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Gamification in Airbnb: Benefits and Risks

Gamification has been studied in various contexts, but not in P2P platforms. Research has also overemphasised the benefits of gamification ignoring its boundaries and counterproductive impacts. This study addresses these gaps by using Airbnb as a case study for investigating the application and (negative and positive) impacts of gamification on hosts' motivation and behaviour. Secondary data were used for examining the funware design of Airbnb, while gamification theory is reviewed for designing a qualitative study with Airbnb hosts for investigating their perceptions and reactions to the Airbnb funware design.

Key words: Gamification; Funware; P2P platforms; tourism; mechanics; impacts SIDS,

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Introduction

The impact of the sharing economy in supporting economic development and fuelling entrepreneurial activity is widely recognised, but also heavily criticised (Sigala & Dolnicar, 2017). Although the sharing economy democratises participation in capitalism, it also creates platform monopolies that make profits based on a new type of slavery who are contractors and not employees (Schor, 2016). The working conditions and rules of these micro-entrepreneurs are determined by the peer-to-peer (P2P) platform algorithms. However, the success of P2P platforms heavily depends on attracting a great number of highly motivated micro-entrepreneurs to provide ‘quality’ services on an on-demand, ad-hoc basis. Hence, attracting more micro-entrepreneurs but also keeping them motivated, engaged and willing to perform well is a significant success factor of P2P platforms. To achieve that, P2P platforms frequently gamify the design of their algorithms to boost micro-entrepreneurs’ motivation and instil ‘good’ behaviour/performance.

However, despite the anecdotal claims about the impact of algorithm management on micro-entrepreneurs’ management, work stress and motivation, there is a lack of research examining its controversial impacts. Moreover, although the application and benefits of gamification have been argued in various contexts (Hamari et al., 2014), no research has examined its contextualisation and impacts within P2P contexts. This is an important gap because the context critically moderates the gamification impacts on its users (Sigala, 2015a). Studies (Sigala, 2015b; Leclercq et al., 2017) also call for more research to investigate the risks and boundaries of gamification and how to best apply and fit the game mechanics to the users’ needs, motivations and context (Robson et al., 2015; Sigala, 2015b).

This study fills in the above gaps and contributes to the gamification and P2P literature by examining the application and impacts of gamification into a P2P marketplace context. By using the funware design of Airbnb as a case study, the study identifies the game mechanics

of Airbnb and investigates their potential benefits and risks on hosts' behaviour and their relations with guests. To achieve that, the paper first reviews the concept, principles, benefits and risks of gamification and then, it applies the game mechanics and dynamics theory into the Airbnb context. The factors that can limit the intended benefits of the Airbnb gamification are discussed. Finally, guidelines for continuing the research are provided.

Gamification: concept, principles, benefits and risks

Gamification is the use of game-play mechanics (e.g. points, leaderboards, achievements/badges, levels, story/theme, clear goals, feedback, rewards) for non-game context (Deterding et al., 2011). Sigala (2015a) clustered game mechanics into: behavioural (e.g. discovery/exploration, ownership, community collaboration, lottery, virality, status); feedback (e.g. bonuses, countdown, reward schedules); and progress (e.g. achievements, levels, points, progress bar). To engage users, game mechanics need to afford extrinsic and/or intrinsic motivations (Hamari et al., 2014): utilitarian (usefulness, ease of use), hedonic (enjoyment, playfulness) and social (recognition, social influence). This gamification principle is summarized into the mechanics-dynamics (behaviors, interactions)-emotions (affective reactions) framework (Robson et al., 2015). Funware is the use of game mechanics to influence the users' psychology and encourage desired users' psychological and behavioural outcomes such as (Sigala, 2015a; Leclercq et al., 2018): flow, customer engagement, participation in co-creation, brand loyalty. The major principles for designing effective funwares include (Sigala, 2015b):

- integration of game activities with the business related tasks;
- use of a variety of game mechanics for affording extrinsic and intrinsic motivation.

Gamification must avoid extrinsic pointsfication;

- matching of game mechanics with the users’ motivations, profiles and aims; a funware should include a variety of mechanics to cater for the various types of users’ needs
- users’ empowerment to select, control and customize the game mechanics to create personally meaningful play goals and so, internalize the game activities

Gamification in peer-to-peer platforms

Resnick & Zeckhauser (2002) first advocated that the review systems of P2P platforms aiming to direct positive behaviour and build trust between hosts and guests follow the gamification principles, i.e. the provision of badges and points to hosts when providing quality services. Others (Xiong & Liu, 2004; Liang et al., 2017) recently advocated the positive impacts of these review systems on platforms’ reputation and revenues by building host-guest trust; attracting reliable hosts and high-quality accommodations; attracting guests by ensuring that hosts will perform appropriately and up to high standards. Airbnb also requires hosts to construct and present a virtual self for building their image, profile and trust and so, attracting guests. Although studies have examined the Airbnb host brand-identity construction, research has failed to study the impacts of this game mechanic (i.e. role play and self-representation) on hosts’ behaviour and motivation. Figure 1 summarises the use of gamification for managing host-guest-platform relations. However, there is no research studying gamification on actors’ behaviour in P2P (Hamari, 2017; Liang et al., 2017).

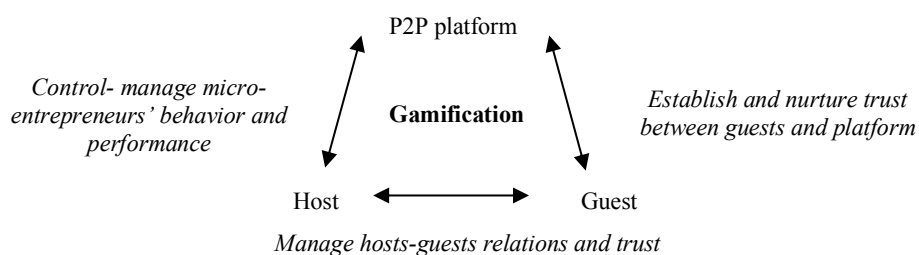


Figure 1. Gamification in P2P platforms

Methodology

To examine, the application and (positive and negative) impacts of gamification in P2P platforms, the following steps are undertaken. Secondary data were collected from Airbnb and other literature sources for applying the gamification literature on Airbnb. Face-to-face in-depth interviews with Airbnb hosts will be conducted for investigating their perceptions of the Airbnb game mechanics and the impacts of the latter on their perceptions of 'work' conditions, motivations and behaviours.

Preliminary Findings

The findings of the first step are summarised in Table 1 showing how Airbnb applies gamification for designing the funware of its algorithmic management of hosts. Airbnb game mechanics mainly provide utilitarian benefits (e.g. provision of priority support, tax services, marketing tools, webinar and discount on household effects) at the expense of social and hedonic benefits. This can be a major limitation based on the gamification literature. Utilitarian benefits provide various forms of functional value always related to work conditions, i.e. mechanics for: managing business (priority support, tax services, marketing tools, products previews); improving the provided experience (discount for buying household effects); and education/learning purposes (webinar). Airbnb hedonic benefits reflect the provision of travel coupon and invitations to exclusive events, social recognition, and visibility on the platforms. Very few mechanics offer a mixture of social, utilitarian and hedonic benefits, e.g.: the products previews could support the accommodation management (by including new services/products), the enjoyment (by using innovative solutions), or the social recognition (by showing on the outside the results of the own performance). The educational/learning benefits are not mentioned in past literature as utilitarian benefits and so, their user impact is worth investigating.

Table 1. Airbnb Funware design: mechanics-dynamics-emotions

AIRBNB SUPERHOSTS CRITERIA	
<i>Positive feedback: 4.8 stars out of 5. Responsiveness: 90% reply rate. Booking: more than 10 reservations per year. Reliability: 0 cancellations</i>	
Airbnb Funware: game mechanics	Game dynamics: motivations/benefits
Badge & Visibility (visual recognition)	Social
Search filter & customized URL (visual recognition)	Social
Travel coupon	Hedonic
Discount on household effects	Utilitarian
Priority support	Utilitarian
Product exclusives, preview upcoming releases	Hedonic, Social, Utilitarian
Invitation to exclusive events	Hedonic, social
Webinar from market experts	Utilitarian
Tax services and marketing tools	Utilitarian

Conclusions and implications for future research

Gamification in Airbnb is argued to not only influence hosts' behaviour, but also the way they experience work conditions and context, which in turn can influence their work motivation and behaviour. For example, the algorithm and mechanics of Airbnb gamification determines the visibility, access, availability and quality imagine of 'work'. However, the overemphasis on utilitarian benefits, their opaque and imposed nature (i.e. lack of control and selection) can have a potential detrimental impact on hosts' behaviour and the in-depth interviews aim to shed more light into these.

References

Deterding S, Dixon D, Khaled R., Nacke L (2011) From game design elements to gamefulness: defining gamification. In Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments (pp. 9-15). ACM.

- Hamari, J. (2017). Do badges increase user activity? A field experiment on the effects of gamification. *Computers in human behavior*, 71, 469-478.
- Hamari J, Koivisto J, Sarsa H (2014) Does gamification work? e A literature review of empirical studies on gamification. 47th HICSS conference, Hawaii, USA
- Leclercq, T., Poncin, I., & Hammedi, W. (2017). The Engagement Process During Value Co-Creation: Gamification in New Product-Development Platforms. *International Journal of Electronic Commerce*, 21(4), 454-488.
- Liang, S., Schuckert, M., Law, R., & Chen, C. C. (2017). Be a “Superhost”: The importance of badge systems for P2P rental accommodations. *Tourism management*, 60, 454-465.
- Resnick P. & Zeckhauser R. (2002) Trust among strangers in Internet transactions. *In The Economics of the Internet and E-commerce* (pp. 127-157). Emerald
- Robson, K., Plangger, K., Kietzmann, J. H., McCarthy, I., & Pitt, L. (2015). Is it all a game? Understanding the principles of gamification. *Business Horizons*, 58(4), 411-420.
- Schor J (2016) Debating the sharing economy. *Journal of Self-governance and Management Economics*, 3, 7e22.
- Sigala M (2015a) The application and impact of gamification funware on trip planning and experiences: The case of TripAdvisor’s funware. *Electronic Markets*, 25(3), 189-209.
- Sigala, M. (2015b). Applying gamification and assessing its effectiveness in a tourism context. *Asia Pacific Journal of Information Systems*, 25 (1), 179 – 210
- Sigala, M. & Dolnicar, S. (2017). Entrepreneurship Opportunities. In Dolnicar, S. *P2P Accommodation Networks: pushing the Boundaries*. Goodfellow, Oxford, UK
- Xiong, I. & Liu, I. (2004). Peertrust: supporting reputation- based trust for peer-to-peer electronic communities. *IEEE Transactions*, 16(7), 843-857.