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스포츠 매니지먼트 석사 학위논문

Motivational factors that Influence
Sports Volunteering at mega sports
events.

스포츠에 영향을주는 동기 부여 요인 메가 스포츠
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David Hodgson Sambola



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Abstract

Motivational Factors that Influence Sports Volunteering at Mega Sports Events

David Hodgson Sambola

Global Sport Management, Department of Physical

Education

The Graduate School

Seoul National University

This research studies and describes the motivational factors that influence volunteering intention at mega sports events. The study examines the differences among various motivational drives and their effects on the motivation to volunteer.

It was investigated the motivational factors play an essential

role in targeting and addressing potential volunteers based on their motivational needs. The study found that specific motivational drivers have a significant influence on the prediction of volunteering intention. Indeed, the data proved that drivers as economical recognition and purposive motivation are essential for predisposing people to volunteer at mega sports events. Also, the result proved that factors like Psychological recognition motivation were not significant in predicting volunteers' motivation and the egoistic motivation factor negatively affects the volunteering intention

Keywords: Volunteering intetion, Motivation, Mega Sports Events, Volunteers, Motivational Factors.

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Chapter 1. Introduction

1.1. Background

Sports volunteerism is fundamental to the sports industry, and the voluntary sector as well. In order to provide some background information regarding this issue, it is essential to analyze the scale and economic impact of sports volunteering. The review of these data will provide a better understanding of the importance of the volunteer sector and its impact on the sports industry. As an example, In the case of Australia and Canada, "over 1 million people volunteer for sport organisations, and in England this number reaches 4.5 million; that is equivalent to 10% of Australians, 5% of Canadians, and approximately 11% of the English population" (Cuskelly, Hoye, & Auld, 2006 as cited on (Doherty, 2006).

In order to have a better comprehension of the situation, it is imperative to know how many of these volunteers are part of the sports sector.

According to Cuskelly et al., (2006) as cited on Doherty, A. (2006) "about one-quarter of all volunteers in Australia (26%) and England (26.5%), and one-fifth of volunteers in Canada (18%) are involved in

the sports sector alone". Further note those volunteers contributed several hours to the sports industry which are equivalent to 98,000, 262,000, and 450,000 fulltime paid employees in sport per year in Australia, Canada, and England, respectively. (Cuskelly, Hoye, & Auld, 2006 as cited on Doherty, 2006). As it is stated above, the sports industry depends on volunteers, and their contributions to be able to operate correctly.

In most countries, sports volunteers make up a substantial proportion of the voluntary sector with more of 25% of the volunteers in some countries. Therefore, it is compulsory to understand the main motives for volunteering in people because it is not as simple as understanding what inspires a person to do any work without monetary compensation. It is more important to understand what motivates sports volunteering in people so that information can be used to target and reach out possible volunteers.

In the case of mega sports events, volunteers play an essential role. As a volunteer, they accomplish multiple functions; they represent staff, visitors, and consumers. Volunteers are also supporters of mega-events who help to make these events successful(Lee, Reisinger, Kim, &

Yoon, 2014) "Identifying volunteer motivation for participating and supporting mega-events is essential for organizing and hosting these events. Thus, it is vital to explore volunteer motivations to participate in mega-events."(Lee et al., 2014)

Different reasons motivate volunteers for mega-events; the opportunity to socialize and network with people that share their same passion, obtain material rewards as sport equipment, trips, food, accommodation, and others, enhance the local community status by promoting a good image of region, connect with personal interests and hobbies, and express altruism. (Lee et al., 2014) Volunteer motivations can be classified differently depending on the authors' preferences and limitations as well as the motivational model used.

1.2. Objective

Several research papers and studies have been done to understand the main motives and factors in sports volunteering. Using varied research methods and diverse populations researchers have obtained different outcomes to what move people to do sports volunteering. During the last years, mega sports events have needed more and more human resources to accomplish their organizational objectives and

deliver a good quality product. The vast majority of human resources at mega-sports events are built up with volunteers from general volunteers to sports volunteers and specialist volunteers that carry on most of the tasks at the different events.

Therefore, the constant investigation and updated research on volunteers are very valuable for the sports industry, which is highly dependent on voluntary work. With this current phenomenon, information regarding the motivations of young generations to do sports volunteering will be necessary to address potential volunteers for mega sports events correctly.

The methodology used for this study is classified as field research with a typology of non-experimental descriptive study, with a quantitative approach. The descriptive method it allows an in-depth analysis of volunteering phenomenon and its components. That is to say; this study will analyze the motivations of people to do volunteering without using an experiment as the research method. In other words, this non-experimental study uses a survey as its instrument for field data collection, and it is considered as descriptive because the information collected it is used to explain the sports volunteering

motivations. The sample of the research is selected by random sampling method at Seoul National University.

There are many researchers conducted to study volunteers' motivations, but not so many on sports volunteers' motivation. This study aims to complement the existed studies by providing new and updated information that can be used by scholars and different volunteer-based organizations especially those focused on mega sports events.

1.3. Significance

Nowadays, sports organizations rely fundamental duties on volunteers, and mega-sports events are not exempt from this tendency. Therefore, it is compulsory to research and analyze the motivations to volunteer in order to provide relevant and updated information that can be used to understand the main reasons why people do sports volunteering. By having on handy relevant information, sports organizations can be able to target potential volunteers according to their motivational needs, giving the sports industry a better understanding of people's motivational drivers to ensure an effective placement and management of volunteers.

Chapter 2. Literature Review

2.1. Mega Events

Mega-events are huge events that affect entire economies and reverberate in the global media; they include sports events like the Olympic Games and the world cups, business events as international exhibitions and world fairs." Defined mega-events as having a volume of more than 1 million visits, capital costs of at least US\$500 million, and the reputation of being a "must see" event"(Lim & Lee, 2006)

Mega-events are events that are expressly targeted at the international tourism market and may be suitably described as "mega" by their size in terms of attendance, target market, level of public financial involvement, political impact, extent of television coverage, construction of facilities, and impact on the economic and social fabric of the host community (Lim & Lee, 2006)

These huge events can stimulate tourism in the region and economic development playing a vital role in destination branding and marketing. The can be categorized depending on to their size, impact

on tourism, purpose, and program; from purposes of competition, business, tourism, and entertainment; to socializing, public celebrations and others. Mega-sports events stimulate tourism in the region and economic development and they a vital role in destination branding and marketing (Lee et al., 2014).

2.2. Sport volunteering

Volunteering can be defined as "any activity in which time is given freely to benefit another person, group, or organization" (Wilson, 2000). On the one hand, scholars defined volunteering as an unremunerated work given freely to a cause, on the other hand, some others said that it should be based on the volunteer intentions instead. It is very common to see volunteers contributing to a cause based on how many benefits and material rewards like clothes, equipment, free transportation, meals, accommodation, and others, they get, instead of genuine support motivated by selfless motives. Based on this, some scholars believe that remunerations fade the essence of volunteering work.

However, Wilson (2000) argues that the essence of volunteering is more link to intentions than compensations. Wheatear

the compensation is a meager salary, free accommodation or genuine and grateful smile. The volunteers' intentions are the ones that can determine if the typology of the act and not the compensation.

Therefore, according to Wilson (2000), there is a difference when people decided to volunteer because the program offers free accommodation and they need where to leave, versus people that volunteer because they believe in the program and they want to contribute.

Another way used by Wilson (2000) to pinpoint how intentions can determine if an act can be considered as volunteerism, it was by highlighting the difference between and spontaneous act and proactive action. There is a difference between the help given to the victim of an assault, where it is necessary to decide rapidly whether or not to take action, versus the typically proactive volunteerism that rather than reactive, it entails some commitment of time and effort. (Wilson, 2000) Whether or not volunteering should be based on benefits and rewards, or intentions or both it is subject to debate.

A volunteer is a person who makes an individual, altruistic commitment to collaborate, to the best of his/her abilities in the

organization and management of the programs or events, carrying out the tasks assigned to him/her without receiving payment or rewards of any other nature (Ahn, 2018). Moreover, volunteering can be defined as an action done voluntarily out of free will, without the need to have any contract or legal stipulations. Volunteering is always done for the benefit of others out of one's free will (United Nation, 2011 as cited in Mahesh & Rai, 2016). According to Stebbins (1992), Volunteering is "a skill and knowledge-based activity in which people can have a career in a special social world" offering the opportunity for improving professional competencies and interpersonal skills, socializing, career path, contributing to learning and personal development.

2.3. Motivational models

For more than four decades, researchers have been trying to find what motivates people to do volunteering. Different studies and different socio-cultural contexts have made dissimilar models by adding and removing dimensions according to their environments and limitations. All of this with the aim of finding the correct model that will help researchers comprehend what motivates volunteering in people. The different models have been categorized into three main

blocks; Unidimensional models, The Two or three-factor model, and Multifactor model (Esmond & Dunlop, 2004).

The unidimensional model appeared in 1991 with the researchers Cnaan and Goldberg-Glen by doing an extensive review of all the literature relating to volunteer motivation, and the confirmed limitations of many previous studies. They concluded that volunteers have altruistic and egoistic motivations for volunteering. Based on this conclusion, their investigation has two main factors, egoistic and altruistic. However, they stated that even though the two types of motivations are present on the volunteers. The volunteers did not distinguish between these different types of motives; therefore, one motive cannot be separated from the other motive. Cnaan and Goldberg-Glen affirmed that there is no altruistic or egoistic motivation by itself, it is a combination of both motives that are part of the whole volunteering experience; therefore, it is a unidimensional model the most accurate one to explain the volunteers' motivation (Cnaan & Goldberg-Glen, 1991).

The Two or three-factor model, back in 1981, the investigators Horton-Smith developed a two-factor model based on altruistic and

egoistic factors to explain the volunteer motivation. They classified the egoistic motives as tangible rewards like equipment and benefits such as free accommodation and the altruistic motives as intangible rewards such as feeling good about helping others (Cnaan & Goldberg-Glen, 1991).

Herzberg developed another two-factor model in 1996 which proposed that the motives to do volunteering are intrinsic and extrinsic factors. He supported his claim with his theory of motivator-hygiene. According to with this theory, paid workers have intrinsic and extrinsic motivations to do their job, the extrinsic factors or hygiene factors pertain to the working environment like policies of the company and working conditions, and the intrinsic or motivator factors pertain to the individual such as job satisfaction or career goals (Herzberg, 1996).

Under this same category, Gidron in 1978 made a research base on three factors model. He stated that people's motivation could be divided into three main areas; social, personal and rewards. Social category stands for interpersonal relationships like socializing or influence of friends, family, coworkers. The personal, it is related to

self-fulfillment and personal goals and rewards it is related to tangible benefits such as a salary (Gidron, 1978).

In the nineteen-nineties, several researchers created multifactor models for understanding volunteers' motivations. Some of the pioneers of this model were Clary, Snyder and their colleagues. Their objective was to understand the motivations of volunteers based on the functional analyses and theorizing on motivation (Clary, Snyder, & Ridge, 1992). Their model was based on people's attitude theories developed in the nineteen sixties by Katz (Katz 1960) which proposed that at a psychological level the reasons to hold and change attitudes of an individual. Clary, Snyder and their colleagues, also, based their research on the finds of Smith, Bruner, and White developed in the nineteen fifties and their theories about the opinions and personalities. (Clary, Snyder, & Ridge, 1992)

Another multifactor model developed by Vellekoop-Baldon(1992), stated that there are multiple factors or motives of why people do volunteering. The research proposed that the main reasons are; altruism in the first place, followed by social interaction, personal growth, and personal skills (Vellekoop-Baldock, 1990).

2.4. Sports Volunteers Motivations

Sports volunteer motivation can be different depending on the individual and the type of event. Also, it can vary depending on the authors' perspectives and analysis. Each author arranges the volunteer motivations in a different set of groups or dimensions based on its criteria and the different theories. Ahn (2018) divided the reasons for volunteering into volunteer motivations, and recognition and rewards. On the one hand, volunteer motivations are; Leisure motivation, Egoistic motivation, Purposive motivation, and External influence. On the other hand, recognition and rewards are; Psychological, Economical, and Managerial.

2.4.1. Leisure Motivation

Leisure motivation alludes to relaxation and recreational needs. It means that people can be motivated to be a volunteer at a world cup because of the love towards football, or to participate as a volunteer in a track & field world championship because they are fans of Usain Bolt. Also, they can be volunteers at the Olympic games because they are genuinely interested in the Olympic games. Leisure motivation is a crucial motive and significant factor for volunteers who participate in

sports events, whereas it is because of the love for sports, fun, and broad interests (Coyne & Coyne, 2001).

2.4.2. Egoistic Motivation

Egoistic motivation alludes to self-esteem and self-actualization. People are motivated to volunteer because it will help them improve their abilities or because it makes them feel better about themselves (Strigas, 2001). This motivation is common in individuals seeking for new skills or in those that would like to challenge their existing abilities and skills or to strengthen their career path. The egoistic motivations refer to volunteers seeking self-oriented benefits related to personal growth, self-esteem, and new skills (Ahn, 2018).

2.4.3. Purposive Motivation

The Purposive motivation alludes to the contribution made by individuals with particular reasons to do volunteering, such as, promoting a sporting event, contributing to the regional and national development, endorsing a better image of the country, and promoting national values, and heritage. These volunteers focus their efforts on sports volunteering with a clear purpose (Strigas, 2001). For example, "volunteers that have important responsibilities on event operation and

management will be more likely to increase the positive image of sports organization and other sponsoring organizations related to the event"(Ahn, 2018). Moreover, people that love their region or nation are likely to have a high purposive motivation because they would like to promote a good image of their country or region.

2.4.4. External Influence

External influence refers to the influence and effects of other external factors in volunteering (Strigas, 2001). External influences are linked to family, regional traditions or custom. Another external influence is religion. Several religions fall into this category because they induce the believers to practice selfless acts and altruism. Moreover, the regional environment influences the volunteer career of an individual. Therefore, recommendations of friends, family, or other significant ones, including coaches or professors numerous motivates people to volunteer at mega-sports events (Farrell, Johnston, & Twynam, 1998). Indeed, there are several external influences that in one way or another, can influence the motivation of volunteers, either to boost their enthusiasm or reduce their interest in a particular event.

2.5. Sports Volunteers Recognitions/Rewards

"Recognition refers to "the acknowledgment of something as valid," "an act of recognizing," or "the state of being recognized."

Within this context, volunteer recognition is generally viewed as an expression of gratitude or appreciation for volunteers' contributions and an acknowledgement of the inherent value of volunteer activities"(Jung, 2011) The volunteers' recognition and rewards can be pure gratitude, a financial or a managerial reward. Ahn (2018) classified the rewards and recognition on three main dimensions, Psychological, Economic and Managerial recognitions, and rewards. The Psychological dimension is related to psychological stability and pride such as gratitude or a thank you letter on behalf of the organization. The Economic dimension is related to tangible rewards like uniforms and equipment. The Managerial dimension refers to rewards given with an administrative and managerial purpose such as information of how to administrate mega-events.

2.5.1. Psychological Recognition/Rewards

According to Jung (2011) the psychological recognition and reward its based on the fulfilment of psychological stability and pride,

increasing volunteers satisfaction, their sense of achievement, and consolation. Some examples of psychological recognition and rewards can be encouragement, appreciation of volunteer work expressed by volunteer organizations. It can be done orally, by a thank you letter or certificate (Ahn, 2018).

2.5.2. Economic Recognitions/Rewards

Economic recognition and reward it is one of the most common manners to reward a volunteer in mega sports events. These rewards are related to extrinsic rewards and tangible products, such as free food, transportation, accommodation, discount coupons, uniforms, sports equipment, cash, and gifts (Jung, 2011). This economic recognition and reward it is seen as one of the most attractive benefits for some volunteers. However, this will depend on the individual motivation of the volunteers.

2.5.3. Managerial Recognitions/Rewards

The Managerial recognition and reward allude to those recognitions or rewards given for an organization's administrative and managerial purpose such as information, time schedule, mileage system, and certificate. This type of managerial rewards are not very

popular among the volunteers that participate in mega sport; however, it is a reason why some specialized volunteer get into the sports industry (Jung, 2011).

2.6. Hypotheses development

Based on the literature review the researched developed the following hypotheses:

H1 Leisure motivation has a positive effect on Volunteering intention.

H2 Egoistic Motivation has a positive effect on Volunteering intention.

H4 External influence has a positive effect on Volunteering intention.

H5 Psychological recognition and rewards have a positive effect on Volunteering intention.

H6 Economical recognition and rewards have a positive effect on Volunteering intention.

H7 Managerial recognition and rewards have a positive effect on Volunteering intention.

Chapter 3. Methodology

This chapter addresses the methodological procedures used in the research. The methodology used for this study is field research with a typology of non-experimental descriptive study, with a quantitative approach. The descriptive method it allows an in-depth analysis of volunteering phenomenon and its components. That is to say; this study will analyze the motivations of people to do volunteering without using an experiment as the research method.

In other words, this non-experimental study uses a survey as its instrument for field data collection, and it is considered as descriptive because the information collected it is used to explain the sports volunteering motivations. The research has a quantitative approach that provides a clear perspective on the issue and its variables. Besides, the quantitative approach uses a numerical way to express reality from a precise, external and objective perspective.

3.1. Procedures and Measures

In the present investigation used a survey as the instrument for data collections, based on the approach of the research and its required

needs. The survey was used to obtain numerical data, which expresses the different variables and limitations of the research. This instrument has seven dimensions divided into four dimensions of volunteer's motivations, and three dimensions of recognition/rewards. Volunteers motivation is divided on; leisure motivation, egoistic motivation, purposive motivation, and external influence. Recognition/reward is divided into; Psychological, Economic, and managerial recognition/reward. (Ahn, 2018)

Each dimension is divided into items measured by a five-point Likert-type scale that ranged from (1) strongly disagree to (5) strongly agree. On the one hand, the dimensions of leisure, egoistic, and external motivation, as well as, Psychological recognition/reward, and managerial recognition/reward contain three items each. On the other hand, the dimensions of purposive motivation and economic recognition/reward contain four items each.

The study uses an adapted version of the scale developed by Ahn (2018). This adapted version uses “I would volunteer if” as possibility expression so the instrument (Table 1) can be applied in a non-volunteer population. An example is: “I would volunteer to

challenge my abilities” (item 5), or “I would volunteer to be appreciated by my significant other/family/community members” (item 12). The scale can be used to rank the individual’s motivations or to give an overall score of the volunteer motivations. (Esmond & Dunlop, 2004)

Table 1. Questionnaire items.

Item
Volunteer motivations
<i>Leisure motivation</i>
1. <i>If I were to volunteer in mega sports events, I would like to be absorbed by what I do. (V1)</i>
2. <i>If I were to volunteer in mega sports events, I would like to provide me the excitement I crave. (V2)</i>
3. <i>If I were to volunteer in mega sports events, I would like to experience the games firsthand. (V3)</i>
<i>Egoistic motivation</i>
4. <i>If I were to volunteer in mega sport events, I would like to improve my skills and abilities through my volunteer assignments. (V4)</i>
5. <i>I would volunteer to challenge my abilities. (V5)</i>
6. <i>I would volunteer because it makes me feel better about myself/helps my self-esteem. (V6)</i>
<i>Purposive motivation</i>
7. <i>I would volunteer because I am genuinely concerned about this sport event and its participants. (V7)</i>
8. <i>I would volunteer because I adhere to the organizational committee's special goals. (V8)</i>
9. <i>I would volunteer because I want to give something back to the community. (V9)</i>
10. <i>I would like to volunteer because this sports event promotes our national values, image, or heritage. (V10)</i>
<i>External influence</i>
11. <i>I would volunteer if I were asked by others to volunteer in these games. (V11)</i>
12. <i>I would volunteer to be appreciated by my significant other/family/community members. (V12)</i>
13. <i>I would volunteer because my friends/family/significant other are also volunteering at these events. (V13)</i>
Recognition and rewards
<i>Psychological recognition and rewards</i>
14. <i>I would volunteer if the organization expresses gratitude (Thanks letter, email, etc.). (V14)</i>
15. <i>I would volunteer if the organization gives praises and encouragement of volunteers' effort. (V15)</i>
<i>Economic recognition and rewards</i>
16. <i>I would volunteer if the organization offers accommodation during the volunteering work. (V16)</i>
17. <i>I would volunteer if the organization offers tangible products (e.g., uniforms, discount coupons). (V17)</i>
18. <i>I would volunteer if the organization offers free transportation. (V18)</i>
19. <i>I would volunteer if the organization offers meal coupons. (V19)</i>
<i>Managerial recognition and rewards</i>
20. <i>I would volunteer if the organization manages schedules by using a volunteering system. (V20)</i>
21. <i>I would volunteer if the organization provides a certificate for school admission or employment. (V21)</i>
22. <i>I would volunteer if the organization provides me a job position that enhance my managerial and administrative capabilities.(V22)</i>
<i>Volunteering intention</i>
23. <i>How likely are you to have an intention to participate in volunteering for Mega-sports events? (V23)</i>
24. <i>How likely are you to have an intention to register a volunteer organization for Mega-sports events? (V24)</i>
25. <i>How likely are you to have an intention to participate in the educational training of a Mega-sports events? (V25)</i>

The questioner was answered by 276 people. The 58.7% corresponded to female respondents and 41.3% male respondents. More than half of the sample (55.1%) fell into the 20–29 years of age group and one third (31.2) fell into the 30-39 age group. Graduate individuals comprised a majority (45.7%) of the sample followed by individuals holding a bachelor's degree (34.8%).

3.2. Analysis

The research used a Random sampling method was to collect data from Seoul National University and surroundings. The research used surveys as primary sources in order to obtain first-hand information about the study subjects. Also, secondary sources, such as articles, journals, books, previous researches, investigations, dissertations, and others. So, the researcher supports its analysis and criteria on different authors and ideologies.

A two-stage procedure was used in the research to confirm if the hypothesis can be supported or rejected by the data collected. The first stage used descriptive statistics to explain the general aspects of the sample. After, a reliability analysis was performed using the Cronbach Alpha values.

The second state, a factor analysis was conducted to confirm if the multiple observed variables (leisure motivation, purposive motivation, economic recognition, and rewards) have similar patterns of responses because they are associated to a latent variable (Volunteering intention). At the same time, a parallel analysis was conducted as a quality control check. Multiple linear regression was conducted. The components retained by the factor analysis were used as explanatory variables in the multiple regression in order to predict the response variable (volunteering intention). Finally, the data obtained from the two-stage analysis is displayed in the Results chapter and analyzed and discussed in the fifth chapter of the research.

3.2.1. Reliability analysis

According to (Pallant, 2006), the reliability of scales indicates how free they are from random error and/or the degree to which items making up the scales measures the same attribute. The investigation used Cronbach Alpha values to measure reliability. Based on Lee Cronbach (1951) the reason for the Cronbach Alpha values is to provide a measure of the internal consistency of a scale, test or model. The Cronbach values are expressed as a number between 0 and 1, and the acceptable values range from 0.70 to 0.95. That is to say, values

closer to 1 express a high average correlation and therefore reliability between selected items. This was used as a benchmark to examine the reliability of the data collected, and it supported the process of transforming the sub-scales into new categories using the mean (Tavakol & Dennick, 2011).

3.2.2 Factor analysis

There are several methods that can be conducted to determine the construct validity of studies based on particular characteristics of the investigation. The factor analysis Is one of the most common statistical methods to determine de construct validity (Çokluk, 2016). One of the distinctiveness of this method is that “factor analysis reduces the complexity of data and thus provides nearly the same amount of information as extensive data obtained by a number of original observations, with only a few factors” (Çokluk, 2016).

According to Stewart (1981) Factor analysis is a multivariate statistical technique with the aim of structuring a set of observable variables. It is appropriate to use this method when the study involves interrelationships among several variables that need to be reduced in a fewer number of original variables that can be easily analyzed. The factor analysis can be used to research qualitative and quantitative data

because its use reduces the number of variables so that the research can be maximized. It is also used when a researcher wants to submit his prior hypothesis of the number of factors for a data set to a statistical test.

Based on (Floyd & Widaman, 1995), the factor analysis approaches can be divided into two categories to evaluate and group several observable variables: exploration and variable reduction. On the one hand, the objective of the exploratory analysis is to reduce the dimensions of a construct already developed. On the other hand, Confirmatory factor analysis can be used for new theory construct by testing hypotheses about the structure of a data set (Stewart, 1981).

3.2.2.1 Interpretation of factors

Parallel analysis developed by Horn (1965) is a technique used to regulate the components to retain from factor analysis. Primarily, the program works by creating a random dataset with the same numbers of observations and variables as the original data. In order to retain the components, the eigenvalues generated by the factor analysis should exceed the ones randomly generated by data set with the same numbers of individuals and variables (Franklin, Gibson, Robertson, Pohlmann, & Fralish, 1995).

The most important part of the factor analysis is to decide the number of factors to retain. This can be done taking into account several criteria. The exploratory factor analysis should be based in theoretical support of previous studies, in the number of primary loadings, variance ratios explained by factors, the difficulty of interpreting following factors, the correlations, the significance, the patters on the loading, analytical method, type of rotations and much more. However, the essence of the exploratory factor analysis depends on the ability to discriminate significant factors from others. When the author determine the number of factors needs close attention because an error in this section can cause serious errors that can affect the results (Child, 2006). Since the development of the Factor analysis by Spearman, there have been many recommended methods like the ones mentioned above. However, methods for discriminating factors are not limited to those. In 1995 Horn suggested the parallel method, as a way to select the number of factors number of research in the literature

show this method to give good results (Reilly & Eaves, 2000; Thompson, 2007; Weng & Cheng, 2005; Fabrigar, Wegener, Maccallum, & Strahan, 1999) and it is effective in determining de number of factors. “Parallel analysis is based on random data simulation to determine the number of factors. Using the Monte Carlo Simulation Technique, a random simulative (artificial) data set is generated besides the actual (real) data set and the estimated eigenvalues are calculated” (Fabrigar, Wegener, Maccallum, & Strahan, 1999). When the analysis is run the eigenvalues of factors produced should be higher than the ones obtained from completely random data. The factors that do not have eigenvalues higher than the parallel analysis would be eliminated.

3.2.2.2 Examination of the Correlation Matrix and Anti-image Correlation Matrix

The correlation matrix provides the researcher with information for determining if the data is appropriate for factor analysis. The factor analysis creates components were observable variables have a high

correlation, therefore, is the correlations in the matrix a relatively low the factor analysis is not appropriate (Stewart, 1981).

The Anti-image correlations matrix represents the negative value of the partial correlations. "If variables share common factors, the partial correlation coefficient between pairs of variables should be small when the linear effects are eliminated. Therefore, if the anti-image matrix has many non-zero off-diagonal entries, the correlation matrix is not appropriate for factoring" (Stewart, 1981).

3.2.2.3 Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin Measure of Sampling Adequacy

The Bartlett's test of sphericity is a technique to that looks for statistical probability based on the correlations in the data matrix determining how suitable is the data for the factor analysis. The test measures how adequate is the sample for each variable, and for the hole model (Stewart, 1981). The Bartlett's test of sphericity is calculated with the next formula:

$$\text{Bartlett's Test of Sphericity } (\chi^2) = - \left[n - 1 - \frac{2P+5}{6} \right] \times \ln|R|$$

; where, n – sample size, P – number of variables, and

$|R|$ – determinant of the correlation matrix

“The Kaiser-Meyer-Olkin measure of sampling adequacy provides a measure of the extent to which the variables belong together and are therefore appropriate for factor analysis” (Stewart, 1981).

$$MSA = \frac{\sum \sum_{j \neq k} r_{jk}^2}{\sum \sum_{j \neq k} r_{jk}^2 + \sum \sum_{j \neq k} q_{jk}^2}$$

; where, q_{jk}^2 - square of the off-diagonal elements of anti-image correlation matrix and r_{jk}^2 - square of the off-diagonal elements of the original correlation. According to Winship (1984) the values obtain from the analysis values are above .90+ marvelous, .80+meritorious, .70+middling, .60+ mediocre .50+-miserable and below .50 unacceptable.

3.2.3. Regression analysis

After the factor analysis and the subsequent creation of the seven components, a multiple regression analysis was performed to test the seven hypotheses. The multiple regression was used as a suitable technique for this model because it is a statistical technique that analyzes the relationship between a single dependent variable and multiple

independent variables. (Hair et al, 1998) After the exploratory factor analysis, the use of multiple regression analysis will determine the importance of the dimensions connected to a dependent variable (Kaul, 2018). The multiple regression can also be used to understand a phenomenon and determine the importance of each observable variable in the prediction of the latent variable (Cohen, 2007).

Chapter 4. Results

4.1. Data screening

The data (n=276) use for the study meet the minimum requirements to so the variables can have a symmetric distribution. The data collected to run a factor analysis should be related to the number of items of the study. A sample of 100 is considered poor, 200 is fair, while 300 is contemplated as a good or bare minimum of 10 observations per variable is necessary to avoid computational difficulties (Franklin et al., 1995).

4.2. Descriptive analysis

The sample size(n=276) of the study is considered acceptable because it ranges between 200 to 300 observations (Franklin et al., 1995). The maximum and minimum of the sample rank between 5 and 1 respectively. The observations V_1 to V_7 , V_9 , V_{10} , V_{16} , V_{17} , and V_{19} have a mean more than 4.08, and less than 4.27. The rest of the observations, (V_8 , V_{11} to V_{15} , and V_{19} to V_{22}) rank under 3.97 (see table 2). The standard deviation goes from 0.76 to 1.19.

Table 2. Descriptive statistics of the variables

Variables	N	Range	Minimum	Maximum	Mean	Std. Deviation
V ₁	276	4.00	1.00	5.00	4.275	0.797
V ₂	276	4.00	1.00	5.00	4.253	0.763
V ₃	276	4.00	1.00	5.00	4.275	0.876
V ₄	276	4.00	1.00	5.00	4.188	0.906
V ₅	276	4.00	1.00	5.00	4.050	1.011
V ₆	276	4.00	1.00	5.00	4.036	1.081
V ₇	276	4.00	1.00	5.00	4.087	1.040
V ₈	276	4.00	1.00	5.00	3.558	1.144
V ₉	276	4.00	1.00	5.00	4.115	1.051
V ₁₀	276	4.00	1.00	5.00	4.456	0.836
V ₁₁	276	4.00	1.00	5.00	3.681	1.065
V ₁₂	276	4.00	1.00	5.00	3.173	1.199
V ₁₃	276	4.00	1.00	5.00	3.101	1.139
V ₁₄	276	4.00	1.00	5.00	3.521	1.158
V ₁₅	276	4.00	1.00	5.00	3.840	1.080
V ₁₆	276	4.00	1.00	5.00	4.260	0.951
V ₁₇	276	4.00	1.00	5.00	3.971	1.143
V ₁₈	276	4.00	1.00	5.00	4.253	1.016
V ₁₉	276	4.00	1.00	5.00	4.087	1.108
V ₂₀	276	4.00	1.00	5.00	3.920	1.030
V ₂₁	276	4.00	1.00	5.00	3.862	1.176
V ₂₂	276	4.00	1.00	5.00	3.934	1.164

4.2.1. Demographic profiles

The section describes the demographic profile of respondents of the current research (see table 3). The female respondents (58.7%) outnumbered male respondents (41.3%) of sample (n=276) collected. More than half of the sample (55.1%) fell into the 20–29 years of age group and one third (31.2) fell into the 30-39 age group. The majority of the respondents were single (70.8%) followed by married (27.7%) and

just (1.5%) other. Regarding educational level, graduate individuals comprised a majority (45.7%) of the sample followed by individuals holding a bachelor's degree (34.8%) and individuals with some college (13.8%). Concerning income, 41.3% had a monthly income below 1,000,000 Korean Won, whereas 31.2% had a monthly income between 1,000,000 and 2,000,000 Korean Won.

Table 3. Demographic of the responses.

Variable	Profile of survey responses (n=276)	N	Percentage
Gender	Female	162	58.7
	Male	114	41.3
Age	17-19	6	2.2
	20-29	152	55.1
	30-39	86	31.2
	40-49	16	5.8
	50-59	8	2.9
	60 and over	8	2.2
Marital Status	Single	196	70.8
	Married	76	27.7
	Other	4	1.5
Educational level	High school diploma	16	5.8
	Some college	38	13.8
	Bachelor's degree	96	34.8
	Graduate degree	126	45.7

Income (Monthly income)	Under 1,000 (United States Dollar)	114	41.3
	1,000 – 2,000	86	31.2
	2,000 – 3,000	40	14.5
	3,000 – 4,000	20	7.2
	5,000 and over.	10	3.6

4.3. Reliability analysis

All the factors were subjected to reliability tests. Reliability was measured with Cronbach’s Coefficient Alpha. For all the factors, the Cronbach’s Coefficient Alpha values score were 0.70, as recommended by Liu, Wu, & Zumbo (2010) (see table 4)

Table 4. Reliability Statistics

Factors	Cronbach's Alpha	N of Items
Leisure motivation	.781	3
Egoistic motivation	.873	3
Purposive motivation	.782	4
External influence	.871	3
Psychological recognition	.794	3
Economical recognition	.892	4
Managerial recognition	.793	3

4.4. Factor analysis

The factor analysis was conducted to confirm if the multiple observed variables have similar patterns of responses because they are associated with a latent variable. That is to say; factor analysis provided

a reduction of the observed variables by creating components or factors (groups of variables) that have similar patterns of responses associated with volunteering intention.

4.4.1. Sampling adequacy

Firstly, it was observed that 20 of the 22 items correlated at least .3 with at least one other item, suggesting reasonable factorability (see Appendix III Correlations Matrix). Secondly, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .78, above the commonly recommended value of .6, and Bartlett’s test of sphericity was significant ($\chi^2 (231) = 276.13, p < .001$). The diagonals of the anti-image correlation matrix were also all over .4 (see appendix V Anti-image)

Table 5. Sampling adequacy

Kmo and Bartlett’s test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.788
Bartlett's Test of Sphericity	Approx. Chi-Square	2761.390
	df	231
	Sig.	.000

4.4.2. Communalities

The communalities were all above .3 (see Table 7), further confirming that each item shared some common variance with other items. Given these overall indicators, factor analysis was deemed to be suitable with all 22 items. (Neill, 2008)

Table 7. Communalities

	Initial	Extraction
V ₁	1.000	.719
V ₂	1.000	.647
V ₃	1.000	.711
V ₄	1.000	.547
V ₅	1.000	.600
V ₆	1.000	.683
V ₇	1.000	.782
V ₈	1.000	.732
V ₉	1.000	.787
V ₁₀	1.000	.655
V ₁₁	1.000	.627
V ₁₂	1.000	.717
V ₁₃	1.000	.683
V ₁₄	1.000	.688
V ₁₅	1.000	.714
V ₁₆	1.000	.747
V ₁₇	1.000	.741
V ₁₈	1.000	.825
V ₁₉	1.000	.796
V ₂₀	1.000	.606

V ₂₁	1.000	.741
V ₂₂	1.000	.744

4.4.3. Principal components

The factor analysis was used because the procedure transforms the possible correlated variables into a smaller number of uncorrelated variables or components. The eigenvalues indicated that the first three factors explained 25%, 14%, and 8% of the variance respectively. The fourth, fifth and sixth factors had eigenvalues just over one, in contrast, the seventh factor did not have an eigenvalue above one. Each factor explained 7%, 6%, 4% and of the variance respectively (see table 8).

Table 8 Total variance

Components	Initial Eigenvalues			Rotation Sums of Squared Loadings ^a
	Total	Variance %	Cumulative %	Total
1	5.633	25.607	25.607	4.601
2	3.217	14.623	40.230	3.210
3	1.976	8.982	49.212	2.245
4	1.675	7.612	56.824	2.577

5	1.393	4.966	61.790	2.125
6	1.293	4.515	66.305	1.526
7	1.285	4.335	70.850	1.437

Solutions for the seven factors were each examined using the Oblimin Rotation of the factor loading matrix. The Oblimin Rotation was better-suited model given that it does not have to force the results to be orthogonal and it allows the factors to correlate (Winship & Mare, 1981).

The seventh factor solution, which explained 68% of the variance, was preferred because of: (a) theoretical support of previous studies; (b) the insufficient number of primary loadings and difficulty of interpreting the fourth factor and subsequent factors, and (c) the ‘leveling off’ of eigenvalues on the scree plot after seven factors.

Component 1 has factor loadings between the .66 and .89 and its composed principally by five economic recognition and rewards items (see table 9). Component 2, it’s the cohesion of the four purposive motivation items with values above .62 Component 3, it’s made of two leisure motivation items with factor loading of .83 and .71 With double

number of items the component 4 is predominantly external motivation items with factor loadings among .56 and .82 Finally, the component 5, 6, and 7 are composed by managerial recognition, leisure and egoistic motivation respectively. These components have the lowest factor loadings from .41 to .76

Table 9. Pattern Matrix

	Component						
	1	2	3	4	5	6	7
V ₁₉	.894						
V ₁₈	.886						
V ₁₆	.728						
V ₂₀	.685						
V ₁₇	.667						
V ₁₅		.498					
V ₇		.849					
V ₉		.774					
V ₈		.654					
V ₁₀		.622					
V ₁			.839				
V ₂			.713				
V ₁₃				.829			
V ₁₂				.561			
V ₁₄				.561			
V ₁₁				.546			
V ₂₂					.766		
V ₂₁					.618		
V ₃						-.733	
V ₆						.661	
V ₅							.695
V ₄							.419

Component 1 has factor loadings between the .66 and .89 and its composed principally by five economic recognition and rewards items (see table 9). Component 2, it is the cohesion of the four purposive motivation items with values above .62 Component 3, it is made of two leisure motivation items with a factor loading of .83 and .71 With a double number of items the component 4 is predominantly external motivation items with factor loadings among .56 and .82 Finally, the component 5, 6, and 7 are composed by managerial recognition, leisure, and egoistic motivation respectively. These components have the lower factor loadings from .41 to .76

4.5. Multiple linear Regression

Multiple linear regression was calculated to predict volunteering intention based on economic motivation, purposive motivation, leisure motivation, external influence, managerial recognition, and egoistic motivation represented by X_1 1 to X_7 respectively (see table 10).

Table 10. Coefficients

Model 1	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error				Beta	Lower Bound
(Constant)	0.031	0.212		0.144	.000	-0.387	0.448
X ₁	1.035	0.040	0.858	26.178	0.000	0.958	1.113
X ₂	0.030	0.038	0.030	0.790	0.005	-0.045	0.105
X ₃	0.068	0.231	0.018	0.295	0.000	-0.387	0.523
X ₄	0.029	0.035	0.029	0.841	0.013	-0.039	0.097
X ₅	0.100	0.041	0.084	2.444	0.015	0.019	0.180
X ₆	-0.120	0.037	-0.124	-3.257	0.001	-0.192	-0.047
X ₇	-0.022	0.040	-0.021	-0.541	0.589	-0.102	0.058

A significant regression equation was found ($F(7, 268) = 122.009, p < .000$), with an R^2 of .761. (see table 11 and 12) Participants predicted volunteering intention can be given by,

$$\hat{Y} = 0.031 + 1.035(X_1) + 0.030(X_2) + 0.068(X_3) + 0.029(X_4) + 0.100(X_5) - 0.120(X_6) - 0.022(X_7)$$

; where independent variables are coded as 1= highly disagree, 2= disagree, 3= neutral, 4= agree, and 5= highly agree.

Participants volunteering intention increased 1.035 (X₁), 0.030 (X₂), 0.068 (X₃), 0.029 (X₄), and 0.100 (X₅) points for each point in

the five-point Likert-type scale of each variable respectively. In contrast, volunteering intention decreased by 0.120 for (X6) and 0.022 for (X7) points for each point in the five-point Likert-type scale of each of the two variables (see tables 10 and 11).

Table 11. Model Summary

Model 1	
R	.872a
R Square	0.761
Adjusted R Square	0.755
Std. Error of the Estimate	0.39500
Change Statistics	
R Square Change	0.761
F Chan	122.009
df1	7
df2	268
Sig. F Change	.000

Table 12. ANOVA Test

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.257	7	19.037	122.009	.000b
	Residual	41.815	268	0.156		
	Total	175.072	275			

Chapter 5. Discussion

5.1 Summary of findings

H1 Leisure motivation has a positive effect on Volunteering intention.

The hypothesis number one showed to be supported by the analysis. The exploratory factor analysis grouped two o items of this dimension into component number 3. "If I were to volunteer in mega sports events, I would like to be absorbed by what I do," and "If I were to volunteer in mega sports events, I would like to provide me the excitement I crave". The multiple regression analysis supported that these two observable variables are significant in predicting volunteering intention.

H2 Egoistic Motivation has a positive effect on Volunteering intention.

The results did not support hypothesis number two. During the exploratory factor analysis, two items of this dimension were group into component number seven. "If I were to volunteer in mega sport events, I would like to improve my skills and abilities through my volunteer assignments," and "I would volunteer to challenge my abilities." The multiple regression expressed a negative correlation between component 7 and the volunteering intention. This proved that

is not statistically significant to assume that these observable variables explain somehow the latent variable. However, based on the data, it can be assumed that whenever the individual's intention to "challenge their abilities" or "to improve their skills" increases the volunteering intention decreases.

H3 *Purposive motivation has a positive effect on Volunteering intention*

The hypothesis number three was supported. The analysis proved that the all the four items grouped in component number 4 belong to the purposive motivation dimension. ("I would volunteer because I am genuinely concerned about this sport event and its participants", "I would volunteer because I adhere to the organizational committee's special goals", "I would volunteer because I want to give something back to the community", and "I would like to volunteer because this sports event promotes our national values, image, or heritage")

This shows a significant correlation between these variables that provoke their cohesion in one component. The multiple regression expressed that purposive motivation explains a significant portion of the volunteering intention.

H4 External influence has a positive effect on Volunteering intention.

It was proved that external influence has a positive effect on volunteering intention. Items “I would volunteer if I were asked by others to volunteer in these games,” and “I would volunteer to be appreciated by my significant other/family/community members” are part of external influence dimension and they are grouped on component number 4 by the exploratory factor analysis. Therefore, it is possible to assume that these two variables have significant correlations that allow them to be merged into component 4. The regression analysis showed that component 4 (External influence) explains a significant part of the dependable variable (intention to volunteer).

H5 Psychological recognition and rewards have a positive on effect Volunteering intention.

The relationship between Psychological recognition/rewards and volunteering intention were not statistically significant to assume that this observable variable by itself explains a significant portion of the latent variable. Psychological recognition and rewards items were not grouped into a single component during the exploratory factor analysis. Based on the data, these items were more correlated to dimensions like economic recognition/rewards and external influence.

So, it is possible to assume that psychological recognition/rewards' items were not significant in measuring the individuals' psychological recognition perception.

H6 Economic recognition and rewards have a positive effect on Volunteering intention.

Economical recognition/rewards proved to have a significant influence on volunteering intention. The exploratory factor analysis group all the items of this dimension into component 1 showing significant correlations among these variables. Moreover, the regression analysis showed that factor 1 has a significant influence in volunteering intention.

H7 Managerial recognition and rewards have a positive effect on Volunteering intention.

The analysis' results supported this hypothesis. Firstly, the two managerial recognition/rewards' items were group into component 5 by the factor analysis show that the items were highly correlated. Secondly, the multiple regression analysis showed that component 1 significantly influences volunteering intention.

5.1 Implications

In this study, we have sought to respond to several research questions related to the individuals' intention to volunteer. The study being of an exploratory and interpretive nature provides several concrete opportunities for future research whether in concepts validation, theory development, or others.

Firstly, the study generated a number of new components that can be useful for the reaction of a more robust theory of the prediction on people's motivation to volunteer at mega sport events. More research will be necessary to refine the result of this study.

Secondly, the study offers the opportunity to modify and validate the concepts and constructs emerged from the analysis. For example, the psychological recognition and rewards dimension will need more research to determine and develop more accurate items that can measure this dimension effectively. The egoistic dimension can be dismissed or restructured in future studies because it was not significant in influencing volunteering intentions. In contrast, other components like; economic recognition/rewards, and purposive motivation were highly significant on people's volunteering intention.

Thirdly, the results of the study can be used by researcher and mega-sport events' organizers to target and hook potential volunteers by appealing to their motivational needs.

5.2 Limitations

First, the multi factor questionnaire had limitations. The instrument used in the research was based on an instrument used in previous studies and it was not standardized yet. Consequently, the exploratory factor analysis showed that some Items were not significantly correlated to their dimensions, therefore, they were not relevant for the study.

Second, the lack of accurate variables for the prediction of volunteering intention reduced that probabilities of more significant results.

Third, the study was conducted with a sample highly educated and with a very low income. On the one hand, according to the demographics of the research, graduate individuals comprised a majority (45.7%) of the sample followed by individuals holding a bachelor's degree (34.8%). On the other hand, concerning income, 41.3% had a monthly income below 1,000,000 Korean Won, whereas 31.2% had a monthly income between 1,000,000 and 2,000,000 Korean Won. These

results made this study particularly different compared with previous studies like Ahn (2018) where its sample was less educated and with a better income. As a result, the level of education and the income of the participants may affected the results of the study.

Furth, the investigator used SPSS for the first time and all the investigation was conducted in this program. As a result, more advanced, complex, and sophisticated studies could have been done with the used of different statistical software and more experience.

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Appendixes

Appendix I

Groups	
Gender	Male
	Female
Age	17–19
	20–29
	30–39
	40–49
	50–59
	60 and over

Marital status	Single
	Married
	Other
Education level	High school diploma
	Some college
	Bachelor's degree
	Graduate degree
Occupation	Company worker
	Housewife
	Professional worker
	Own business
	Tourism/services
	Student
	Government employee
	Other
Monthly income	Under 2,000,000 (Korean) Won
	2,000,000–2,999,999
	3,000,000–3,999,999
	4,000,000–4,999,999
	5,000,000 and over

Appendix II Questionnaire develop by Ahn 2018

Volunteer motivation

Leisure motivation

I want to experience the feeling of being absorbed by what I do.

I want to provide me the excitement I crave.

Egoistic motivation

I want to improve my skills and abilities through my volunteer assignments

I want to challenge my abilities.

Volunteering makes me feel better about myself/helps my self-esteem.

Purposive motivation

I want to volunteer because I am genuinely concerned about this sport event and the participants of this sport event

I adhere to the organizational committee's special goals.

I want to put something back into the community.

I want to volunteer because this sport event promotes our national values, image, or heritage.

External influence

Because I am asked by others to volunteer in these games.

I want to be appreciated by my significant other/family/community members.

My friends/family/significant other are also volunteering at these events

Recognition and rewards

Psychological recognition and rewards

The organization expresses gratitude (Thanks letter, email, etc).

The organization gives praises and encouragement of volunteers' effort

Economic recognition and rewards

The organization offers accommodation during the volunteering work

The organization offers tangible products (e.g., uniforms, discount coupons).

The organization offers transportation fees.

The organization offers meal coupons.

Managerial recognition and rewards

The organization manages volunteering schedules by using volunteering system

The organization provides volunteer certificate for school admission or employment

The instrument of this research it is based on the model develop by Ahn (2018)

Appendix III: Correlations matrix

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Leisure motivation 1												
Leisure motivation 2	0.434											
Leisure motivation 3	0.266	0.265										
Purposive motivation 10	0.323	0.319	0.106									
Purposive motivation 7	0.190	0.201	0.093	0.539								
Egoistic motivation 6	0.241	0.103	-0.080	0.303	0.314							
Egoistic motivation 5	0.154	0.115	0.066	0.325	0.265	0.244						
Purposive motivation 8	0.086	-0.029	0.028	0.371	0.399	0.236	0.459					
Purposive motivation 9	0.066	-0.037	-0.035	0.452	0.462	0.310	0.275	0.641				
Egoistic motivation 4	0.139	0.183	0.172	0.346	0.260	0.208	0.243	0.459	0.231			
External influence 11	0.326	0.243	0.250	0.156	0.209	0.111	0.096	0.176	0.284	0.168		
External influence 12	0.011	0.126	-0.067	0.080	0.215	0.203	0.274	0.242	0.230	0.237	0.231	
External influence 13	0.065	0.188	-0.006	-0.026	0.054	-0.003	0.021	0.185	0.215	0.122	0.284	0.402
Psychological recognition 14	-0.014	-0.043	0.037	0.136	0.107	0.118	0.139	0.350	0.226	0.315	0.230	0.301
Psychological recognition 15	-0.025	0.146	0.054	0.097	0.012	0.173	0.147	0.237	0.303	0.357	0.215	0.268
Economic recognition 16	0.154	0.339	0.350	0.261	-0.067	0.026	0.084	-0.014	0.223	0.271	0.226	-0.078
Economic recognition 17	0.104	0.408	0.313	0.120	-0.035	-0.040	0.026	-0.065	0.258	0.124	0.303	0.025
Economic recognition 18	0.003	0.273	0.207	0.120	0.075	0.011	-0.005	0.015	0.109	0.129	0.223	-0.078
Economic recognition 19	0.047	0.283	0.147	0.122	0.031	0.040	-0.023	0.082	0.301	0.251	0.258	-0.050
Managerial recognition 20	-0.044	0.100	0.081	0.152	0.142	0.185	0.122	0.161	0.183	0.304	0.109	0.070
Managerial recognition 21	-0.014	0.217	0.192	0.175	0.099	0.055	0.012	-0.018	-0.022	0.181	0.301	0.177
Managerial recognition 22	0.066	0.289	0.260	0.105	0.071	-0.050	-0.003	-0.033	-0.095	0.094	0.183	0.206

	V13	V14	V15	V16	V17	V18	V19	V20	V21
Psychological recognition 14	0.384								
Psychological recognition 15	0.261	0.660							
Economic recognition 16	0.183	0.344	0.408						
Economic recognition 17	0.298	0.264	0.396	0.655					
Economic recognition 18	0.116	0.233	0.441	0.623	0.701				
Economic recognition 19	0.108	0.248	0.394	0.640	0.639	0.806			
Managerial recognition 20	0.087	0.352	0.459	0.392	0.374	0.568	0.522		
Managerial recognition 21	0.168	0.288	0.377	0.500	0.548	0.558	0.489	0.399	
Managerial recognition 22	0.230	0.236	0.321	0.317	0.446	0.352	0.264	0.262	0.609

Sig (1-tailed)

Leisure motivatio 1		0.000	0.000	0.000	0.001	0.000	0.005	0.077	0.138	0.010	0.000	0.431
Leisure motivation 2	0.000		0.000	0.000	0.000	0.043	0.028	0.313	0.272	0.001	0.000	0.018
Leisure motivation 3	0.000	0.000		0.040	0.061	0.094	0.136	0.324	0.283	0.002	0.000	0.135
Purposive motivatio 10	0.000	0.000	0.040		0.000	0.000	0.000	0.000	0.000	0.000	0.005	0.092
Purposive motivatio 7	0.001	0.000	0.061	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Egoistic motivation 6	0.000	0.043	0.094	0.000	0.000		0.000	0.000	0.000	0.000	0.033	0.000
Egoistic motivation 5	0.005	0.028	0.136	0.000	0.000	0.000		0.000	0.000	0.000	0.056	0.000
Purposive motivatio 8	0.077	0.313	0.324	0.000	0.000	0.000	0.000		0.000	0.000	0.002	0.000
Purposive motivatio 9	0.138	0.272	0.283	0.000	0.000	0.000	0.000	0.000		0.000	0.005	0.033
Egoistic motivation 4	0.010	0.001	0.002	0.000	0.000	0.000	0.000	0.000	0.000		0.003	0.000
External influence 11	0.000	0.000	0.000	0.005	0.000	0.033	0.056	0.002	0.005	0.003		0.000
External influence 12	0.431	0.018	0.135	0.092	0.000	0.000	0.000	0.000	0.033	0.000	0.000	
External influence 13	0.140	0.001	0.459	0.334	0.186	0.480	0.366	0.001	0.295	0.021	0.000	0.000
Psychological recognition 14	0.406	0.237	0.270	0.012	0.038	0.025	0.011	0.000	0.000	0.000	0.000	0.000
Psychological recognition 15	0.341	0.008	0.185	0.054	0.419	0.002	0.007	0.000	0.000	0.000	0.000	0.000
Economic recognition 16	0.005	0.000	0.000	0.000	0.134	0.333	0.081	0.409	0.061	0.000	0.000	0.098
Economic recognition 17	0.042	0.000	0.000	0.023	0.284	0.252	0.331	0.139	0.225	0.019	0.000	0.340
Economic recognition 18	0.479	0.000	0.000	0.023	0.106	0.425	0.464	0.399	0.058	0.016	0.000	0.098
Economic recognition 19	0.219	0.000	0.007	0.022	0.303	0.255	0.349	0.087	0.003	0.000	0.000	0.205
Managerial recognition 20	0.234	0.049	0.090	0.006	0.009	0.001	0.021	0.004	0.000	0.000	0.035	0.123
Managerial recognition 21	0.410	0.000	0.001	0.002	0.051	0.180	0.421	0.381	0.356	0.001	0.000	0.002
Managerial recognition 22	0.136	0.000	0.000	0.040	0.121	0.204	0.478	0.295	0.058	0.059	0.001	0.000

Leisure motivatio 1	0.406	0.341	0.005	0.042	0.479	0.219	0.234	0.410	0.136
Leisure motivation 2	0.237	0.008	0.000	0.000	0.000	0.000	0.049	0.000	0.000
Leisure motivation 3	0.270	0.185	0.000	0.000	0.000	0.007	0.090	0.001	0.000
Purposive motivation 10	0.012	0.054	0.000	0.023	0.023	0.022	0.006	0.002	0.040
Purposive motivatio 7	0.038	0.419	0.134	0.284	0.106	0.303	0.009	0.051	0.121
Egoistic motivation 6	0.025	0.002	0.333	0.252	0.425	0.255	0.001	0.180	0.204
Egoistic motivation 5	0.011	0.007	0.081	0.331	0.464	0.349	0.021	0.421	0.478
Purposive motivatio 8	0.000	0.000	0.409	0.139	0.399	0.087	0.004	0.381	0.295
Purposive motivatio 9	0.000	0.000	0.061	0.225	0.058	0.003	0.000	0.356	0.058
Egoistic motivation 4	0.000	0.000	0.000	0.019	0.016	0.000	0.000	0.001	0.059
External influence 11	0.000	0.000	0.000	0.000	0.000	0.000	0.035	0.000	0.001
External influence 12	0.000	0.000	0.098	0.340	0.098	0.205	0.123	0.002	0.000
External influence 13	0.000	0.000	0.001	0.000	0.027	0.036	0.074	0.003	0.000
Psychological recognition 14		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Psychological recognition 15	0.000		0.000	0.000	0.000	0.000	0.000	0.000	0.000
Economic recognition 16	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000
Economic recognition 17	0.000	0.000	0.000		0.000	0.000	0.000	0.000	0.000
Economic recognition 18	0.000	0.000	0.000	0.000		0.000	0.000	0.000	0.000
Economic recognition 19	0.000	0.000	0.000	0.000	0.000		0.000	0.000	0.000
Managerial recognition 20	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
Managerial recognition 21	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.000
Managerial recognition 22	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

Appendix IV: Anti-image Covariance

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Leisure_motivatio_1	0.617	-0.170	-0.091	-0.086	0.022	-0.153	-0.032	0.005	0.033	-0.019	-0.180	0.069
Leisure motivation 2	-0.170	0.527	-0.021	-0.089	-0.078	0.006	-0.014	0.040	0.067	-0.055	0.004	-0.057
Leisure_motivation_3	-0.091	-0.021	0.663	0.085	-0.087	0.079	0.014	-0.065	0.058	-0.097	-0.113	0.033
Purposive motivation 10	-0.086	-0.089	0.085	0.464	-0.175	-0.028	-0.034	-0.057	-0.076	-0.022	0.033	0.020
Purposive_motivatio_7	0.022	-0.078	-0.087	-0.175	0.487	-0.077	-0.026	-0.004	-0.106	0.006	-0.045	-0.043
Egoistic motivation 6	-0.153	0.006	0.079	-0.028	-0.077	0.728	-0.041	0.010	-0.056	0.023	0.015	-0.080
Egoistic motivation 5	-0.032	-0.014	0.014	-0.034	-0.026	-0.041	0.649	-0.198	0.041	0.026	0.013	-0.151
Purposive_motivatio_8	0.005	0.040	-0.065	-0.057	-0.004	0.010	-0.198	0.399	-0.151	-0.081	-0.012	0.022
Purposive_motivatio_9	0.033	0.067	0.058	-0.076	-0.106	-0.056	0.041	-0.151	0.401	-0.116	-0.050	0.030
Egoistic motivation 4	-0.019	-0.055	-0.097	-0.022	0.006	0.023	0.026	-0.081	-0.116	0.551	0.044	-0.079
External influence 11	-0.180	0.004	-0.113	0.033	-0.045	0.015	0.013	-0.012	-0.050	0.044	0.666	-0.074
External_influence_12	0.069	-0.057	0.033	0.020	-0.043	-0.080	-0.151	0.022	0.030	-0.079	-0.074	0.579
External_influence_13	-0.014	-0.071	0.122	0.093	-0.031	0.038	0.110	-0.109	0.033	0.008	-0.086	-0.179
Psychological_recognition_14	-0.025	0.126	0.012	-0.004	-0.046	0.037	0.042	-0.064	-0.011	0.025	-0.015	-0.045

Psychological_recognition_15	0.040	-0.072	0.039	0.034	0.087	-0.073	-0.020	0.000	-0.032	-0.074	-0.021	-0.049
Economic_recognition_16	-0.010	-0.030	-0.127	-0.108	0.117	-0.010	-0.080	0.087	-0.031	-0.047	0.029	0.082
Economic_recognition_17	0.021	-0.068	-0.065	-0.023	0.043	0.012	-0.046	0.037	0.014	0.018	-0.037	0.019
Economic_recognition_18	0.014	0.007	-0.016	0.016	-0.062	0.026	0.003	-0.006	-0.008	0.076	0.015	0.043
Economic_recognition_19	-0.008	-0.039	0.081	0.048	0.014	0.002	0.068	-0.047	-0.020	-0.052	-0.046	-0.014
Managerial_recognition_20	0.031	0.034	0.002	0.004	-0.025	-0.089	-0.052	0.023	-0.001	-0.084	0.047	0.017
Managerial_recognition_21	0.073	0.055	0.039	-0.045	-0.032	-0.045	0.026	0.012	0.067	-0.046	-0.108	-0.063
Managerial_recognition_22	-0.034	-0.062	-0.094	-0.011	-0.013	0.075	0.033	-0.005	0.017	0.036	0.068	-0.051

Appendix V: Anti-image Correlation

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12
Leisure_motivatio_1	.668a	-0.298	-0.142	-0.162	0.040	-0.228	-0.050	0.011	0.066	-0.033	-0.281	0.115
Leisure motivation 2	-0.298	.751a	-0.036	-0.180	-0.155	0.009	-0.025	0.088	0.145	-0.101	0.008	-0.104
Leisure_motivation_3	-0.142	-0.036	.639a	0.153	-0.154	0.114	0.022	-0.127	0.112	-0.160	-0.170	0.054
Purposive motivation 10	-0.162	-0.180	0.153	.763a	-0.369	-0.049	-0.062	-0.133	-0.176	-0.044	0.058	0.038
Purposive_motivatio_7	0.040	-0.155	-0.154	-0.369	.705a	-0.130	-0.046	-0.008	-0.240	0.011	-0.078	-0.081
Egoistic motivation 6	-0.228	0.009	0.114	-0.049	-0.130	.778a	-0.060	0.019	-0.104	0.036	0.021	-0.123
Egoistic motivation 5	-0.050	-0.025	0.022	-0.062	-0.046	-0.060	.685a	-0.388	0.080	0.043	0.020	-0.246
Purposive_motivatio_8	0.011	0.088	-0.127	-0.133	-0.008	0.019	-0.388	.740a	-0.378	-0.173	-0.023	0.046
Purposive_motivatio_9	0.066	0.145	0.112	-0.176	-0.240	-0.104	0.080	-0.378	.789a	-0.247	-0.098	0.062
Egoistic motivation 4	-0.033	-0.101	-0.160	-0.044	0.011	0.036	0.043	-0.173	-0.247	.827a	0.073	-0.139
External_influence_11	-0.281	0.008	-0.170	0.058	-0.078	0.021	0.020	-0.023	-0.098	0.073	.801a	-0.119
External_influence_12	0.115	-0.104	0.054	0.038	-0.081	-0.123	-0.246	0.046	0.062	-0.139	-0.119	.697a
External_influence_13	-0.024	-0.127	0.194	0.178	-0.058	0.058	0.178	-0.226	0.068	0.014	-0.138	-0.306
Psychological_recognition_14	-0.050	0.273	0.023	-0.008	-0.104	0.068	0.082	-0.158	-0.028	0.052	-0.029	-0.092

Psychological_recognition_15	0.081	-0.158	0.077	0.080	0.200	-0.137	-0.040	0.000	-0.080	-0.159	-0.041	-0.103
Economic_recognition_16	-0.023	-0.074	-0.278	-0.284	0.299	-0.020	-0.178	0.246	-0.087	-0.113	0.064	0.191
Economic_recognition_17	0.046	-0.165	-0.140	-0.060	0.108	0.025	-0.100	0.103	0.040	0.042	-0.080	0.044
Economic_recognition_18	0.037	0.021	-0.043	0.051	-0.191	0.065	0.008	-0.021	-0.026	0.219	0.040	0.119
Economic_recognition_19	-0.020	-0.105	0.193	0.137	0.040	0.004	0.163	-0.145	-0.060	-0.135	-0.110	-0.035
Managerial_recognition_20	0.053	0.064	0.003	0.009	-0.048	-0.141	-0.087	0.049	-0.002	-0.153	0.078	0.030
Managerial_recognition_21	0.146	0.119	0.076	-0.105	-0.072	-0.083	0.052	0.030	0.167	-0.098	-0.209	-0.131
Managerial_recognition_22	-0.061	-0.117	-0.160	-0.021	-0.025	0.121	0.057	-0.010	0.037	0.068	0.114	-0.092