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COLLABORATIVE CONSUMPTION PRACTICES IN KYRGYZSTAN[1]

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Abstract. This research article studies collaborative consumption practices in Kyrgyzstan in the context of the Theory of Planned Behaviour and Auckland Individualism and Collectivism dimensions. The research aims to answer the question: To what extent are the Theory of Planned Behaviour and Individualism and Collectivism dimensions relevant framework to explaining intention to engage in collaborative consumption and collaborative consumption behaviour. A quantitative online survey of 308 respondents was conducted. A linear regression analysis was performed using the R statistics engine. The study found that dimensions of the TPB such as attitude, subjective norm, perceived behavioural control, and personal norms; and the dimension of individualism – responsibility are among the statistically significant positive predictors of intentions to engage in collaborative consumption. Whereas personal norms, behavioural beliefs, advice, and closeness are positive; biospheric value orientations and harmony are negative factors impacting the collaborative consumption behaviour of respondents.

Keywords: Kyrgyzstan, Collaborative consumption, Sharing Economy, Theory of Planned Behaviour, Individualism and Collectivism, AICS.

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Introduction

The concept of sharing economy is being widely studied and discussed in current times by researchers and businesses (Gruber, 2020). It has seen significant development in recent years within the expansion of wide online platforms usage and access to internet (Benkler, 2004; Nwaorgu, 2018).

Sharing is defined as "an alternative to the private ownership that is emphasized in both marketplace exchange and gift-giving… In sharing, two or more people may enjoy the benefits (or costs) that flow from possessing a thing. Rather than distinguishing what is mine and yours, sharing defines something as ours" (Belk, 2007, p. 127). Sharing economy and collaborative consumption emerged from mixing up different economic models that work on changing production ways and consumption cultures (Pasimeni, 2020). Its wide growth is due to several reasons including the economic crisis, expansion of internet-based technology, a paradigm shifts from hyper-consumerism to anti-consumerism as well as increasing interest in sustainable consumption (Belk, 2014; Nwaorgu, 2018).

Collaborative consumption stands for "traditional sharing, bartering, lending, trading, renting, gifting, and swapping redefined through technology and peer communities – that is remodelling business, consumerism, and the means we tend to live" (as cited in Nwaorgu, 2018, p. 240). It is one of the crucial models of economy towards sustainable consumption as sharing, bartering and swapping goods and services between several consumers reduces the use of economic resources (ac cited in Tuncel & Ozkan Tektas, 2020, p. 2). Though sharing is not a new concept as throughout history people used to share living space, food, and other items with each other (Wruk et al., 2019). Communal consumption was present for centuries as a system of survival from a scarcity of available economic resources (Perepeolkin, 2020). The practices of sharing economy were also present in the countries of the Soviet Union (Kashepov, 2020).

Chornaya Kassa (CHK) (literally, black cashbox from Russian) and Sherine (literally, treat from Kyrgyz language) are examples of sharing economy practices and traditional ROSCAs which are present today in Kyrgyzstan (Kuehnast & Dudwick, 2004; Mamadiiarov, 2019). The difference between CHK and Sherine is that the amount of funds collected in Sherine is always bigger compared to CHK. A group of people ranging from 5 to 12, usually co-workers, classmates, friends, neighbours, or relatives, agree on participation and each member of the group contributes a fixed amount of money each month. One member of the group gets the collected money or fund and the turn goes to the other one and so on. For each turn of fund collections, the group gets together over food to socialize. CHK and Sherine became widespread during the Soviet period due to the difficult

procedure of obtaining bank loans, the anti-consumerist ideology of the Soviet Union, and unpredictable purchase opportunities. Under the perestroika period and the transition economy, the demand for informal resources of loans and credits got higher and CHK became a very important informal credit mechanism for Kyrgyz people serving as means of survival in economic crisis (Nuehauser, 1993).

Several researches were done to identify the motivations behind persons' intentions to engage in collaborative consumption. However, there is a research gap in the available literature for the Kyrgyzstani context. This research article aims to fill in the research gap on people's motivations to engage in collaborative consumption in Kyrgyzstan. Therefore, the following are the research questions:

Q1: To what extent are the TPB and the AICS relevant theoretical frameworks to explain the intention to engage in collaborative consumption?

Q2: To what extent are the TPB and the AICS relevant theoretical frameworks to explain the collaborative consumption behaviour?

Literature review

The Theory of Planned Behaviour

The Theory of Planned Behaviour (TPB) was created to analyse and predict human intention to do a certain task at a particular place or time (LaMorte, 2019). It is an extended model of the Theory of Reasoned Action (TRA) with an inclusion of perceived behavioural control (Rossi & Armstrong, 2008). It was effectively applied in various research papers including works on financial behaviours (Xiao, 2008), sport-related habits (Lu et al., 2011), and other types of human behaviour (Asare, 2015). TPB incorporates five components: attitude, subjective norms, perceived behavioural control (PBC), intentions, and behaviour (Passafaro et al., 2019). Attitude, subjective norms, intentions, and PBC interact with each other to determine behaviour (Figure 1). The extended model of the TPB features variables that are not previously mentioned such as personal norms, altruistic value orientation, biospheric value orientation, and egoistic value orientation (Roos & Hahn, 2017).

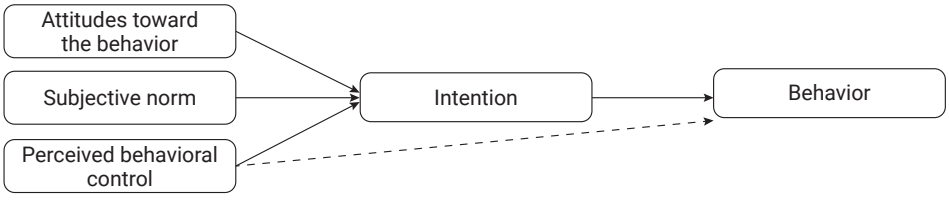

Figure 1. The Theory of Planned Behaviour (Hadadgar et al., 2016)

Attitude is a factor that measures the favourability scale of behaviour that is put under consideration. It also examines the outcomes of performing behaviour (LaMorte, 2019) and is a major determinant in predicting human intention (Ajzen, 1991). It consists of outcome evaluations and behavioural beliefs (Asare, 2015).

Behavioural intention refers to one's motivation of behaving in a certain way. The stronger the intention is, the more likely the action is to be fulfilled (LaMorte, 2019). Three independent constants that determine intentions are attitude toward behaviour, subjective norms, and perceived behavioural control (Ajzen, 1991, p. 188).

Subjective norms are social factors that measure one's moral responsibility to attempt a behaviour or not (Ajzen, 1991, p. 188). It measures the degree to which a person can be influenced by people whose input is important in accomplishing an action (Rossi & Armstrong, 2008, p. 43).

Perceived behavioural control pertains to one's judgment of a task's difficulty level. It depends on situations and actions; therefore, it is more likely to change based on a person's perception of the situation (LaMorte, 2019). The more favourable subjective norms and attitudes towards behaviour are, the stronger PBC becomes which sequentially increases the strength of one's intention to perform a behaviour. The relevance of each component in determining intentions varies depending on the situation or behaviour in question. In some cases, the only attitude is important to assess the intentions, while in others PBC plays more of an important role (Ajzen, 1991, p. 188). PBC takes into account situations where people do not have full volitional control over the behaviour and act based on two factors: one's comfort of doing an action and availability of necessary resources (Hadadgar et al., 2016).

Auckland Individualism-Collectivism Scale (AICS)

AICS was invented by Shulruf and his colleagues to measure individualism and collectivism dimensions (Györkös et al., 2013). Individualism and collectivism framework is important due to its theoretical frugalness which means that it can help to understand differences in behaviour by only focusing on a few varying dimensions between two given cultures (Oyserman et al., 2002).

Individualism is a notion of valuing personal independence, freedom of choice, personal autonomy, and responsibility (Shulruf et al., 2007, p. 12–13). Individualists are more likely to have a distinct style of addressing and communicating as well as have a higher probability of choosing themselves over others (p. 1). Collectivists refer more to belonging and relatedness to a group of people, harmony, and a sense of duty to others. They identify themselves as part of a community rather than a separate entity and are more likely to emotionally restrain themselves to maintain harmony (p. 2).

According to the AICS, there are three dimensions of individualism and three dimensions of collectivism. They are responsibility, uniqueness, and competitiveness for individualism and advice, harmony and closeness for collectivism (Rubin et al., 2009).

Collaborative consumption

Collaborative Consumption is defined as a distribution of resources and gaining temporary access to goods and services without bearing the full costs and ownership of a service or a property (Toni et al., 2021). The notions of car sharing, house-sharing, and office sharing have risen in popularity in recent years. And popular applications such as BlaBlaCar, Uber, Yandex Drive, and many more can be considered as bright examples of collaborative consumption (UNECE, 2020, p. 44–51). Even though renting services such as car sharing is a relatively new phenomenon, the initiative itself has deep roots from traditional car renting advertisements in the Minneapolis Journal in July of 1904. It is believed that the first mention of car sharing appeared in Zürich in 1948. It was a car share program by the name of "Sefage", which is a short-term for Selbstfahrergenossenschaf or Self-Drive Cooperative (UNECE, 2020, p. 1). CC is a part of the sharing economy (John, 2013, p. 4). It is a high-tech phenomenon where people barter, rent, or exchange goods and services through social media networks and technology. There are three ways in which technology can be linked with CC: technology as an enabling factor of CC, technology as a driving factor of CC, and terminology and metaphors. John (2013) gives the technology two roles – a passive role as the medium for swapping, renting, and trading of goods and services: and an active role as the source of data exchange of GPS locations, skills, price, and availability.

Previous research on the TPB, AICS and CC

Roos and Hahn (2017) focus on control and behavioural beliefs by questioning people about the benefits and drawbacks of CC as well as the individual and general factors that facilitate such practices. Based on findings, they determined five common behavioural beliefs: cost savings, environmental protection, dependency on others' behaviour, efficient use of resources, and community with others. Cost savings was one of the most prevalent behavioural beliefs that persisted in many research papers relating to collaborative consumption (p. 11). Economic motivation is based on a man's rationalization of alternatives in terms of possible advantages and disadvantages. They also note that participating in collaborative consumption maximizes behaviour and utilizes lower-cost options (Mayasari & Chrisbaryanto, 2018).

Other papers suggest that cost-saving attracts those who are financially conscious and therefore, are willing to participate in CC practices to save funds (Kim & Jin, 2019).

Hypotheses

The previously conducted research validated the relationship between variables of the extended TPB and CC (Ianole-Călin et al., 2019; Roos & Hahn, 2017). Therefore, the first set of hypotheses are postulated and tested to validate those relationships in the context of Kyrgyzstan. The following hypotheses on respondents' intention to engage in CC are tested for validation:

H1. Respondents' attitude toward collaborative consumption positively impacts their intention to engage in collaborative consumption.

H2. Respondents' subjective norms regarding collaborative consumption positively impact their intention to engage in collaborative consumption.

H3. Respondents perceived behavioural control over collaborative consumption positively impacts their intention to engage in collaborative consumption.

H4. Respondents' personal norms positively impact their intention to engage in collaborative consumption.

More on, extensions of the TPB with behavioural beliefs, egoistic value orientations, and biospheric value orientations were proposed and tested in Ianole-Călin et al.'s study (2019). Although the initial study found them statistically insignificant, it was decided to examine them in this research project taking into consideration the new country sample:

H5. Respondents' behavioural beliefs positively impact their intention toward collaborative consumption.

H6. Respondents' biospheric values positively impact their intention toward collaborative consumption.

H7. Respondents' egoistic values negatively impact their intention toward collaborative consumption.

In addition, Ianole-Călin and her colleagues (2019) postulated and tested two more hypotheses about Individualism-Collectivism variables' impact on intention to engage in collaborative consumption. Responsibility as a dimension of individualism and advice as a dimension of collectivism in these hypotheses:

H8. Responsibility positively impacts respondents' intention to engage in collaborative consumption.

H9. Advice positively impacts respondents' intention to engage in collaborative consumption.

The following test the hypotheses validated by the study of Roos & Hahn (2017). It was found that perceived behavioural control and intention to consume collaboratively are statistically significant in explaining respondents' collaborative consumption behaviour. The latter variable was measured as an estimated frequency of purchasing items as a result of CC, or giving / receiving gifts, borrowing / ask for something.

H10. Perceived behavioural control positively related to collaborative consumption behaviour.

H11. Intention to consume collaboratively positively related to collaborative consumption behaviour.

Methodology

Pilot study

Prior to the main phase of data collection, a pilot study was conducted in mid-December 2021. The aim of the pilot study was to examine the understanding and comprehensibility of the questions. A total of 5 respondents participated in this phase. As a result, some of the questions were checked for word order, some words were replaced with appropriate ones and the time taken to complete the questionnaire was recorded.

Data collection process

Between January and March 2021, a web-based survey was conducted in Kyrgyzstan using the platform Google Forms. The link to the survey was distributed in groups on social platforms such as Telegram, WhatsApp and Facebook. The survey was also distributed by professors from two universities, including the Kyrgyz National University and the International University of Kyrgyzstan. Some carsharing companies operating in Kyrgyzstan were also asked to distribute the survey among their customers. Respondents were given information about the research and its purpose. They read the consent form to participate and agreed to participate by clicking the "Yes, I agree to participate" button. A total of 308 respondents participated in the quantitative survey. The extensive characteristics of the sample are provided in the Sample Statistics section.

Questionnaire

The questionnaire for the online quantitative survey was provided in two languages: Kyrgyz and Russian. The questions were translated from English and checked for consistency using the back-translation method. Respondents were asked to rate their level of agreement with the statements on a Likert scale from 1 to 7 and from 1 to 9, with 1 indicating strong disagreement and the earlier scores of 7 and 9 indicating strong agreement. The questionnaire included a number of questions from existing scales of TPB, AICS and CC, which were used in a previous study by Ianole-Călin et al. (2019).

The study replicated the existing theoretical framework developed for collaborative consumption by Roos & Hahn (2017). The list of items presented in Table 1 measured each dimension of the Theory of Planned Behaviour (detailed items in Appendix 1). All latent variables were based on three or more items as suggested by the authors of the original methodology. The three value orientations – Altruistic, Egoistic and Biospheric – were measured on a 9-point Likert scale, while the remaining variables were measured on a 7-point Likert scale.

The study used 30 items from the Auckland Individualism-Collectivism Scale to measure the following latent variables, which are listed in Table 2 below. The variables Competitiveness, Uniqueness, Responsibility are the dimensions of Individualism, whereas Advice, Harmony, and Closeness are the dimensions of Collectivism. All variables were measured on a 7-point Likert scale.

Table 1. The list of latent variables of the Theory of Planned Behaviour

No.	Latent Structure	Observed variables
1	Behavioural Intention (INT)	INT1, INT2, INT3
2	Attitudes (ATT)	ATT1, ATT2, ATT3, ATT4, ATT5, ATT6
3	Subjective Norms (SN)	SN1, SN2, SN3, SN4
4	Perceived Behavioural Control (PBC)	PBC1, PBC2, PBC3
5	Personal Norms (PN)	PN1, PN2, PN3
6	Behavioural Beliefs (BB)	CS1, CS2, ENV1, ENV2, DEP1, DEP2, EFF1, EFF2, COM1, COM2
7	Altruistic Value Orientation	ALT1, ALT2, ALT3, ALT4
8	Egoistic Value Orientation	EGO1, EGO2, EGO3
9	Biospheric Value Orientation	BIO1, BIO2, BIO3

Table 2. The list of latent variables for Individualism and Collectivism dimensions

No.	Latent Structure	Observed variables
1	Advice (ADVICE)	ADV1, ADV2, ADV3, ADV4
2	Harmony (HARMONY)	HARM1, HARM2, HARM3, HARM4, HARM5, HARM6
3	Closeness (CLOS)	CLOS1, CLOS2, CLOS3, CLOS4, CLOS5, CLOS6
4	Competitiveness (COMP)	COMPET1, COMPET2, COMPET3, COMPET4
5	Uniqueness (UNIQ)	UNIQ1, UNIQ2, UNIQ3, UNIQ4
6	Responsibility (RESP)	RESP1, RESP2, RESP3, RESP4, RESP 5, RESP6

The questionnaire also included control variables for collaborative consumption practices, including the frequency of CC practices such as renting, borrowing, swapping, accepting gifts or donations, buying second-hand items, resources. All items for CC were measured on a 7-point Likert scale, except for the item indicated on resources.

Control variables included age, gender, type and region of residence, education level, number of people living in the household, number of siblings, income, job presence, perceived financial status, religion, and perception of the near future.

Research Strategy

A linear regression analysis with average scores was performed using R statistics. For every variable measured using the 7 or 9-point Likert scale, the average score was calculated using the following chunk code: *mydata$averageINT < (mydata$Intention1+mydata$Intention2 +mydata$Intention3)/3 (example for Intention variable*). Before running a linear regression, the correlation and directionality of data were analysed. A step function was run to evaluate the explanatory power of dependent variables, validity and usefulness of the models. Regression analysis was run using the lm() function.

Sample statistics

A sample size of 308 respondents participated in an online quantitative survey out of which 82 % are females (n = 254) and 18 % are males (n = 54). The respondents' age ranges from 17 to 70 years old. The mean age is 29.45, with a standard deviation (SD) equal to 12.55 and median equal to 25. The sample comprises 87 % of the urban (n = 268) and 13 % of the rural (n = 40) population of Kyrgyzstan.

The majority of respondents have completed higher education (59.7 %), incomplete higher education (21.4 %), and incomplete secondary education (6.2 %).

The average number of people living in respondents' household is 5, with a SD = 1.75. There are 10 people living in the biggest household.

The average number of siblings respondents' have is 3, with a SD = 2.34. The maximum number of siblings respondents indicated is 10 siblings (Table 3).

Majority (57 %) of the respondents are currently employed (n = 176) while the rest of the respondents (43 %) do not currently have a job. Of those who are not employed (n = 143), the majority currently have student status at university or school (48.5 %), are housewives or on maternity leave (21.97 %), and temporarily unemployed but looking for a job (18.93 %). Almost every second respondent from the survey said that he/she can easily buy durable things, but buying really expensive things like a car is a big problem for them (44.8 %). 27.3 % (n = 84) of the respondents have enough income for food and clothing but buying expensive durable things like a TV, refrigerator is a problem for them. On the other hand, 14.6 % of the respondents find it difficult to afford clothes. Majority of the respondents (49.7 %) reported that their monthly household income is more than KGS 20,000 (more than USD 239). Whereas 10.4 % of the individuals reported their monthly household income as up to 20,000, 9.7 % as up to 18,000 and 7.8 % as up to KGS 12,000.

The vast majority of the respondents are Muslim (85.7 %). 33 respondents (10.7 %) do not profess any religion, 1.6 % are Orthodox Christians and 1.3 % are atheists. Most of the respondents who participated in the survey live in the country's capital (64 %). The rest of the respondents are from other regions, including Osh (11 %), Issyk-Kul (10.7 %), Chui (6.5 %). The summary of the sample statistics can be found in Table 4.

Table 3. Sample statistics

Variable	%	Variable	%
Gender	***N* = 308**	**Financial Status**	***N* = 308**
Female	82	We can easily purchase durable things, but buying really expensive things such as a car is associated with big problems for us	44,8
Male	18	There is enough income for food and clothing, but buying expensive durable items such as a TV, refrigerator is a problem for us	27,3
Residence	***N* = 308**	We have enough money for food, but buying clothes causes us difficulties	14,6

Variable	%	Variable	%
Urban	87	Currently, we can afford a lot: a car, a summer vacation trip, a foreign trip	6,5
Rural	13	There is only enough money for food, but no longer enough for utilities	5,2
Education	***N* = 308**	There is not enough money even for food	1,6
Complete higher education	59,7	**Employment status**	***N* = 308**
Incomplete higher education	21,4	Currently employed	57
Incomplete secondary education	6,2	Currently unemployed	43
Academic Degree	4,2	Reason of unemployment status	*N* = 132
Secondary education	2,6	Student	48,5
College	2,3	Housewife / on maternity leave	21,97
Elementary education	1,6	Temporarily unemployed; looking for a job	18,93
Secondary vocational education	1,3	Retired (age, illness)	7,57
Without education	0,7	Unemployed; NOT looking for a job	3,03
Household Income	***N* = 308**	**Religion**	***N* = 308**
More than 20,001 KGS	49,7	Islam / Muslim	85,7
18,001-20,000 KGS	10,4	Nothing	10,7
15,001-18,000 KGS	9,74	Orthodox Christianity	1,6
10,001-12,000 KGS	7,8	Atheism	1,3
12,001-15,000 KGS	5,52	Christianity: Protestant (Baptist, Adventist, Jehovah's Witnesses)	0,6
8,001-10,000 KGS	4,9	**Region**	***N* = 308**
6,001-8,000 KGS	4,5	Bishkek (capital city)	64
Up to 700 KGS	1,9	Osh	11
1,201- 1,500 KGS	1,62	Issyk-Kul	10,7
1,501-2,000 KGS	1,3	Chui	6,5
2001-3000 KGS	1	Naryn	4,5
701-900 KGS	0,6	Jalal-Abad	1,6
3001-4000 KGS	0,6	Talas	1,3
901-1,200 KGS	0,32	Batken	0,3

Research findings

CC practice frequency

The estimated frequency of purchasing items or goods in the last month due to sharing is 4 (med = 4) on a Likert scale, where 1 means never and 7 means every day. The estimated frequency of sharing something with someone in the last month is 5 (med = 5). As it is shown in the Table 4, respondents were more likely to receive / make gifts and borrow/ask for something more frequently than they were to exchange something with someone or buy second-hand items.

Table 4. Collaborative consumption practices

#	Variable	Median
Beh1	Please estimate how many times you have purchased something in the last 4 weeks as a result of collaborative consumption	**4**
Beh2	Please rate how many times in the last 4 weeks you have shared something.	**5**
	How many times in the past 4 weeks have you done one of the following?	
CC1	Rented something	**3**
CC2	Borrowed / Asked for something	**4**
CC3	Exchanged something with someone	**2**
CC4	Received or made a gift	**5**
CC5	Bought something used (Second hand)	**2**

30 % (n = 89) of respondents reported that they have played Chornaya Kassa or Sherine in the last 12 months. 27 % (n = 83) of respondents have rented apartment in the past 12 months. And 12 % (n = 37) have rented a car in the past 12 months. In total, 166 respondents (53.8 %) out of 308 indicated that they were engaged in CC in the past 12 months.

Respondents reported to share frequently with others books (n = 34), food and groceries (33), apartment or house (32), car (22) and clothes (20). Besides them, respondents also shared offices and business premises, electronics, household equipment and different accessories in the last 4 weeks.

Intention To Engage in Collaborative Consumption

Intention to engage in collaborative consumption practices was measured in a 7-point Likert-scale by three items including intention, try, and plan to share / consume goods and services with others in the near future. The mean score for all three items is 4.64 with a med= 4.67 and sd= 1.77. A linear regression model explains the dependent variable intention to engage in CC as a function of all latent variables of the TPB, the AICS dimensions and demographic variables. The stepwise analysis of the model resulted in 63.35. Below is the chunk code of the *Model #1:*

Model1 ← lm (averageINT ~ averageATT + averageSN + averagePBC + averagePN + averageALT + averageBIO + averageEGO + averageBB + averageAdvice + averageHarmony + averageClos + averageCompet + averageUniq + averageRespons + Age + Gender + Residence + Education + Household + Siblings + Income + Job + Financial + Religion + Region, data = mydata)

ATT, PBC, PN and BIO are significant variables in explaining respondents' intention to engage in CC. Attitude is statistically highly significant positive factor that influence intention to engage in CC with three stars of significance ($p < 0.001$). The higher the score of attitude towards CC is, the more likely respondents are to have higher intentions to engage in CC. Therefore, the H1 which states that consumers' attitude towards CC positively related to their intention to CC is confirmed. PBC and PN are also statistically significant positive factors that influence intention to engage in CC with one star of significance ($p < 0.05$). The higher the scores of PBC and PN are, the more likely respondents are to have higher intentions to engage in CC. Thus, the H3 and H4 positing that the positive impact of PBC and PN on intention are confirmed. The BIO value orientation has weak negative influence on respondents' intention to engage in CC with a p-value < 0.0873. Therefore, the H6 which posits that BIO value orientation influences consumers' intention to CC is rejected. The model also found that respondents' intention to engage in CC declines with ageing ($p < 0.05$). Poor financial situation such as inability to afford food ($p < 0.05$) and utilities ($p = 0.0644$) is also among the positive factors predicting intention. Those who have siblings are also among those who have intention to engage in CC (p-value = 0.0511). The model has good explanatory power of 72.2 %. Below is the output of the *Model #1:*

Table 5. The model- Intention as a function of TPB and AICS

Residuals:

Min	1Q	Median	3Q	Max
−3.9195	−0.4571	−0.0379	0.6369	2.7169

Coefficients:

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	−1.69722	1.516365	−1.119	0.2641
averageATT	0.544719	0.081448	6.688	1.47e−10 ***
averageSN	0.08096	0.075744	1.069	0.2862
averagePBC	0.187721	0.081595	2.301	0.0222 *
averagePN	0.147928	0.06708	2.205	0.0283 *
averageALT	0.031096	0.068227	0.456	0.6489
averageBIO	−0.132039	0.076919	−1.717	0.0873 .
Age	−0.017703	0.007364	−2.404	0.0169 *
Siblings	0.072807	0.03715	1.96	0.0511 .
Income 901-1,200 som	2.106396	1.25336	1.681	0.0941 .
Financial (Barely afford food)	1.182472	0.569216	2.077	0.0388 *
Financial (Barely afford utilities)	0.773751	0.416505	1.858	0.0644 .

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 1.033 on 250 degrees of freedom
Multiple R-squared: 0.7217, Adjusted R-squared: 0.6582
F-statistic: 11.37 on 57 and 250 DF, p-value: < 2.2e-16

The stepwise analysis was run in order to find out better fitting model explaining intention to engage in CC. It resulted in a *Model #2* with a 17.53 AIC score which is lower compared to the score of *Model #1*. The explanatory power is 69.74 % which is very good as well. The better fitting model excluded BB, ALT, EGO factors of TPB, and some demographic variables. The *Model #2* was run in the following chunk code:

Model2 ← lm (averageINT ~ averageATT + averageSN + averagePBC + averagePN + averageBIO + averageClos + averageRespons + Age + Gender + Residence + Siblings + Financial, data = mydata)

All other dimensions of TPB are statistically significant according to the result of the regression analysis. ATT is statistically highly significant positive factor that influence intention to engage in CC with three stars of significance ($p < 0.001$). The higher the score of attitudes toward CC is, the more likely respondents are to have higher intentions to engage in CC. Therefore, the H1 which states that consumers' attitude towards CC positively impacts their intention to CC is confirmed by the better fitting Model #2 as well. The regression model also has confirmed the hypotheses H3 and H4 with PBC and PN being statistically significant positive

factors that influence intention to CC with one star of significance ($p < 0.05$). The H9 is also rejected for BIO value orientation with a p-value of $p < 0.071$.

Compared to the result of the previous model, the current regression found SN to be a significant factor influencing respondent' intention to CC. SN is marginally significant positive factor, if the p-value threshold requirement is relaxed ($p < 0.057$). Therefore, the H2 is supported as a result of regression analysis. Below is the output of the Model #2:

Table 6. The model- Intention as a function of TPB and AICS with lower AIC

Residuals:

Min	1Q	Median	3Q	Max
−3.5365	−0.5207	−0.0506	0.6522	2.5896

Coefficients:

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	−0.712738	0.538044	−1.325	0.186316
averageATT	0.545997	0.069931	7.808	1.06e−13 ***
averageSN	0.121238	0.06335	1.914	0.056628 .
averagePBC	0.156742	0.06997	2.24	0.025838 *
averagePN	0.13605	0.059472	2.288	0.022877 *
averageBIO	−0.088893	0.04905	−1.812	0.070971 .
averageClos	0.082099	0.058886	1.394	0.164322
averageRespons	0.14058	0.074471	1.888	0.060061 .
Age	−0.01972	0.005481	−3.598	0.000377 ***
GenderMale	−0.231546	0.158399	−1.462	0.144878
ResidenceUrban	0.530627	0.174083	3.048	0.002514 **
Siblings	0.095937	0.029323	3.272	0.001198 **
Financial (Can't afford car)	0.186727	0.248297	0.752	0.452641
Financial (Can't afford clothes)	0.226002	0.275738	0.82	0.4131
Financial (Can't afford durable items)	−0.312818	0.259781	−1.204	0.229506
Financial (Barely afford food)	0.977605	0.51325	1.905	0.057801 .
Financial (Barely afford utilities)	0.589552	0.349684	1.686	0.092876 .

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.9988 on 291 degrees of freedom

Multiple R-squared: 0.6974, Adjusted R-squared: 0.6808

F-statistic: 41.92 on 16 and 291 DF, p-value: < 2.2e-16

Besides variables of TPB, the regression analysis found Responsibility (averageRespons), a dimension of Individualism, as marginally significant positive factor, if the 0.05 threshold requirement is relaxed (p-value < 0.06). Along with predictors of respondents' intention to CC, age, place of residence and number of siblings of respondents are statistically highly significant factors. The older the respondent is, the less likely he or she is to have intention to engage in CC ($p < 0.001$). Consumers living in urban areas are more likely to have higher intentions to engage in CC (p-value < 0.01). And respondents who have reported to have siblings are also among those who are more likely to have intentions to practice CC. When speaking about financial situation of respondents, it is revealed by the model results that those who are facing lack of finances and cannot afford even food, are most likely to practice CC as well. The factor is marginally significant, if the 0.05 threshold requirement is relaxed (p-value < 0.058).

To summarize, ATT, SN, PBC, and PN were found statistically significant positive factors predicting respondents' intention to engage in CC. Therefore, H1-H4 are confirmed. However, both of the models did not find any relationship between intention and BB, BIO, EGO, and Advice. Thus, H5-H7 and H9 are rejected. H8 which states that responsibility is positively related to intention to engage in CC is supported by the *Model#2* if the 0.05 threshold requirement is relaxed (p-value < 0.06).

Collaborative consumption behaviour

The current practices of collaborative consumption were measured in 7 questions. They are presented in the previous section *4.1.1 CC practice frequency*. The further models predict collaborative consumption behaviour of respondents.

The *Model #3* predicts CC behaviour of respondents as a factor of latent variables of the TPB, the AICS dimensions and demographics. The stepwise analysis resulted in AIC equal 91.9. It has a good explanatory power of 42.97 %. The following chunk code was run:

```
Model3 ← lm(averageBehavior ~ averageINT + averageATT + averageSN + averagePBC + averagePN + averageALT + averageBIO + averageEGO + averageBB + averageAdvice + averageHarmony+ averageClos + averageCompet + averageUniq +averageRespons+ Age + Gender + Residence + Education + Household + Siblings + Income + Job + Financial + Religion + Region, data = mydata)
```

According to the results of the regression analysis, PN, BIO, BB and dimensions of Collectivism – Advice, Harmony, Closeness are statistically significant factors in predicting CC behaviour of respondents. Intention and PBC are not

statistically significant. Thus, H10 and H11 are rejected. However, the regression model found other relationships.

PN is statistically significant positive predictor of CC behaviour (p-value < 0.05). Behavioural beliefs BB is statistically highly significant positive predictor of CC behaviour with three stars of significance (p-value < 0.001). Advice and Closeness also have a positive influence on CC behaviour with a p-value < 0.01. Along with Harmony (< 0.01), BIO orientation values (p-value < 0.01) are shown to have statistically significant negative impact on respondents' CC behaviour. The model also revealed that male respondents are more likely to practice CC compared to female respondents (p-value < 0.05). Regarding the financial situation of respondents, the model shows that the worse the financial situation of respondents is, the more likely they are to be engaged in CC. Below is the output of the *Model #3:*

Table 7. The model- CC behaviour as a function of TPB and AICS

Residuals:

Min	1Q	Median	3Q	Max
−2.8749	−0.6870	0.1032	0.5411	3.0344

Coefficients:

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	0.299584	1.568106	0.191	0.848643
averageINT	0.015587	0.06524	0.239	0.811366
averageATT	−0.001906	0.091223	−0.021	0.983349
averageSN	0.12184	0.078311	1.556	0.121014
averagePBC	−0.078921	0.085054	−0.928	0.354362
averagePN	0.181262	0.069865	2.594	0.010036 *
averageALT	−0.015449	0.070408	−0.219	0.826497
averageBIO	−0.252966	0.079811	−3.17	0.001718 **
averageEGO	−0.032443	0.05969	−0.544	0.587251
averageBB	0.36645	0.095881	3.822	0.000167 ***
averageAdvice	0.182154	0.069865	2.607	0.009678 **
averageHarmony	−0.223112	0.100769	−2.214	0.027730 *
averageClos	0.246037	0.078597	3.13	0.001954 **
averageCompet	−0.122655	0.069122	−1.774	0.077209 .

	Estimate	Std. Error	t value	Pr(>|t|)
averageUniq	0.109694	0.078425	1.399	0.163141
averageRespons	−0.039812	0.110833	−0.359	0.719745
Age	−0.008992	0.007684	−1.17	0.242993
GenderMale	0.469659	0.195722	2.4	0.017147 *
Financial(Can't afford car)	0.579668	0.304034	1.907	0.057725 .
Financial(Can't afford utilities)	0.938921	0.432597	2.17	0.030920 *

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 1.066 on 249 degrees of freedom
Multiple R-squared: 0.4297, Adjusted R-squared: 0.2969
F-statistic: 3.235 on 58 and 249 DF, p-value: 1.029e-10

The stepwise analysis was run in order to find out better fitting model predicting CC behaviour of respondents. It resulted in a *Model #4* with a 45.74 AIC score which is lower compared to the score of *Model #3*. The explanatory power is 31.63 % which is good as well. The better fitting model excluded demographic variables and thus showed the factors that have the most significant impact on CC behaviour. The chunk code for the better fitting model is below:

Model4 ← lm(averageBehavior ~ averageSN + averagePN + averageBIO + averageBB + averageAdvice + averageHarmony + averageClos, data = mydata)

The model has similar results as in the previous one with only minor changes in estimated coefficients. Intention and PBC were found not statistically significant in this regression analysis as well. Thus, H10 and H11 are rejected.

PN factor has a positive and statistically significant impact on CC behaviour (p-value < 0.01). BB, Advice, and Closeness are statistically highly significant factors impacting CC behaviour (p-value < 0.001), while BIO value orientation and Harmony have negative statistically highly significant effect (p-value < 0.001). The higher the average score for both Advice and Closeness, the more likely the respondent is to consume collaboratively with others. However, the less the average score for harmony, the less likely he/she is to share. Below is the output of the *Model #4:*

Table 8. The model- CC behaviour as a function of TPB and AICS with lower AIC
Residuals:

Min	1Q	Median	3Q	Max
−2.66645	−0.74833	0.07263	0.68507	3.10715

Coefficients:

	Estimate	Std. Error	t value	Pr(>|t|)
(Intercept)	2.12918	0.45528	4.677	4.42e-06***
averageSN	0.08142	0.05597	1.455	0.146778
averagePN	0.16588	0.05194	3.194	0.001554 **
averageBIO	−0.26698	0.05148	−5.186	3.95e-07 ***
averageBB	0.30459	0.07855	3.877	0.000130 ***
averageAdvice	0.22117	0.05832	3.792	0.000181 ***
averageHarmony	−0.30019	0.08566	−3.504	0.000527 ***
averageClos	0.25185	0.06771	3.719	0.000238 ***

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Residual standard error: 1.063 on 300 degrees of freedom
Multiple R-squared: 0.3163, Adjusted R-squared: 0.3004
F-statistic: 19.83 on 7 and 300 DF, p-value: < 2.2e-16

In a summary of previous findings, PBC and INT were found insignificant and thus, H10 and H11 are rejected. However, PN, BB, Advice, Closeness were found statistically significant positive factors predicting CC behaviour. Whereas, BIO and Harmony were revealed to have negative relationship with CC behaviour.

Conclusion

The research article aimed to test previously validated impact of the TPB and AICS on CC. The study applied linear regression analysis with average scores of each variable. It was revealed that attitude, subjective norms, perceived behavioural control and personal norms are statistically significant positive factors impacting intention to engage in collaborative consumption. Therefore, the study confirmed the previously validated impacts of the TPB on CC as it was found out by Ianole-Călin et al. (2019) and Roos & Hahn (2017). Responsibility, the dimension of Individualism, was found to be a statistically significant positive factor impacting intention to engage in CC as well (if the 0.05 threshold requirement is relaxed (p-value < 0.06).

Personal norms, behavioural beliefs, advice, and closeness were found to be statistically significant positive factors in predicting collaborative consumption behaviour of respondents. Kyrgyzstan as a country with a post-Soviet history (Kuehnast et al., 2004) where people used to live in communal settings and have collectivist lifestyle and values. Therefore, being close to the community might be important for

Kyrgyz people and by engaging in collaborative consumption they try to be closer to each other. In addition, biospheric values and harmony were revealed to have negative relationship with collaborative consumption behaviour of respondents.

Research to date has revealed the impact of the TPB on collaborative consumption behaviour. However, the theory should be tested on different samples in order to validate its usefulness and applicability. The aim of this research article was to validate previously tested and confirmed hypotheses about the impact of latent variables of the TPB and dimensions of the AICS on intention to engage in CC, and currently estimated CC behaviour. Therefore, the research article supports and refines the proposed theoretical model as Kyrgyzstan is a country with a different country profile.

Moreover, the article works towards minimizing the existing literature gap on collaborative consumption motivators in the territory of Kyrgyzstan as there is no literature available on the aforementioned topic. The first limitation of the study is that only half of respondents (53.8 %) reported that they have practiced CC in the previous 12 months. Second, the quantitative survey was distributed on social media platforms. Third, the median age of respondents is 25 (mean 29.5). Therefore, the study's sample might not represent the entire population of the country. Further research should work more on a sampling design.

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