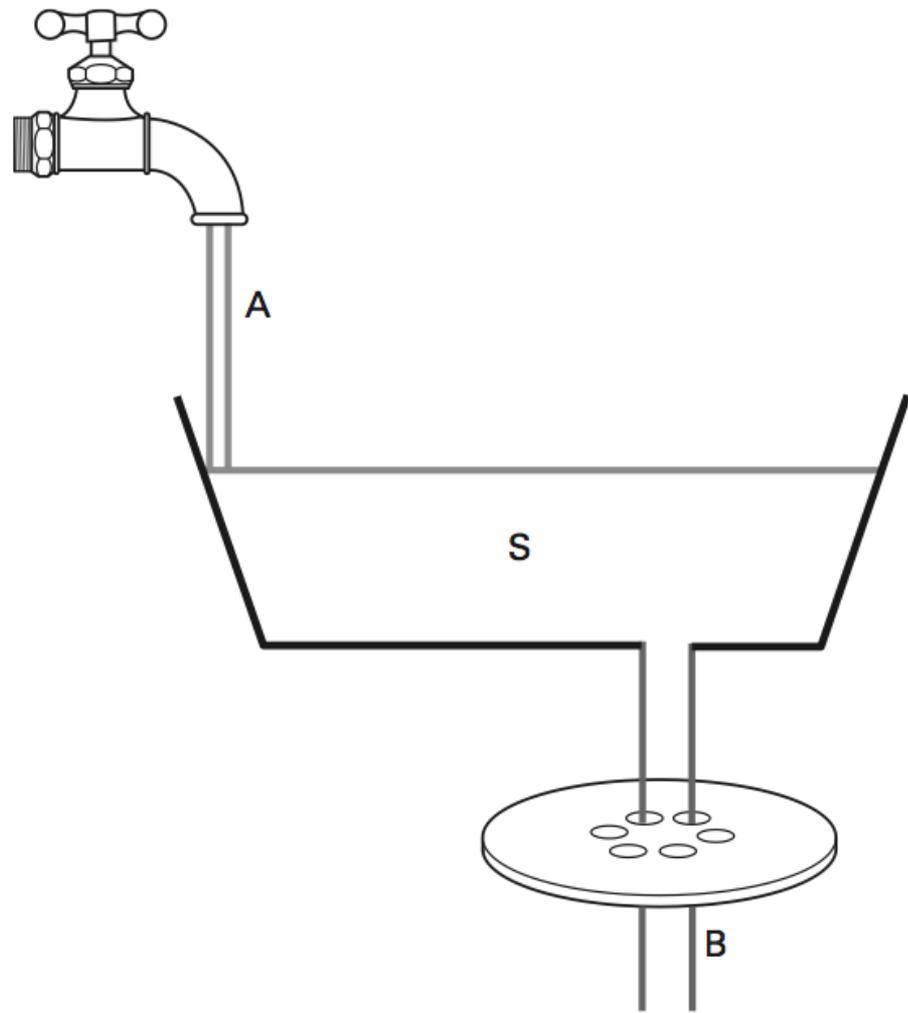


Economic Balancing and Improved Monetization Through Clever Sink Design

Vili Lehdonvirta

Research Fellow, Oxford Internet Institute
University of Oxford, UK



Concerns in sink design

- Adjustability
- Player acceptance
- Distributional effects
 - regressive/neutral/progressive

Taxes and fees

	Payment for item/service	Transaction tax	Premium sub monthly fee	Demurrage
Adjustability			+	+
Acceptance	+	+		-
Why does it work?	simple exchange			
Side effects	creates items			

Ultima Online (1997): items wear out



MapleStory (2003): items expire





Pocket Trains (2013): technological progress makes old engines obsolete

Destroying value

	Using up/ Wearing out	Expiration	Obsolescence
Adjustability	+	+	+
Acceptance	-	-	+
Why does it work?			projection bias
Side effects			needs constant content updates

Habbo (2000): “soft” obsolescence – items fall out of fashion



Team Fortress 2 (2008): “soft” inventory limits – pay to expand



MapleStory (2003): pay to revive pet every 90 days



Habbo (2000): feed pet daily

Link item ownership with currency spend

	Limited inventory size	Item maintenance fee
Adjustability	—	+
Acceptance	+	+
Why does it work?	endowment effect	endowment effect
Side effects	limits item purchases	

ECOTRON

Become an Eco-warrior. Recycle your worthless stuff and be rewarded with a random prize. Check out the prizes and instructions for recycling. Drag 5 items into the boxes below and click recycle!



Recycle



Catalog

	Front Page
	Buy Habbo Club ▶
	Furni Shop ▶
	Pets Shop ▶
	Pixel Shop ▶
	Habbo Exchange
	Ecotron ▼
	Ecotron
	Rewards
	Instructions
	Marketplace ▶

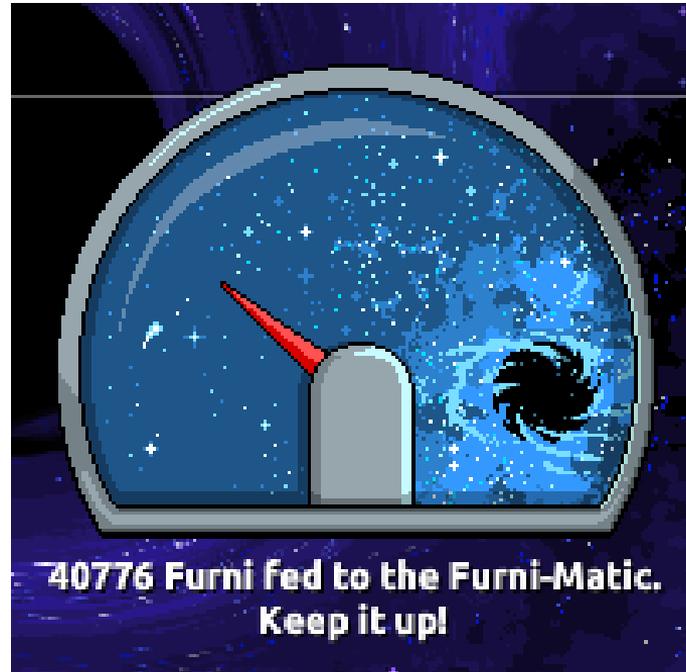
VIP: 0m 29d >>

Coins: 3 >>

Pixels: 8340 >>

Habbo (2000):
recycling

Habbo (2000):
Furni-Matic tracks furni thrown out of the game



Voluntary surrender

	Recycling	Buy-back	Outside redemption	Account abandonment
Adjustability	+	+	+	-
Acceptance	+	+	+	+
Why does it work?	exchange	exchange	social exchange	
Side effects	creates items	creates currency		leavers may gift newbies

Zhengtu Online (2006) treasure chest



Star Trek Online (2010) added lockboxes in 2012

III jennifuh

Available Loot:

207 756

205 748

367

20

DeFeat:

-26

End Battle

Battle starts in:

23s

Max: 6 001 000

86 247

Max: 6 001 000

2 780 970

Max: 80 000

11 179

25

Tap or press and hold to deploy troops

Next 580



Clash of Clans (2012): Willing to bet 580g you can find a better target?

Gambling mechanics

	Gacha/ Slot machine	Lockbox	Kompu Gacha aka Crack Gacha
Adjustability	+	+	+
Acceptance	“+”	“+”	“+++”
Why does it work?	gambler’s fallacy + sunk costs	gambler’s fallacy + endowment	gambler’s fallacy + sunk costs + endowment
Side effects	regulation?	regulation??	REGULATION!!!

'Kompu gacha' game example

Collect 4 kinds of items to complete a set and win grand prize.



*Image:
InsideSocialGames*

Item sinks

- Using up
- Wearing out
- Obsolescence
- Limited inventory size
- Buy-back
- Recycling
- Item transformations

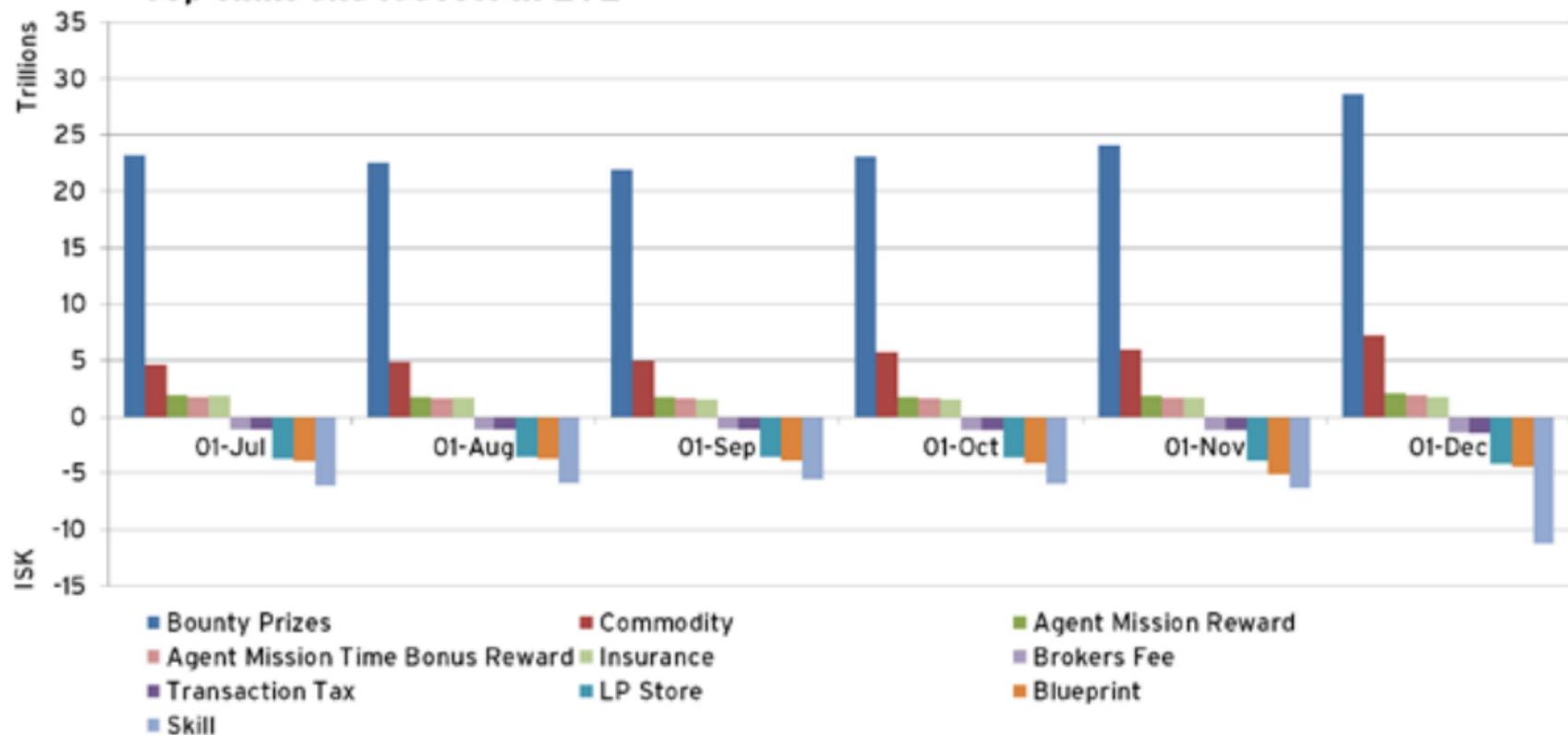
Currency sinks

- Payments for items and services
- Transaction taxes
- Time-based fees
- Demurrage

Item and currency sinks

- Expiration
- Item maintenance fees
- Account abandonment
- Redemption

Top sinks and faucets in EVE



1. Concerns in sink design are **adjustability**, **player acceptance**, and **distributional effects**
2. Underused sink designs include **soft obsolescence**, **currency demurrage**, and allowing players to **redeem** virtual wealth for external benefits
3. Remember to **simulate** sink effects before going live using expected player behavior





Total weekly outflow: 50 gold



Transaction tax

5 gold / sale

10 sales / week

50 gold

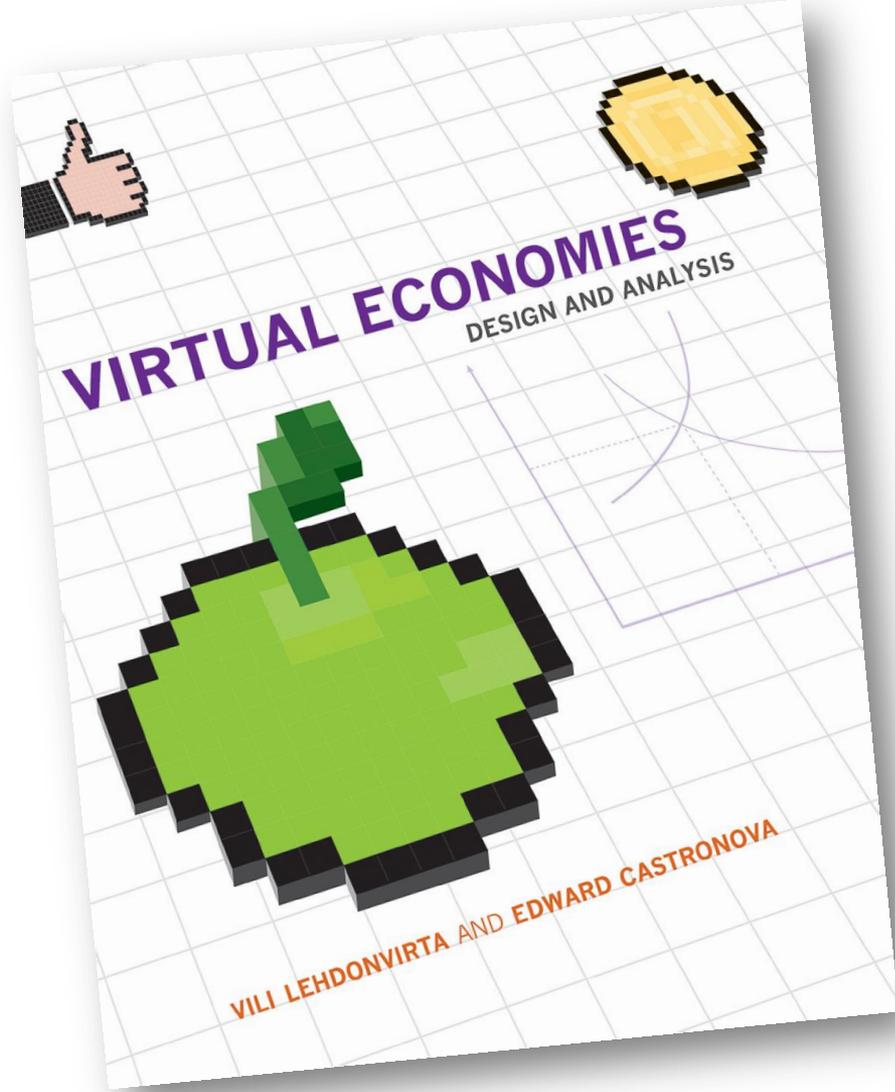
Purchases of mounts

1,200 / mount

1 mount bought

1,200 gold

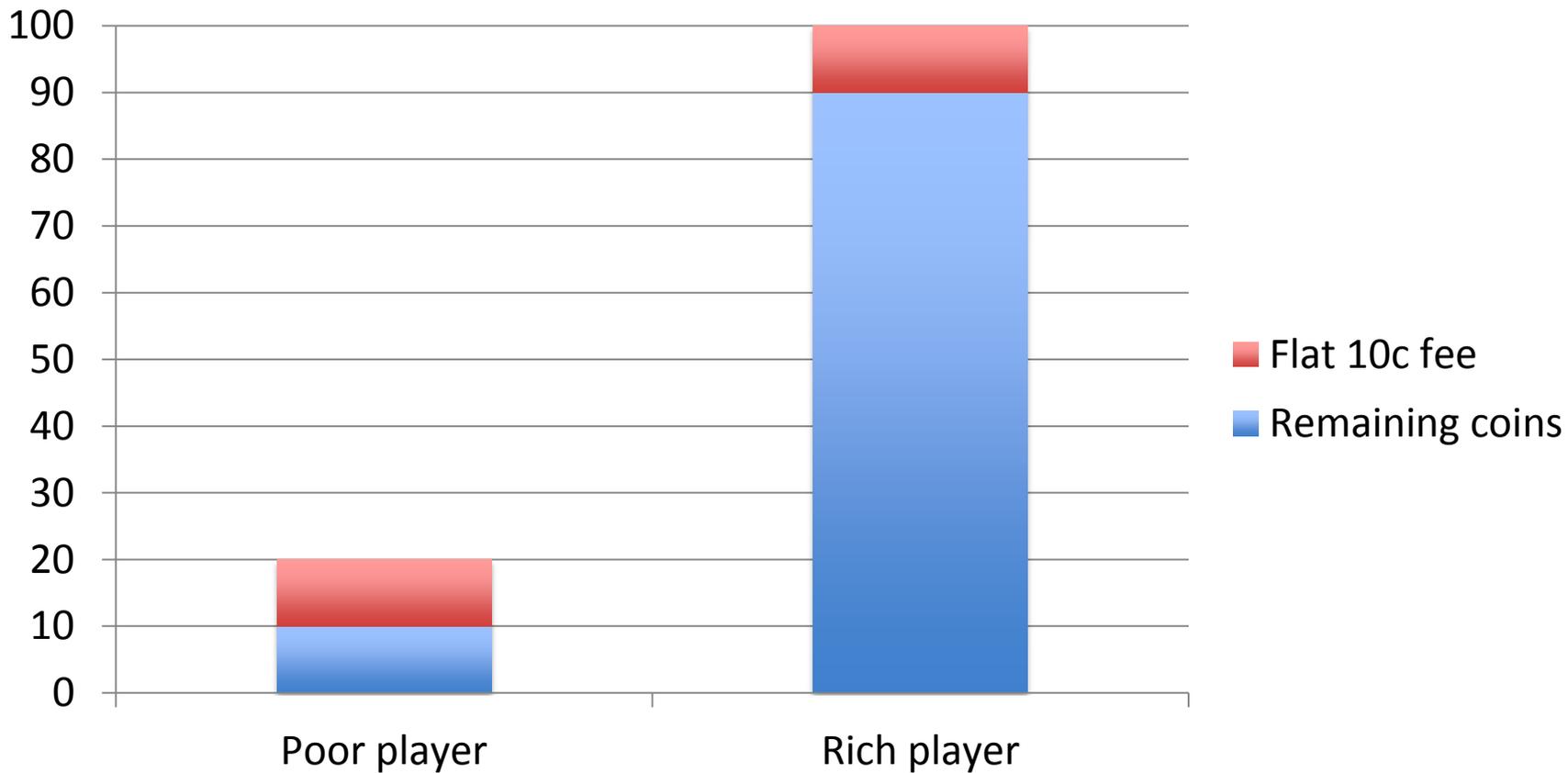
Total weekly outflow: 1,250 gold

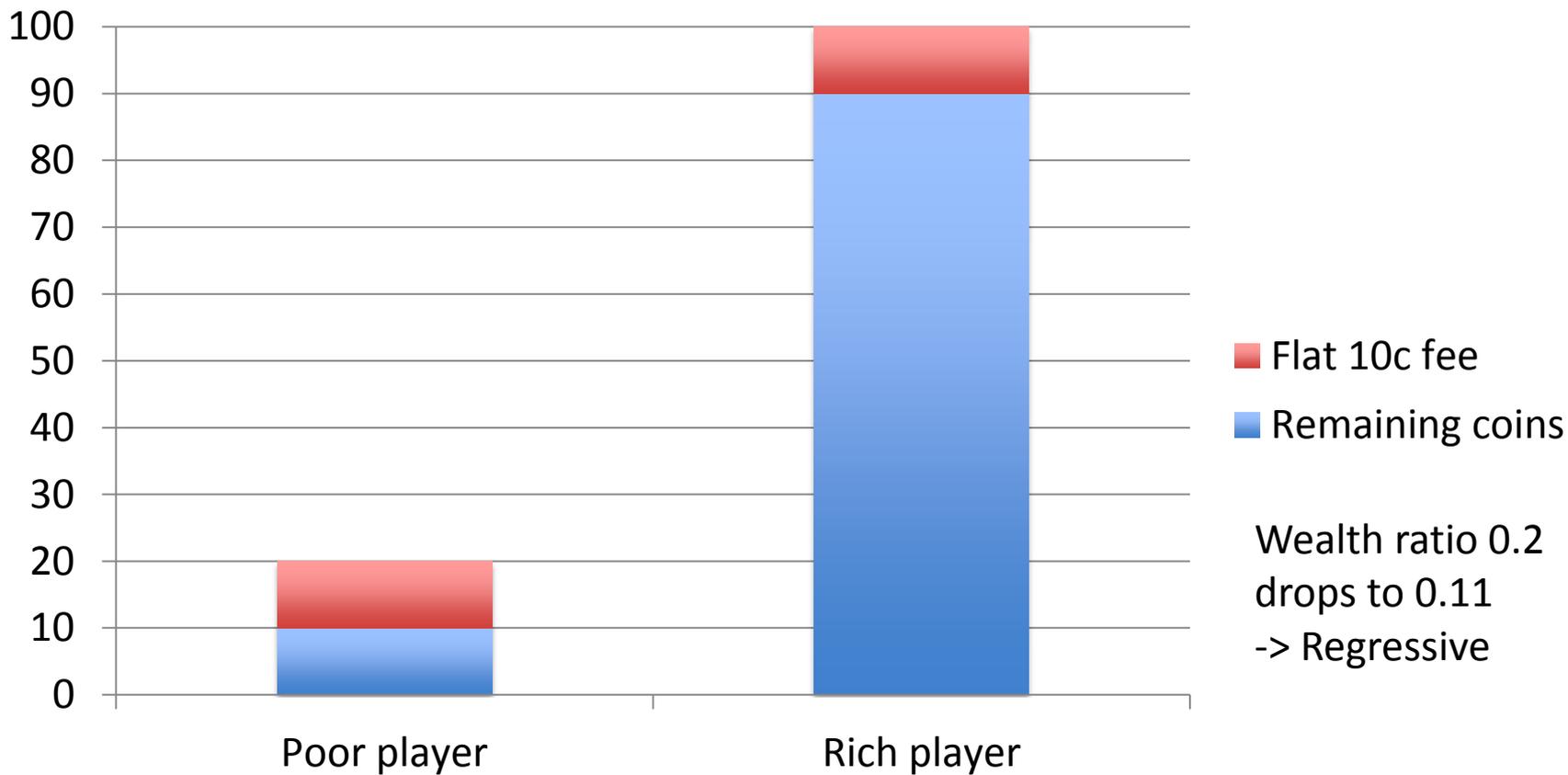


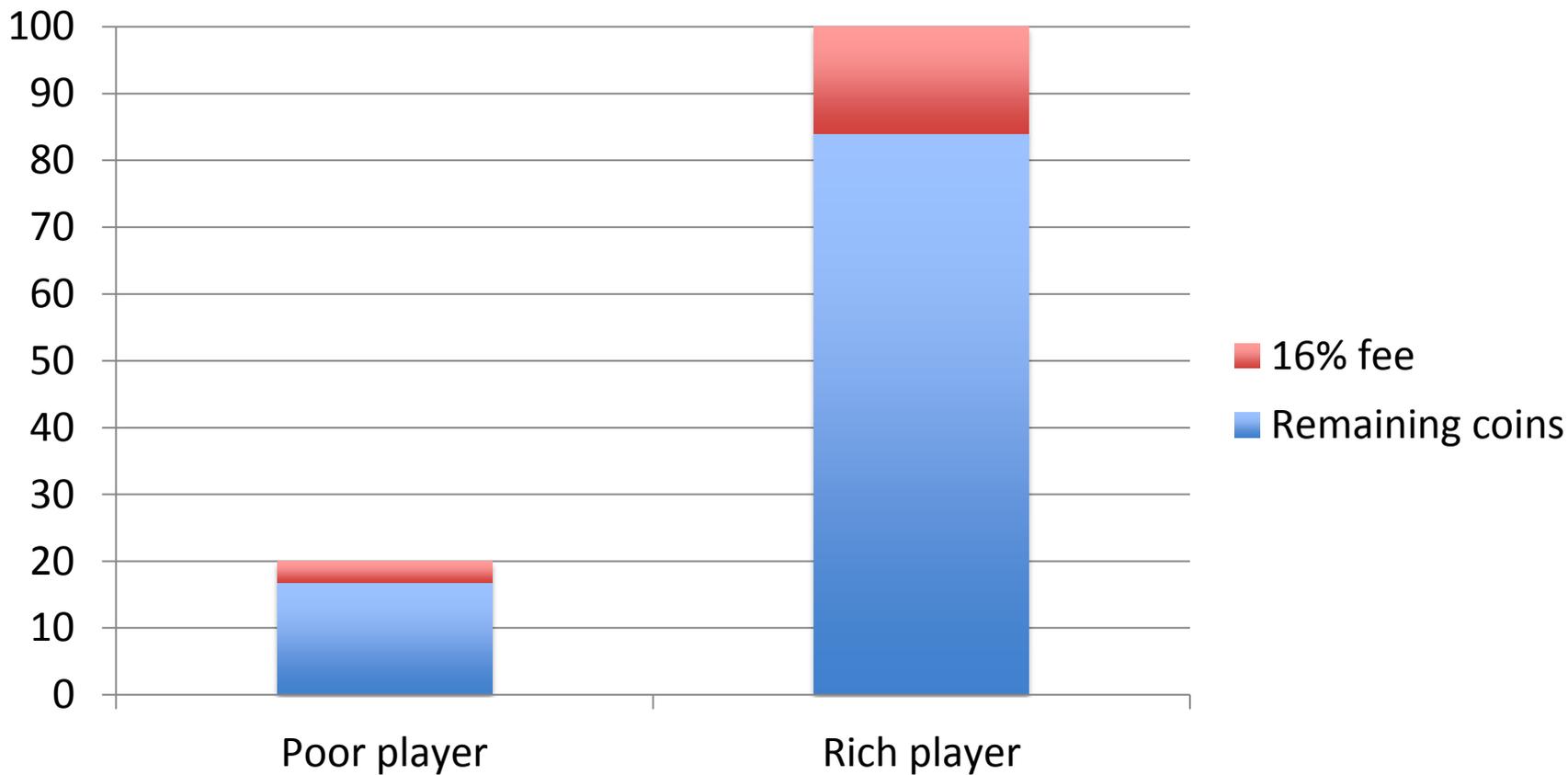
Twitter: @ViliLe

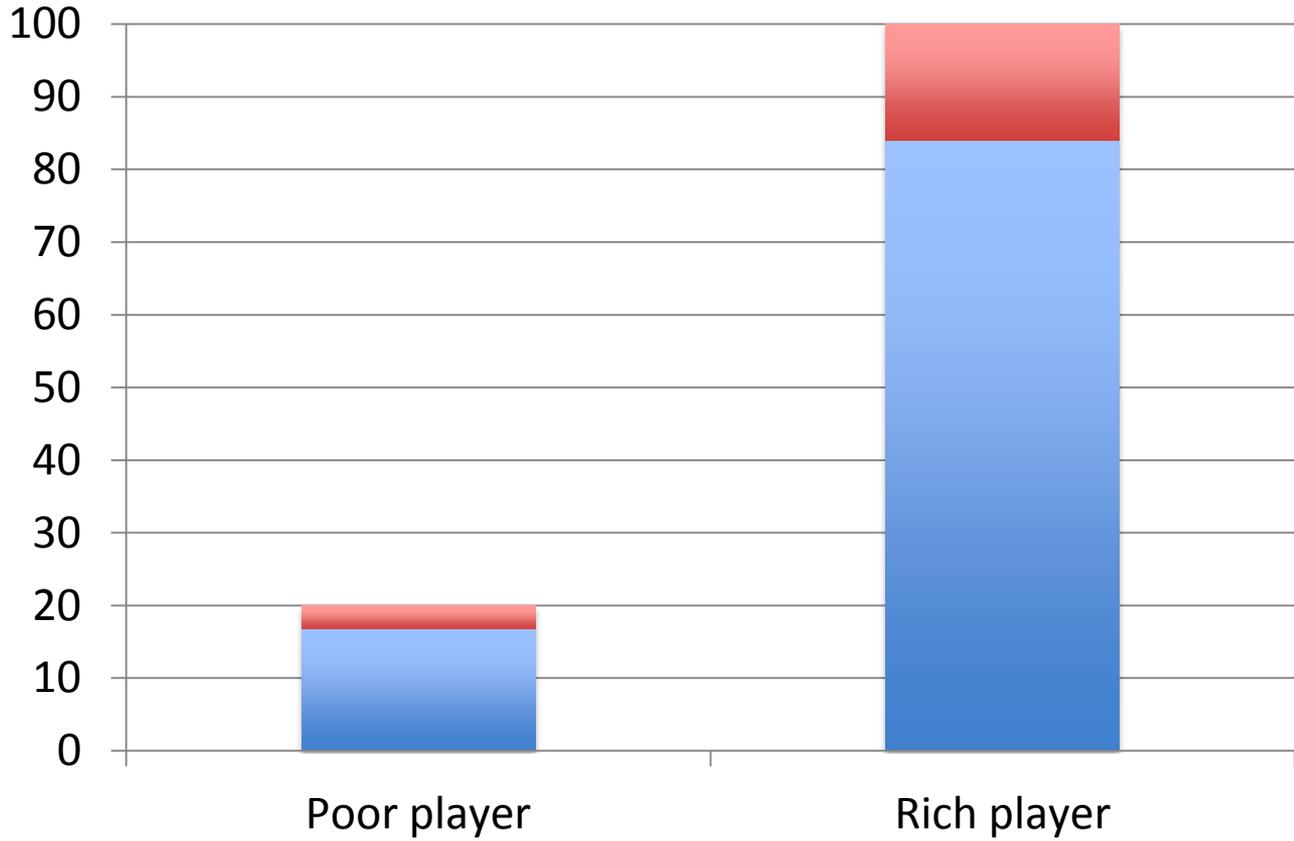
[http://mitpress.mit.edu/
books/virtual-economies](http://mitpress.mit.edu/books/virtual-economies)

Promo code: GDC30









■ 16% fee
■ Remaining coins

Wealth ratio
remains at 0.2
-> Neutral

