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FAIRNESS PERCEPTIONS: JUSTIFICATIONS ON OUICS

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Abstract

The research field of online user innovation communities (OUICs) has picked upped interest in the recent years and has since been growing. This study contributes to the research field of OUICs by combining it with justice and justification theories. First, renown theories of justice (distributive, procedural, interpersonal and informational) and justification (orders of worth or common worlds) were selected. Second, for this study a sample of ideas has been taken from the extensive OUIC of Starbucks. This dataset of ideas, containing expressions of perceived fairness (justice) and accompanied by their reasoning (justification), has been coded and validated. Finally, evidence is found that fully and partially supports theorized relationships between perceived fairness and accompanied reasoning. Overall, this study contributes to managing information overload, by providing a categorization of ideas based on the justice theory, and a better understanding of perceived and expressed fairness by OUIC users, by categorizing justifications and suggesting relationships between expressed perceived fairness and significant justifications.

Keywords: OUIC; justice; justification

INTRODUCTION

"A wealth of information creates a poverty of attention…"

— Simon (1971: 40-41)

In today's fast pacing world with multiple popular social media platforms, each having hundreds of millions of active users (Statista, 2017), the sheer number of content items created can be overwhelming. This study focuses on the phenomenon known as online user innovation communities (OUICs), co-development through user's ideas; perceived user's justice; and what reasoning or justification expressed in user's ideas. OUICs are online user innovation communities which are based on social media technology with the purpose of achieving open innovation through crowdsourcing ideas about new products services and processes (Di Gangi and Wasko, 2009; Di Gangi, Wasko & Hooker., 2010; Dong and Wu, 2015). In OUICs, users have the ability to post new ideas about innovation. In addition, users also have the ability to comment and vote on new ideas. Which highlights the second area of interest of this study.

In pursuing the benefits of open innovation, it is suggested that high levels of openness imply a larger amount of external sources tapped and a higher heterogeneity of knowledge (Salge, Farchi, Barret & Dopson, 2013). In this context, high investments in information technology, such as OUICs, may result in a massive amount of user's ideas and comments which contribute to information overload, a phenomenon that has been negatively related to innovation (Hemp, 2009; Paruchuri, 2010). Paruchuri (2010) argues that when information flows increase beyond a certain point they cannot be adequately processed. This due to bounded rationality, the limited capability of individuals to gather and compute information (Schulze, Indulska, Geiger & Korthaus, 2012; Simon, 1972). Information overload may also lead to insufficient attention to any particular idea (Zhou & Li, 2012) and

to a reduction in learning opportunities. In addressing the issue of limited attention of the firm (Piezunka & Dahlander, 2015) and in relation to ideas to be reviewed by the firm, this study focuses on the perception of fairness expressed by the users of OUICs and which justification is best served to elaborate the fairness perceived. Additionally, contributing by making the act of categorizing ideas based of fairness more manageable.

The philosophical interest of justice or fairness extends back at least as far as Plato and Socrates (Ryan, 1993). However, only since 1975 researchers began integrating fairness concerns with outcomes relevant to organizations. (Colquitt, Conlon, Wesson, Porter & NG, 2001). Thus, as a topic of interest extending many years back, and in the fashion of researchers since 1975, this study extends the justice theory to relative new technologies of the OUICs. As a social media technology, OUICs are communities which are able to host many users which are given the ability to complain, express ideas, express gratitude and such via a commenting feature. This joining of individuals and opinions sparks the interest in extending the justice theory to OUICs.

A tool in improving the expression of fairness in user ideas is the provision of clear reasoning or justification, which provides a better view on how the user has experienced fairness during a critical moment. This study applies the widely influential work of Boltanski and Thévenot (Giulianotti & Langseth, 2016) in providing a guide for categorizing the "justification logics" expressed on OUICs. Boltanski and Thévenot (1999) introduce the orders of worth, which are six worlds individuals draw upon when forming their justification.

Combining justice, justification and OUICs forms the interest of this study. A literature review resulted in a very narrow selection in which the "justice constructs" of Colquit" et al. (2001) and the six common world or "orders of worth" of Boltanski and Thevernot (1999) were incorporated (e.g. Pecherskaya, 2013; Ramirez, 2013; Regan & Haueisen Rohrer, 2012). In addition, the exploration of OUICs in general has gained more

attention since 2010 (e.g. Di Gangi, Wasko & Hooker, 2010) and still only has but a few renown studies (e.g. Dong, 2015; Hau & Kim, 2011). To the best of my knowledge, ideas posted on OUICs concerning the perception of fairness combined with a categorization of reasoning is an area of interest which is fairly new and not yet well explored by researchers. Thus, remains an area of interest still to be thoroughly explored. So, it follows that in this study*, the connection between (perceived) justice and (its) justification, on OUICs will be explored based on the OUIC database provided by the Starbucks Coffee Company which can be found online via MyStarbucksIdea.force.com.*

To address the aforementioned unexplored area, this study theorizes a relationship for each "justice construct" combined with a justification in the OUIC context and empirically examines their connection. Each examined relationship addresses a different justice construct including the most appropriate "justification logic" according to literature. This resulted in two relationships which were found to be significant, except for the related correlation. These are "distributive justice" and its "money, competition" justification; and "informational justice" and its "efficiency, effectiveness" justification. The former has a predicted positive correlation and the latter has a unpredicted negative correlation. Additionally, results only provided full support for one theorized relationship. Which is, "interpersonal justice" and its "money, competition" justification with a negative correlation. Suggesting that reasons containing financial benefit arguments negatively supports the perceived interpersonal (un)fairness expressed by the users.

Lastly, the main contributions are three-fold. First, this study contributes to the literature concerning information overload (e.g. Hemp, 2009; Paruchuri, 2010; Piezunka & Dahlander, 2015; Schulze, Indulska, Geiger & Korthaus, 2012; Simon, 1972; Zhou & Li, 2012) by setting out a new categorization which can benefit firms to prioritize certain ideas posted by on their OUICs. Additionally, it provides a better view on how the users have

experienced fairness during critical moments. Second, certain "justification logics" have been significantly connected to a number of "justice constructs". Which suggests those "justification logics", that are related to a certain justice construct, have more explanatory power than the others concerning that type of (un)fairness. Thus, providing a guide for OUIC users to follow in picking the most appropriate justification logic for, better, explaining and giving weight the type of unfairness experienced by the user. Third, this study adds to the OUIC, justice and justification literature. The "justice constructs" and "justification logics" have been connected in earlier studies, however only in a narrow selection (e.g. Pecherskaya, 2013; Ramirez, 2013; Regan & Haueisen Rohrer, 2012). Therefore, this study contributes to the existing literature by extending it with views provided by OUIC data analysis. In addition, this study extends the current OUIC literature, which is only recently becoming more popular (e.g. Amann, Zanini & Rubinelli, 2016; Di Gangi et al., 2010; Dong & Wu, 2015; Li, Kankanhalli & Kim, 2016; Yan, Leidner & Benbya, 2016). Justice and justification theories have not been integrated into OUICs studies.

The rest of the study proceeds as follows. In the next section the theoretical background and hypotheses are presented. Followed by the methodology and empirical results. Finally, concluding this study by discussing the theoretical and managerial implications, as well as the limitations and directions for future research.

THEORY AND HYPOTHESES

Open innovation, crowdsourcing and OUICs

The general idea of open innovation is the sourcing of valuable ideas from within and outside of the firm and go to market (Chesbrough, 2006). By involving customers in the innovation process, firms may reap benefits from lower development costs and enhanced customer acceptance of the innovations (Li, Kankanhalli & Kim, 2016; Von Hippel, 2005; Xu, Ribeiro-Soriano & Gonzalez-Garcia, 2015). The way firms apply this concept varies. In this study, the focus lies on crowdsourcing with special attention for OUICs. Crowdsourcing itself is inherent to sourcing contributions from internet users. In addition, OUICs are online platforms which enable content sharing by internet users, e.g. needs of customers (Xu, Ribeiro-Soriano & Gonzalez-Garcia, 2015), and sourcing by the firms.

OUICs are commonly suggested to be valuable for crowdsourcing by enabling firms to collect large amount of user-generated ideas (Bayus, 2013; Dong, 2015; Huang et al., 2014). OUICs are based on social technology (Web 2.0) which enables firms to engage with users directly. These electronic social environments allow people around the world to share their knowledge and expertise with each other and the firm in question. Users can comment on existing products and services and propose new ideas for innovation. These communities are often mainly customer-focused as it can be regarded as an open business model. Firms which are successful in creating a thriving OUIC can enhance their internal R&D activities by allowing users to identify new sources of innovation at lower costs (Di Gangi et al., 2010).

Justice

Next to sharing concrete innovative ideas, users of an OUIC have the ability to express their fair and unfair experiences. E.g. two equal users were treated differently by a third-party when asking for an equal, thus same, service. The fairness experienced by users of OUICs can be divided in several categories, the "justice constructs".

According to research in the organizational sciences, justice is considered to be socially constructed. Cropanza & Greenberg (1997) define it as, an act is just if most individual perceive it to be so on the basis of empirical research. Hence, by linking objective facets of decision making to subjective perceptions of fairness, we can derive "what is fair". In organization settings, justice focuses on the antecedents and consequences of two types of subjective perceptions: (1) the fairness of outcome distributions or allocations, referred to as distributive justice (Adams, 1965; Colquitt et al., 2001; Deutsch, 1975; Homans, 1961; Leventhal, 1976) and (2) the fairness of the procedures used to determine outcome allocations or distributions, referred to as procedural justice (Colquitt et al., 2001; Leventhal, 1980; Leventhal, Karuza & Fry, 1980; Thibaut & walker, 1975). Additionally, according to Colquitt et al. (2001), the most recent advance in the justice literature introduced an additional construct of focus which is referred to as interactional justice (Bies & Moag, 1986) and based on the fairness of the interpersonal treatment individuals receive when procedures are implemented. However, interactional justice has been further specified into (3) interpersonal justice and (4) informational justice.

In a meta-analytic review of organizational justice, these four "justice constructs" were empirically tested and were to be found to be empirically distinguishable (Colquitt et al., 2001). In order to better understand how fairness interrelates with these "justice constructs" each construct will be elaborated upon.

Table I
Justice Constructs

Justice constructs	Description
(1) Distributive	The extent to which the ratio of an individual's level of input and output compares to the ratio of a comparison other.
(2) Procedural	The extent to which procedures are consistently applied across people and time, are free from bias, have a decision-making process that is based on accurate information, have mechanisms to correct incorrect decisions, conform to prevailing or personal standards of morality or ethics and take into account the opinions of groups affected by a decision.
(3) Interpersonal	The extent to which individuals are treated with respect, dignity and politeness by third-parties in carrying out procedures and determining outcomes.
(4) Informational	The extent to which individuals are provided with explanations that convey information about why procedures were used, or why outcomes were distributed in a certain way.

Justification

Users,expressing a degree of fairness following the "justice constructs" are helped by justification, which is the reasoning of the users for feeling treated un-/fair. E.g. two equal users were treated differently by a third-party when asking for an equal, thus same service. Both are in need of the service right away. One user requested the service mid-day and was served accordingly. The other user requested the service moments before closing time and was told to come back the next day. The reasoning expressed by users of OUICs can be divided in several categories, the "justification logics".

In the world of social sciences, the theory of Boltanski and Thevernot (1999) approaches the explanation of how individuals justify their actions. They identify six common worlds or "orders of worth", each of the worlds providing a different context for reasoning. This research focuses on the core message of each world and depicts them as "justification logics", see Table II.

The six worlds introduced by Boltanski and Thevernot (1999) are: inspiration, domestic, renown, civic, market and industrial. The market world (1) bases its reasoning on richness and competitiveness. It is a harmonious world when individual are opportunistic, spot and seize market opportunities, are not hampered by a personal link and are emotionally under control. The industrial world (2) bases its reasoning on how productive, operational and efficient someone/something is. It is a harmonious world when it is organized, functional, measurable and standardized. The world of inspiration (3) bases its reasoning on oddness, being wonderful and emotional. It is a harmonious world when it is filled with e.g. spirits, crazy people, artists and children which dream, imagine, rebel and thrive on live experiences. The world of renown (4) bases its reasoning on the level of being famous, recognized, successful and/or convincing. It is a harmonious world when rumors are spread, there is gossiping and cross-identification. The domestic world (5) bases its reasoning on being straightforward, faithful, have character and being distinguished. It is a harmonious world when Individuals recommend one another, give birth, breed, reproduce and present an invitation. The civic world (6) bases its reasoning on the ability to put the collective first, instead of the individual. It is a harmonious world when individuals mobilize and involve others for collective action through e.g. federations, public communities and representatives.

Table II
Justification Logics

Justification logic	Description
(1) Money, Competition	Can or should gain financial benefits
(2) Efficiency, Effectiveness	Can or should be more effective and efficient in doing things
(3) Artistic, Creative, Innovative	Can or should be more artistic, creative, or innovative
(4) Status, Recognition, Fame	Can or should gain status, recognition or fame
(5) Well-being, Family, Tradition	Can or should be happy and treated well as if he/she is a family member
(6) Environmentally Good	Can or should gain general societal or environmental (here, nature) benefits

Hypotheses Development

From a historical perspective, it is the literature of distributive justice which has received the most attention. Before 1975, the study of justice was primarily concerned with distributive justice (Colquitt et al., 2001) and was built upon the work of Adams (1965). According to him, individuals were more concerned about whether the outcomes were fair than the levels of outcomes. In linking "justification logics" with justice, it seems to be an appropriate first step to take the familiar way. Firstly, it is acknowledged that users on open innovation platforms contribute in order to gain extrinsic, financial, benefits (Frey, Lüthje & Haag, 2011). Clear examples, readily available in the database, are the multitude of ideas which point out the loss of a certain free add-on to a Starbuck beverage caused by the firm itself. Followed by the idea of re-introducing the free add-on for mostly a specific group of customers. Secondly, it is stated that distributive justice is a strong predictor of customer satisfaction (Sparks & McColl-Kennedy, 2001) which in turn relates to the perceived unfairness generated by ideas and comments relating to an inequality of distribution. In addition, it is mentioned that customers should feel they receive a fair level of tangible

outcomes, e.g. additional benefits, when they use a service, e.g. gold card membership, which is closely related to the justification logic "Money, Competition". Thirdly, Starbucks provides its users, stakeholders and such with highly practical information concerning pricing and rewards, e.g. in-store pricing and gold card membership promotions. For the simple reason that this information is widely and readily available, it is more likely for users to use this as input to justify their perceived unfairness (Franke, Keinz & Klausberger, 2013). Thus, making is easier for users to refrain themselves from the other "justice constructs" and lay their focus on the "distributive" justice construct. So, it follows:

H1: The justification logic of "Money, Competition" has a positive relationship with the "Distributive" justice construct.

First, OUICs enable firms to collect large amount of user-generated ideas and integrate the new perceived knowledge in their innovation processes. Innovation has been defined many times (Acs & Audretsch, 1988; Connoly, Routhicaux & Schneider, 1993; Damanpour, 1992; de Jong & Kemp, 2003; Fruhling & Keng, 2007; Geiger & Cashen; 2002; Hage, 1999; Palmberg, 2004; Dibrell et al., 2008). However, the two most important dimensions remain that it is to a degree novel to and useful for the beneficiary. Reviewing the sample on the degree of novelness lies not within the scope of this study. However, usefulness is. Increasing the usefulness of a product adds to the innovativeness of an idea posted by the user. Whether the user's idea is aimed at radical or incremental innovation of Starbuck's products, services and such, there should be some basic premise of the product it concerns (Norman & Verganti, 2014). Implying, that having this basic information helps the user to more efficiently propose a more useful idea.

Second, taking into account the descriptions posed in table 1 and table 2, is becomes apparent the justice construct is based on the degree in which information is provided to the user containing some sort of explanatory information. It concerns processes and distributions. From a practical viewpoint, informational justice is one of the important sources for customer to make fair shopping decisions. E.g. gold card membership offers the ability to collect points and earn free drinks. However, a user reported not being able to view the number of free drinks collected online or in the Starbucks app. Thus, providing delayed and incomplete information during the service encounter. Which is a major reason for consumer dissatisfaction (Umar, Saleem & Majoka, 2017). So, it follows:

H2: The justification logic of "Efficiency, Effectiveness" has a positive relationship with the "Informational" justice construct.

A multinational firm like Starbucks manages internal and external stakeholders, in addition to the different customer groups. In managing a wide array of different groups related to the firm, each with a different set of goals, experiences and such, it can be difficult to apply a single process to al groups. In relation to justice and justification, this issue is highlighted in a study by Ramirez (2013). It highlights the difference in procedures and processes used by small versus larger firms in the same industry and the application of quality control. Firm's reasoning for this differentiation in the application of a different set of procedures and processes is based on the "efficiency, effectiveness" justification logic. As for smaller firms, it is often not efficient to apply all processes provided by the quality control prescription. One of the sampled ideas provides an example: "I would love a reward program that would allow me to choose rewards that matter most to me. All of the gold card rewards are focused on drinks and that is not the only thing I buy at Starbucks…". It becomes clear

that the current reward program is not addressing the need of this user. It could be more effective if it was adjusted to the user. In this case, it would mean applying a custom process to each user to increase fairness. The application of a custom process has studied, with its focus on internal stakeholders. The sampled ideas in this study also cover the internal stakeholders of Starbucks. In addition, the former study suggested that providing internal stakeholders with the ability to change the rewarding process and choose their own rewards; is beneficial to the performance of the firm (Caza, McCarter & Northcraft, 2015). Thus, increasing the effectiveness and/or efficiency of the firm by providing fairness in the perception of procedures. So, it follows:

H3: The justification logic of "Efficiency, Effectiveness" has a positive relationship with the "Procedural" justice construct.

Starbucks employees deal with customers on a daily basis. In addition, Starbucks does not only offer products, like the general coffee-shops, but it offers the power of its brand (Berry, 2000). As is stated by the Starbucks founder Howard Schultz (1997) himself:

"Our competitive advantage over the big coffee brands turned out to be our people. Supermarket sales are nonverbal and impersonal, with no personal interaction. But in a Starbucks store, you encounter real people who are informed and excited about the coffee, and enthusiastic about the brand. Starbucks' success proves that a multimillion-dollar advertising program isn't a prerequisite for building a national brand nor are the deep pockets of a big corporation. You can do it one customer at a time, one store at a time, one market at a time. (P. 247)

First, people play a significant role at Starbucks. Models like the service profit chain (Loveman, 1988) incorporates these people, employees and customers. Additionally, the factors of satisfaction and loyalty are introduced. When taken together, this particular model results in a possible revenue growth and profitability as an outcome. To avoid confusion, the possible revenue growth and profitability is an outcome of the model and not considered a justification for perceived interpersonal fairness. Second, as is observed in the sampled ideas and supported by a study by Lee and Park (2010), interpersonal unfairness is expressed when there is a failure of firm to act fairly on ideas posted on its OUIC. E.g. as a firm, deleting ideas without making any attempt to notify users of this action. This would make it fairly probable that an effect would be apparent when testing the database. Third, when concerning customer service and in respect to the "distributive" and "procedural" justice constructs, the expression of the "interpersonal" justice construct and its reasoning is not aiming for a monetary compensation (Park, Lehto & Park, 2008). Implying that referring to a reasoning based on financial benefits is less likely. Last, Colquit et al. (2001) suggest the "interpersonal" justice construct acts primarily to alter reactions to decision outcomes. Thus, not relating to the outcomes itself which is more in line with the "distributive" justice construct. Implying that interpersonal unfairness perception can be negated by showing one's sensitivity to the unfavorable outcome. So, it follows:

H4: The justification logic of "Money, Competition" has a negative relationship with the "Interpersonal" justice construct.

METHODOLOGY

The dataset used in this study is a database composed of a random sample drawn from the OUIC of Starbucks, MyStarbucksIdea (MyStarbucksIdea.force.com). Dependent and independent variables used in this study were not part of the original data source. These variables were added through the use of a process of thorough coding. The random sample has been validated through interrater reliability. In the evaluation of interrater reliability consistency of ratings is important (Gisev, Bell & Chen, 2013). Using a large sample of over 6000 ideas divided over a total of four academic researchers, an ICC2 = 0.76 reliability of a fixed set of judges (Armstrong, 1981; Shrout & Fleiss, 1979) has been established. Hence, making the dataset a formidable source to draw upon.

Database

To construct the original dataset, an automated script was created to retrieve relevant information from the Starbucks OUIC. The Starbucks OUIC provides users the opportunity to post ideas, post comments, vote on ideas, view ideas in action and so on. There are three main categories of ideas: product ideas, experience ideas and involvement ideas. Each carrying another subset of categories with a total of fifteen categories. The extraction of data from the Starbucks OUIC resulted in a dataset with a wide range of data-points, e.g. idea number, title, idea, category, link to idea, username, number of comments, number of points received from votes and date posted. Furthermore, the dataset was constructed of ideas posted during the period from March 28th, 2008 to September 2nd, 2011 and contained 117,153 posts (Dong and Wu, 2015). The database used in this study adapts the original dataset (Dong, 2015) and extents it with the variables concerning the research topics of the "justice constructs" and the "justification logics". However, the dataset used as input for this study contained approximately 1500 ideas.

Before the dataset was used in this study it was cleaned, meaning ideas which did not contain any justice or justification variable were removed. This step was taken for the simple reason that these ideas did not contain any data related to the goal of this study. After purging the dataset, 1384 ideas remained. The next step was to make the database accessible for and usable by a statistics program in order to make additional analysis. As the binary logistic regression is a frequently applied procedure used to predict the probability of occurrence for some binary outcome using one or more continuous or categorical variables as predictors (Ramos, Ollero & Suárez-Llorens, 2017) and the variables used in this study are easily categorized, it was an obvious choice. Thus, the database was adjusted so that the "justice constructs" and "justification logics" were presented as binary data.

Variables

The variables introduced to the original dataset are those of the "justice constructs", as shown in table I, and the "justification logics", as shown in table II. This constitutes in the addition of ten variables to the dataset. These variables are based on the "title" and "idea" provided by the original dataset. Based on the various descriptions of the "justice constructs" and "justification logics", given in tables A and B, each sampled idea was reviewed. This resulted in the addition of none, one or multiple variables to each idea.

Thus, each sampled idea could contain a justice construct and/or a justification logic variable. Which were reviewed to be related to each other. Relatively, an injustice was perceived and was followed by a justification. Additionally, an idea could contain more than one combination of justice construct and justification logic. Also, a sampled idea could have multiple beneficiaries, e.g. a particular customer group and an internal stakeholder, each perceiving justice differently and providing a different justification. Would this occur, then

the sampled idea would be copied and provided with the variables it contained. Resulting in a more in-depth insight in each idea in the sample.

Lastly, the original dataset was also extended with variables, e.g. prevent harm, promote gain and beneficiary. In the extensive reviewing process, these variables were added to the sampled ideas, adding additional layers of information to the original dataset. These additional coded variables are not in the scope of this study, thus resulting in the lack of them in the results of this study. However, the "comments" and "votes" variables of the original dataset will be used as control variables.

In accordance to the goal of this study and the hypotheses it follows that the "justice constructs" will act as the dependent variables and the "justification logics" as independent variables. An example of a sampled idea, which is in line with the proposed distribution of variables, is: "I suggest offering free upsizing of drinks for gold members, meaning gold members pay the short price for a tall…". The user proposes an idea which suggests the implication of a discrepancy between regular Starbucks customers and gold members. Thus, in accordance with "distributive justice". In accordance with the justification logic of "money, competition, the user suggests a financial benefit, as gold members do not pay for upsizing. This example represents the goal of this study to provide insights in the relation between user's perceived and expressed justice and the justification or reasoning explaining the chosen of justice construct.

Validation

A random sample, consisting of more than 6000 ideas, was reviewed by a total of four academic researchers. Using multiple individuals to review and code ideas brings up the question of the reliability of the added variables. As Gisev, Bell & Chen (2013) mention: "In the evaluation of interrater reliability consistency of ratings is important". Thus, when coding the sampled ideas, each researcher should provide the same variables. As each researcher inherently has a different perspective on the world it is difficult to expect results without any deviation, when reviewing qualitative data. Therefore, multiple training sessions were set up. These training sessions were hosted by two professors. The aim was to increase the reliability of the sampled ideas that were to be reviewed. Multiple datasets of sampled ideas were reviewed for training purposes. Each was followed by a training session in which the coded data was reviewed, trying to create a consensus between researchers and professors. In the end, this resulted in an interrater reliability of a fixed set of judges (Armstrong, 1981; Shrout & Fleiss, 1979) ICC2 of 0.76. Which satisfies the appropriate reliability check of academic research.

Results

The results are presented in the following fashion. The table 1 and table 2 set out the independent and dependent variables clearly again. Followed by hypotheses testing, which will introduce table 3 and table 4, and is based on the correlation and regression analysis.

Table 1
Distribution of ideas in MyStarbucksIdea

	Sampled ideas	
	n	*%*
Sampled ideas		
Total	1384	100
Justice construct (Dep.Var.)	359	25.9
Justification logic (Indep.Var.)	1247	90.1
Dependent variable (Justice construct)		
Distributive	245	17.7
Procedural	35	2.5
Interpersonal	43	3.1
Informational	36	2.6
Total	359	
Independent variable (Justification logic)		
Money, Competition	319	23
Efficiency, Effectiveness	365	26.4
Artistic, Creative, Innovative	30	2.2
Status, Recognition, Fame	153	11.1
Well-being, Family, Tradition	329	23.8
Environmentally Good	51	3.7
Total	1247	

Table 1 shows the distribution of the sampled ideas. A few observations can be made. Many ideas contain some sort of justification logic. However, only 359 contain a justice construct. Suggesting, a reasoning is included in many ideas without clearly expressing the perceived justice construct. Ideas containing a justice construct are skewed to "distributive justice". This suggest many ideas express a perceived unfairness pertaining differences in

inputs and outputs. The justification logic which is least used is "Artistic, Creative, Innovative". Hence, the reasoning of the possibility of being more or less artistic, creative or innovative is least used.

In table 2 the "justice constructs" are numbered and presented as "Justice (1-4)". The "justification logics" are numbered and presented as "Reason (1-6)". The renaming of the variables result in easier to read tables later on. Thus, this has been done purely for cosmetic reasons.

Table 2
Description of variables

Variable	Description
Dependent variables	
Justice (1): Distributive	The extent to which the ratio of an individual's level of input and output compares to the ratio of a comparison other.
Justice (2): Procedural	The extent to which procedures are consistently applied across people and time, are free from bias, have a decision-making process that is based on accurate information, have mechanisms to correct incorrect decisions, conform to prevailing or personal standers of morality or ethics and consider the opinions of groups affected by a decision.
Justice (3): Interpersonal	The extent to which individuals are treated with respect, dignity and politeness by third-parties in carrying out procedures and determining outcomes.
Justice (4): Informational	The extent to which information is disseminated concerning why procedures were used in a certain way or why outcomes were distributed in a certain fashion.
Independent variables	
Reason (1): Money, Competition	Can or should gain financial benefits.
Reason (2): Efficiency, Effectiveness	Can or should be more effective and efficient in doing things.
Reason (3): Artistic, Creative, Innovative	Can or should be more artistic, creative, or innovative.
Reason (4): Status, Recognition, Fame	Can or should gain status, recognition or fame.
Reason (5): Well-being, Family, Tradition	Can or should be happy and treated well as if he/she is a family member.
Reason (6): Environmentally Good	Can or should gain general societal or environmental (here, nature) benefits.

Table 3
Descriptive statistics and correlations

	n	Mean	SD		n	Mean	SD
Dep.Var.				Indep.Var.			
Justice (1)	245	0,18	0,382	Reason (1)	319	0,23	0,421
Justice (2)	35	0,03	0,157	Reason (2)	365	0,26	0,441
Justice (3)	43	0,03	0,174	Reason (3)	30	0,02	0,146
Justice (4)	36	0,03	0,159	Reason (4)	153	0,11	0,314
				Reason (5)	329	0,24	0,426
				Reason (6)	51	0,04	0,188

	R (1)	R (2)	R (3)	R (4)	R (5)	R (6)
Justice (1)	0.020	0.006	-0.030	0.006	0.035	-0.020
Justice (2)	-0.012	0.018	-0.024	0.017	-0.007	-0.032
Justice (3)	-0.078**	-0.060*	-0.027	0.083**	0.066*	-0.035
Justice (4)	-0.068*	-0.015	-0.024	0.000	0.058*	-0.032

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

Table 3 provides the results of correlation calculation. It suggests there are significant negative correlations between justice (3) and reasons (1) and (2). In addition to significant positive correlations with reasons (4) and (5). Furthermore, it suggests there is a significant negative correlation between justice (4) and reason (1). In addition to a significant positive correlation with reason (5). Remarkably, there are only significant correlations related to justice (3) and (4).

In table 4 the regression calculation is presented, including the dummy variables "comments" and "votes". As earlier mentioned, due to categorization and cleaning the dataset the binary logistic regression (Harrell, 2015; Hosmer, Lemeshow & Sturdivant, 2013) is used. It is important to note that the addition of these dummy variables have not significantly changed the results of the regression calculation. Next to the seven significant regression results, reasons (4) and (6) show some remarkable results. These odd results can be caused by

the low number (81) observations in relation to the total number of observations (1274) of the

independent variables ("justification logics").

Table 4
Binary logistic regression (sig.) / Variables in equation including dummy variables

	Justice (1)	Justice (2)	Justice (3)	Justice (4)
Reason (1)	0.019*	0.963	0.005**	0.004**
	(0.316)	(0.699)	(0.799)	(0.798)
Reason (2)	0.035*	0.617	0.008**	0.047*
	(0.313)	(0.660)	(0.581)	(0.511)
Reason (3)	0.946	0.998	0.998	0.998
			(7253.952	
	(0.671)	(7318.712)	)	(7330.965)
Reason (4)	0.052	0.589	0.641	0.182
	(0.351)	(0.741)	(0.484)	(0.624)
Reason (5)	0.012*	0.758	0.840	0.472
	(0.314)	(0.675)	(0.444)	(0.456)
Reason (6)	0.488	0.998	0.997	0.997
			(5567.125	
	(0.469)	(5612.871)	)	(5621.184)
Comments	0.192	0.468	0.776	0.560
	(0.004)	(0.004)	(0.007)	(0.010)
Votes	0.877	0.268	0.003**	0.474
	(0.013)	(0.032)	(0.27)	(0.031)
Cox & Snell R2	0.009	0.005	0.029	0.014
R2[1]	0.008	0.004	0.028	0.012
Adj. R2[1]	0.002	-0.002	0.022	0.007
Chi-sq.	11.996	7.339	41.231	19.604

Note: n=1384. Standard errors are in parentheses.
*** Regression is significant at 0.001 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).
[1] Linear regression output

When combining the results of the correlation and regression analysis the following

suggestions present themselves. First, "distributive justice" has a significant relation with

three "justification logics": "money, competition", "efficiency, effectiveness" and "well-

being, family, tradition". However, there are no significant results concerning if the relations

are positive, negative or non-effective. Second, the results of the analysis suggest that "procedural justice" is not significantly related to any justification logic. Third, "interpersonal justice" is significantly related to the two "justification logics": "money, competition" and "efficiency, effectiveness". The correlation analysis suggests both relations are negative. Last, "informational justice" is significantly related to the two "justification logics": "money, competition" and "efficiency, effectiveness". The correlation analysis suggests both relations are negative. However, "efficiency, effectiveness" is not significantly correlated.

These initial results provide some insight; further insight will be drawn from the hypotheses testing. This study provides four hypotheses and will be highlighted sequentially. Hypothesis 1 stated: "The justification logic of "Money, Competition" has a positive relationship with the "Distributive" justice construct". As predicted, "money, competition" is significantly related to "distributive justice". In addition, the relation is suggested to be positive. However, it is not significant. Thus, *hypothesis 1 is partly supported*. Hypothesis 2 stated: "The justification logic of "Efficiency, Effectiveness" has a positive relationship with the "Informational" justice construct". As predicted, "efficiency, effectiveness" is significantly related to "informational justice". As was seen with the hypothesis 1, a non-significant correlation is suggested. It concerns a negative relationship, which was not predicted. Thus, *hypothesis 2 is partly supported*. Hypothesis 3 stated: "The justification logic of "Efficiency, Effectiveness" has a positive relationship with the "Procedural" justice construct". The results of both the correlation and regression analysis do not suggest any significant relationship. Thus, *hypothesis 3 is not supported*. Hypothesis 4 stated: "The justification logic of "Money, Competition" has a negative relationship with the "Interpersonal" justice construct". As predicted, "money, competition" is significantly related to "interpersonal justice". In addition, according to the correlation analysis the relationship is negative and significant. Thus, *hypothesis 4 is supported*.

Discussion

In this study, renown theories from justice and justification literature are drawn upon to theorize and empirically test the relation of reasoning with the perceived feeling of unfairness expressed in ideas on the OUIC of Starbucks, MyStarbucksIdea.force.com. This translates in the effect the various "justification logics" (Boltanski & Thevenot, 1999) have on the "justice constructs" (Colquitt et al., 2001) expressed by the users. To the best of my knowledge, ideas posted on OUICs concerning the perception of fairness combined with a categorization of reasoning is an area of interest which is fairly new and not yet well explored by researchers.

Main findings and contributions

By exploring the various hypotheses, justice and justification theories are extended and applied to the limited research literature on OUICs. This resulted in a more and less expected results. The main findings will be set out via the proposed hypothesizes.

As predicted, "money, competition" is significantly related to "distributive justice". However, the positive correlation was not significant. Although not fully supported, in justifying perceived unfairness due to an unfair ratio of an individual's level of input and output in comparison to the ratio of a comparison other reasoning based on monetary gain/loss play a supporting role.

Also predicted was that "efficiency, effectiveness" is significantly related to "informational justice". In addition to a non-significant negative correlation, where a positive relation was predicted. This prediction was based on the premise that users need information to be more effective and efficient; and in extension contribute to the usefulness aspect of innovation. Hence, the "efficiency, effectiveness" justification logic could be used to support the "informational" justice construct.

The last hypothesis which was fully supported and, states: "The justification logic of "Money, Competition" has a negative relationship with the "Interpersonal" justice construct". This suggests that reasons concerning financial benefits or loss do not support and increase the weight of the expressed "interpersonal" justice construct. E.g. the customer felt that the barista was very obnoxious and abusive during the ordering process, because the customer received a 50 cents rebate. Thus, indeed the reasoning is flawed and correlates negatively.

The main contributions are three-fold. First, this study contributes to the literature concerning information overload (e.g. Hemp, 2009; Paruchuri, 2010; Piezunka & Dahlander, 2015; Schulze, Indulska, Geiger & Korthaus, 2012; Simon, 1972; Zhou & Li, 2012) by setting out a new categorization which can benefit firms to prioritize certain ideas posted by on their OUICs. Additionally, it provides a better view on how the users have experienced fairness during critical moments.

Second, OUIC users are able to tap in to the results and use them, in practice, as a guide when posting ideas on OUICs. Certain "justification logics" have been significantly connected to a number of "justice constructs". Which suggests those "justification logics", that are related to a certain "justice construct", have more explanatory power than the others concerning that type of (un)fairness. Thus indeed, providing a guide for OUIC users to follow in picking the most appropriate justification logic for, better, explaining and giving weight the type of unfairness experienced by the user.

Third, this study adds to the OUIC, justice and justification literature. The "justice constructs" and "justification logics" have been connected in earlier studies, however only in a narrow selection (e.g. Pecherskaya, 2013; Ramirez, 2013; Regan & Haueisen Rohrer, 2012). Therefore, this study contributes to the existing literature by extending it with views provided by OUIC data analysis. In addition, this study extends the current OUIC literature, which is only recently becoming more popular (e.g. Amann, Zanini & Rubinelli, 2016; Di

Gangi et al., 2010; Dong & Wu, 2015; Li, Kankanhalli & Kim, 2016; Yan, Leidner & Benbya, 2016). Justice and justification theories have not been integrated into OUICs studies. Thus, exploring a new wealth of knowledge.

Managerial implications

This study allows for important managerial implications with respect to information overload on OUICs and better understanding fairness expressed in users' ideas. First, due to the vast amount of ideas posted on OUICS and the limited attention a firm has for these ideas it is challenging to acquire and review the ideas which are most beneficial to the firm. Limitations of the firm could, for example, reside in the fact that only a few employees are responsible for reviewing the thousands of ideas posted on the OUIC. In the context of this information overload, this study provides a possible categorization of ideas based on the "justice constructs". These "justice constructs" help to categorize ideas based on the perceived (un)fairness users express in their ideas. The firm could, for example, limit its focus on the ideas of one "justice construct", avoiding the extent of other available ideas. Thus, focusing firm's attention on a narrower section of ideas could make it possible to focus, with limited attention, on ideas most beneficial to the firm.

Second, next to the categorization based on the "justice constructs", the reasoning of users for posting a certain idea can be categorized as well. This study provides a categorization based on "justification logics". If an idea provides some sort of reasoning, it is likely it refers to one of the "justification logics". By applying this categorization, it could become clear for the firm which reasoning users often use to better express the (un)fairness perceived. The "justification logics" also imply, on a more abstract level, what the user "wants". For example, a user mentions that it is not fair that he/she receives free add-ons at one Starbucks venue, but not at the other. He/she wants those add-ons to be free at every

venue. This would concern the justification logic of "money, competition", which implies a financial gain. Thus, when a firm is focusing on a certain fairness category and there is significant level of a particular justification logic present, the firm can attain a better idea of the reasoning most users apply and possibly implement this knowledge in the innovation process.

Limitations and future research

This study has some limitations. First, the original dataset (Dong and Wu, 2015), containing 117,153 posts, offers the opportunity to create a larger sample, compared to the current sample of 1384 ideas used, to increase reliability and generalizability of the results. Second, although a certain degree of interrater has been accomplished. Increasing this amount via more training sessions would benefit the objectivity of the coded dataset.

Future research can complement this study by adopting a larger dataset, increase reliability and focus on the following unexplained results. The following prediction and hypothesis was found not to be supported: "The justification logic of "Efficiency, Effectiveness" has a positive relationship with the "Procedural" justice construct". The results of both the correlation and regression analysis do not suggest any significant relationship. Using different processes for different user groups could result in a process perfectly adjusted to a specific user group. Which would imply an increase in efficiency and effectiveness. This is a topic well worth further research.

Other significant results, which were partially supported and those which were not part of the hypothesis's, are also worth looking in to. Such as: (1) "Distributive justice" is related to three "justification logics": "money, competition", "efficiency, effectiveness" and "well-being, family, tradition". (2) "Procedural justice" is not related to any justification logic. (3) "interpersonal justice" is negatively related to two "justification logics": "money,

competition" and "efficiency, effectiveness". The correlation analysis suggests both relations are negative. Additionally, "informational justice" is negatively related to the justification logic "money, competition".

Furthermore, although the data provided by Starbuck's OUIC is significant in number and size, it relies on users with a certain interest towards the products and services of Starbucks. This interest, together with the level of basic knowledge needed for users to create and express their innovative ideas are specific to Starbucks. To further increase the generalizability of combining "justice constructs" and "justification logics" on the topic of OUIC's it is recommended to bridge industries in future research.

Additionally, future research could encompass the dynamic perspective of the data and results. This could be accomplished by increasing moments of measuring and, thus, increasing insights in the dynamism of research results over time.

Finally, Starbucks provides its customers, stakeholders and such with information through a wide range of communication resources. Optimal versus sub-optimal performance of the provision and acknowledging of information could impact the perceived justice. E.g. being well informed on why certain rebates are only applicable to a certain customer group could inhibit feelings of injustice, as the found difference is appropriately justified by the firm. Thus, the addition of research on information and communication flows form an interest which offers deeper insight in the topic of interest.

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