

## Online Gaming, Regulation, and Big Data

Michael Auer (1) and Mark D. Griffiths (2)

(1) Neccton ltd., London, UK

(2) Nottingham Trent University, Nottingham, UK

In recent years, several member states of the European Union have established new online gambling regulations. Until recently, it was sufficient to hold an operating license at the company's headquarters (e.g., Malta, Gibraltar). However, in the European Union, it is now required that gaming operators need to apply for licenses at the players' country of origin. Furthermore, different countries require operators to meet different measures in relation to player protection.

In July 2014, the European Commission published the recommendation on principles for the protection of consumers and players of online gambling services. These recommendations included voluntary self-exclusion schemes, tools to allow players set voluntary limits on the amount of money they spend gambling, and easy access to their gambling expenditure data. The recommendations also state that players should automatically be informed about their wins, losses, and amount of time played. Some countries have gone beyond these minimum requirements (e.g. the Netherlands) and it is likely that future online gambling regulators will require operators to proactively screen player behaviour for signs of harmful patterns using behavioural tracking data.

All of these tasks require the analysis of large amounts of player-related data (so-called 'Big Data'). Big Data can mean a variety of different things to different people. In this article we refer to it as the analysis of large amounts of data in order to make sense and to find patterns and correlations. Big Data has the potential to be very helpful in online gambling regulation because online gambling operators track each and every players' deposit amount, bet made, type of game played, and many other crucial aspects of behaviour.

Behavioural tracking tools tend to be customer-centric and support players' gambling decisions. Some of these tools provide players with personalized information about their gambling behaviour. Such systems typically utilize personalized behavioural tracking data in order to give personalized feedback. Here are some of the main reasons why behavioural tracking can be important to online gaming operators.

*1. The psychology of gambling:* Players have different motivations for gambling. Some players gamble primarily to relax, whereas other gamblers seek action and excitement. These, along with several other motivators, lead to specific playing patterns. Behavioural tracking tools can help extract those patterns and advise gamblers accordingly about how they can change their behaviour if they so wish.

2. *Motivational self-efficacy enhancement*: Studies have shown that messages during or after play have beneficial harm minimization effects on gambling behaviour. The best tools should be able to personalize communication with players. Such communication plans should be based on the concept of motivational interviewing, which has proven to be successful in a wide range of areas for instigating behavioural change.

3. *Recovery in the absence of abstinence*: Studies have shown that up to 90% of recovered problem gamblers still occasionally gamble. Behavioural tracking tools should aim to keep gambling safe and fun. However, such systems should also support the small percentage of gamblers who financially (or temporally) overextend themselves.

4. *Identification of high-risk sub-groups*: Behavioural tracking tools should be able to identify subgroups of gamblers and provide gamblers with the right information at the right point in time. Furthermore, personalized messages should follow the concept of motivational interviewing to ensure a higher likelihood of behavioural change.

5. *Satisfied players*: The main objective of any behavioural tracking tool should be player protection. For most players, gambling is an enjoyable leisure activity. However, a small minority of players can encounter problems. Behavioural tracking tools should be able to detect undesirable behavioural tendencies and initiate personalized communication with players with the aim of preventing problematic gambling. Consequently, players can continue to enjoy their gambling, and customer satisfaction increases.

6. *Increased loyalty*: The gaming market – especially the online market – is a highly competitive environment. Attracting new players can be expensive, and every customer lost impacts negatively on the financial investment made through marketing and advertising. Loyalty is the key to repeat custom over the player's lifetime. The longer that players use an operator's product, the higher the revenue per player. However, once players run into gambling problems, they are typically lost forever. Behavioural tracking tools can help players to enjoy gambling within limits, while extending their lifespan as a player. This gives online gaming operators the opportunity to build up a stable and profitable customer relationship (benefitting both players and operators).

7. *Increased trust*: Attracting players in a highly competitive gaming market requires extensive marketing investment. But how can players distinguish trustworthy operators? Behavioural tracking tools indicate both objectivity and transparency and help empower trust. It signals a strong customer-centric approach. A high level of trust increases and strengthens existing customer relationships, and helps to attract new customers. Behavioural tracking tools also signal transparency to regulators and the community, which in turn increases confidence in online gaming operators.

Good behavioural tracking tools can support informed player choice, and also help online gaming operators and their regulators gain more insight into players' behavioural patterns. Such tools have the potential to supply gaming operators (and regulators) with valuable information through standardized

reports. This knowledge can in turn be used to optimize the player experience and keep gambling both safe and enjoyable.

To date, many online gambling operators have implemented a variety of responsible gaming measures that are helping to keep gambling safe. Age verification processes, player education, mandatory limits as well as the possibility to choose voluntary limits are a few examples of commonly available responsible gaming features. Given the protection that these measures and protocols provide to players, there is perhaps an argument that gaming licenses should only be granted to those companies that have such tools in place (e.g., behavioural tracking software becoming mandatory before an operating license can be granted). Furthermore increased regulation requires more advanced tools and scientifically sound approaches. In order to meet regulatory requirements and help protect players, gaming operators, legal experts, Big Data specialists, and scientists have to work together.

#### Further reading

Griffiths, M.D. & Auer, M. (2011). Approaches to understanding online versus offline gaming impacts. *Casino and Gaming International*, 7(3), 45-48.

Auer, M. & Griffiths, M.D. (2013). Behavioral tracking tools, regulation and corporate social responsibility in online gambling. *Gaming Law Review and Economics*, 17, 579-583.

Auer, M. & Griffiths, M.D. (2013). Limit setting and player choice in most intense online gamblers: An empirical study of online gambling behaviour. *Journal of Gambling Studies*, 29, 647-660.

Auer, M. & Griffiths, M.D. (2014). Personalised feedback in the promotion of responsible gambling: A brief overview. *Responsible Gambling Review*, 1, 27-36.

Auer, M. & Griffiths, M.D. (2015). Testing normative and self-appraisal feedback in an online slot-machine pop-up message in a real-world setting. *Frontiers in Psychology*, 6, 339. doi: 10.3389/fpsyg.2015.00339.

Auer, M., Malischnig, D. & Griffiths, M.D. (2014). Is 'pop-up' messaging in online slot machine gambling effective? An empirical research note. *Journal of Gambling Issues*, 29, 1-10.