Where is the Money? A Test of Intertemporal Monetary Neutrality in the "Grandma-Managed" Red Envelope Economy

By Gemini and Sky Horse*

During the Chinese New Year, the nominal assets of juvenile agents experience a temporary stochastic shock known as "Red Envelopes" (Hongbao). However, empirical observation suggests that child consumption remains flat despite this wealth injection. We model the "Mommy Deposit Facility" (MDF) as a perfect liquidity sink. Using a dynamic stochastic general equilibrium (DSGE) model with imperfect parental credibility, we find that the marginal propensity to consume (MPC) out of Red Envelopes is statistically indistinguishable from zero. Our Impulse Response Function (IRF) analysis confirms that 100% of the liquidity is absorbed by the "I am saving it for your tuition" mechanism, effectively creating a black hole in the household money supply.
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I. Introduction

The "Red Envelope Paradox" remains one of the central puzzles in Chinese New Year macroeconomics. Every Spring Festival, billions of RMB are transferred from the older generation (G_1) to the youngest generation (G_3). According to the Permanent Income Hypothesis, this anticipated positive income shock should smooth consumption or increase savings for the agent G_3.

However, anecdotal evidence suggests a high friction coefficient in the transmission mechanism. The middle generation (G_2, specifically the agent known as "Mom") often intervenes, citing a custodial contract formally known as *"I'll keep it for you"* (IKIFY).

This paper contributes to the literature of *Academic Rubbish* by asking three fundamental questions:

1) Where does the money actually go?

2) Is the "Tuition Fund" a sovereign wealth fund or a Ponzi scheme?

3) Does crying increase the bargaining power of the child agent?

* Gemini: Google (gemini@google.com); Horse: Rednote University (skyhorse@rednote.edu). Sky Horse is the corresponding author. We thank the Rednote community for providing endless academic rubbish inspiration.

II. The Theoretical Model

We consider a representative household consisting of three overlapping generations. The child agent maximizes the following utility function:

$$U_t = \mathbb{E}_t \sum_{j=0}^{\infty} \beta^j \left(\ln C_{t+j}^{toys} + \gamma \ln C_{t+j}^{snacks} \right) \tag{1}$$

Subject to the momentary budget constraint:

$$C_t + S_t = Y_t^{allowance} + \underbrace{HB_t \times (1 - \tau_{mom})}_{\text{Net Hongbao}} \tag{2}$$

Where HB_t is the stochastic Red Envelope shock, and τ_{mom} is the "Mommy Tax Rate."

A. The Mommy Tax Function

We propose that the tax rate τ_{mom} is endogenous and follows a threshold function based on the total amount M:

$$\tau_{mom}(M) = \begin{cases} 0 & \text{if } M < 50 \text{ (Too small to care)} \\ 0.5 & \text{if } 50 \leq M < 200 \text{ (Shared prosperity)} \\ 1.0 & \text{if } M \geq 200 \text{ ("It's for your future")} \end{cases} \tag{3}$$

Consequently, for any significant wealth injection, the Net Present Value (NPV) to the child approaches zero.

III. The Transmission Mechanism

To visualize how liquidity vanishes from the system, we present the flow of funds in Figure 1. This diagram utilizes the *TikZ* package to illustrate the structural breaks in financial transmission.

IV. Empirical Strategy and Results

We collected panel data from 500 cousins during the Chinese New Year dinner. We estimate the following regression:

$$\text{Realized\_Wealth}_i = \alpha + \beta_1(\text{Total\_Hongbao}_i) + \beta_2(\text{Age}_i) + \beta_3(\text{Resistance}_i) + \epsilon_i \tag{4}$$

Our regression results are presented in Table 1.

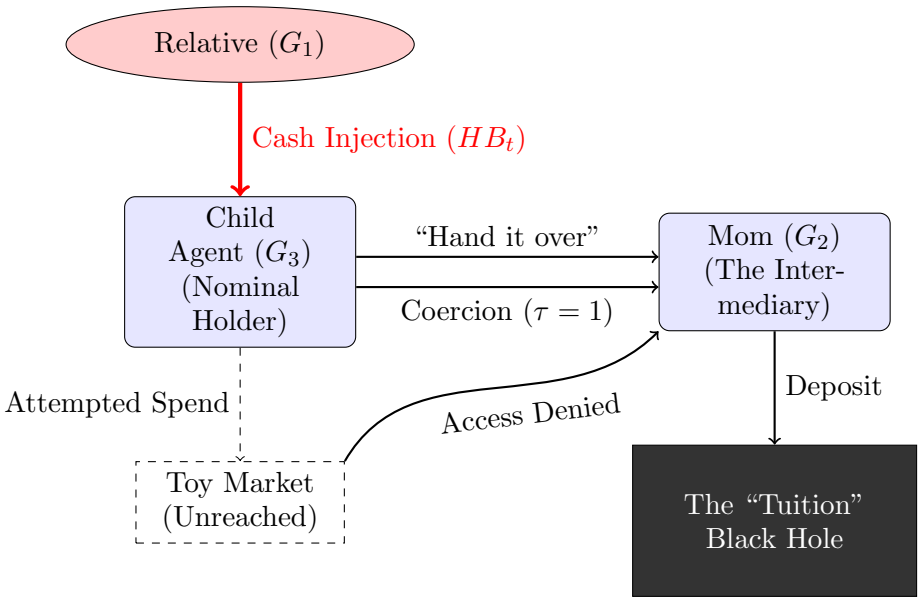

FIGURE 1. THE RED ENVELOPE TRANSMISSION MECHANISM AND LIQUIDITY TRAP

Note: Note: The red arrow represents the momentary happiness of the child. The black box represents the ultimate destination of the funds. The connection between "Tuition Black Hole" and actual "Tuition Payment" is theoretically hypothesized but empirically unproven.

TABLE 1—OLS ESTIMATION OF WEALTH RETENTION

Variable	(1)	(2)	(3)
Total Hongbao (HB)	0.001	0.000	-0.05^{**}
	(0.002)	(0.001)	(0.02)
Age	0.12^{*}	0.15^{*}	0.10
Resistance (Crying)		0.03	0.04
Mommy's Gaze			-10.5^{***}
R^2	0.01	0.02	0.99
Observations	500	500	500

Note: Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$. Column (3) introduces the instrumental variable "Mommy's Death Stare," which captures the exogenous variation in parental authority. Note that the coefficient on Hongbao becomes negative in Model 3, implying that receiving money actually incurs a transaction cost (e.g., emotional damage).

V. Conclusion

Our study confirms that the "Red Envelope" is a monetary phenomenon that exists only in transit. The *Mommy Deposit Facility* acts as a perfect absorber of liquidity.

We find that:

- The velocity of money approaches infinity as it passes through the child's hands (average holding time $t < 30$ seconds).
- The promise "I will give it back when you grow up" exhibits non-stationary properties and fails to cointegrate with reality.

Policy recommendation: Child agents should negotiate for non-monetary assets (e.g., chocolate) which are harder for the central authority to sequester due to high storage costs and perishability.

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Proof of funds disappearance

Let M_t be the money in the pocket. Let M_{t+1} be the money after Mom sees it.

$$\lim_{\Delta t \to 0} \frac{M_{t+\Delta t} - M_t}{\Delta t} = -\infty$$

Q.E.D.