2P and business-to-peer initiatives, market and non-market mechanisms, as well as centralized and flat peer-to-peer systems (Acquier et al., 2016). We followed according to the studies of Schor (2015;2016) that the new sharing practices can be divided into four major categories, such as, re-circulation of goods, exchange of services, optimizing use of assets, and building social connections and timebanking is originated from the second practice, exchange of services. Thus, timebanks are non-profit, community-based barter site where the members' time and skill are valued equally with time credit (Schor, 2016). In the sharing economy consumers are often termed as provider, consumer, participant and user. Peers who buy services are the consumers and peers who offer services are providers or suppliers, where participants often exchange offering and consuming in the transaction (Schor, 2016; Valor et al., 2017).

1.4 What is a Timebank?

"A real story of an immigrant from Ivory Coast, Issouf Coulibaly could explain what we are going to discuss later. Issouf was a machine operator in a rotor factory in Portland, Maine, US. By the day, he swept the floor of the Portland Ballet, did babysitting, or translated correspondence into French. The work was voluntary, but it was not volunteer work. He was a member of a system called East End Timebank, a collection of about 700 people in Portland from all walks of life who exchange hours of labor. This bank connects Portland residents with one another and with services. In exchange for his hours he took driving lessons and learned ballet dancing. He also built friendships through the timebank and decided to stay in Maine rather than join fellow Ivorians in Philadelphia. (Halpen S., Cultural Currency, 2011)."

The first timebanks could date back to era of industrial revolution. In 1827, one American anarchist Josiah Warren opened a Time Store in Cincinnati. Goods were offered in exchange for the amount of time that it took to produce the goods. (Cahn and Rowe, 1992; Seyfang, 2004; Collom, 2008;2016). Outlined by the founder of TimeBanks USA, Dr. Edgar Cahn, "a timebank is a tool used to organize people or organizations in a system of exchange, whereby they are able to trade skills, resources and expertise through time. For every hour participants 'deposit' in a timebank by giving practical help and support to others, they are able to 'withdraw' equivalent support in time when they themselves need something doing. In each case the participant decides what they can offer. Everyone's time is equal, so one hour of my time is equal to one hour of your time, irrespective of the skills we might trade. This is a person-person timebanking approach. Timebanks can also be used by organizations as a tool for achieving their own outcomes and goals. For example, a hospital might wish to provide a home-care service for patients who have left the acute care setting but are still in need of support – perhaps somebody with a broken leg for example. The hospital would then organize the informal support needed, such as help with cooking meals, doing shopping or running basic errands, using a timebank to incentivize the giving of help rather than paying professionals in the traditional manner. This model is traditionally referred to as a person-agency timebanking approach. (People Can, 2011, P. 8-9, Timebanking UK 2001)". However, in our thesis we would concentrate on a person-person timebank.

According to Cahn et al. (1992) below are core values and ideologies a timebank follows:

- *Value Everyone*. A timebank should see all its members as assets. Everyone has something of value to share – even if it's something that isn't worth a lot in dollar terms.
- *Redefine Work*. The money economy defines "work" as a job that earns money. Timebanks, by contrast, put a value on the kind of work that money can't buy, such as creating art, rearing children, improving a neighborhood, or social activism. Time credits are a way to recognize and reward these hard jobs as real work.
- *Reciprocity*. Time exchanges must be a two-way street. Everyone involved needs to give, as well as receive. When some people only give and others only take, it creates an uneven relationship that can lead to resentment. Helping each other, by contrast, empowers everyone. Whenever members receive help, they need to think about how they can "pay it forward" by helping someone else. In this way, everyone can work together to build a better world.
- *Social Networks*. A good timebank is a web of mutual support. As members help each other out, they form stronger ties to each other. Over time, these ties develop into a net that helps hold the whole community together.
- *Respect for Others*. All members in a timebank need to treat each other with respect. People can differ in many ways, such as culture, faith, and political views, but these differences should never stop them from valuing each other. This mutual respect is essential for any group to be able to govern itself.

Timebanking systems provide alternative forms of currency, earned through time, spent in directly serving the community, e.g. working in the community garden, recycling, repairing leaky faucets, babysitting instead of monetary exchanges. These units of time can be used to ask other members of work systems to do jobs they need or may ask in a forum in which special jobs or needs can be communicated and traded. These systems operate to a large degree outside of the monetary economy (Peacock, 2006). Timebanking have now been an established system and running in at least 36 different countries around the globe; sometimes in a different name other than timebank but with the same concept. Mostly the banks run locally and independently; however sometimes they run under some big timebanks as well. Typically, there are founders, coordinators and members – these roles are available in the timebank. But we have observed that everyone makes transactions as members in general. Timebank participants request and provide services mostly by their internal online groups, websites and also list the skills/services they can offer there. Some of the very involved timebanks are:

Name	Country	Website
Timebank CC	Netherlands	https://timebank.cc
Timebanking UK	UK (Around 300 timebanks in UK organized by Timebanking UK)	https://www.timebanking.org/
Timebanks Org	USA (40 different timebanks in different states of the USA and around 15 global timebanks organized by Timebanks Org)	https://timebanks.org
Timebanks NZ	New Zealand	http://timebanks.nz/
Wellington Timebank	New Zealand	http://www.wellingtontimebank.org.nz/
Dunedin Timebank	New Zealand	https://dunedin.timebanks.org/
hOurworld	USA	https://hourworld.org/

Table 1: Some very active timebanks around the globe

1.5 Relatedness between commitment and drivers, barriers to participate:

Understanding and building customer commitment to have loyal customer and increase customer retention is one of the main focus for any service provider. Commitment described by Meyer and Herscovitch (2001) as a force that binds an individual to a course of action of relevance to one or more targets. Meyer and Allen (1991) mentioned a three-component model of organizational commitment where the three components are affective, continuance and

normative. Bansal et al. (1997) supported that model by showing that each of the components develop in different ways and to understand commitment need to assess their effects separately. Service providers need to understand that their customer could choose any of these three components and could stay committed for different reasons (Bansal et al., 2004). According to Bansal et al. (2004) research there are some variables which service providers might influence and make strategy with. The variables are for example, trust, subjective norms[3] and switching cost which can affect the customer switching decisions. If we see in the case of timebank, firstly, 'trust' (Ozanne, 2010; Valor et al., 2016) is a construct to be found as a driver and also as a barrier to participate in the service exchanges depending member's trust level on each other and organization. Secondly, subjective norm is related within timebanks' ideology and core values. They play role both as driver and barrier at the same time to participate, so believing in the ideology lead to participate and not believing vice versa. Consequently, lack of knowledge about timebank values may lead the member not to use the platform more actively for exchanging services may turn to lower commitment. Since in the timebank there is no strict and direct switching cost, the switching cost for the members is they need to stay and participate in timebank by offering each other their skills and quality services. Otherwise, members may prefer to switch to monetary markets. Hence, understanding commitment is very necessary in non-monetary shared economy since it's quite easy for participants to move to monetary economy. Since the three-component model of commitment and its extended research show the relationships between constructs and commitment, we believe it would be interesting to use this theory further based on timebank to analyze commitment. In our theoretical framework we have discussed more on this.

1.6 Relatedness of values to commitment:

The core of the timebank is creation of market where C2C or P2P exchange with each other, creates value for each other and have service demand in the market. "Values are affected laden beliefs that refer to a person's desirable goals and guide the selection or evaluation of actions, policies, people and events" defined by Schwartz (2006). In the study of marketing and consumer behavior, human values have been recognized to be important to study long time ago by researchers and marketing practitioner. According to Vinson et al. (1977), in the marketing

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[3] Subjective norms refer to that kind of norms which an individual follows due to social pressure (Ham et al., 2015)

and consumer behavior personal value is quite significant to research to make the marketing strategies by identifying group of segments and changing value orientation of the consumer. Furthermore, a wide set of variables that are related closely to the needs can be identified by in-depth knowledge of values of the consumers. Also, it broadens the knowledge of marketers beyond just differences in demographic and psychographic. Besides, the selection and maintenance of the ends and goals, the human being strive and alongside control the method and manner where this striving takes place, are constrained by value (Vinson et al., 1977). In addition, in the cognitive core elements, values are considered to stimulate motivation for behavioral response (Vinson et al., 1977). In the sharing economy, the relationship between drivers and non- participatory behavior can be assumed to be affected by personal values and attitudes (Andreotti et al., 2017).

Piscicelli et al. (2018), indicates, in the P2P, the value is created by the active participation and positive reviews by the peers, which attracts other consumers/peers to participate more. The two-sided markets need quit mass of active users (Piscicelli et al., 2018), however the acceptance of these platform is hindered by the individuals' personal values (Piscicelli et al., 2015; 2018). For deeper understanding, it needs to be studied further to understand what determines these kinds of platforms' success or failure (Piscicelli et al. 2018). In the case of timebank, in terms of the P2P shared platform, the non-monetary, social aspects make it different than the shared platform like Airbnb where they generate money. In the timebank, the mass of active participant (by making exchanges, which in return create demand and supply) is also important factor to be sustainable in the long run. So, the human values that might be correlated to the active participation, hence resulting more commitment to the timebank is significant to study for our study. For this research, we have adopted the value theory and Portrait Value Questionnaire (PVQ) as instrument for the theory by Schwartz (1992, 1994). It specifies a set of ten value orientations with four higher order values that are probably comprehensive of the major different orientations that are recognized across cultures. By measuring each of these values by standard set of questionnaires it provides information on the basic values that are relevant to whatever topics might be chosen. Researchers interested in a detailed study of the value antecedents or consequences of particular opinions, attitudes or behavior could build on and add to the core information on values by using this approach. We have discussed PVQ and why PVQ in detail in later parts of our thesis. However, these combined yet complex relationship of commitment, personal values and barriers and drivers to participate in P2P exchange platform inspired us to formulate the below research questions.

1.7 Research questions:

Our main research question is, **'What are the impacts of personal values with commitment in the shared economy in the context of timebank?'** To answer this question, we will examine through literatures and data analysis, if there is any relationship between drivers and barriers to participate in timebanking with personal values and commitment and their significance. We have already mentioned how all these constructs are interrelated. Thus, besides answering our main research question, we will answer several sub questions that are assumed to be related to commitment and personal values:

RQ: 1 What is the relationship of personal values with drivers and barriers to participate in timebanking?
RQ: 2 What is the relationship between commitment to the timebank and drivers and barriers to participate in timebanking?

In order to answer our research questions, we have chosen quantitative study to conduct on timebank in different continents such as North America, Asia, Oceania and Europe. We have identified from previous researches that, though there are qualitative studies on several aspects of timebank conducted on many countries, but the quantitative studies are rather limited (see Chapter 2 literature review). We have created a survey questionnaire based on the previous literatures and collected our data samples by distributing the survey to the timebank's members. Later, we have used statistical analytical tools such as SPSS to find our answers where we mainly used spearman's correlation for our research questions and among other additional analysis. Mann-Whitney U test was used to compare personal values and commitment country wise.

1.8 Thesis contributions:

As discussed in the beginning of our thesis, our motivation behind this paper imply that our contribution is embedded on the further understanding in C2C exchanges and service exchanges in relation to the values they have as an individual. Also, on how commitments get affected in the non-monetary shared economy by various constructs. Our study aims to contribute in the marketing literature for the non-profit markets. Our research of non-monetary P2P exchange compliments the study of Piscicelli (2015) on the personal values study in the context of Europe,

comparing our respondents' in different nations than Europe with a quantitative measure. Our study also compliments the study of Shih et al. (2015) where the authors focused on implications of divergent motivations for participation in timebanking. We also contribute to the findings of Papaoikonomou and Valor (2016) 's qualitative study which showed the importance of commitment study using relational marketing P2P exchange systems as an alternative to the conventional consumption, by our quantitative study.

P2P exchange platforms and timebank itself can use our result in establishing further strategy by understanding their consumer's values. By focusing on the values of the members, participation can be increased with the relevant strategy and can create more commitment and remove what hinders building commitment. We have already received several requests to share our results with timebanks we have contacted for the data. We believe, all the other P2P platform can use our study for increasing participation of both provider and receiver by understanding the value of the peers regardless of the non-monetary model of timebank. Because, in this platform it is important to understand what engages consumers more to increase their commitment level as their personal values may influence participations. Last but not the least, we believe in the future, market-oriented firms can implement the timebank commercially with the social approach as a platform of P2P exchange. They can use our research as a tool to involve consumer in the delivery and development of services by understanding them.

In the next sections of our paper, first we will review the existing literatures to identify the gap for our study. Then in the theoretical section we will discuss the relevant theories. Then next section will follow the methods of our study where we will explain our study methods and research designs. After that, in the analysis and discussion part, we will analyze our data and we will discuss our findings. Lastly, we will conclude our study by summarizing the findings and mentioning the limitation of our study.

CHAPTER 2: LITERATURE REVIEW

This chapter reflects what other authors have studied on timebank in terms of the commitment and values to understand the research gaps. Firstly, this chapter will describe the gap on commitment studies about timebank, then about the value studies on the context of timebank.

In the exploding trend of P2P or C2C exchange platform in the collaborative or shared economy, there are many studies have been conducted on these types of exchange platforms including timebank. However, different authors have focused on timebank from a different perspective. Timebanking is a matured and an interesting concept of P2P exchange without any monetary exchanges. Among other many studies, Valor et al. (2017) has studied timebank as a phenomenon of C2C exchange to understand consumer behavior in the participation by using goal theory. Valor et al. (2016) have also studied timebank as a phenomenon of P2P exchange to understand and explore the commitment, where commitment was associated with the participation and to the organization using commitment and reciprocity theory. Collom (2008, 2011, and 2012) has studied timebank as social movement phenomena to understand the key indicators of different participating motivation. Shih et al. (2015) researched extensively on timebank to understand the different motivation and barriers to participate and also conflict among the motivations. Additionally, many authors have studied timebank through social psychology and social exchange theories to understand the social capital (Schor et al. 2015, Dubois, 2014) benefits of timebank in the social and economic context (Seyfang 2001; 2003; 2006). We have understood from the previous researches that there are not many studies available on such non-monetary economy platform like timebank concentrating extensively on how the basic human values[4] is connected to understand consumers or peer's participation. Most importantly how their values are associated with the drivers and barriers to participate and how their personal values are related to their commitment to timebank. The next section will follow the previous studies on timebank focusing commitment, values, drivers and barriers to participate in timebanking.

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[4] Schwartz, (2012), An Overview of the Schwartz Theory of Basic Values. Online Readings in Psychology and Culture. We have discussed the values and related theory later.

2.1 Research gap in commitment studies:

Considering the non-monetary form of the timebank, it can be assumed that, different people with different underlying motivational goals and values are participating in timebanking and there are different reasons underlying to their types of commitments to the timebank. However, there is not much study except Papaoikonomou and Valor (2016), who conducted a qualitative study exploring commitment in timebank as a P2P exchange example and studied the relationship of commitment with reciprocity. Papaoikonomou and Valor (2016) illustrated the importance of commitment study using relational marketing P2P exchange systems as the P2P exchange system as an alternative to the conventional consumption. Furthermore, the authors emphasized that there are not enough studies on the relationship between exchanging partners and the role commitment plays in it. Hence, timebank as a context of this study can be relevant for other P2P platforms to understand what affects the active commitment in these P2P exchange systems. The authors argued that the concentrations of commitment are not hierarchical or sequential. Furthermore, it is been urged to study more on the structure of commitment in the P2P exchange system and in cross-cultural research (Papaoikonomou and Valor, 2016).

Commitment[5] to timebanking has some interesting pattern. The appealing social, ecological and humanitarian impact of timebank may lead people to join timebank. However, the active participation later gets decreased because of the lack of knowledge about the timebank and the reciprocity designed within timebanking (Papaoikonomou and Valor, 2016). Furthermore, there are some significant differences in the commitments according to the associated exchange market system and the form of reciprocity in it, which makes commitment a complex and multidimensional construct. Besides, the evaluating and understanding of the value of exchanged services can be affected by their long time association with the conventional market because of the ideology of timebank (see 1.4 What is a Timebank?), where the timebank does not focus on the use value of the services rather they focus on the egalitarian exchange value of any types of the services (Papaoikonomou and Valor, 2016). The authors classified the timebank based on below three foci and the relationship of two types of commitment (attitudinal & behavioral) with them.

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[5] Commitment is a force that binds an individual to a course of action of relevance to one or more targets (Meyer and Herscovitch, 2001). We will define more definitions of commitment later in our theoretical framework.

Foci	Commitment type
Political project timebank	Attitudinal commitment but potential lack of behavioral commitment
Social welfare timebank	Behavioral commitment
Timebank as a market	Behavioral commitment

Table 2: Papaoikonomou and Valor's (2016) described type of timebank

Thus, commitment in members to their timebanks is necessary to be expressed in their activeness, attitude and behavior to accept timebank as not just an alternative consumption platform but a real consumption market apart from a social and community building key (Papaoikonomou and Valor, 2016). However, Collom (2007), Collom and Lasker (2011; 2012; 2016) also have included partially organizational commitment in their quantitative study of timebank to measure the motivation and barriers of participation where they have used eight relevant questionnaires of organizational commitment from Mowday et al., (1979). Apart from these studies, in the context of timebank, there are not enough study on the commitment explicitly and the different variables that are related to and affects the commitment to the timebank.

2.2 Research gap in value studies:

In the context of timebank there are not enough study on values[6] like commitment, except Collom (2007; 2011), additionally, Martin and Upham (2016) studied on Freegle and Freecycle[7] and Piscicelli et al. (2015;2018) studied on the P2P sharing platform and Ecomodo[8] in the European context (UK & Dutch people). Collom (2007), conducted a quantitative study on motivations, engagement, satisfaction, outcomes, and the demographics of the participants of a timebank in the U.S. One of these findings was that values are motivational reason to

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[6] "Values are affected laden beliefs that refer to a person's desirable goals and guide the selection or evaluation of actions, policies, people and events" – Schwartz (2006). We will discuss in detail in our theoretical framework.

[7] Online based P2P giveaway sites to create a resource-sharing community based on UK and USA.

[8] Similar P2P organization like Freegle and Freecycle; however, have been closed now.

participate in timebank. Collom (2007) framed the theory for this study based on previous literatures on motivation to volunteer and community currency[9] to develop the survey questions. In the study of motivation and differential participation, one of the findings of Collom (2011) was that, members who are motivated by their needs and values are more likely committed to the timebank. Collom (2007) used below five items for value construct on this survey study.

- "Act on your personal values, convictions, or beliefs"
- "Create a better society"
- "Contribute to the quality of life in our region"
- "Be part of a larger movement for social change"
- "Help build community in our region"

However, according to Andreotti (2017), some motives which are more important in participating in the sharing economy may be linked to not just demographic variables but more to social variables like attitudes and values that forms the sharing. These variables may affect the individuals' decision to express themselves the way they want or do not want in the sharing platform by managing their privacy and boundary. Andreotti (2017), also argued to focus more on the studying individuals 'motives', 'attitudes' and 'norm' for deeper understanding of the certain pattern of behavior of '(non-) participation' in the sharing economy.

Piscicelli et al. (2015; 2018), studied the P2P shared model using Schwartz basic human values theory to understand the success and failure of the sustainable business model in the economy in the European context. Because, consumers' values influence market acceptance of P2P shared model (Piscecilli, et al. 2018). The acceptance and adoption hindered by the consumer related barriers may result in the failure of the P2P sharing platforms (Piscicelli et al., 2018). Supported by Martin and Upham (2015), who used personal values to study such platform, Freegle and Freecycle, in their study they found how different personal values play role in such platform. Goods sharing platform such as Ecomodo studied by Piscicelli et al. (2015), found that UK users ranked higher in self-transcendence and openness to change (pro-social and pro-environmental behavior) prior to self-enhancement and conservation values. However, the members ranked lower in tradition, security and power values compared to the national population. So, we can understand that, there was difference between UK population and

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[9] A type of currency used by groups with a common identity. Could be geographical or community based. The currency not necessarily based on monetary value. It could use hours as currency such as Ithaca hours or timebank hours.

Ecomodo users in terms of their value orientation. On the contrary, Martin and Upham's (2015) large sample size indicated that, only a third of the members ranked higher in self-transcendence and openness to change values. However, though one platform was more successful than another shared platform, overall both UK based studies indicated the relationship between personal values and acceptance of P2P shared platform. Thus, Piscicelli et al. (2018), urged to study further in the other countries in order to see the differences in their value orientation, which is the gap we would like to contribute with.

Overall, there have been several studies on the monetary form of shared economy platform, however, the non-monetary form of platform like timebank is yet under studied, especially on how values might cause the active participation or less participation and shaping commitment.

CHAPTER 3: THEROTICAL FRAMEWORK

This chapter reflects the core theories we have used in our study from the previous literatures to support our research analysis. First, we will introduce the main theories about commitment and values we particularly choose for our study and why. Then we will brief about the correlated theories of different constructs and how we are using those. Lastly, we will present our suggested theoretical model.

3.1 Why did we choose specifically the three-component model of organizational commitment and Schwartz's value theories and PVQ?

In our study we have used three-component model of organizational commitment developed by Meyer and Allen (1991) as our main commitment theory. This three-component commitment theory has been used widely in the commitment of consumer to the organization and also employee to the organization (Bansal, 2004; Cohen and Liu, 2010).

Figure 1: Meyer and Allen's (1991) three-component model of organizational commitment

Bansal et al. (2004) argued that, this model of commitment has broad applicability regardless of any context (such as, work, home or the service encounter) and any target group (such as, employer vs spouse vs service provider). Furthermore, it captures the full domain of commitment and it is important to include all the three commitments in the study to see their effects. In addition, Meyer and Herscovitch (2001), also emphasized on these three components of commitment (affective, continuance and normative) because these three different commitments have different underlying psychological states regarding the relationship with their specific interested target where they want to maintain the relationship. Thus, three different commitments may have different implications for their behavior. Jones et al. (2010) argued that consumer commitment constructs can also possible to build based on the Meyer and Allen (1991) three-component model. Therefore, we specifically choose this three-component model of commitment, because we assume that it may give justified result in our study since it already has greater applicability and used by many authors. Though it can be argued that there are studies where the results were surprising than the expected one in the lieu of three-component commitment outcomes, but it was explained that these different results occurred because it took place on different nations. For example, the study on the commitment of Chinese employees' results show surprising result for the continuance commitment (Cohen and Liu, 2010). Since we are also studying timebank on different countries and different nations, we need to have theories with the universal perspective since that would be appropriate for our theoretical conceptualizations. Similarly, the basic values of human theory by Schwartz is also universal (Cohen and Liu, 2010), fitting the commitment theory. For more justification of using personal values theory in this marketing context, Piscicelli et al. (2015), illustrated that, in order to gain knowledge and understanding of consumer behavior and their social habitus, using social psychology theories gives valuable insights and the organization can work on the main findings to make strategies.

3.2 Definitions of commitment:

There are various definitions of commitment. The author Mowday et al. (1979), identified ten different definitions of commitment from different authors. From these definitions of Mowday et al. (1979), some examples are,

- "An attitude or an orientation toward the organization which links or attaches the identity of the person to the organization (Sheldon, 1971, p. 143)

- The willingness of social actors to give their energy arid loyalty to social systems, the attachment of personality systems to social relations which are seen as self-expressive (Kanter, 1968, p. 499)
- It includes something of the notion of membership; (2) it reflects the current position of the individual; (3) it has a special predictive potential, providing predictions concerning certain aspects of performance, motivation to work, spontaneous contribution, and other related outcomes; and (4) it suggests the differential relevance of motivational factors (Brown, 1969, p. 347)
- A partisan, affective attachment to the goals and values of an organization, to one's role in relation to goals and values, and to the organization for its own sake, apart from its purely instrumental worth (Buchanan, 1974, p. 533)
- The nature of the relationship of the member to the system as a whole (Grusky, 1966, p. 489"

From these several definitions, there are two types Mowday et al. (1979) identified, commitment related behavior or behavioral commitment and attitudinal commitment. In addition, author also identified commitment as a crucial variable in many studies to understand the work behavior of the employees in an organization (Mowday et al., 1979). The authors identified three possible reasons to consider commitment an important variable to study behavior.

- "First, in an organization commitment of employees are predictor of certain behavior like, people who are willing to be with organization and work accordingly to its' goal are more likely to be committed to the organization.
- Second, commitment is an appealing concept to the managers as an interest to increase attachment of employees with the organization for its' own good. Besides, the social scientist too found it interesting as because, 'loyalty' was studied from the beginning as a socially acceptable behavior of the employees.
- Thirdly, the nature of general psychological processes that help to identify purposes in life and sense making out of any object surrounding us may facilitated by studying and understanding organizational commitment broadly" (Mowday et al., 1979, p. 1).

Furthermore, commitment can be also characterized by at least three other factors: (1) a strong belief in and acceptance of the organization's goals and values; (2) a willingness to exert

considerable effort on behalf of the organization and (3) a strong desire to maintain membership in the organization (Mowday et al., 1979, p. 4).

Since there can be many definitions and measurements of the commitment, Meyer and Allen (1991) also researched several definitions of commitments including Mowday et al., (1979) definitions, and have developed the three-component model of commitment (see Figure 1) to serve two purposes:

- To help in the interpretation of existing research
- To serve as a framework for future research

They have conceptualized three types of commitment - affective, continuance and normative commitment. Affective component refers to employees' emotional attachment to, identification with, and involvement in the organization (Meyer and Allen, 1991). The continuance component refers to commitment based on the costs of employees' leaving the organization or because they need to (Meyer and Allen, 1991). Finally, the normative component refers to employees' feelings of obligation to remain with the organization (Meyer and Allen, 1991). Though Meyer and Allen (1991) took approach of employees to describe these commitments, we already mentioned the universality of this model to use. As we mentioned (see 1.7 Research questions) that we have created questionnaire (see Appendix 1 & 3 for detail questionnaire with each construct) to collect data based on previous literatures, it might help to look at the below figure 2 how we related questions with component of commitments:
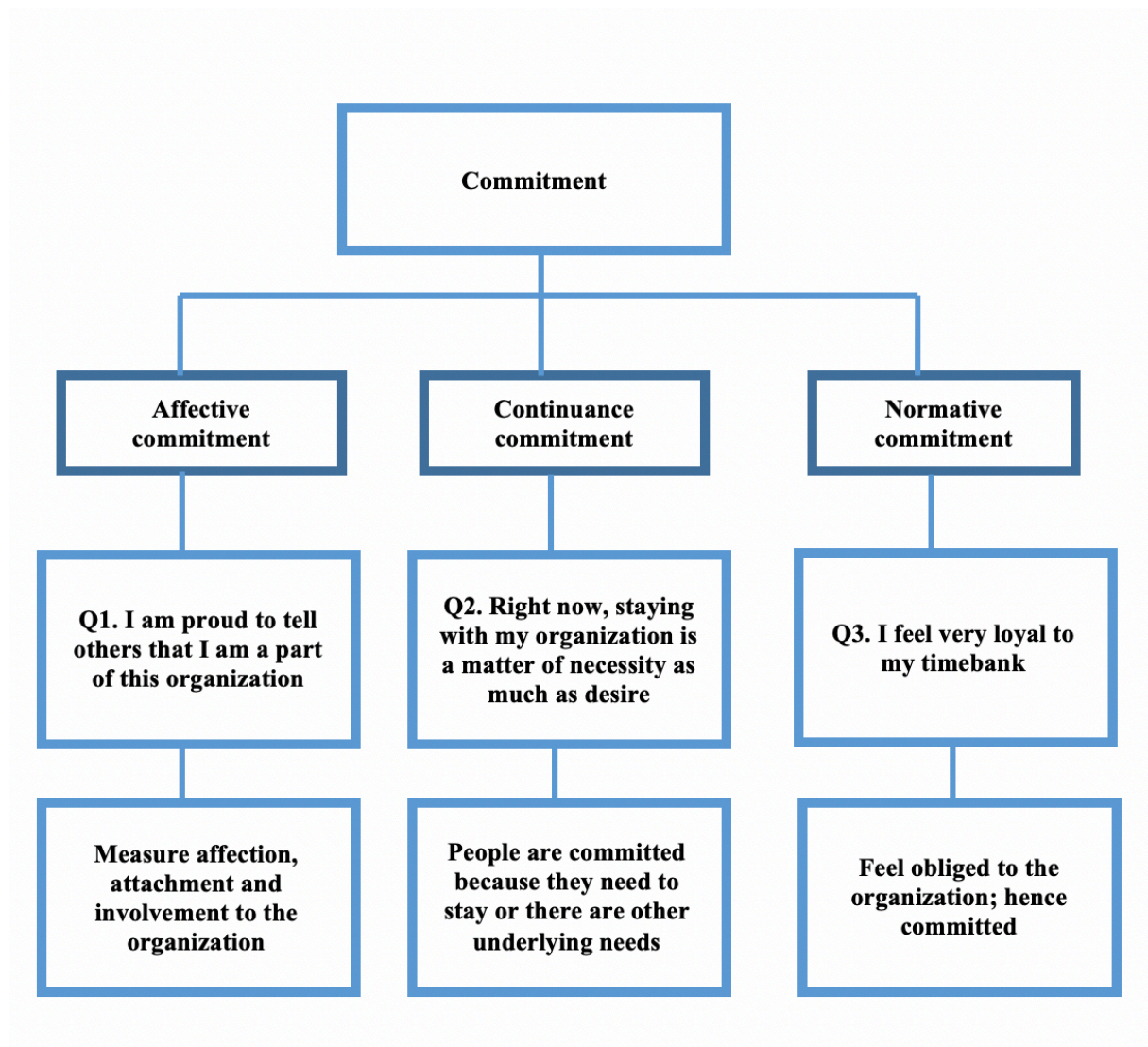
Figure 2: Examples of how survey questions are derived and connected with three components of commitment

- In the case of our timebank study, as describe in the above figure, we assume that people who ranks higher in 'Q1. I am proud to tell others that I am part of this organization' would rank higher in affective commitment but it is not necessarily they would be very active to make exchanges.

- Continuance commitment according to Bansal et al. (2004), makes a constraint-based bond between consumer and the service provider out of need where the consumer faces the fact that they have to stay with the service provider. Continuance commitment also referred as a ''calculative commitment'' (Gilliland and Bello, 2002), and it is

similar as Bendapudi and Berry's (1997) notion of a "constraint-based relationship" where consumers feel they cannot end the relationship with the service provider because of the economic, social or psychological costs (Bansal et al., 2004). Thus, we assume that people who ranks higher in 'Q2. Right now, staying with my organization is a matter of necessity as much as desire' would rank higher in continuance commitment and would continue to participate more actively playing both role of provider and receiver.

- Finally, we assume that people who ranks higher in 'Q3. I feel very loyal to my Timebank' would rank higher in normative commitment. However, members who are very loyal to timebank may not always necessarily be an active participator. Because, as some members understand timebank as a volunteering platform they may participate mostly as a service provider or they might support the ideology of timebank and becomes member to express their support to it without being an active service exchanger. They may be a passive member to the timebank by donating time credits, funds, joining events. Thus, members who are environment, social and political activist they also may be a loyal supporter of timebank but not necessarily would be an active service exchanger. However, according to Jones and Taylor (2012), consumers evaluate the useful value of the service prior to the relationship with their services provider.

To support this further in the context of timebank, Papaoikonomou and Valor (2016) proved the evidence of Morgan & Hunt (1994) study that active commitment is not assured by the shared values to participate in a group, if later there is no instrumental value carried out. As mentioned before by Papaoikonomou and Valor (2016), three foci of commitment in timebanks, which are, timebanks as political projects, as social welfare and as markets. Members not necessarily be committed to all the foci and they may commit to one but not another. Thus, their commitment can differ by the reasons behind their types of commitment.

3.3 The value theory:

According to Schwartz (2006), values influence most if not all motivated behavior. Schwartz (2006) defined values as "affected laden beliefs that refer to a person's desirable goals and guide the selection or evaluation of actions, policies, people and events". Survey researchers often

view values as deeply rooted abstract motivation (Schwartz, 1992). However, often it has been noticed that by measuring values with sets of attitude questions such as religion, politics, work etc., there is a lack of a theory-based instrument to measure values which matters most to understand individuals (Schwartz, 1992; 1994). To bridge the gap between the theory and instrument, Schwartz (1992, 1994) provides a framework, the value theory, for relating the system of ten values to behavior with four higher order values (see Table 3) that enriches analysis, prediction, and explanation of value-behavior relations and it makes clear that behavior entails a trade-off between competing values. It specifies a set of ten value orientations those are comprehensive of some major motivational goals and those motivational goals are recognized across cultures. These 10 values again can be further grouped into two bipolar dimensions (in total four higher order values).

- Self-transcendence versus self-enhancement
- Openness to change versus conservation

These four higher order value types tend to be more stable and generalizable than the ten values (Schwartz, 1994). By measuring each of these values by a standard set of questionnaires it can provides information on the basic values that are relevant to whatever topics might be chosen. Researchers interested in a detailed study of the value antecedents or consequences of particular opinions, attitudes or behavior could build on and or add to the core information on values by using this framework (Schwartz, 2006).

Higher order values	Core values	Motivational Goal
Self-enhancement		
	1. Power	Social status and prestige, control or dominance over people and resources
	2. Achievement	Personal success through demonstrating competence according to social standards
	3. Hedonism	Pleasure and sensuous gratification for oneself
Openness to change		
	3. Hedonism	Pleasure and sensuous gratification for oneself

		*Hedonism comes under both higher order values
	4. Stimulation	Excitement, novelty, and challenge in life
	5. Self-direction	Independent thought and action choosing, creating, exploring
Self-transcendence		
	6. Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and for nature
	7. Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact
Conservation		
	8. Tradition	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide the self
	9. Conformity	Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms
	10. Security	Safety, harmony, and stability of society, of relationships and of self

Table 3: Schwartz (1992) four higher order values, ten core values and each value's underlined motivational goal

However, there are some other scales for measuring values as well such as Hofstede (1980, 1991), Rokeach (1973), Inglehart (1971) but the Schwartz (1992) Value Survey (SVS) is the most widely used by researchers for studying distinctive differences in ten basic human values as we mentioned before this can be apply universally. This scale (SVS) enquires respondents to rate the importance of 56 specific values as a guiding principle in their life. Shalom Schwartz (1992) based his values theory on the conceptual framework of Rokeach (1973). The author defined value as 'an enduring belief that a specific mode of conduct or end state of existence is

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personally or socially preferable to an opposite or converse mode of conduct or end state of existence' and explained that every human being's values continually change over time, as opposed to enduring as stable personality traits. As per Schwartz (1992, 1994) values derive from three needs of human existence:

- Needs of individuals as biological organisms

- Coordinated social interaction

- Group efficacy and survival

And based on these ideas, Schwartz (1992; 1994) also defined values as desirable, abstract, trans situational goals with varying degrees of importance that serve as guiding principles in people's lives. Schwartz & Bilsky (1990) also discussed that all human values share five common features of values: (1) are concepts or beliefs (2) pertain to desirable end states or behaviors (3) transcend specific situations (4) guide selection or evaluation of behaviors and event (5) are ordered in relative importance. Therefore, every value is distinct from another because of the motivational goal that causes it. Schwartz (1992) identified the existence of ten basic values which encapsulate all possible values.

However, in recent time Schwartz (2006) introduced a new modified method called PVQ (Portrait Value Questionnaire) from the SVS scale. The PVQ scale also measure the same ten basic value orientations as measured by SVS. But with more concrete and its less cognitively complex task than the SVS which makes it suitable for use for all fragments of the population (see 4.8 Schwartz Value Theory). PVQ state each question such as "Thinking up new ideas and being creative is important to him. He likes to do things in his own original way" in a portrait way where the responders need to think "How much like you is this person?" (see Appendix 2 & 4). Then they can check one of six boxes labeled: very much like me, like me, somewhat like me, a little like me, not like me, and not like me at all. Thus, the respondent's resemblance of participants to individuals who are defined in terms of specific values is inferred from their own values. The judgments of resemblance are converted into a 6-pt. numerical scale starts from 1 to 6 like Likert scale. There can be different PVQ versions such as PVQ-20, PVQ-21, PVQ-29, PVQ-40, PVQ-56 to use for different populations. For our research purpose, we have adopted PVQ-21 with 21 items questions (see Appendix 2 & 3 for the questionnaire and questionnaire with values) but it can still measure the ten values and also achieves optimal coverage of the distinctive basic motivational orientations (Schwartz, 2012).
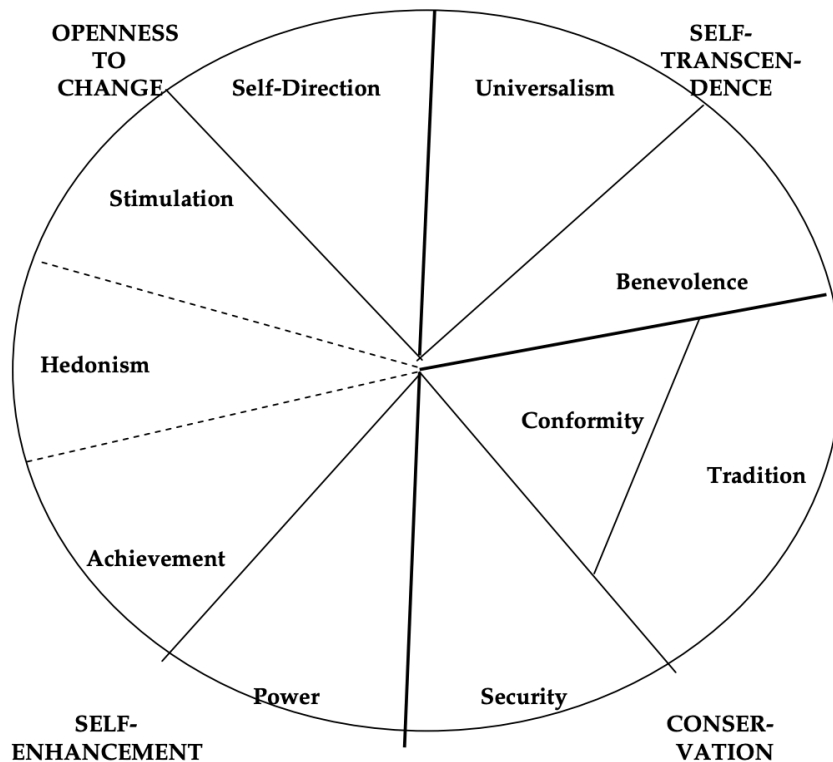
Figure 3: Circular diagram model of relations among ten core values and four higher order values (Schwartz, 1992)

The circular arrangement model of the values above by Schwartz (1992) represents a motivational range. As Schwartz (1992) stated, "the closer any two values in either direction around the circle, the more similar their underlying motivations. The more distant any two values, the more antagonistic their underlying motivations."

How the structure of these ten values represents their underlying motives and the conflicts and congruities between them we have explained below:

Self-enhancement vs. Self-transcendence:

On this dimension, power and achievement values oppose the universalism and benevolence values (see Figure 3). Power and achievement underlined the pursuit of self-interests, but the opposite values, universalism and benevolence represent the welfare and interests of others.

Openness to change vs. Conservation:

On this dimension, self-direction and stimulation values oppose security, conformity and tradition values (see Figure 3). Self-direction and stimulation values represent independent action, thought and feeling and readiness for new experience, whereas security, conformity and tradition values emphasize self-restriction, order and resistance to change. Hedonism (see Figure 3) shares both openness and self-enhancement elements.

To justify our use of PVQ-21 we researched on previous studies based on values and P2P shared economy, where we have found that there is successful study by Piscicelli et al. (2018) using Schwartz value theory (2012). In the study self-transcendence and openness to change was scored high and self-enhancement and conservation values scored low among the respondents. Piscicelli et al. (2018) used 19 basic individual values (see Figure) rather than 10, where the self-direction and universalism values were higher significant, and power and tradition were lower significant to the participants.

Figure 4: Circular motivational continuum of 19 basic individual values. Adapted from Schwartz et al. 2012, 669; Piscicelli et al. (2018)

Between the values, openness to change represents accepting new ideas and experiences are whereas, the opposite conservation values represent values such as self-restriction, order and avoiding change (Schwartz et al., 2012). Self-enhancement values are opposed by self-transcendence as we explained before as well (see Figure 3). Openness to change and self-enhancement values have shared element to hedonism (Piscicelli et al., 2018). Since Piscicelli et al. (2018) study's successfully measures the values of users of a successful P2P goods-sharing platform and to what extent they differ from values of users of another comparable platform using Schwartz's PVQ; that inspired us as well besides the universal application of PVQ to use PVQ-21 in our studies. In our methodology chapter we have listed more reasoning for PVQ-21.

3.4 Coherence of commitment and drivers, barriers to participate in timebank:

In P2P exchange, timebank act as a mediator between members and members participate in exchanging services sometimes as provider and sometimes as receiver (Nind et al., 2017). Therefore, we assume in those participations, there might be some barriers and drivers to participate and that might affect the overall commitment to that timebank itself. To support our argument, we have identified several barriers and drivers of participation of timebank discussed by previous authors and our questionnaire (see Appendix 1) also based on these constructs. The below table represents the most argued drivers and barriers by several authors which either inspire to participate or hinders. We have also discussed how they are defined.

	Constructs	Reference	Discussion
Drivers	Ideological + Value	Shih et al. (2015); Dubois (2015)	Members may like the goals and ideology of timebank, which is a strong factor that bring members towards timebank. Members may still join timebank for their own values such as, to help building community.
	Social	Collom (2011;2016);	Members join time bank with different social motives, such as, increasing social connectedness and social network building,

		Dubois et al. (2014)	integrating with new people in a new town, nostalgia for "neighborliness"
	Economic + Instrumental	Shih et al. (2015); Valor et al. (2017)	Members may join timebank with political goals, however, their self-oriented goals are expressed by the consistency of their transection. Because, the members are engaged in more transection when they obtain material gain. Transection of timebank represents participants are interested in the individual return and instrumental value.
	Altruism	Shih et al. (2015); Valor et al. (2017); Seyfang (2003); Baftales (2018); Schor (2016); Collom (2011, 2016); Dubois (2015)	Altruism is defined by helping others in the society without expecting anything in return, altruism is kind of volunteering. Time bank members are found to be motivated by altruism to participate
Barriers	Knowledge gap	Bellotti et al. (2015) Shih, et. al. (2015); Dubois, (2015); Collom, (2011); Seyfang, (2003); Glynos et al. (2012);	Do not know how time bank works, how to use time credits, how to communicate for/to the exchange among time bank members

		Ozanne (2010); Molnar (2011)	
	Lack of trust	Bellotti et al. (2015); Ozanne (2010); Valor et al. (2016)	If members do not feel safe to let an unknown person enter into the house for service or go to an unknown person's house to do service.
	Social homophily + Social capital distance	Collom (2007;2011) Dubois (2014; 2015); Schor (2016); Baftales (2018); Schor et al. (2016)	There might be a cultural and social capital distance maintained when choosing exchanging partner.
	Limited service range	Bellotti et al. (2015) Seyfang (2006); Dubois (2015); Valor et al. (2016)	When members ask for service, but the service is not available in the time bank
	Lack of service quality	Shih et al. (2015) Dubois (2014); Schor et al. (2016); Ozanne (2010)	A concern of many members in the requested services in timebank might provide low perceived quality of services
	Self-interest + Knowledge gap	Bellotti et al. (2015); Shih, et. al. (2015);	Not having enough disposable time for timebanking but want recognition rather than having time credits in the time banking

		Dubois, (2015); Collom, (2011); Seyfang, (2003); Glynos et al. (2012); Ozanne (2010); Molnar (2011)	and also do know how the mechanism in timebank works

Table 4: Drivers and barriers to participate in timebank mentioned by previous researchers

We have discussed briefly in previous sections how authors have connected the commitment and these barriers and drivers to participate in timebanking. There have been several surveys (Shih et al.,2015; Collom, 2011) conducted on these barriers and drivers on the context of timebank. These survey results also showed us that responses on these surveys can be crucial and need to understand case by case; e.g. a person might rank higher in the affective commitment since the driver for the person to join timebank is being a volunteer and mostly altruistic but timebank is for exchange services therefore he/she shows that he/she has a lack of knowledge about timebank. Based on our previous discussions we will explain below the theoretical assumptions we have made to research further on this connection:

From the studies we have found that many members may take timebanking as volunteering (see Table 4) work, thus we assume that the affective commitment would be highest among these members. However, the economic and instrumental constructs ranked higher among members (Collom, 2011) to participate in timebanking. Thus, in this case the continuance commitment can be highest ranked among these members, where the variables can be service quality, service availability and unable to pay for it in the market.

Members who are not satisfied with the service quality and does not get services when they ask for it, would prefer to get the services from the conventional market place; opposed to the members who do not have the ability to pay for it in the conventional market or unable to perform the services by themselves. They may not prefer the conventional marketplace when the services are available in timebank. People who are unemployed or retired may also

choose timebanking more than the people who are employed. Thus, we assume that people will rank higher in continuance commitment when they rank higher in economic and instrumental construct in the driver. And will rank lower in continuance commitment when they rank higher in lack of service quality barrier construct and they would be employed. The independent variables in this case are economic and instrumental constructs, self-interest and lack of service quality. Continuance commitment would be a dependent variable.

3.5 Coherence of commitments and values:

According to Lydon (1996), values and commitment should be related as the individuals are particularly committed to the objectives, projects and duties of life that convey their core values, beliefs, identities and their core values define significantly who they are. The values play role of a bridge of our life experiences and goals with a motivational process to commitments to achieve those goals. Hence, our true identity is expressed by the goals that we are mostly committed to (Lydon, 1996). Glazer et al. (2004), studied the relationship between higher order values[10] (also see Table) and hospital nurses from UK, USA, Hungary and Italy who were born and living in these countries. Significant differences between countries give the evidence of values to motivate different types of commitment to their own organization (Glazer et al., 2004).

3.5.1 Affective commitment and values:

According to Mowday et al. (1982), human values and objectives being matched with their organizations' values and objectives often results as their emotional attachment, identification with the organization, which is affective commitment (Glazer et al., 2004). Affective commitment is a reflection of both self-transcendence and conservation values. Conservation values emphasize belongingness whereas, self-transcendence represents concern for others. If a person has an affective commitment to his/her organization, it means the person desire to stay with the organization because it provides a feeling of security and identification. Therefore, self-transcendence would be strongly correlated with the affective commitment compared with conservation values (Glazer et al., 2004). Abrams et al. (1999) stated that social pressure also might influence behavior. When people desire to maintain a relationship in their life for

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[10] "Four higher order values are Self-enhancement, Openness to change, Self-transcendence, Conservation" - Schwartz (1992)

maintaining their sense of stability and security, they become more aware and want to fulfill the expectation of others, for example, to a family like organization (Glazer et al., 2004). Conservation are expected to be positively correlated with affective commitment. The openness to change is expected to be negatively correlated to affective commitment as conservation and openness oppose each other. Values that are positively correlated to each other, are expected to have the more or less similar relationship with other variables (Glazer et al., 2004). Additionally, Cohen (2009) argued in his study about affective commitment and values relationship that, conformity, benevolence and universalism consistently have positive relationship with all the six-workplace commitment forms[11]including affective type of commitment.
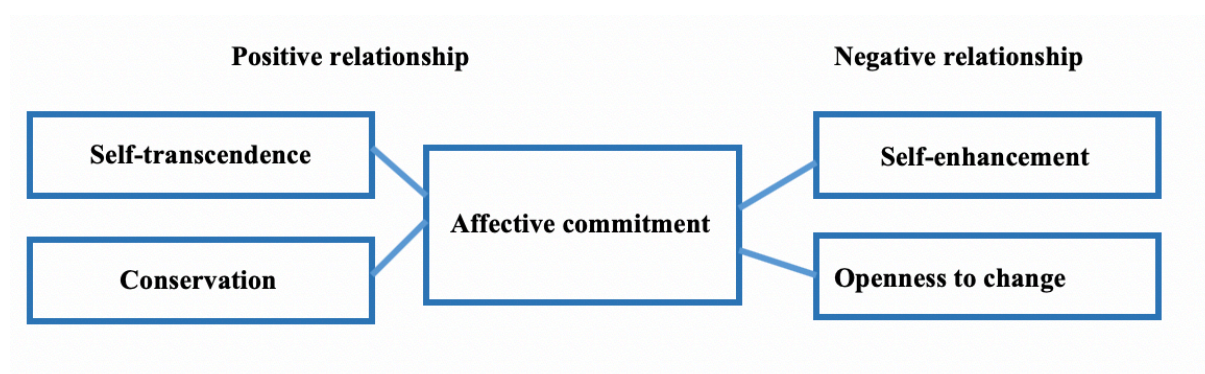
Figure 5: Relationship between affective commitment and values

3.5.2 Continuance commitment and values:

When people desire to move forward with achieving social status and power, it reflects the values under self-enhancement. People work for the organization to achieve their goal, thus, when they do not meet the goal or the organization does not give them the growth opportunity and independence, they tend to leave the organization. However, if they do not have better option and the leaving cost is high then they tend to stay with the organization (Glazer et al., 2004). However, we are aware that there are debates about continuance commitment, if it is an organizational commitment or not since there is no involvement of psychological bind (Abbotti, et al., 2005). Finegran (2000), studied continuance commitment to be different than affective and normative commitment by different workplace values. On the contrary, Cohen and Liu

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[11] Six workplace commitment forms (organizational, occupational, group, work, job, union) – Cohen (2009)

(2010) showed in their study about organizational commitment and its relationship with values based on China that there is a strong role for continuance commitment in organizational commitment which is affected by personal values. Cohen and Liu (2010) found that self-direction was strongly negatively correlated with continuance commitment whereas, benevolence was positively correlated to continuance commitment which was an unanticipated finding since these two values are close in the circular diagram (see Figure 3). Thus, the authors argued to conduct further study in western context as it showed surprising findings in the Chinese context. Hence, we would also consider continuance commitment in our study to see if its relation is significant or not.
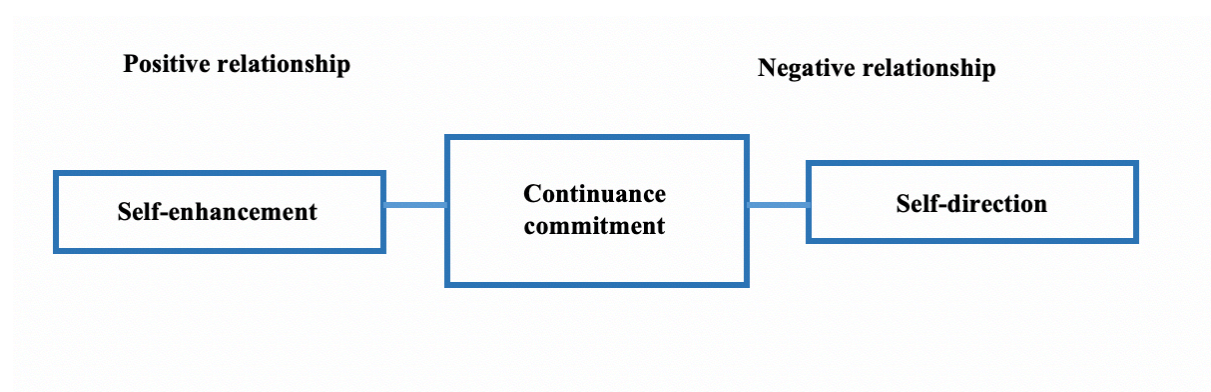
Figure 6: Relationship between continuance commitment and values

3.5.3 Normative commitment and values:

According to Finegan (2000), people who are more likely to be obedient and people who value the cautiousness and formality have normative commitment to their organization. From this definition of normative commitment, it can be assumed that normative commitment will be positively correlated to conformity. Additionally, situation that are responsible to produce affective commitment, are also likely to produce normative commitment by increased sense of obligation to their organizations Finegan (2000). There are also other studies, such as Meyer et al. (1993), who found that the affective and the normative commitment are often correlated. Abbott et al. (2005), also argued that affective and normative commitment are highly and positively correlated whereas, continuance commitment is unrelated to affective commitment and negatively related to organizational positive behaviors. Affective and normative commitment results in positive organizational behavior, satisfaction and performance (Abbott et al. 2005). Thus, it can be assumed that the normative commitment will be positively

correlated to the similar values as the affective commitment. However, normative commitment found to be positively related to universalism in the study of Cohen & Liu (2010).
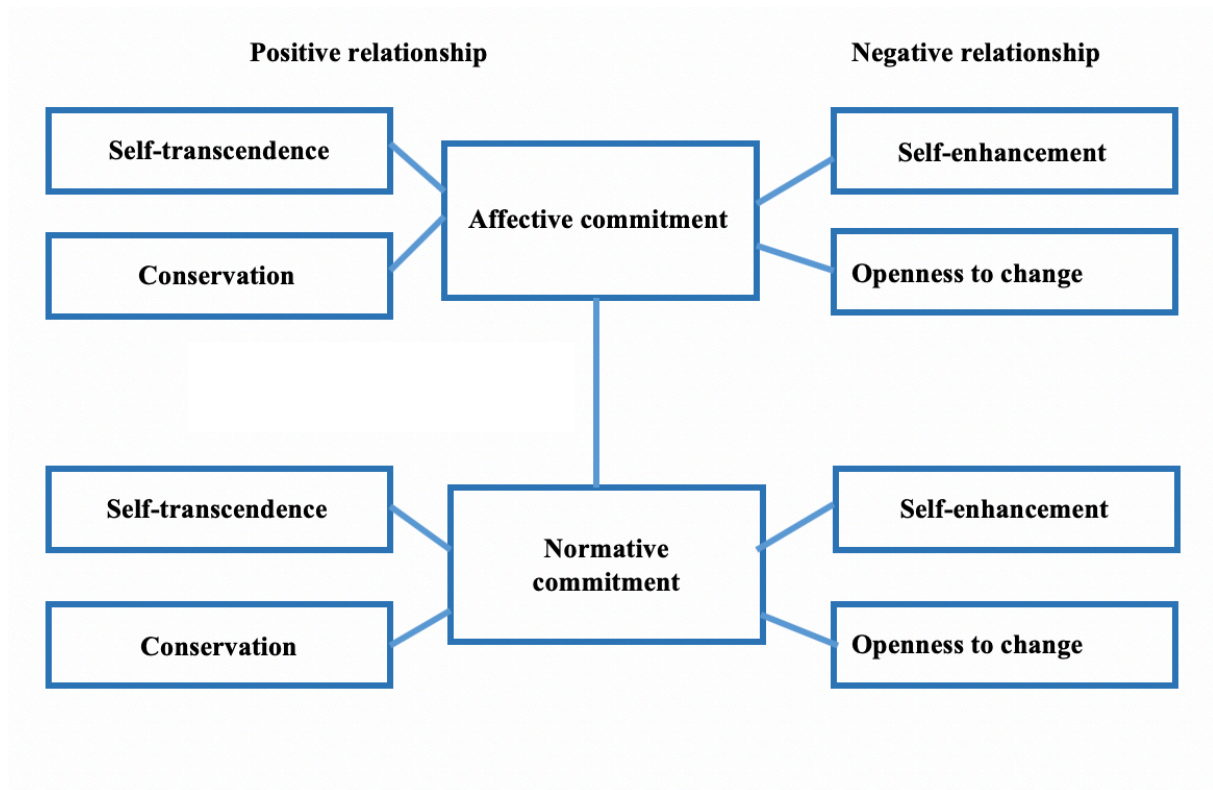
Figure 7: Relationship between values and affective, normative commitment

3.6 Coherence of personal values and drivers, barriers to participate in timebank:

Following the personal values by Schwartz, the motivational goals that each of these values portray, instrumental driver may have a positive correlation to the achievement, ideology value driver may have a positive correlation with universalism and benevolence values. However, altruism may be more related to the conservation values like tradition and conformity. Social driver may have correlation to self-transcendence and conservation as these two values represents social focus (Piscicelli et al. 2015).

3.7 Our suggested theoretical model:
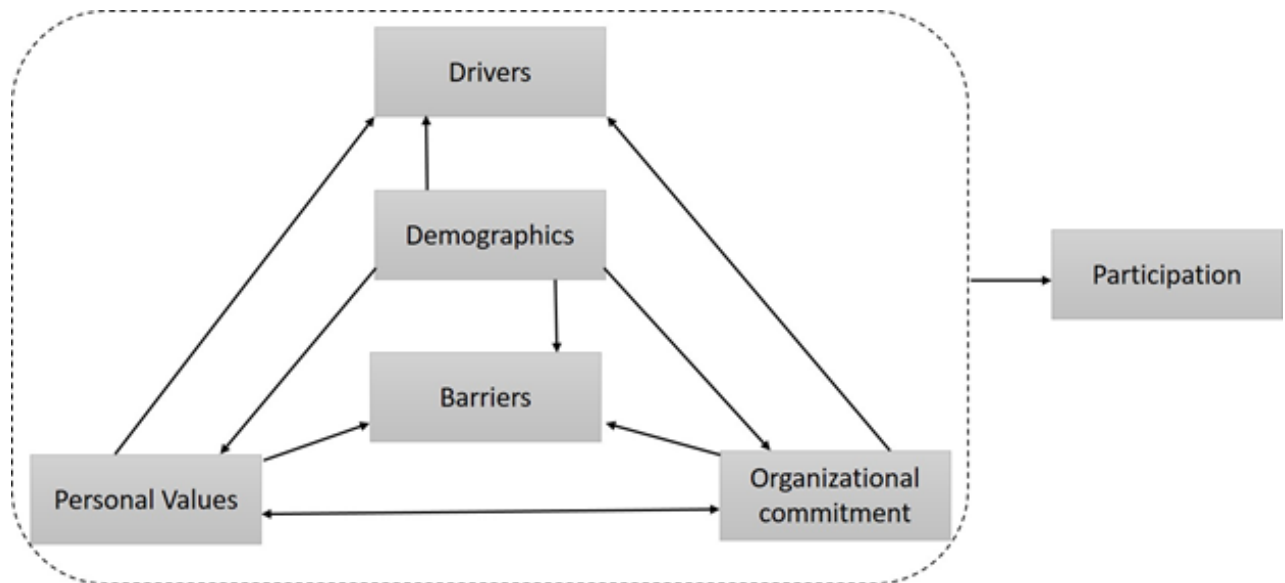
Figure 8: Suggested theoretical model connecting all the constructs

Above Figure 8 is our proposed model of personal value-commitment relationship with the other constructs such as drivers, barriers and demographics. Here, personal values and commitment are assumed to be correlated. Demographics may affect the commitment, values types, drivers and barriers. Personal values and commitment may also have correlation with the drivers and barriers. These variables overall affect the participation in timebanking as they are assumed to be correlated.

3.8 Hypothesis:

According to Cohen and Liu (2010), it has been illustrated by Schwartz et al. (2000) that the individual values people consider as priority, might be linked to their attitude and behavior, thus, high-priority values guide people to their goals. The attention people give to their perception and their interpretation of various situation are influenced by values and these can affect attitudes, for example commitment (Cohen and Liu, 2010). Schwartz (1996) argued that, to create particular hypotheses about the connection between values and attitudes and behaviors, the effects of behaviors or attitudes on the expression or attainment of motivational objectives of value types should be carefully analyzed in order to identify the most relevant type (Cohen and Liu, 2010).

From the previous discussion, our proposed hypotheses considering timebank are,

Values:

H1: In the timebank, participants will score higher in universalism, benevolence and openness to change.
H1a: In the timebank, participants will score higher in universalism.
H1b: In the timebank, participants will score higher in benevolence.
H1c: In the timebank, participants will score higher in openness to change.

H2: In the timebank, participants will score lower in the self enhancement, conservation and power values.
H2a: In the time bank, participants will score lower in the self enhancement.
H2b: In the time bank, participants will score lower in the conservation.
H2c: In the time bank, participants will score lower in the power.

Commitments:

H3: Affective and normative commitment will score higher and continuance commitment will score lower.
H3a: Affective and normative commitment will score higher.
H3b: Continuance commitment will score lower.

Values vs commitments:

H4: Affective commitment will have strong positive correlation with self-transcendence and positive correlation with conservation. However, openness to change are expected to be negatively correlated to affective commitment.
H4a: Affective commitment will have strong positive correlation with self-transcendence.
H4b: Affective commitment will have positive correlation with conservation.
H4c: Openness to change are expected to be negatively correlated to affective commitment.

H5: Normative commitment will have positive correlation to universalism, conformity, conservation and self-transcendence values. On the contrary, power, achievement and hedonism will be negatively correlated to normative commitment.

H5a: Normative commitment will have positive correlation to universalism.

H5b: Normative commitment will have positive correlation conformity.

H5c: Normative commitment will have positive correlation conservation.

H5d: Normative commitment will have positive correlation self-transcendence.

H5e: Power, achievement and hedonism will be negatively correlated to normative commitment.

H6: Continuance commitment will have positive correlation with tradition, conformity, benevolence, and universalism. Whereas, self-direction, stimulation and hedonism will be negatively correlated to continuance commitment

Drivers and barriers vs commitment:

H7: In the timebank, economic instrumental and altruism will score higher as drivers and will be positively correlated to affective commitment. Whereas, lack of knowledge, lack of service quality and availability will score higher as barriers and lack of service quality will be negatively correlated to affective commitment.

H7a: In the timebank, economic instrumental will score higher as drivers.

H7b: In the timebank, altruism will score higher as drivers.

H7c: In the timebank, economic/instrumental drivers will be positively correlated to affective commitment.

H7d: In the timebank, altruism drivers will be positively correlated to affective commitment.

H7e: Lack of knowledge will score higher as barriers.

H7f: Lack of service quality and availability will score higher as barriers.

H7g: Lack of knowledge will be negatively correlated to affective commitment.

H7h: Lack of service quality will be negatively correlated to affective commitment.

Values and drivers, barriers:

H8: On the context of timebank, there will be positive correlation between instrumental drivers and achievement; conformity and altruism; universalism and ideology value drivers.

H8a: On the context of timebank, there will be positive correlation between instrumental drivers and achievement.

H8b: On the context of timebank, there will be positive correlation between conformity and altruism.

H8c: On the context of timebank, there will be positive correlation between universalism and ideology value drivers.

H9: On the context of timebank, there will be negative correlation between lack of trust and universalism

CHAPTER 4: METHODOLOGY

This section explains the research methods we have used to analyze our data. Followed by discussing each step we have taken for our research. Finally, we ended the section with our chosen analytical methods to analyze gathered data.

4.1 Research Approach:

To answer our main research question and the sub questions of our thesis, we set up few criteria's in order to create a survey that will facilitate in conducting a cross-cultural study in many different countries. Those countries might be very different in values and understanding values. The criterions were:

1. The survey questions sources need to be based on previous researches and literatures; where the authors already have proven the constructs (such as barriers and drivers).

2. The survey needs to contain questions relevant for all kind cultures for the countries we will send.

3. The survey needs to be to meaningful to the timebank founders/coordinators/members and not too much time consuming for respondents to complete.

4. The survey needs to capture biasfree responses irrelevant of gender, country, occupation, age.

5. We have to consider language barriers between countries.

We have contacted timebanks in below 12 countries. However, the research took place in the USA, New Zealand and India.

In despite of different countries, the object of the study remains as to captures initial respondents on an individual level, mainly the timebank members. The objective of conducting such a study in these countries was to gather timebanks data, which can be later analyze in country level, national level, portrait value level and finally to understand how these construct affects commitment level. It was also fundamental for the study to get a depth of the cultural and value differences. Therefore, sampling of data also captured where we could measure the five demographic categories such as age, gender, educational level, profession and whether the respondents are living alone or with someone else. Since we had separate continents, also many different cities specially in New Zealand and the USA, the study gave a very wide range of

individuals from various conditions of living. Except India, both the US and New Zealand's language was English, therefore we could overcome the language barriers for our majority samples.

Country	Number of Timebank took part in the survey
India	1
USA	25
New Zealand	10
*Number of unidentified timebank	13

Table 5: Participants countries in the survey

4.2 Survey Method:

According to King et al. (1994) quantitative research uses numbers and statistical methods and tends to be based on numerical measurements of specific aspects of phenomena. It also abstracts from particular instances to seek a general description or to test causal hypothesis. It seeks measurements and analyses that are easily replicable by other researchers. We choose the quantitative approach and collect data by conducting surveys as the purpose of our research to discover answers to questions through the application of scientific procedures. There is no guarantee that any given research undertaking actually will produce relevant, reliable and unbiased information but scientific research procedures are more likely to do so than any other method (Selltiz et al. 1964). Survey allows the researcher to gather subjective responses from the participants and the result from the survey can be later generalized by selecting the desired population as an interest group (Pinsonneault and Kraemer, 1993).

There are various methods to identify the samples for the surveys. However, we selected convenience sampling. Since convenience sampling is a type of nonprobability or nonrandom sampling where the members of the targeted population meet certain practical criteria. The criteria could be easy accessibility, geographical proximity, availability at a given time, or the willingness to participate for the purpose of the study or the researching subjects of the

population are easily accessible to the researcher (Etikan et al. 2016). Since we received the willingness from the coordinators to help us with the study from certain timebanks which were easily accessible through internet to send the survey through email addresses and also gave us different geographical locations to understand the cultural differences.

To facilitate our data collection for the study we chose to email each coordinator and founder of the timebank separately and discussed and emailed them our thesis proposal and what are we trying to measure. And once they have agreed to conduct and send the survey between their members, we sent them the survey. It has taken a longer time, but we got few gains such as:

- We received good number of responses in relatively short time (3 weeks).
- The respondents read the questionnaires individually and showed interested in our survey as the comments in the survey received.
- We had the information and contacts of several coordinators whom we could contact for additional information.

4.3 Questionnaire:

The questionnaire combined with constructs such barriers, drivers of participating in timebank studied by previous researchers, commitment build up, respondent background and demographic questions with Schwartz portrait value theory (see Appendix 2). The order of the questionnaire was introduction of the researchers, background information such as name of the timebank, transactions made in timebank, commitment, barriers and drivers of participating in timebank and portrait value questionnaire. The demographic questions included last, which is the most common and recommended approach when constructing a questionnaire (Schwartz, 1992).

The survey was created by Google Survey forms. And sent to the participants online by email invitation to take part in the survey. The full questionnaire is available in the Appendix 3.

Section 1	Introduction to the survey
Section 2	Background
Section 3	Commitment
Section 4	Barriers and drivers in participating in Timebank

Section 5	PVQ-21
Section 6	Demographics
Section 7	End of the survey

Table 6: Survey sections

4.4 Scale:

For Section three and four we have used seven-point Likert scale to add additional granularity (Bertram D., 2016) to the typical five-points Likert scale. Joshi et al. (2015) explained the Likert scale as the position of neutrality (neutral/don't know) lies exactly in between two extremes of strongly disagree (SD) to strongly agree (SA), it provides independence to a participant to choose any response in a balanced and symmetric way in either directions. The validity of a Likert scale is driven by the given topic; and the response received in context of respondents' understanding and judged by the creator of the response item (Joshi et. al. 2015). Each level on the scale represents a numeric value or coding, usually which starts at 1 and incremented by one for next level (Bertram D., 2016).

Q. I am proud to tell others I am part of this organization

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree	Not Applicable
○	○	○	○	○	○	○	○

Figure 9: Sample of seven-point Likert scale

4.5 Commitment:

Commitment is defined as "the implicit or explicit pledge of relational continuity between exchange partners" (Dwyer et al., 1987, p.19). Although in the exchange system of timebank, the organization is a facilitator for the exchange between members or peers, yet the organization has its core values to attract people in the system, hence the organizational commitment is identified to which the members are attracted and committed for further steps in the system. It has been found that the members are ideologically attracted to the egalitarian value and trading ration of timebanking where everyone's time is valued equally, and their skill is not evaluated like the economic market. Besides, members are concerned about knowing the people that provides the goods and services for creating local alternatives, thus they prefer not to have professionalized services or have outsourcing for the services (Dubois, 2015; Schor et al. 2016). Based on such previous researches about how commitment is corelated with different attributes and barriers and drivers in participation of timebanking and P2P exchanges ten questions have been selected for measuring the commitment (see Appendix 1)

4.6 Drivers and barriers to participate in timebanking:

The academic studies on timebanking and participation related to the P2P exchanges have covered different perspectives. Valor et al. (2016) has studied of timebank as a phenomenon of P2P exchange to understand and explore the commitment associated with the participation and to the organization using commitment and reciprocity theory. Collom (2008, 2011, and 2016) discussed timebank as social movement phenomena to understand the key indicators of differential participating drivers and barriers. Shih et al. (2015) also studied the timebank to understand the different motivation to participate and conflict among the motivations. Twenty questions from previous researches about ten barriers and drivers in participation of timebanking and P2P exchanges have been selected for measuring the commitment (see Appendix 1)

4.7 PVQ:

As previously discussed, there are two instruments the SVS and the PVQ. Based on the Schwartz Value Theory any of these two could be used to measure the basic human values. However, the PVQ was concluded as the most appropriate instrument to be used for such study. As we mentioned before PVQ has not been studied to understand how timebank members

values are associated with the motivation and barriers to commitment to their timebank. Secondly, PVQ is perceived as easier to understand compare to the SVS.

The other advantages of using PVQ are-

- Respondents treat the PVQ as a simple task
- As more user-friendly and suitable for most of the countries
- PVQ also shown better result in responding when it comes to any sample/respondent with little or no schooling
- Research has also shown that respondents have too little difficulty when completing the PVQ (Cieciuch and Davidov, 2012)
- PVQ-21 also shorter than the SVS or PVQ-40; hence will take less time to complete

Since we conducted the survey through online and by email applying an uncomplicated and user-friendly tool was very much necessary for us as it might lead to fewer questions, all additional explanation, confusion or misunderstanding and that would lead the biases at minimum. In order to conserve the validity of the instrument, the PVQ-21 was not altered to larger extent, however minor updates were applied for selecting a universal gender approach.

Here we briefly describe some people. Please read each description and think about how much each person is or is not like you. Tick the box to the right that shows how much the person in the description is like you.

1. Thinking up new ideas and being creative is important to him/her. He/she likes to do things in her own original way.

Not like me at all	Not like me	A little like me	Somewhat like me	Like me	Very much like me
○	○	○	○	○	○

Figure 10: Sample of one PVQ question

4.8 Demographic questions:

Demographic questions asked were age, gender, the level of education, profession and additional family members. The purpose of the questions was to see if there is influence of demographic factors on study results and also to obtain the descriptive statistics for the study.

The responses for education were originally; no studies, primary, secondary, intermediate, university. However, after the pre-testing of the questionnaire, more possible realistic alternatives for the education were suggested as no studies, primary, secondary, bachelor, graduate and postgraduate (see Appendix 3).

The demographic variables were measured by using traditional nominal scales with different categories for each question. The specific age of the respondents was asked for each person. Since the systems are similar in nature between the two major countries, we have done our survey on, no major transactional error has been occurred in the demographic responses.

4.9 Chosen statistical method:

A total of 158 responses were collected from these three countries at the end of the three weeks survey time. Statistical analyses of the data were made in the software SPSS v 26 which we have discussed in detail in the next chapter.

CHAPTER 5: ANALYSIS

This section explains the analysis of our collected data. Followed by discussing the measures of scale and the step by steps tests we have done for our research. Finally, we ended the section with the findings.

Measures of scale:

For categorical variables (e.g. country, gender, occupation, education) we have used nominal measure and for continuous variables (e.g. commitments, values, drivers, barriers) we have used ordinal measure. The numerical variables are measured with scale.

Normality test:

Missing data:

In the missing data analysis, we have found that we had highest 5.1% data missing. Thus, we have replaced all the missing data with the total mean for each scale of the quantitative variables. However, for the categorical variables, we have replaced missing data with 'others'. After replacing with mean, we have retested the missing data to check the change in the mean and there was very insignificant change in the mean.

Outlier:

From the visual observation of boxplots, there was evidence of outliers among some constructs, thus, it violates the assumption of Spearman's correlation. In order to remove some extreme outliers, we have replaced data with the mean score for each item as we had just few outliers compared to our sample. We have removed three cases with extreme outliers, as a result, our total valid respondent cases were 155. Furthermore, extreme outlier can seriously have effect on the correlation coefficient, thus it should be removed or replace with down to a value that is not so extreme (Pallant, 2002). However, as an alternative study of Spearman's correlation, Spearman's rank order correlation assumption does not concern about the outliers. So, Spearman correlation might be the alternative way of running correlation when the data will reject the assumption of normally distribution. Because, if the data rejects the assumption of normally distribution it means it violates the Spearman's assumption (Pallant, 2002).

Normality test - skewness, kurtosis, shapiro-wilk, histogram, plot box:

From the normality test, in our data sample, we have identified from the kurtosis and skewness that our data are both positively and negatively strongly skewed. Even though, in such large data sample it is normal that the data will be skewed, we have also found the evidence that the P value in our sample size is very low than 0.05 which rejects the assumption of our data to be normally distributed. Thus, as the skewness and kurtosis value were below -1 and above +1, it violates the Spearsons' Correlation assumption about data normally distribution of our data. When the data are not normally distributed, we can go forward with the non-parametric test for our further analysis. Therefore, instead of conducting Spearson's correlation, we have conducted the Spearman correlation to analyze our data. In the Spearman's correlation there is no assumption or requirement for the data to be normally distributed to removal of outliers. The skewed data can be analyzed with this kind of non-parametric techniques (Pallant, 2002).

Reliability test:

Reversed coded:

In order to maintain the pattern of questions, we have inverted some negative questions into positive such as

- I don't like feeling that I am helping people just to earn hours
- I don't really want to receive services, I prefer to only provide services

Removed items:

Reliability test is conducted to test the inter consistency of the items for each construct in our data (Pallant, 2013). From our data sample it has been found that the item 'Participating in timebanking gives me a sense of accomplishment' from the scale 'altruism' could improve the Cronbach's alpha. Thus, this item was removed to increase the scale reliability. Because, the Cronbach's alpha was increased from 0.184 to 0.281 after deleting the item, which was still poor but improved than previous value. All the other items for other constructs did not make much change to delete any items. Some items were significant to keep for the constructs to be measure in our study, even though deleting those items could improve the Cronbach's alpha in

a small scale. Moreover, it can be said that, except the Altruism constructs, all the other items have at least minimum required consistency to their constructs.

5.1 Descriptive analysis:

Demographics:

Gender		Frequency	Valid Percent
Valid	Female	119	77.8
	Male	34	22.2
	Total	153	100.0
Missing	Others	2	
Total		155	

Table 7: Gender

Education		Frequency	Valid Percent
Valid	No studies	1	.6
	Primary School	1	.6
	Secondary School	6	3.9
	Bachelor	12	7.7
	Graduate	126	81.3
	Postgraduate	9	5.8
	Total	155	100.0

Table 8: Education

Profession		Frequency	Valid Percent
Valid	Employed	38	24.7
	Part-Time employed	21	13.6
	Entrepreneur / Self-employed	29	18.8
	Homemaker	5	3.2
	Student	1	.6
	Retired	53	34.4
	Unemployed	4	2.6
	Others	3	1.9
	Total	154	100.0
Missing		1	
Total		155	

Table 9: Profession

From our frequency analysis of the categorical demographic variables, we have observed from the frequency table for each of these variables that, there were 77.8% of female and 22.2% of male in the participants or in other words, from 155 total participants, 119 were female participants and 34 were male participants and 2 participants did not answer the question about their gender. The members were mostly higher educated as there were 81.3% of graduate among members. Most of the members were retired as it has been seen in the frequency table that approximately 34.4% members were retired among other categories. However, 24.7%, 13.6% and 18.8% were for employed, part-time employed and entrepreneur/self-employed respectively.

Frequency table of numeric variables						
	Member-ship duration	Total transaction number	Provided services in last six months	Requested services in last six months	Age	Family member
Mean	72	138	10	3	55	1
Std.D.	292.640	413.742	43.770	5.396	14.970	1.292
Minimum	1	0	0	0	14	0
Maximum	3615	4521	530	31	87	6

Table 10: Frequency of numeric variables

From the table of frequency above, the average membership duration was 72 months with maximum of 3615 months and minimum of 1 months, average total transections number was 138 hours with maximum of 4521 hours and minimum of 0 hour, average number of services provided in last six months were 10 times where the maximum number was 530 times and minimum was 0 times. Furthermore, average number of services requested in last six months was 3 times, where maximum number was 31 times and minimum were 0 times. However, the standard deviation for membership duration, total transection, provided and requested services in last six months are higher than the mean, which means there was high amount of variability in the distribution. One explanation for it can be, there were new members and old members and different levels of engagement in terms of actively participating in the exchange of services playing both role, service provider and receiver. However, there can be an argument that, a new member might be more actively engaged than that of an old member. Thus, time of membership does not indicate higher or lower active transection. One might be member for a long time but might not actively participating.

In terms of the demographics of the members, from the frequency table, the average aged members were 55 years old with maximum of 87 years old and minimum of 14 years old. Besides, most of the timebank members had average one person in the family living with them where maximum was 6 persons and minimum was 0, means living alone.

Drivers & barriers	Mean	Std. Deviation
Ideology value	5.85	1.083
Social	4.66	1.818
Instrumental	4.88	1.449
Altruism (R)	4.46	1.366
Lack of knowledge (R)	5.18	1.388
Lack of trust	5.43	1.256
Limited service range (R)	3.98	1.386
Lack of service quality (R)	4.74	1.212
Self-interest (R)	4.78	1.880
Social homophily	4.73	1.550

*'R' is reverse coded where from 1-7 scale 'strongly disagree' to 'strongly agree' became 'strongly agree' to 'strongly disagree' in the 1-7 scale

Here, in the motivational drivers, ideology value driver was mostly supported by the participant. The second most supported was instrumental, after that social and then altruism. 'I like timebanking because I am contributing to building a better community'; 'I participate in

timebanking because it creates trust among community members'; 'I participate in timebanking because I learn about my community' these questions were asked to measure 'ideology value' driver of the participants. In terms of barriers, limited service range was the most supported barrier to the participant in timebanking. To measure this construct we have asked how much they agree or disagree with 'Members whom I contact are often not available to provide services (R)' and 'I always get the service I look for in proper time'. Hence, from our descriptive analysis, it has been found that limited service availability was the most supported among other barrier constructs.

Types of commitments	Mean	Std. Deviation
Affective commitment	5.54	.969
Normative commitment	5.42	1.172
Continuance commitment	3.11	1.730

Table 11: Descriptive of commitments

From the descriptive analysis of commitments, the mean value indicates that the highest ranked commitment was affective, second highest was normative and continuance commitment was lowest.

Personal values	Mean	Std. Deviation
Self_direction	4.54	1.089
Stimulation	3.91	1.234
Hedonism	3.44	1.171
Achievement	3.10	1.129
Power	2.30	.806
Security	3.25	1.156
Conformity	2.92	1.216
Tradition	3.73	.979
Benevolence	4.87	.967
Universalism	5.23	.734

Table 12: Descriptive of personal values

The descriptive table of personal values indicates by the mean values of all the personal values that, the highest value was universalism, then benevolence, then self-direction, stimulation, tradition. However, the lowest value was power, then conformity, achievement, security, hedonism respectively.

5.2 Spearman's rank order correlation (alternative to Spearman's correlation):

Spearman's rank order correlation coefficient (r_s or ρ) or Spearman's correlation is a non-parametric measure of the strength and direction of correlation between two continuous variables that are on ordinal scale (Pallant, 2002). Spearman's correlation is an alternative to Spearson's correlation. Spearman's correlation is not sensitive to outliers, thus running this test can still give a valid result (Pallant, 2002).

Study design:

Assumption test for running Spearman's correlation:

1. Two continuous or ordinal variables

We have used Likert scale for both of our constructs, commitments (1-7; strongly disagree to strongly agree) and values (1-6; not like me at all to very much like me). Thus, our data accepts the assumption of the variable measures for the Spearman's correlation method.

2. Monotonic non-linear relationship between variables

From the visual inspection on the scatterplot there is evidence of a monotonic non-linear relationship between two variables of commitment and values. In the inspection the relationship is positive, that, if the x increases, y also increase and if the x decrease, y also decreases. In the scatterplot case, the negative relationship is, if the x increases, the y decreases, which is not found in the observation. However, it does not matter if the relationship is positive or negative, the relationship should be monotonic, which supports our visual inspection for the variables. Thus, our data accepts this assumption of monotonic relationship between continuous variables.

Measuring spearman's correlation:

In order to find the correlation among commitments, values, drivers and barriers, we have used the Bivariate under regression and then Spearman's correlation in SPSS which gave us a descriptive model of correlation coefficient (r_s) and significance of correlation (ρ) among the variables.

Processes of Interpretation of spearman's correlation results:

The first step of our interpretation was to understand the Spearman's rank order correlation coefficient value (r_s) or (ρ), which determines the strength and direction of the correlation between variables. According to Cohen (1988), the value should be from +1 to -1 in the correlation coefficient, where a perfect positive correlation is indicated by +1 and perfect negative correlation is indicated by -1. However, no correlation between variables is indicated by 0, thus, the closer the correlation is to 0, the weaker the correlation between variables and the opposite is true for +1 and -1. However, we are aware of the fact that there is no indicator of determining the strength of correlation of different values in the Spearman's correlation unlike Spearson's correlation (Pallant, 2002).

The second step of our interpretation was to determine if the spearman's correlation coefficient value is statistically significant. The null hypothesis was for it, there is no correlation between different variables that we want to achieve, for example, correlation between commitments and values, commitment between drivers and barriers and values between drivers and barriers. We have set the significant value, alpha $\alpha = 0.01$ where $P < 0.01$, which means there is a less than 1% chance that the strength of the relationship we have found between variables happened by chance if the null hypothesis is true.

The last step was to prepare the result in the table following APA standard style.

5.3 Findings:

Results of Spearman's correlation:

In our sample data, the positive or negative strong (**) correlation is significant at the 0.01 level (2-tailed) and the positive or negative (*) correlation is significant at the 0.05 level (2-tailed). Thus, from the correlation matrix tables observation, the correlation that are found to be (strongly) positively statistically significantly correlated or (strongly) negatively statistically

significantly correlated, are illustrated below. In the tables, Sig. is p value and correlation coefficient is r_s value.

Correlations between commitments & drivers to participate			Affective commitment	Normative commitment	Continuance commitment	Ideology value	Social drivers	Instrumental Drivers	Altruism(R)
Spearman's rho	Affective commitment	Correlation Coefficient	1.000	.786**	.473**	.581**	.494**	.267**	-.016
		Sig. (2-tailed)	.	.000	.000	.000	.000	.001	.847
	Normative commitment	Correlation Coefficient	.786**	1.000	.400**	.560**	.560**	.312**	-.019
		Sig. (2-tailed)	.000	.	.000	.000	.000	.000	.813
	Continuance commitment	Correlation Coefficient	.473**	.400**	1.000	.313**	.506**	.232**	-.173*
		Sig. (2-tailed)	.000	.000	.	.000	.000	.004	.031
	Ideology value	Correlation Coefficient	.581**	.560**	.313**	1.000	.649**	.239**	-.071
		Sig. (2-tailed)	.000	.000	.000	.	.000	.003	.378
	Social drivers	Correlation Coefficient	.494**	.560**	.506**	.649**	1.000	.185*	-.086
		Sig. (2-tailed)	.000	.000	.000	.000	.	.021	.285
	Instrumental Drivers	Correlation Coefficient	.267**	.312**	.232**	.239**	.185*	1.000	.076
		Sig. (2-tailed)	.001	.000	.004	.003	.021	.	.348
	Altruism	Correlation Coefficient	-.016	-.019	-.173*	-.071	-.086	.076	1.000
		Sig. (2-tailed)	.847	.813	.031	.378	.285	.348	.
**. Correlation is significant at the 0.01 level (2-tailed).									
*. Correlation is significant at the 0.05 level (2-tailed).									

Correlations between commitments and barriers to participate

			Affective C	Normative C	Continuance C	Lack of knowledge	Lack of trust	Limited service range	Lack of service quality	Self interest	Social homophily
Spearman's rho	Affective C	Correlation Coefficient	1.000	.786**	.473**	.350**	.495**	.200*	-.168*	.296**	.622**
		Sig. (2-tailed)	.	.000	.000	.000	.000	.013	.037	.000	.000
	Normative C	Correlation Coefficient	.786**	1.000	.400**	.279**	.404**	.195*	-.131	.247**	.445**
		Sig. (2-tailed)	.000	.	.000	.000	.000	.015	.105	.002	.000
	Continuance C	Correlation Coefficient	.473**	.400**	1.000	.117	.238**	.116	-.155	.119	.247**
		Sig. (2-tailed)	.000	.000	.	.148	.003	.150	.054	.140	.002
	Lack of knowledge	Correlation Coefficient	.350**	.279**	.117	1.000	.254**	-.034	.120	.155	.146
		Sig. (2-tailed)	.000	.000	.148	.	.001	.678	.136	.054	.071
	Lack of trust	Correlation Coefficient	.495**	.404**	.238**	.254**	1.000	.311**	-.016	.188*	.309**
		Sig. (2-tailed)	.000	.000	.003	.001	.	.000	.848	.019	.000
	Limited service range	Correlation Coefficient	.200*	.195*	.116	-.034	.311**	1.000	-.067	.036	.286**
		Sig. (2-tailed)	.013	.015	.150	.678	.000	.	.411	.660	.000
	Lack of service quality	Correlation Coefficient	-.168*	-.131	-.155	.120	-.016	-.067	1.000	.118	-.175*
		Sig. (2-tailed)	.037	.105	.054	.136	.848	.411	.	.145	.029
	Self interest	Correlation Coefficient	.296**	.247**	.119	.155	.188*	.036	.118	1.000	.073
		Sig. (2-tailed)	.000	.002	.140	.054	.019	.660	.145	.	1.000

Affective commitment & drivers & barriers:

There was a statistically significant, strong positive correlation between affective commitment and ideology & value driver, $r_s = .581$, (p < 0.0005)[12], and social driver, $r_s = .494$, (p < 0.0005) and instrumental driver, $r_s = .267$, (p < 0.001).

There was a statistically significant, strong positive correlation between affective commitment and lack of knowledge, $r_s = .350$ (p < 0.0005), lack of trust barrier construct, $r_s = 0.495$ (p < 0.0005), self-interest, $r_s = 0.296$ (p < 0.0005) and social homophily, $r_s = 0.622$ (p < 0.0005). Furthermore, there was also a positive correlation between affective commitment and limited service range barrier, $r_s = .200$ (p < 0.013) and a negative correlation with lack of service quality barrier, $r_s = -0.168$ (p < 0.037).

Normative commitment & drivers & barriers:

There was a statistically significant, strong Positive correlation between normative commitment and ideology & value driver, $r_s = .560$, (p < 0.0005) social driver, $r_s = .560$, (p < 0.0005) and instrumental driver, $r_s = .312$, (p < 0.0005).

There was a statistically significant, strong positive correlation between normative commitment and self-interest, $r_s = .247$, (p < 0.0005) social homophily, $r_s = .445$, (p < 0.0005), lack of knowledge, $r_s = .279$ (p < 0.0005), lack of trust barrier, $r_s = .404$ (p < 0.0005). Furthermore, there was also a positive correlation between normative commitment and limited service range barrier, $r_s = .195$ (p < 0.002).

Continuance commitment & drivers & barriers:

There was a statistically significant, strong positive correlation between continuance commitment and ideology & value driver, $r_s = .313$ (p < 0.0005), social driver, $r_s = .506$ (p < 0.0005), instrumental drivers, $r_s = .232$ (p < 0.004). However, there was a negative correlation between continuance commitment and altruism driver, $r_s = -.173$ (p < 0.031).

There was a statistically significant, strong positive correlation between continuance commitment and lack of trust, $r_s = .238$ (p < 0.003) and social homophily, $r_s = .247$ (p < 0.002).

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[12] p-value of 0.000 indicates that p < 0.0005

Correlations between commitments and personal values

		Affective C	Normative C	Continuance C	Self-direction	Stimulation	Hedonism	Achievement	Power	Security	Conformity	Tradition	Benevolence	Universalism
Affective C	CC	1.000	.786**	.473**	.067	.101	-.006	.020	-.137	-.014	-.065	-.053	.198*	.219**
	p	.	.000	.000	.411	.213	.945	.808	.090	.864	.425	.509	.013	.006
Normative C	CC	.786**	1.000	.400**	.070	.192*	.066	.048	-.052	.014	.012	.057	.206*	.230**
	p	.000	.	.000	.385	.017	.415	.551	.518	.866	.879	.478	.010	.004
Continuance C	CC	.473**	.400**	1.000	-.063	.023	.064	.087	-.018	.095	.059	.103	.076	-.030
	p	.000	.000	.	.433	.774	.429	.280	.824	.239	.467	.202	.347	.708
Self-direction	CC	.067	.070	-.063	1.000	.476**	.293**	.298**	.179*	.109	-.064	.115	.307**	.352**
	p	.411	.385	.433	.	.000	.000	.000	.025	.177	.430	.154	.000	.000
Stimulation	CC	.101	.192*	.023	.476**	1.000	.367**	.155	.137	-.153	-.117	-.019	.242**	.351**
	p	.213	.017	.774	.000	.	.000	.055	.088	.057	.148	.816	.002	.000
Hedonism	CC	-.006	.066	.064	.293**	.367**	1.000	.336**	.165*	.254**	-.048	.318**	.152	.147
	p	.945	.415	.429	.000	.000	.	.000	.041	.001	.552	.000	.059	.068
Achievement	CC	.020	.048	.087	.298**	.155	.336**	1.000	.488**	.330**	.164*	.148	.139	.014
	p	.808	.551	.280	.000	.055	.000	.	.000	.000	.041	.067	.085	.866
Power	CC	-.137	-.052	-.018	.179*	.137	.165*	.488**	1.000	.211*	.390**	.118	.012	-.169*
	p	.090	.518	.824	.025	.088	.041	.000	.	.008	.000	.142	.885	.036
Security	CC	-.014	.014	.095	.109	-.153	.254**	.330**	.211*	1.000	.397**	.342**	.208**	.032
	p	.864	.866	.239	.177	.057	.001	.000	.008	.	.000	.000	.009	.693
Conformity	CC	-.065	.012	.059	-.064	-.117	-.048	.164*	.390**	.397**	1.000	.312**	.087	-.020
	p	.425	.879	.467	.430	.148	.552	.041	.000	.000	.	.000	.281	.808
Tradition	CC	-.053	.057	.103	.115	-.019	.318**	.148	.118	.342**	.312**	1.000	.142	.089
	p	.509	.478	.202	.154	.816	.000	.067	.142	.000	.000	.	.078	.271
Benevolence	CC	.198*	.206*	.076	.307**	.242**	.152	.139	.012	.208**	.087	.142	1.000	.491**
	p	.013	.010	.347	.000	.002	.059	.085	.885	.009	.281	.078	.	.000

		Self-direc ti-on	Stimu latio n	Hed o- nism	Achieve me-nt	Pow er	Secu ri-ty	Confo-rmit y	Tradi tio-n	Bene vole nc-e	Univ ersalis m	Ideol o-gy valu e	Soci al	Instru m-ental	Altrui s-m(R)
Univer salism	C C	.219**	.230**	-.030	.352**	.351**	.147	.014	-.169*	.032	-.020	.089	.491**	1.000	
	p	.006	.004	.708	.000	.000	.068	.866	.036	.693	.808	.271	.000	.	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Affective commitment & values:

There was a statistically significant, strong positive correlation between affective commitment and universalism Value, $r_s =$ .219, (p < 0.006) and a positive correlation with benevolence Value, $r_s = .198$, (p < 0.013).

Normative commitment & values:

There was a statistically significant, strong positive correlation between normative commitment and universalism value, $r_s =.230$ (p < 0.004). Besides, there was a significantly positive correlation between normative commitment and stimulation value, $r_s = .192$, (p < 0.017), benevolence value, $r_s = .206$ (p < 0.010).

Continuance commitment & values:

There was a no statistically significant (strong) positive or negative correlation found between continuance commitment and values.

Correlations between personal values and drivers to participate															
		Self-direc ti-on	Stim u-latio n	Hed o-nism	Achi eve me-nt	Pow er	Secu ri-ty	Conf o-rmit y	Tradi tio-n	Bene vole nc-e	Univ er-salis m	Ideol o-gy valu e	Soci al	Instru m-ental	Altrui s-m(R)
Self-direc tion	CC	1.000	.476**	.293**	.298**	.179*	.109	-.064	.115	.307**	.352**	.081	.037	.256**	.066
	p	.	.000	.000	.000	.025	.177	.430	.154	.000	.000	.315	.645	.001	.417
Stim ulati on	CC	.476**	1.000	.367**	.155	.137	-.153	-.117	-.019	.242**	.351**	.132	.092	.131	.080
	p	.000	.	.000	.055	.088	.057	.148	.816	.002	.000	.102	.257	.105	.320
Hedo nism	CC	.293**	.367**	1.000	.336**	.165*	.254**	-.048	.318**	.152	.147	.010	.097	.181*	-.116
	p	.000	.000	.	.000	.041	.001	.552	.000	.059	.068	.903	.228	.025	.152

Achievement	CC	.298**	.155	.336**	1.000	.488**	.330**	.164*	.148	.139	.014	.113	.104	.185*	-.096
	p	.000	.055	.000	.	.000	.000	.041	.067	.085	.866	.160	.198	.021	.233
Power	CC	.179*	.137	.165*	.488**	1.000	.211**	.390**	.118	.012	-.169*	-.027	-.030	.058	-.180*
	p	.025	.088	.041	.000	.	.008	.000	.142	.885	.036	.739	.713	.472	.025
Security	CC	.109	-.153	.254**	.330**	.211**	1.000	.397**	.342**	.208**	.032	.003	.152	.064	-.078
	p	.177	.057	.001	.000	.008	.	.000	.000	.009	.693	.967	.060	.429	.334
Conformity	CC	-.064	-.117	-.048	.164*	.390**	.397**	1.000	.312**	.087	-.020	-.035	.070	-.031	-.308**
	p	.430	.148	.552	.041	.000	.000	.	.000	.281	.808	.670	.385	.703	.000
Tradition	CC	.115	-.019	.318**	.148	.118	.342**	.312**	1.000	.142	.089	.072	.167*	.073	-.125
	p	.154	.816	.000	.067	.142	.000	.000	.	.078	.271	.375	.038	.364	.120
Benevolence	CC	.307**	.242**	.152	.139	.012	.208**	.087	.142	1.000	.491**	.104	.152	.233**	-.007
	p	.000	.002	.059	.085	.885	.009	.281	.078	.	.000	.196	.060	.004	.934
Universalism	CC	.352**	.351**	.147	.014	-.169*	.032	-.020	.089	.491**	1.000	.236**	.152	.201*	.051
	p	.000	.000	.068	.866	.036	.693	.808	.271	.000	.	.003	.059	.012	.527
Ideology value	CC	.081	.132	.010	.113	-.027	.003	-.035	.072	.104	.236**	1.000	.649**	.239**	-.071
	p	.315	.102	.903	.160	.739	.967	.670	.375	.196	.003	.	.000	.003	.378
Social	CC	.037	.092	.097	.104	-.030	.152	.070	.167*	.152	.152	.649**	1.000	.185*	-.086
	p	.645	.257	.228	.198	.713	.060	.385	.038	.060	.059	.000	.	.021	.285
Instrumental	CC	.256**	.131	.181*	.185*	.058	.064	-.031	.073	.233**	.201*	.239**	.185*	1.000	.076
	p	.001	.105	.025	.021	.472	.429	.703	.364	.004	.012	.003	.021	.	.348
Altruism	CC	.066	.080	-.116	-.096	-.180*	-.078	-.308**	-.125	-.007	.051	-.071	-.086	.076	1.000
	p	.417	.320	.152	.233	.025	.334	.000	.120	.934	.527	.378	.285	.348	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Correlations between personal values and barriers to participate

		Self-direction	Stimulation	Hedonism	Achievement	Power	Security	Conformity	Tradition	Benevolence	Universalism	Lack of knowledge (R)	Lack of trust	Limited service range (R)	Lack of service quality (R)	Self interest (R)	Social homophile
Self-direction	CC	1.000	.476**	.293**	.298*	.179*	.109	-.064	.115	.307**	.352**	.085	.073	.138	.010	-.023	.026
	p	.	.000	.000	.000	.025	.177	.430	.154	.000	.000	.293	.366	.087	.898	.777	.747
Stimulation	CC	.476**	1.000	.367**	.155	.137	-.153	-.117	-.019	.242**	.351**	.039	.270**	.270**	-.154	-.084	.083
	p	.000	.	.000	.055	.088	.057	.148	.816	.002	.000	.628	.001	.001	.056	.298	.306
Hedonism	CC	.293**	.367**	1.000	.336**	.165*	.254**	-.048	.318**	.152	.147	-.021	.121	.185*	.048	-.200*	.057
	p	.000	.000	.	.000	.041	.001	.552	.000	.059	.068	.796	.135	.021	.549	.012	.482
Achievement	CC	.298*	.155	.336**	1.000	.488**	.330**	.164*	.148	.139	.014	-.085	.009	-.033	-.109	-.131	.065
	p	.000	.055	.000	.	.000	.000	.041	.067	.085	.866	.290	.916	.681	.176	.104	.424
Power	CC	.179*	.137	.165*	.488**	1.000	.211**	.390*	.118	.012	-.169*	-.214**	-.113	.059	-.029	-.182*	-.030
	p	.025	.088	.041	.000	.	.008	.000	.142	.885	.036	.007	.161	.469	.717	.023	.713
Security	CC	.109	-.153	.254**	.330*	.211	1.000	.397*	.342*	.208*	.032	.049	.011	.022	.038	.053	.063
	p	.177	.057	.001	.000	.008	.	.000	.000	.009	.693	.546	.893	.790	.642	.509	.438
Conformity	CC	-.064	-.117	-.048	.164*	.390**	.397**	1.000	.312*	.087	-.020	-.101	-.070	.077	-.005	.005	.152
	p	.430	.148	.552	.041	.000	.000	.	.000	.281	.808	.209	.388	.341	.948	.953	.060
Tradition	CC	.115	-.019	.318**	.148	.118	.342**	.312*	1.000	.142	.089	-.070	.014	.046	.040	-.012	.043
	p	.154	.816	.000	.067	.142	.000	.000	.	.078	.271	.387	.858	.568	.618	.884	.599
Benevolence	CC	.307**	.242**	.152	.139	.012	.208**	.087	.142	1.000	.491**	.196*	.346**	.223**	.000	.091	.088
	p	.000	.002	.059	.085	.885	.009	.281	.078	.	.000	.015	.000	.005	.995	.261	.274
Universalism	CC	.352**	.351**	.147	.014	-.169*	.032	-.020	.089	.491**	1.000	.220**	.247**	.120	-.101	.082	.171*
	p	.000	.000	.068	.866	.036	.693	.808	.271	.000	.	.006	.002	.136	.209	.312	.033
Lack of knowledge	CC	.085	.039	-.021	-.085	-.214**	.049	-.101	-.070	.196*	.220**	1.000	.254**	-.034	.120	.155	.146
	p	.293	.628	.796	.290	.007	.546	.209	.387	.015	.006	.	.001	.678	.136	.054	.071
Lack of trust	CC	.073	.270**	.121	.009	-.113	.011	-.070	.014	.346**	.247**	.254**	1.000	.311**	-.016	.188*	.309**
	p	.366	.001	.135	.916	.161	.893	.388	.858	.000	.002	.001	.	.000	.848	.019	.000
Limited service	CC	.138	.270**	.185*	-.033	.059	.022	.077	.046	.223*	.120	-.034	.311*	1.000	-.067	.036	.286**

	p	.087	.001	.021	.681	.469	.790	.341	.568	.005	.136	.678	.000	.	.411	.660	.000
Lack of service quality	CC	.010	-.154	.048	-.109	-.029	.038	-.005	.040	.000	-.101	.120	-.016	-.067	1.000	.118	-.175*
	p	.898	.056	.549	.176	.717	.642	.948	.618	.995	.209	.136	.848	.411	.	.145	.029
Self interest	CC	-.023	-.084	-.200*	-.131	-.182*	.053	.005	-.012	.091	.082	.155	.188*	.036	.118	1.000	.144
	p	.777	.298	.012	.104	.023	.509	.953	.884	.261	.312	.054	.019	.660	.145	.	.073
Social homophile	CC	.026	.083	.057	.065	-.030	.063	.152	.043	.088	.171*	.146	.309*	.286**	-.175*	.144	1.000
	p	.747	.306	.482	.424	.713	.438	.060	.599	.274	.033	.071	.000	.000	.029	.073	.

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

*CC= correlation coefficient

** p= Sig. (2-tailed)

Correlation between values and drivers:

There was a statistically significant, strong positive relationships between self-direction and instrumental driver, r_s = .256 (p < 0.001)

There was a statistically significant, positive relationships between hedonism and instrumental driver, r_s = .181 (p < 0.025)

There was a statistically significant, positive relationships between achievement and instrumental driver, r_s = .185 (p < 0.021)

There was a satistically significant, negative correlation between power and altruism, r_s = - .180 (p < 0.025)

There was a statistically significant, strong negative relationships between conformity and altruism drivers, r_s = - .308 (p < 0.0005)

There was a statistically significant, positive correlation between tradition and social driver, r_s = .167 (p < 0.038)

There was a statistically significant, strong positive relationships between benevolence and instrumental drivers, r_s = .233 (p < 0.004)

There was a statistically significant, strong positive relationships between universalism and ideology & value driver, r_s = .236 (p<0.003) and also positive correlation with instrumental driver, r_s = .201 (p < 0.012)

However, there was a no statistically significant (strong) positive or negative correlation found between stimulation, security values with any of the driver constructs.

Correlation between values and barriers:

There was a statistically significant, strong positive correlation between stimulation and lack of trust barrier, $r_s = 0.270$ (p < 0.001), and limited service range barrier as well, $r_s = .270$ (p < 0.001).

There was a statistically significant, positive correlation between hedonism and limited service range barrier, $r_s = .185$ (p < 0.021). However, there was a significant negative correlation between hedonism and self-interest, , $r_s = -.200$ (p < 0.012).

There was a statistically significant, strong negative correlation between power and lack of knowledge barrier, $r_s = -.214$ (p < 0.007) and a negative correlation with self-interest, $r_s = -.182$ (p < 0.023).

There was a statistically significant, strong positive correlation between benevolence and lack of trust barrier $r_s = .346$ (p < 0.0005) and also with limited service range barrier, $r_s = .223$ (p < 0.005). Furthermore, there was statistically Signiant, positive correlation found between benevolence and lack of knowledge barrier, $r_s = .196$ (p < 0.015).

There was a statistically significant, strong positive correlation between universalism and lack of knowledge barrier, $r_s = .220$ (p < 0.006) and lack of trust barrier as well, $r_s = .247$ (p < 0.002). Furthermore, there was a statistically significant positive correlation with universalism and social homophily, $r_s = .171$ (p < 0.033)

However, there was a no statistically significant (strong) positive or negative correlation found between self-direction, achievement, security, conformity, tradition values and with any of the barrier constructs

Correlation among commitments (additional finding):

There was a statistically significant, strong positive correlation between Affective commitment and normative $r_s = .786$, (p < 0.0005) and continuance commitment, $r_s = .473$ (p < 0.0005). Furthermore, there were statistically significant, strong positive correlation between

continuance commitment and affective commitment, $r_s = .473$, (p < 0.0005) and normative commitment, $r_s = .400$, (p < 0.0005).

Hypothesis test results:

Values:

H1. In the timebank, participants will score higher in universalism, benevolence and openness to change	
H1a: In the timebank, participants will score higher in universalism	Accepted
H1b: In the timebank, participants will score higher in benevolence	Accepted
H1c: In the timebank, participants will score higher in openness to change	Rejected

H2. In the time bank, participants will score lower in the self enhancement, conservation, power values.	
H2a: In the time bank, participants will score lower in the self enhancement	Accepted
H2b: In the time bank, participants will score lower in the conservation	Accepted
H2c: In the time bank, participants will score lower in the power	Accepted

Commitments:

H3: Affective and normative commitment will score higher and continuance commitment will score lower.	
H3a: Affective and normative commitment will score higher	Accepted
H3b: Continuance commitment will score lower	Accepted

Commitments vs values:

Affective commitment vs. value:

H4: Affective commitment will have strong positive correlation with self-transcendence and positive correlation with conservation. However, openness to change are expected to be negatively correlated to affective commitment	
H4a: Affective commitment will have strong positive correlation with self-transcendence	Accepted
H4b: Affective commitment will have positive correlation with conservation	Rejected

H4c: openness to change are expected to be negatively correlated to affective commitment.	Rejected

Normative commitment vs. value:

H5: Normative commitment will have positive correlation to universalism, conformity, conservation and self-transcendence values. On the contrary, power, achievement and hedonism will be negatively correlated to normative commitment.	
H5a: Normative commitment will have positive correlation to universalism	Accepted
H5b: Normative commitment will have positive correlation conformity	Rejected
H5c: Normative commitment will have positive correlation conservation	Rejected
H5d: Normative commitment will have positive correlation self-transcendence	Accepted
H5e: Power, achievement and hedonism will be negatively correlated to normative commitment	Rejected

Continuance commitment vs. value:

H6: Continuance commitment will have positive correlation with tradition, conformity, benevolence, and universalism. Whereas, self-direction, stimulation and hedonism will be negatively correlated to continuance commitment.	Rejected

Drivers and barriers vs. commitment

H7: In the timebank, Economic instrumental and altruism will score higher as drivers and will be positively correlated to affective commitment. Whereas, lack of knowledge, lack of service quality and availability will score higher as barriers and lack of service quality will be negatively correlated to affective commitment.	
H7a: In the timebank, Economic instrumental and altruism will score higher as drivers.	Rejected
H7b: In the timebank, Economic/instrumental drivers will be positively correlated to affective commitment.	Accepted
H7c: In the timebank, altruism drivers will be positively correlated to affective commitment	Rejected
H7d: lack of knowledge will score higher as barriers.	Rejected
H7e: lack of service quality and availability will score higher as barriers.	Accepted

H7f: lack of knowledge will be negatively correlated to affective commitment.	Rejected
H7g: lack of service quality will be negatively correlated to affective commitment.	Accepted

Drivers & barriers vs. values:

H8: On the context of timebank, there will be positive correlation between instrumental drivers and achievement; conformity and altruism; universalism and ideology value drivers.	
H8a: On the context of timebank, there will be positive correlation between instrumental drivers and achievement.	Accepted
H8b: On the context of timebank, there will be positive correlation between conformity and altruism.	Rejected
H8c: On the context of timebank, there will be positive correlation between universalism and ideology value drivers.	Accepted

H9: On the context of timebank, there will be negative correlation between lack of trust and universalism.	Rejected

Additional findings (country-wise study):

Numeric demographic variables:

Descriptive of the participants of NZ					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	46	14	74	47.04	14.650
Family member	46	0	6	1.52	1.574

Descriptive of the participants of USA					
	N	Minimum	Maximum	Mean	Std. Deviation
Age	95	23	87	58.68	13.936
Family member	95	0	5	1.25	1.072

From the descriptive tables of numeric variables above, there were approximately average of 47 years old participants from NZ and average of 59 years old participants from the USA. Furthermore, for both NZ and the USA, the family member of the participants were on average not more than one.

Categorical demographic variables

*Table of Country * Gender*

		Gender		*Total*
		Female	Male	
Country	New Zealand	38	7	45
	USA	71	23	94
Total		109	30	139

*Table of Country * Education*

		Education						
		No studies	Primary School	Secondary School	Bachelor	Graduate	Post graduate	*Total*
Country	New Zealand	0	0	3	6	34	3	46
	USA	1	1	3	5	79	6	95
Total		1	1	6	11	113	9	141

Table of Country * Profession									
		Profession							*Total*
		Employed	Part-Time employ-ed	Entrepren-eur / Self-employed	Homem-aker	Stud-ent	Retir-ed	Unempl-oyed	Oth-ers	
Country	New Zealand	16	8	7	4	1	8	0	2	46
	USA	21	13	16	1	0	38	4	1	94
Total		37	21	23	5	1	46	4	3	140

The frequency tables of categorical variables above indicates that, among 139 participants from two countries there were 45 participants from NZ and 94 from the USA. Furthermore, among these participants, there were 38 and 71 females, likewise, there were 7 and 23 males from New Zealand and the USA respectively. In addition to that, the participants were mostly higher educated as it has been found that there were 34 and 79 graduates from NZ and the USA respectively. However, there were only one participants from the USA with no education. On the other hand, in terms of profession of the participants, majority of them were retired and other majority had self-earning source in the USA, as it shown in the table that there were 38 retired participants and 21 employed; 13 part-time employed and 16 entrepreneurs among participants. However, in the context of NZ the majority were employed as there were 16 out of 46 participants employed among other categories. There were no unemployed in NZ whereas, there were 4 unemployed in the USA.

Frequency table of drivers country-wise:

Table of drivers country-wise					
Country		Ideology & value	Social	Instrumental	Altruism(R)
New Zealand	Mean	5.31	4.29	4.91	4.42
	Std. Deviation	1.267	1.601	1.347	1.308

USA	Mean	6.09	4.84	4.86	4.49
	Std. Deviation	.920	1.907	1.513	1.420
Others	Mean	6.00	4.66	4.89	4.39
	Std. Deviation	.865	1.812	1.417	1.258

*1="Strongly disagree to 7="Strongly agree"; **1="Strongly agree to 7="Strongly disagree" for reverse coded; "R" is for reverse coded.

From the frequency analysis of drivers to participate in timebanking, the mean value indicates that, ideology value driver had highest support in NZ, USA and also in the 'others' or 'missing country' catagory of country ; instrumental driver had second highest support in all catagories, whereas, altruism and social had lowest support among all the categories of the country.

Frequency table of barriers country wise:

Table of barriers country-wise

Country		Lack of knowledge(R)	Lack of trust	Limited service range(R)	Lack of service quality(R)	Self-interest (R)	Social homophily
New Zealand	Mean	5.29	5.45	4.32	5.01	4.20	4.72
	Std. Deviation	1.348	1.288	1.318	1.344	1.973	1.470
USA	Mean	5.12	5.46	3.72	4.66	5.02	5.03
	Std. Deviation	1.417	1.272	1.391	1.125	1.804	1.410
Others	Mean	5.18	5.18	4.61	4.43	5.07	4.86
	Std. Deviation	1.395	1.085	1.196	1.254	1.774	1.460

*1="Strongly disagree to 7="Strongly agree"; **1="Strongly agree to 7="Strongly disagree for reverse coded"

From the frequency analysis table, the mean value indicates that lack of trust, lack of knowledge, lack of service quality were higher in mean values and self-interest,limited service avilability and social homophily were lower in mean values in New Zealand. Here, even though

the mean values are higher for lack of trust, lack of knowledge, they were not supported as barriers to participate in timebanking as they were reverse coded. However, limited service range and self-interest with lower mean were supported as barriers to participate in timebanking in New Zealand. In the USA, lack of trust, lack of knowledge, social homophily, self interest were higher in mean values and limited service range and lack of service quality were lower in mean value. However, as like New Zeland, lack of service range were highly supported as a barrier to participate in timebanking. Besides, in the 'other' catagory of country, lack of knowledge, lack of trust, self interest had higher mean values and lack of service quality and limited service range had lower mean value. Thus, the limited service range and the lack of service quality were supported as barriers to participate in timebanking in this catagory of timebank.

Mann-Whitney U test to compare two independet groups(countries):

Assumptions for the test:

1. Continuous or ordinal dependent variable assumption is accepted

2. Independent variable with two categorical independent groups assumption is accepted

3. Independence of observations, in other words, same participants cannot be in two groups; assumption is accepted

4. Similarly shaped distributions of data. Even if the data are not similarly shaped, one can still run the test, however, rather than measuring the mean ranks, one need to measure the median.

Assumption 4 test result:

Commitment: Rejected null hypothesis of assumption four except continuance commitment. Thus, we will measure Mean Ranks for continuance commitment and Median for affective and normative commitments.

Values: Accepted null hypothesis except two values, self-direction and security. Thus, for these two values we will measure Median instead of Mean ranks.

Mann-Whitney Test & Findings:

Commitments:

Table of mean rank of commtiment			
Commitment type	Country	N	Mean Rank
Continuance commitment	New Zealand	46	63.22
	USA	95	74.77
	Total	141	

Table of Median of Commitments		Affective commitment	Normative Commitment
Country			
New Zealand	N	46	46
	Median	5.20	5.00
USA	N	95	95
	Median	5.80	5.41
Total	N	141	141
	Median	5.60	5.33

Test Statistics[a]	Affective commitment	Normative commitment	Continuance commitment
Mann-Whitney U	1492.000	1625.500	1827.000
Wilcoxon W	2573.000	2706.500	2908.000
Z	-3.054	-2.474	-1.584
Asymp. Sig. (2-tailed)	.002	.013	.113
a. Grouping Variable: Country			

Affective commitment

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A Mann-Whitney U test was conducted to test the differences of affective commitment for all the categories of country, New Zealand and USA. The test indicates, that the affective commitment in the USA participants (Median rank = 5.80, N=95) exceeded those of the New Zealand participants (Median rank = 5.20, N=46), U=1492, Z= - 3.054, p= 0.002, two tailed. Here, the p value is less than .05, thus, the median is statistically significantly different, consequently, it indicates that the participants from USA are statistically significantly, has higher affective commitment than that of New Zealand's participants.

Normative commitment

A Mann-Whitney U test was conducted to test the differences of normative commitment for all the categories of country, the mean ranks indicate that on average the normative commitment among USA participants (Median= 5.41, N= 95) was higher than that of New Zealand participants (Median rank= 5.00, N=46), U=1625.500, Z= -2.474, p= .013. Furthermore, p<.05, thus, it indicates that the median are statistically significantly different. Hence, Participants of USA had statistically significantly higher normative commitment than the participants of New Zealand.

Continuance commitment

A Mann-Whitney U test was conducted to test the differences of continuance commitment for all the categories of country, the mean ranks indicates that on average, the continuance commitment among the participants of USA (Mean= 74.77, N= 95) was higher than the participants of New Zealand (Mean=63.22, N=46), U=1827.000, Z= -1.584 p= .113, here the p value is more than .05, thus, the mean ranks are not statistically significantly different. As a result, the degree of continuance commitment among particanpts of USA and New Zealand is not statistically significantly different.

Personal Values:

Among ten personal values as mentioned before in the assumption test that, two values, self-direction and security rejected the null hypothesis, thus we have conducted the Mann-Whitney U test separately for these two values and measure by thier median.

Test Statistics[a]		
	Security	Self-direction
Mann-Whitney U	2141.000	1987.500
Wilcoxon W	6701.000	6547.500
Z	-.195	-.877
Asymp. Sig. (2-tailed)	.845	.380
a. Grouping Variable: Country		

Table of Median			
Country		Security	Self-direction
New Zealand	N	46	46
	Median	3.00	5.00
USA	N	95	95
	Median	3.00	4.50
Total	N	141	141
	Median	3.00	4.50

Self-direction

A Mann-Whitney U test was run to determine if there were differences in the self-direction value between USA and New Zealand. Distribution for self-direction value for USA and New Zealand were similar, assessed by the visual inspection. Median of self-direction scored for New Zealand (Median= 5.00, N=46) higher than USA (Median= 4.50, N=95) but not statistically significantly different, U= 1987.500, Z= -.877, p= .380

Security

A Mann-Whitney U test was run to test if there were differences in the security value between New Zealand and USA. The visual inspection indicates that the distribution for security value for USA and New Zealand were similar. Median of security value scored for New Zealand (Median= 3.00, N=46) similar as USA (Median= 3, N=95) and there was no statistically significantly difference, U= 2141.000, Z= -.195, p= .845

Types of values	Country	N	Mean Rank
Stimulation	New Zealand	46	76.93
	USA	95	68.13
	Total	141	
Hedonism	New Zealand	46	81.50
	USA	95	65.92
	Total	141	
Achievement	New Zealand	46	68.64
	USA	95	72.14
	Total	141	
Power	New Zealand	46	72.09
	USA	95	70.47
	Total	141	
Conformity	New Zealand	46	69.42
	USA	95	71.76
	Total	141	
Tradition	New Zealand	46	76.15
	USA	95	68.51
	Total	141	
Benevolence	New Zealand	46	81.76
	USA	95	65.79
	Total	141	
Universalism	New Zealand	46	70.54
	USA	95	71.22
	Total	141	

Test Statistics^{*a*}

	Stimulati-on	Hedonis-m	Achievem-ent	Power	Conformi-ty	Traditio-n	Benevole-nce	Universal-ism
Mann-Whitney U	1912	1702	2076.5	2135	2112.5	1948	1690	2164
Wilcoxon W	6472	6262	3157.5	6695	3193.5	6508	6250	3245
Z	-1.209	-2.140	-.482	-.224	-.321	-1.056	-2.210	-.094
Asymp. Sig. (2-tailed)	.227	.032	.630	.823	.748	.291	.027	.925
a. Grouping Variable: Country								

1. **Stimulation**

A Mann-Whitney U test was conducted to test the differences of stimulation value for all the categories of country, the mean ranks indicate that on average the stimulation value among USA participants (Mean= 68.13, N= 95) was lower than that of New Zealand participants (Mean rank= 76.93, N=46), U=1912.000, Z= -1.209, p= . .227. Furthermore, p>.05, thus, it indicates that the mean ranks are not statistically significantly different. Hence, Participants of USA does not have statistically significantly differences in stimulation value than the participants of New Zealand.

2. **Hedonism**

A Mann-Whitney U test was conducted to test the differences of hedonism value for all the categories of country, the mean ranks indicate that on average the hedonism value among USA participants (Mean= 65.92, N= 95) was lower than that of New Zealand participants (Mean rank= 81.50, N=46), U=1702.000, Z= -2.140, p= .032. Furthermore, p< .05, thus, it indicates that the mean ranks are statistically significantly different. Hence, Participants of US have statistically significantly lower in hedonism value than the participants of New Zealand.

3. Achievement

A Mann-Whitney U test was conducted to test the differences of achievement value for all the categories of country, the mean ranks indicate that on average the achievement value among USA participants (Mean= 72.14, N= 95) was higher than that of New Zealand participants (Mean rank= 68.64, N=46), U=2076.500, Z= -.482, p= .630. Furthermore, p> .05, thus, it indicates that the mean ranks are not statistically significantly different. Hence, Participants of US does not have statistically significantly differences in achievement value than the participants of New Zealand.

4. Power

A Mann-Whitney U test was conducted to test the differences of power value for all the categories of country, the mean ranks indicate that on average the power value among USA participants (Mean= 70.47, N= 95) was lower than that of New Zealand participants (Mean rank= 72.09, N=46), U=2135.000, Z= -.224, p= .823. Furthermore, p> .05, thus, it indicates that the mean ranks are not statistically significantly different. Hence, Participants of US does not have statistically significantly differences in power value than the participants of New Zealand.

5. Conformity

A Mann-Whitney U test was conducted to test the differences of conformity value for all the categories of country, the mean ranks indicate that on average the conformity value among USA participants (Mean= 71.76, N= 95) was higher than that of New Zealand participants (Mean rank= 69.42, N=46), U=2112.500, Z= -.321, p= .748. Furthermore, p> .05, thus, it indicates that the mean ranks are not statistically significantly different. Hence, Participants of US does not have statistically significantly differences in conformity value than the participants of New Zealand.

6. Tradition

A Mann-Whitney U test was conducted to test the differences of tradition value for all the categories of country, the mean ranks indicate that on average the tradition value among USA participants (Mean= 68.51, N= 95) was lower than that of New Zealand participants (Mean rank= 76.15, N=46), U=1948.000, Z= -1.056, p= .291. Furthermore, p> .05, thus, it indicates that the mean ranks are not statistically significantly different. Hence, Participants of US does not have statistically significantly differences in tradition value than the participants of New Zealand.

7. Benevolence

A Mann-Whitney U test was conducted to test the differences of benevolence value for all the categories of country, the mean ranks indicate that on average the benevolence value among USA participants (Mean= 65.79, N= 95) was lower than that of New Zealand participants (Mean rank= 81.76, N=46), U=1690.000, Z= -2.210, p= .027. Furthermore, p< .05, thus, it indicates that the mean ranks are statistically significantly different. Hence, Participants of New Zealand were statistically significantly higher in benevolence value than the participants of USA.

8. Universalism

A Mann-Whitney U test was conducted to test the differences of universalism value for all the categories of country, the mean ranks indicate that on average the universalism value among USA participants (Mean= 71.22, N= 95) was lower than that of New Zealand participants (Mean rank= 70.54, N=46), U=2164.000, Z= -.094, p= . 925. Furthermore, p> .05, thus, it indicates that the mean ranks are not statistically significantly different. Hence, Participants of US does not have statistically significantly differences in universalism value than the participants of New Zealand.

Comparison to the European study of Piscicellis':

Types of personal values	NZ	USA	Europe (UK & Netherlands)
	Mean	Mean	Mean
Self-direction	4.61	4.48	4.975
Stimulation	4.07	3.79	3.99
Hedonism	3.72	3.29	4.34
Achievement	3.08	3.11	3.75
Power	2.37	2.32	2.82
Security	3.24	3.21	3.94
Conformity	2.86	2.92	2.76
Tradition	3.82	3.67	3.78
Benevolence	5.09	4.78	4.845
Universalism	5.17	5.23	4.81

Comparison of our study with European study of Piscicelli (2017):

Personal Values	NZ compared to Europe	USA compared to Europe
Self-direction	Lower	Lower
Stimulation	Higher	Lower
Hedonism	Lower	Lower
Achievement	Lower	Lower
Power	Lower	Lower
Security	Lower	Lower
Conformity	Higher	Higher
Tradition	Higher	Lower
Benevolence	Higher	Lower
Universalism	Higher	Higher

We have compared the means for personal values in the context of NZ and the USA with European study of Piscicelli (2017), which shows the differences in the degree of these ten personal values among these three different contexts. Piscicellis' study focused on 19 smaller values whereas, we have focused on the 10 values that represents those 19 values broadly and collectively. We have summed up the means of smaller values under the same category in one to get the similar 10 values from their 19 values. The table above represents comparison between NZ and Europe; USA and Europe. It shows that, NZ was higher in stimulation, conformity, tradition, benevolence and universalism values than that of Europe. On the other hand, USA was higher in only conformity and universalism values than that of Europe. This comparison shows how different degree of these values in three context and shows that universalism was highest ranked in both NZ and the USA whereas, self-direction was the highest in the European values study. One explanation can be the monetary context and the non-monetary context of the peer-to-peer exchange platform and the types of organizations. However, the question can be raised that how does ones' personal values can be different depending on the types of exchange platform and organizations? It can answer by understanding their drivers to participate in such a platform. As Schwartz has demonstrated motivational goals underlying each of these values, different values may drive to participate in such a platform depending on the expected benefits.

CHAPTER 6: DISCUSSION

In this chapter first we will discuss our findings from the analysis and the accepted hypothesis we have assumed. After that, we will also discuss about the contribution of our study theoretically and practically. Lastly, we will discuss the future scope of the study.

Affective commitment: Our supported hypothesis, 'H4a: Affective commitment will have strong positive correlation with self-transcendence value', depicts that participants with higher affective commitment are more caring, concerned about others and nature, believes in tolerance. Besides, these findings also support the findings of Glazer et al., (2004) and Cohen (2009) as we have found that there was a strong positive correlation between affective commitment and universalism and a positive correlation with benevolence. This is explained by the types of timebank organization is and its' goals and objectives where building community is one of the main focus by helping each other. However, by accepting the hypothesis, 'H7b: In the timebank, Economic/instrumental drivers will be strongly positively correlated to affective commitment' showed that the members who had higher degree of affective commitment were also motivated by instrumental or economic drivers to participate in timebanking, whereas, altruism was not a motivational drivers for the participants who had affective commitment. This interestingly shows contrasting perspective of what meant by the self-transcendence value, where altruism was expected to be correlated with this value and as this value correlated to affective commitment and in our findings it shows that affective commitment had strong significant positive correlation with universalism that supports both Cohen (2009) and Glazer et al., (2004). Moreover, as it has been found that, there was a statistically significant, strong positive correlation between affective commitment and three different drivers to participate in timebank, which were, ideology value, social and instrumental driver. We can say that, members who had the higher level of ideology value, instrumental and social driver had the increased or higher level of affective commitment to their timebanks. Thus, in our findings, members have higher level of emotional attachment and they desire to stay with their timebank with high level of ideology value and were motivated to make new friends and socialize through timebank's events. Besides, who had the higher level of their instrumental need to save money by getting the services from their timebank without paying for it and without performing the services by themselves had the higher level of affective commitment or emotional attachment to their timebank.

On the other hand, hypothesis, 'H7f: lack of service quality will be negatively correlated to affective commitment' was accepted and it depicts that participants who strongly disagreed to 'The quality of service I get from my Timebank has the same standard if I would buy those services with money' and ' Sometimes other members of my Timebank are not satisfied with my services' had the lower degree of affective commitment to their timebank as these statement were reverse coded. In other words, participants with higher affective commitment were not affected by the lack of service quality in timebanks. It can be explained by understanding their transections and providing and requesting numbers of services. Participants who were only providing services more than asking for it when they needed might have higher affective commitment and might be those were the members who were not affected by the lack of services quality at the same time as they were not requesting much services in timebank. However, people who do not ask services in timebank logically should not have higher affective commitment to timebank when they are also not satisfied or concerned with the service quality in timebank as it has been found in previous study of Shih et al. (2015), Dubois (2014), Schor et al. (2016) and Ozanne (2010), that members who are not satisfied with the service quality tend to not ask services in timebank. Following our findings, it can be explained as, these members are those who just want to contribute to the society or want to be more social by engaging in the activities as the average members were middle aged or more and female. Furthermore, a strong positive significant correlation of affective commitment with lack of knowledge, lack of trust, self-interest and social homophily and a positive correlation with limited service range. This can be explained as, participant who strongly disagreed to not have knowledge and strongly agreed to trust unknown members to receive and provide services at home had higher level of affective commitment, which means, they may already have an emotional attachment by building strong trust and knowing timebanking correctly. Besides, participants who disagreed to not have the member available when needed and getting services on time had increase of affective commitment.

Furthermore, participants who strongly disagreed that they do not have enough time to offer their services had the higher level of affective commitment and participants who strongly disagreed that they think themselves as similar to others in timebank had higher level of social homophily, which means, they like to stay in the same social class as theirs and people with same interest as theirs. So, participants who ranked lower in social homophily had the lower level of affective commitment to their timebank. However, social homophily was considered

as a barrier in timebanking in the previous studies of Collom (2007;2011), Dubois (2014; 2015), Schor (2016), Baftales (2018), which in other words, we refer as social capital distance as it was measured by the participants' agree or disagreement of 'I like to think myself as similar to other members of my timebank'. So, people who ranked lower in these constructs, would may like to transect in their own class and group of members rather than others which may result in imbalance in the transactional direction. Besides, it may result in members unavailability when requested for any services (Bellotti et al.,2015;

Seyfang, 2006; Dubois, 2015; Valor et al., 2016).

Normative commitment: Our accepted hypothesis 'H5a: Normative commitment will have positive correlation to universalism' and 'H5d: Normative commitment will have positive correlation self-transcendence', which we found in our study that universalism were strongly positively correlated and benevolence and stimulation were positively correlated to normative commitment. Here, universalism and benevolence are underlying or core values of self-transcendence, thus, our findings also support the findings of Cohen & Liu (2010). Our findings also represents that affective commitment and normative commitment are positively correlated to each other and as previous findings of Meyer et al (1993), suggested that there is relationship between normative and affective commitment and often these both commitments are considered as similar to each other, it is also established in our findings as we have found that affective commitment are strongly positively significantly correlated to normative commitment, which supports Abbott et al. (2005). As per definition of normative commitment, it has been found to be supported in our study, as the normative commitment was strongly positively correlated to the ideology value driver, social driver and instrumental driver to participate in timebank. Ideology value driver construct represents support to the timebanks' ideology and values (Shih et al., 2015; Dubois, 2015), which in other words can be said as loyalty or feeling obligation to the timebank. Besides, social driver constructs also can be a factor to be loyal and engaged in timebank which can increase normative commitment among members. Instrumental driver or economic benefits by getting services without spending money rather spending hours helps people who are unable to buy the services or unable to conduct it by themselves (Collom, 2011). Thus, it increases loyalty or normative commitment, we have found that there was a strong positive significant correlation between normative commitment and instrumental drivers to motivate participation in timebanking.

However, in terms of barriers to participate, as we have found that there was a strong positive correlation between normative commitment and lack of knowledge, lack of trust, self-interest

and social homophily. There was also positive correlation between normative commitment and limited services in timebank. Lack of knowledge construct was represented by asking two questions which are, 'I do not think all the services I can provide are valuable in my Timebank' and 'Sometimes I feel like I do not know how to use time credits or how Timebanking works'. As we had reversed the negative question, the higher scale was strongly disagreed after reversing these questions. Which indicates that, participants who ranked higher in these question from 1 to 7 scale, they strongly disagreed to not have knowledge about timebank activities or disagreed to have any knowledge gap about timebanking. Thus, the positive correlation between normative commitment and knowledge gap can be interpreted as like this, the more people disagrees to have knowledge gap about timebanking, the higher level of normative commitment they have to their timebank. It goes same with the lack of trust, limited service availability and self-interest and social homophily as these constructs represent negative support in the higher scale to these constructs as barriers which means, these do not work as barriers to participate to these participants. Moreover, participants who ranked lower in the 1 to 7 scale for these constructs means, they supported these as their barriers to participate, thus, as our correlation findings, they will have lower normative commitment to their timebank.

Continuance commitment: Our hypothesis of continuance commitment, 'H6: Continuance commitment will have positive correlation with tradition, conformity, benevolence, and universalism. Whereas, self-direction, stimulation and hedonism will be negatively correlated to continuance commitment' was rejected as because there was evidence of no significant positive or negative correlation with continuance commitment and any of the personal values in our findings. Thus, our findings support that there is no involvement of psychological bind in the continuance commitment (Abbotti, et al., 2005).

On the other hand, interestingly continuance commitment was positively significantly correlated with normative commitment and affective commitment which contradicts the findings of Abbotti et al (2005) that there is no relation between continuance commitment and affective commitment. Besides, as like normative commitment, continuance commitment was strongly positively correlated to the ideology value driver, social and instrumental driver. However, continuance commitment had a significant negative correlation with altruism driver. This can be explained as per the types of the organizational platform of timebank, social, community bonding, helping each other, non-monetary or non- profit organization. Thus, here continuance commitment may have different factors than other monetary platforms. The leaving coast of the organization as discussed before, can be just not having the access of getting

services without paying for it in cash. In terms of social perspective, leaving cost may be the loneliness. Other than that, there is no such strict leaving cost imposed by timebank that can affect the decision making of the members. Staying means having benefits that may not be available for some members. We have found in our sample group that mostly the participants were retired middle aged or had self-dependency as they were earning somehow for their livelihood. For these two majority groups, continuance commitment may get influenced differently, retired members may need more social time and have the ideology value as like time banks, whereas, for the other group, continuance commitment may get positively influenced by instrumental and altruism drivers. Here, altruism was reverse coded which means higher scale will indicate strongly disagree to 'I do not like feeling that I am helping people just to earn hours and 'I don't really want to receive services, I prefer to only provide services'. These both, indicates that the higher the people score in these statements, the lower they have altruism as drivers to participate. Furthermore, from our findings, altruism showed negative significant correlation with continuance commitment, which means, the more people will have altruism the less they will have continuance or calculative commitment to their timebank. Because, altruism is opposite of calculating cost and benefits one might have from any action. Moreover, increasing in these motivational drivers will increase in the level of continuance commitment as well and the members would more likely to be staying with their timebank for a long time.

In terms of barriers, we have found that there was a strong positive correlation between continuance commitment and lack of trust, social homophily. Here, the participants who scored lower, means strongly disagreed to feel safe to invite other unknown members at home for receiving services and visiting other unknown members for providing services would have lower continuance commitment and vice versa. Besides, in terms of social homophily, participants who strongly agreed to think themselves as similar to other had higher level of continuance commitment and vice versa.

Personal values vs. drivers and barriers: In our hypothesis about the correlation between personal values and drivers to participate, 'H8a: On the context of timebank, there will be positive correlation between instrumental drivers and achievement' and 'H8c: On the context of timebank, there will be positive correlation between universalism and ideology value drivers' was accepted. Whereas, 'H8b: On the context of timebank, there will be positive correlation between conformity and altruism' was rejected but found to be strongly negatively correlated.

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Here, the personal values represent the similar kind of motivational goal as the motivational drivers to participate, except conformity and altruism; power and altruism as they found to be negatively correlated. Here conformity represents obedience to laws, regulations, more like traditional. So, these conformity values or attitude did not influence altruism among members. On the other hand, power do not represent altruism. Besides, it was found that there was a strong positive correlation between self-direction and instrumental, benevolence and instrumental driver, universalism and ideology value drivers. Besides, there was positive correlation between hedonism and instrumental, tradition and social drivers. Here, self-direction and hedonism values are underlying smaller values of openness to change, whereas, benevolence and universalism are smaller or core value of self-transcendence, where the former is about personal focus and the other one is about social focus (Piscicelli, 2015). Traditional value is a core value of conservation value which is correlated to social driver means socializing, maintaining tradition. On the other hand, there was evidence that, instrumental motivation is not just aligned with the goal of achieving personal benefits but also with the social responsibilities (Valor et al. 2016). May be, humans' goal is not just bounded to the caring, serving others but also gaining incentives or benefits for themselves. Interestingly, there was no significant positive or negative correlation found between stimulation and security values with any of the drivers to participate, means none of these values influence any of these motivational drivers to participate in timebank.

In terms of correlation between values and the barriers to participate, there was strong positive correlation between stimulation and lack of trust, limited service range; benevolence with lack of trust, limited service range; universalism with lack of knowledge, lack of trust. Besides, there were positive correlation between hedonism with limited service range, benevolence and lack of knowledge, universalism and social homophily. However, there was a strong negative significant correlation between power and lack of knowledge and a negative correlation between power and self-interest; hedonism and self-interest. Here, the positive relation means, increase of one construct results in increase of another too. In other word, higher degree of stimulation value or openness to change inspires to trust unknown members in terms of providing and receiving services, as the lack of trust was reverse coded and higher scale means disagreement with not trusting unknown members. Likewise, higher degree of self-transcendence or social focus too inspire to trust unknown members and vice versa. Besides, limited service range works as barrier to participate with lower degree of stimulation, benevolence and hedonism. Furthermore, lack of knowledge is a barrier when the degree of

benevolence, universalism values are lower, or in other words, participants with higher degree of benevolence, universalism values had proper knowledge about how timebank works and knew that all their services are valuable in the timebank platform. Besides, participants who had lower degree of hedonism and power values, also strongly disagree to not having enough time to provide services in timebank.

Our sample group of participants were mostly educated and on average higher educated middle-aged female with not more than one family member in their family. This average descriptives of the participants tell that the most supported reason that they participate in timebanking, is because of their ideology value as motivational driver and the most supported barrier they face was social homophily and limited service availability or range to participate in timebanking. The average number of transection and membership duration were higher, though there were minimum of 0 transection is last six months. One explanation can be that, the average members were more than 55 years old and retired. There might be disabled old members too. However, interestingly, it was found that the number of providing services in last six months were higher than asking for any services, which we have found in previous studies many times that it is a very common in timebanking and often it is a threat to the sustainability of timebank. Besides, this finding of the transaction explains why the ideology value driver was the most supported motivational driver to participate in timebanking and why the social homophily and limited service range was the most supported barrier in timebanking. In our findings, ideology value and instrumental drivers were most influential motivation drivers to participate in timebanking, which supports the previous study of Valor et al. (2016); Shih et al. (2015) for instrumental driver and Dubois et al. (2015) and Shih et al. (2015) for ideology value driver to participate in timebanking.

Additional Discussion:

Descriptive of commitment in different countries:
From the descriptive statistics of commitments among countries, the mean value indicates that, affective commitment was highly supported by the members in New Zealand and USA. Furthermore, normative commitment had second highest support in all the categories of country. However, in the 'other' or 'missing' category, interestingly the highest support was for the normative commitment than that of affective commitment. Continuance commitment had lowest support among all the categories of country.

Country-wise differences of commitment, values:

Hedonism, benevolence values were only statistically significantly different between USA and New Zealand, where the participant of New Zealand had higher level of both hedonism and benevolence value than that of USA. That explains that the participants from New Zealand had significantly pursuit of happiness or pleasure and altruistic or cared about others. However, interestingly the altruism driver was higher ranked mean in USA than New Zealand but there was not significant difference in mean ranks. Thus, both countries had same level of altruism among the participants. Even if the benevolence value that may convey the altruistic motivational goal did not represent such driver to participate in timebanking. On the contrary, overall value of the participants regardless of country differences, were higher for universalism and benevolence and lower for self-enhancement, conservation and power which was accepted in our hypothesis H1a and H1b; H2a, H2b and H2c. Furthermore, in terms of commitments, USA participants had significantly higher level of affective and normative commitment than New Zealand participants. However, in terms of continuance commitment, USA ranked higher than NZ but there was no statistical significantly difference, which indicates similar level of continuance commitment in both countries.

6.1 Contribution:

Theoretical Contribution:

1. Our study compliments the European personal values study of Piscecilli (2015, 2017) (UK & Netherlands based study) and Matin & Upham, (2016) (UK based study) by extending Schwartz theory in the non-monetary P2P exchanges. Our study compliments the Piscecilli's study on European context by comparing our study on New Zealand and USA, where we compared the findings of personal values in our study with their study by comparing the mean of the values. We are aware of the fact, they have used 19 values, whereas we have used 10 values. However, the 10 values are also represented among their 19 values. Their study on two different peer-to-peer platform, Ecomodos and peerby where Ecomodos was more like a non-profit organization as like timebank as because timebank does not generate profit and a non-monetary platform.

2. Our cross-cultural quantitative study compliments to the qualitative study of commitment on timebank by Papaoikonomou & Valor (2016), where they studied the relationship of two general commitments (attitudinal and behavioral) with reciprocity. In our study we have considered commitment as three dimensional to understand its' perceptive more explicitly by quantitative study and we have studied on the relationship of these commitments with personal values. Our study also contributes to the study of collom (2007,2011,2012) by broaden the concept of commitments to timebank and showing relationship of drivers and barriers with three dimension of commitment model, where they studied commitment as one general form of organizational commitment to understand the motivational factor of participation in timebank.

3. This study contributed to the literature on the non-monetary marketing by quantitative study and there is evidence from the study that there is relationship between the individuals' personal values and their commitment to their organization. Furthermore, the participation or service exchanges are related to the personal values and their drivers to participate and barriers to participate affects their commitment to their timebank. Thus, the understanding of individuals' personal values or basic human values helps to understand the types of commitment and the reasons aligned with the commitments, which may explain issues such as, switching to another option, less active or dissatisfactions of the employees or consumers.

4. Overall, our study contributes to the literature of commitment and personal values separately and on the relationship of personal values and commitment in non-monetary peer-to-peer exchange with quantitative findings. Last but not the least, our study overall contributes to the literature of timebank.

Practical contribution:

One practical contribution of our study can be to the segmentation of consumers according to their values depending of the types of organization and increasing commitment among employees to their organization. If the organization is a non-monetary platform then they may focus more on affective commitment of their consumers or employees and their personal values relating to the affective commitment. However, if the organization is full profit organization

they may focus on the normative and continuance commitment as well beside the affective commitment; and the values related to these each commitment in different contexts. This study can contribute to the multinational organizations where the segmentation of customer is significant, and the employees are also with different values from different nations. Both on the management and on the marketing context this study can help to make the segmentation strategies in the organization for their consumers and retaining and increasing loyalty among their employees.

Furthermore, timebanks can use our study to understand their members' personal value type and the commitment types to their timebank and make strategy to increase the active participation by increasing their commitments. Besides, the drivers and barriers are also correlated to personal values and commitments, so timebank can focus on those motivational drivers and barriers to participate in timebanking in order to increase transection and participation. One strategy can be also segmenting the members according to their personal values and commitment to engage them in different timebank project (social, political, market), activities and responsibilities to increase their interest and active participation. As these ten values represents different motivational goals and some are correlated to different types of commitments, they can focus on their interests and goals to make strategies. Timebanks in USA and New Zealand can focus on their members' personal values and commitments from the findings of our study and use them in their segmentation.

6.2 Future scope of study:

Future study should focus on the national level comparison of values with such non-monetary peer-to-peer organizations' members' values to understand if there is any differences between the personal values of participants from the organization and the national values, and if so, does they affect the success or failure of the organization. How does they affect the types of commitments in the organization? Future study can use the study design of our research to conduct a study on the relationship of commitment and personal values, or relationship of drivers of motivation and commitment and values, or to analyze the factors relating to performance, future research can use our study. Furthermore, future study can focus on more diverse contexts of peer-to-peer exchange platform with more in-depth (quantitative and qualitative) studies as it has been found that there is not enough study on commitment and personal values in peer-to-peer exchange. Through these studies one may find different results and more critical understanding. As this shared economy platform is increasing day by day and

replacing traditional business (Zervas, et al. 2014), it is important to increase diverse knowledge and study the consumers or peers in the platform for a successful business model.

Furthermore, in terms of time bank study, future study can focus on the in-depth field study and also by using our study to understand more deeply and concisely their members participation, whether it is active participation or less active participation. From such study, one may understand what the personal values and types of commitment are related to the active participation and consequently, what makes a successful timebank. Thus, it can be interesting to study a successful timebank vs. an unsuccessful timebank in a similar context. Because, different context may give different result and may not be affectively applicable in a completely different context. Many other timebanks who are struggling to be sustainable may use the study to gain knowledge and make strategy by finding the core issues and implementing a successful strategy following the study of long term sustained timebanks.

CHAPTER 7: CONCLUSION

To conclude our paper, in this chapter we will discuss our limitation, contribution briefly, then will discuss the main goal of this paper. Finally, the main findings briefly will be presented to answer the main research question. Future scope of the study will be shortly presented to conclude the paper.

Before concluding our thesis, we would like to mention about our limitation that, we are aware of the limitations of using non-parametric test for our analysis. Non-parametric statistics often are less sensitive than their powerful parametric alternatives. As a result, they may fail to identify the differences between groups that was already there (Pall ant, 2002). However, we can say that values generally express more about individuals' attitudes and beliefs than questions about general demographic data do. We believe our quantitative findings have contributed to the qualitative studies of timebank and P2P studies and also to the literature of commitments and personal values. Besides, our study can contribute to the practical use of management and marketing in the organization to make segmentation, such as, timebank itself can use our study to segment their members according the values and related the commitments. Besides, focusing on the values and commitment, timebank can implement strategies to increase participation as in our findings there was significant relationship between commitment and drivers to participate and barriers to participate. Besides, there were also significant relation between values and drivers to participate and barriers to participate. Focusing on these findings, timebanks can have their strategy in the management level and reduce the barriers to increase the sustainability of their timebanks. These proved correlations was proposed in our own theoretical model as well which as our focus of the study.

To guide us to our main research question which we set out to answer, "**What are the impacts of personal values with commitment in the shared economy in the context of timebank?"** we can reach to the conclusion that, there was a strong positive correlation between affective commitment and universalism value and positive correlation with benevolence value. Besides, there were strong positive correlation between normative commitment and universalism value. Furthermore, there were positive correlation between normative commitment and stimulation, benevolence value; however, there were no significant positive or negative correlation between continuance commitment and any of the personal values.

The future research on the relationship of commitment and personal values in a non-western context may provide extensive knowledge. Besides, it can be studied in other form of peer-to-peer exchange platforms and non-monetary platforms. Future quantitative and qualitative study on both successful and struggling timebank to understand the relationship between commitment and personal values may answer questions like, what are the main factors of the successful timebank that are related to the types of commitments and personal values? Are the values of such timebanks similar to the national values? Which types of commitment from the three dimension is proven to be the most successful factor for a sustainable timebank? what was lacking in a struggling timebank to increase which commitment that causes barriers to participate in timebanking? Future study can use our study design and findings as a support to their qualitative study and quantitative study.

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APPENDIX

APPENDIX 1.

Commitment, drivers and barriers to participate in timebank and the source of the how the questions are formatted for the survey:

Construct	References		Original statement	Revised statement
Commitment	Collom (2007;2011); Allen et al. (1990)	1	Time banking is an important reflection of who I am	Timebanking is an important reflection of who I am
		2	I am willing to work harder in order to help my Timebank succeed	As it is
		3	I feel very little loyalty to this organization	I feel very loyal to my timebank
		4	I am proud to tell others that I am part of this organization	I am proud to tell others that I am a part of this timebank
		5	I like to think of myself as similar to other members of my Timebank	As it is
		6	I find that my values and the organization's values are very similar	I find that my values and my Timebank's value are similar
		7	I really care about the fate of this organization	I really care about the future of my Timebank
		8	I plan to remain a member of the Time Bank for a number of years	I plan to remain a member for a long time of this Timebank
		9	Too much in my life would be disrupted if I decided I wanted to leave my organization now	Too much in my life would be disrupted if I decided I wanted to leave my Timebank now
		10	Right now, staying with my organization is a matter of necessity as much as desire	Right now, staying with my timebank is a matter of necessity as much as desire

Construct	References		Original statement	Revised statement
Drivers / Ideological + Value	Shih et al. (2015); Dubois (2015)	1	I am contributing to building a better community	I like Timebanking because I am contributing to building a better community
		2	It creates trust among community members	I participate in Timebanking because it creates trust among community members
		3	I learn about my community	I participate in Timebanking because I learn about my community
Drivers / Social	Collom (2011;2016); Dubois et al. (2014)	4	How often do you attend the Time Bank's social events (monthly gatherings, meetings, events, etc.)?	I often participate in social programs of my Timebank (Meetings/Events)
		5	Meet new people or make friends	I participate in Tmebanking often to meet new people or make friends
Drivers / Economic+ Instrumental	Shih et al. (2015); Valor et al. (2017)	6	I can gain work experience/build my business	I can gain work experience/build my business through Timebanking
		7	I can build up my hours to get other services/goods	Through Timebanking I can build up my hours to get other services to save money
Drivers / Altruism	Shih et al. (2015); Valor et al. (2017); Seyfang (2003); Baftales (2018); Schor (2016); Collom (2011, 2016); Dubois (2015)	8	I don't like feeling that I am helping people just to earn hours	I don't like feeling that I am helping people just to earn hours
		9	I don't really want to receive services, I prefer to only provide	I don't really want to receive services, I prefer to only provide services
		10	It gives me a sense of accomplishment	Participating in Timebanking gives me a sense of accomplishment

Construct	References		Original statement	Revised statement
Barriers / Knowledge gap	Bellotti et al. (2015) Shih, et. al. (2015); Dubois, (2015); Collom, (2011); Seyfang, (2003); Glynos et al. (2012); Ozanne (2010); Molnar (2011)	1	I don't know if anyone would want what I have to offer	I do not think all the services I can provide are valuable in my Timebank
		2	I don't want to go into debt with my account	I feel like I do not know how to use time credits or how Timebanking works
Barriers / Lack of trust	Bellotti et al. (2015); Ozanne (2010); Valor et al. (2016)	3	I don't trust strangers	I trust the Timebank members to invite them at home to exchange services even if they are strangers
		4	I don't feel safe going to unknown locations	I feel safe visiting other Timebank members to provide services, even if if they are strangers
Barriers / Social homophily + Social capital distance	Collom (2007;2011) Dubois (2014; 2015); Schor (2016); Baftales (2018); Schor et al. (2016)	5	I like to think of myself as similar to other members of my Time Bank	I like to think of myself as similar to other members of my Timebank
Barriers / Lack of service availability + Limited service range	Bellotti et al. (2015)Seyfang (2006); Dubois (2015); Valor et al. (2016); Shih et al. (2015) Dubois (2014); Schor et al. (2016); Ozanne (2010)	6	Members who I contact are not available to provide services	Members whom I contact are often not available to provide services
		7	The services that I desire are not available	I always get the service I look for
Barriers / Lack of service quality		8	I have concerns about the quality of the services	The quality of service I get from my Timebank has the same standard if I would buy those services with money
		9	Sometimes people are not satisfied with my services	Sometimes other members of my Timebank are not satisfied with my services
Barriers / Self-interest + Knowledge gap	Bellotti et al. (2015); Shih, et. al. (2015); Dubois, (2015); Collom, (2011); Seyfang, (2003); Glynos et al. (2012); Ozanne (2010); Molnar (2011)	10	I don't like to offer timebanking services to others because I don't have enough time	I do not have enough time to offer my services to others in my Timebank

Appendix 2

PVQ questionnaire – which questions measure which higher values and core values (Schwartz ,2012)

Higher Values	Values	Goal	Questions
Openness to change	**Self-Direction**	Independent thought and action; choosing, creating, exploring.	1.Thinking up new ideas and being creative is important to him. He likes to do things in his own original way 11. It is important to him/her to make his/her own decisions about what he/she does. He/she likes to be free and not depend on others.
	Stimulation	Excitement, novelty, and challenge in life.	6.He/she likes surprises and is always looking for new things to do. He/she thinks it is important to do lots of different things in life. 15. He/she looks for adventures and likes to take risks. He/she wants to have an exciting life
	Hedonism	Pleasure and sensuous gratification for oneself.	10. Having a good time is important to him/her. He/she likes to "spoil" him/herself. 21. He/she seeks every chance he/she can to have fun. It is important to him/her to do things that give him/her pleasure.
Self-enhancement	**Achievement**	Personal success through demonstrating competence	4. It's very important to him/her to show his/her abilities. He/she wants people to admire what he/she does.

			13. Being very successful is important to him/her. He/she hopes people will recognize his/her achievements
	Power	Social status and prestige, control or dominance over people and resources.	17. It is important to him/her to be in charge and tell others what to do. He/She wants people to do what he/she says.
			2. It is important to him/her to be rich. He/she wants to have a lot of money and expensive things
Conservation	**Security**	Safety, harmony, and stability of society, of relationships, and of self.	5.It is important to him/her to live in secure surroundings. He/she avoids anything that might endanger his/her safety
			14. It is important to him/her that the government insure his/her safety against all threats. He/she wants the state to be strong so it can defend its citizens
	Conformity	Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.	7.He/she believes that people should do what they're told. He/she thinks people should follow rules at all times, even when no-one is watching.
			16. It is important to him/her always to behave properly. He/she wants to avoid doing anything people would say is wrong
	Tradition	Respect, commitment, and acceptance of the customs and	9.It is important to him/her to be humble and modest. He/she tries not to draw attention to herself

		ideas that traditional culture or religion provide the self.	20. Tradition is important to him/her. He/she tries to follow the customs handed down by his/her religion or his/her family
Self-transcendence	**Benevolence**	Preserving and enhancing the welfare of those with whom one is in frequent personal contact (the 'in-group').	12. It's very important to him/her to help the people around him/her. He/she wants to care for their well-being 18. It is important to him/her to be loyal to his/her friends. He/she wants to devote herself to people close to him/her
	Universalism	Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.	3. He/she thinks it is important that every person in the world be treated equally. He/she believes everyone should have equal opportunities in life 8.It is important to him/her to listen to people who are different from him/her. Even when he/she disagrees with them, he/she still wants to understand them 19. He/she strongly believes that people should care for nature. Looking after the environment is important to him/her.

Appendix 3

Survey Questionnaire:

Section 1 : Introduction to the survey	"Dear participant, thank you for taking part in the survey on Timebank. We highly appreciate your contribution to our research. Responding to this survey will take a maximum of 20-25 minutes. Please answer truthfully (there are no wrong responses). Click on Next to proceed. Do not click on the return button from your browser. Yours sincerely, Sabera Zohra Abonty sabab144@student.liu.se"

Section 2 : Background	First, we would like to begin by asking/collecting for/some information about your Timebank
	The name of your Timebank o Short answer

	Your current role in the Timebank?
	   o As a founder
	   o As a coordinator
	   o As a member

	How long have you been a part of this Timebank? (In months) o Short answer
	What is your total number of transactions? • Short answer
	In the last six months, how many times did you provide services to other Timebank members? o Short answer
	In the last six months, how many times did you request services from another Timebank member? • Short answer

For section 3 and section 4 we have used below likert scale:

Please choose how you agree or disagree with each of the following statements, from 'Strongly Disagree' to 'Strongly Agree'

Strongly agree	Agree	More or less agree	Undecided	More or less disagree	Disagree	Strongly disagree
(1)	(2)	(3)	(4)	(5)	(6)	(7)

Section 3 : Commitment	This part of the survey concerns your commitment to Timebank in general

- Timebanking is an important reflection of who I am
- I am willing to work harder in order to help my Timebank succeed
- I feel very loyal to my timebank
- I am proud to tell others that I am a part of this timebank
- like to think of myself as similar to other members of my Timebank
- I find that my values and my Timebank's value are similar
- I really care about the future of my Timebank
- I plan to remain a member for a long time of this Timebank
- Too much in my life would be disrupted if I decided I wanted to leave my Timebank now
- Right now, staying with my timebank is a matter of necessity as much as desire

Section 4 : Barriers and drivers of Timebank	This part of the survey concerns your perception of the barriers and drivers of Timebanking

- I like Timebanking because I am contributing to building a better community
- I participate in Timebanking because it creates trust among community members
- I participate in Timebanking because I learn about my community
- I often participate in social programs of my Timebank (Meetings/Events)
- I participate in Tmebanking often to meet new people or make friends
- I can gain work experience/build my business through Timebanking

- Through Timebanking I can build up my hours to get other services to save money
- I don't like feeling that I am helping people just to earn hours
- I don't really want to receive services, I prefer to only provide services
- Participating in Timebanking gives me a sense of accomplishment
- I do not think all the services I can provide are valuable in my Timebank
- I feel like I do not know how to use time credits or how Timebanking works
- I trust the Timebank members to invite them at home to exchange services even if they are strangers
- I feel safe visiting other Timebank members to provide services, even if if they are strangers
- I like to think of myself as similar to other members of my Timebank
- Members whom I contact are often not available to provide services
- I always get the service I look for
- The quality of service I get from my Timebank has the same standard if I would buy those services with money
- Sometimes other members of my Timebank are not satisfied with my services

Section 5 : PVQ	Here we briefly describe some people. Please read each description and think about how much each person is or is not like you. Tick the box to that shows how much the person in the description is like you

Section 6 : Demographics	Please tell us about yourself and your background.

- How old are you?
- What is your gender?

Female
Male
Other
- What is your level of education?

No studies
Primary School

Secondary School
Bachelor
Graduate
Post graduate
- What is your professional occupation?

Student
Part-Time employed
Employed
Entrepreneur
Unemployed
Retired
Homemaker
- How many people do you currently live with?

Section 7 : End of the survey	Thank you so much for sharing your Timebank insights with us

o Do you have any comments about this survey?

o If you would like to know the result of the survey later, you can leave your email address here.

---End of the thesis---