

What are the odds? Lower compliance with Western loot box probability disclosure industry self-regulation than Chinese legal regulation

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3 November 2021

Society for the Study of Addiction PhD Symposium 2021

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Preprint: <https://doi.org/10.31219/osf.io/g5wd9>

Data: <https://doi.org/10.17605/OSF.IO/CX5RV>

Prior work: <https://doi.org/10.1017/bpp.2021.23>

What is a loot box?

- ❖ Virtual items in video games that contain **randomised** rewards.
- ❖ Some loot boxes are **purchased with money**: our research focuses on paid loot boxes.
- ❖ Some loot box rewards can be sold to other players for real world money and therefore have **real world monetary value**.



What can loot box rewards do?

- ✦ Some rewards are only **cosmetic**, e.g., they merely change the colour of the player character's sword.
- ✦ Other rewards may influence the game more significantly, e.g.:
 - ✦ unlocking **additional game content** not otherwise available;
 - ✦ granting **competitive advantages**.



Total spending

- No conclusive data as **the video game industry does not release data.**
- The loot boxes of one **single game** is known to generate over US\$500,000 (over **¥3.2 million Renminbi**) of **daily** revenue in **China** alone.

Extreme individual cases reported

- One UK player 'spent nearly £700 [¥6,200] in a month' (BBC, 2019)
- Another spent over '[US]\$10,000 [¥65,000] in just two years' (Eurogamer, 2018)
- Four children spent 'nearly £550 [¥5,000] in three weeks' of their father's money without permission and still failed to obtain the rare item they were hoping for (BBC, 2019).

Potential Harms of Loot Boxes

- ✦ Structural **similarity** between loot boxes and gambling
- ✦ Empirical link between **problem gambling** and loot box spending
 - ✦ ‘The more severe that participants’ problem gambling was, the more money they spent on loot boxes’ (Zendle & Cairns, 2018).

Prevalence of Loot Boxes

- Loot boxes are **prevalent** in all genres of video games on all platforms (PC, console and mobile).
- Vulnerable groups, such as **children**, are also exposed to loot boxes.
 - **28.1%** of 11–16-year-olds in the UK have used in-game items and **22.9%** have paid money to open loot boxes (UK Gambling Commission, 2019).

Prior Research on Prevalence

- Prior research has examined the prevalence of loot boxes in the 100 highest-grossing iPhone games.
- A 2019 study found a prevalence rate of 59% in the UK.
 - And a prevalence rate of 58.9% amongst games deemed suitable for children aged 12+ (Zendle *et al.*, 2020).

A reduction of loot box prevalence?

- Media reports of some video game companies choosing to **stop** implementing loot boxes in their games due to ethical, legal, and/or PR concerns.
- Has there been a **statistically significant reduction** in loot box prevalence in the UK on the iPhone platform from 2019 to 2021?

Legal recognition as gambling?

- In **Belgium**, all paid loot boxes are recognised as gambling and are effectively **banned** (as no gambling licences have been granted to video game companies).
- In **the UK**, only a small minority of paid loot boxes whose rewards can be sold to other players for real world money are recognised as gambling; other loot boxes remain **unregulated**, although this may soon change!

How to regulate?

- ✦ Banning loot boxes as gambling is **only one** (very restrictive) approach.
- ✦ **China** has adopted a different (less restrictive and arguably more nuanced) consumer protection approach inspired by gambling harm reduction measures:
 - ✦ *Not* preventing players from buying loot boxes, **but** requiring companies to **disclose the probabilities** of obtaining various potential rewards.

Probability Disclosures



Appearance Rates

High-End Spotlight

	Mario (Happi)	1.0000%
	Quickshaw	1.0000%
	New Year's Kite	1.0000%

High-End

	Pauline	0.2500%
	Mario (Hakama)	0.2500%
	Peach (Kimono)	0.2500%

Industry self-regulation?

- China is the **only** country to require probability disclosure as **law**.
- However, the same measure has been adopted as **industry self-regulation** in almost every other country:
 - For example, Apple requires all iPhone games to disclose loot box probabilities internationally.
- Was the law **more effective** at ensuring compliance than industry self-regulation? *i.e.*, was the disclosure rate higher in China than in the UK?
- Should other countries also adopt legal regulation to ensure better compliance?

UK loot box prevalence 2021

- ✦ A 2019 study found a prevalence rate of 59% in the UK (Zendle *et al.*, 2020).
- ✦ We found that 77.0% of games contained loot boxes.
 - ✦ Not significantly lower ($p > .999$) than the 2019 UK prevalence rate.
 - ✦ On the contrary, it was significantly higher ($p < .001$).
- ✦ Children and adults alike are now more likely to be exposed to loot boxes than two year ago.

Probability disclosure rate

- ✦ A 2020 study found a disclosure rate of **95.6%** in **the UK** (Xiao *et al.*, 2021).
- ✦ We found the UK disclosure rate to be **only 64.0%**.
 - ✦ **Significantly lower** ($p < .001$) than the Chinese disclosure rate.
- ✦ Legal regulation was more effective: countries where self-regulation has already been implemented should **still** require probability disclosures **by law** to **enhance** the compliance rate and consumer protection.

The benefits of self-regulation

- ✦ Benefits:
 - ✦ Better understanding of the technical aspects of game design.
 - ✦ More cost-effective, and able to respond rapidly to novel issues.
- ✦ Current (**but resolvable**) difficulties:
 - ✦ Lack of enforcement powers (e.g., cannot delist non-compliant games).
- ✦ South Korea's industry self-regulation reported a compliance rate of **90.8%**.

Questions?

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