Gold Expenditure, Status Seeking and Development Trade-offs in Indian Households

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Introduction

- Gold occupies a unique position in India as both a cultural symbol and an economic asset.
- India's household stock of gold – estimated at between 23,000–25,000t (∼US$1.4tn) (World Gold Report, 2023)
- Equivalent to almost 56 per cent of India's projected nominal GDP in 2026. (Economic Times Report, 2026)
- following the sharp rally in gold prices through 2024-25 and early 2026, India's households now hold more gold than the combined reserves of the world's top 10 central banks. (Economic Times Report, 2026).
- Plain gold jewellery maintains 80–85% market share" in India's gold market, indicating that household gold ownership is overwhelmingly concentrated in jewellery form.(India Gold Market Series, WGC 2023).
- Households in India spend a substantial share of their income on gold, particularly in the form of jewellery, often motivated by customs associated with weddings, festivals, and inheritance.

Research Motivation and Core Questions

- What forms of gold account for the major share of household gold spending?
- Is expenditure on gold jewellery primarily driven by status signaling to display wealth, prestige and social status?
- If gold jewellery provides status value, is it necessarily conspicuous in nature?
- Does conspicuous spending on gold jewellery create trade-offs within household expenditure such as education, healthcare, nutrition and women's welfare and empowerment?
- Does this expenditure enhance financial resilience or constrain long-term human capital development?

Literature Review

Gold ownership, jewellery demand and household gold behaviour

- Baur, D. G., & McDermott, T. K. (2010); Tully, E., & Lucey, B. M. (2007): hedge, safe-haven and household asset, driven by symbolic, hedonic and investment motives.

Conspicuous consumption, status signalling and visible expenditure

- Veblen, T. (1899); Charles, K. K., Hurst, E., & Roussanov, N. (2009); Roychowdhury, P. (2017): visible consumption and status competition and may crowd out education expenditure.
- Kandpal, D.,& Maiti, D. (2022); Mitra, A., & Mukherji, R. (2026): Analyses Conspicuous expenditure patterns across caste, income groups using Indian household data.

Literature Review (cont.)

- Linssen, R., van Kempen, L., & Kraaykamp, G. (2011); Jadhav, V. (2026):conspicuous consumption reduces subjective welfare and crowds out essential expenditure.

Human capital trade-offs, welfare and household expenditure allocation

- Banerjee, A., & Duflo, E. (2007); Deaton, A. (1997): Discusses spending choices, temptation goods, and human capital trade-offs among poor households.
- Jaimkumar et. al.'I Show Off, So I Am Well Off" (2018): Studies how conspicuous consumption affects perceived well-being among Indian households.
- Moav and Neeman (2009) - Status and Poverty

- **Limited evidence exists on whether household expenditure on gold jewellery in India functions primarily as a status good and/ or a precautionary asset.**
- **How this affects household welfare, human capital investment, and women's empowerment.**

Objectives

- To examine household expenditure patterns across different forms of gold, particularly gold jewellery.
- To analyse whether gold jewellery expenditure is driven by status signalling and conspicuous consumption.
- To assess whether household gold expenditure enhances financial resilience or crowds out human development expenditure such as education, health and nutrition.

Data and Methodology

- **Data:** IGPC-PRICE (2022–23) household gold survey data.
- **Linear Regression:** Status effect on gold jewellery expenditure.
- **2SLS-IV Method:** Effect of gold expenditure on crowding out routine development household expenditure.
- **OLG Framework:** Gold expenditure, financial resilience, and human development trade-offs.

Household Expenditure Patterns across different forms of Gold and other expenditure (Objective 1)

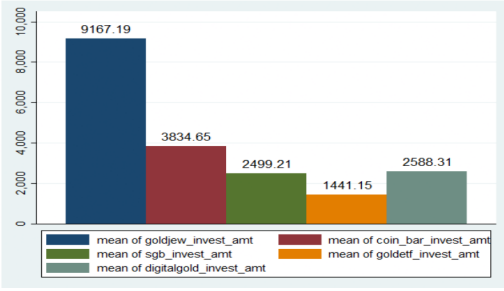

Figure: Average expenditure on different gold products

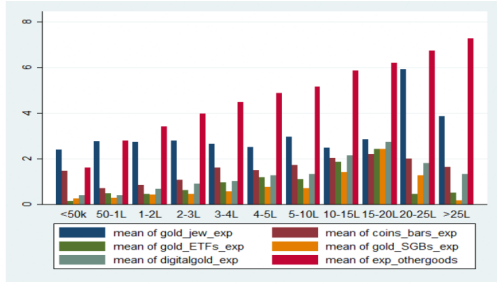

Figure: Average Expenditure on gold products and expenditure on other goods (food and non-food expenditure) across different income levels

Whether gold jewellery expenditure is driven by status signalling and conspicuous consumption (Objective 2)

- **Construction of Status Index**
- **Purpose:** Measure status-seeking behaviour in household gold jewellery consumption.
- **Survey Statements Included:**
  - Gold symbolizes success
  - Buying gold to display wealth
  - Purchase of premium/expensive gold brands
  - Gold increases social respect
  - Gold jewellery creates admired personal style
  - Regular gold purchasing behaviour
- **Response Scale:** 1–7 Likert scale (Strongly Agree to Can't Say)
- **Reverse Coding:**

$$\text{Revised Score} = 8 - \text{Original Score}$$

- **Final Index:**
  Principal Component Analysis (PCA) used to construct a continuous status index.

Determinants of Jewellery Expenditure

Table 7: Determinants of Jewellery Expenditure

	Log (Jewellery Expenditure)					
	Model 1		Model 2		Model 3	
Regressors	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Constant	41.327***	0.00	41.5058***	19.28	32.109***	14.89
Price of jewellery	-0.0063***	-14.73	-0.0064***	-14.85	-0.0054***	-12.70
Location (Urban = 1)	-0.0127	-0.70	-0.0119	-0.67	-0.0209	-1.17
Earning members	-0.0596***	-6.12	-0.0587***	-6.03	-0.0526***	-5.40
Education level (Moderately educated = 1)	0.1857***	8.87	0.1832***	8.76	0.1785***	8.54
Education level (Highly educated = 2)	0.3886***	17.95	0.3782***	17.41	0.3940***	18.27
Status index	-0.0087	-1.00	0.0873***	4.19	0.1139***	5.44
Expenditure on other goods	0.1089***	7.54	0.1122***	7.77	0.0207	1.13
Occupation status	-0.0049	-0.87	-0.0045	-0.81	-0.0054	-0.97
Income level (Moderate income = 1)	0.3427***	13.58	0.3456***	13.71		
Income level (High income = 2)	0.5613***	17.87	0.5697***	18.14		
Status × Income			-0.0508***	-5.06	-0.0572***	-5.69
Log (Income)					0.4187***	18.42
Adjusted R^2	0.2526		0.2560		0.2556	
F-statistic	268.36		247.05		272.55	
P-value	0.0000		0.0000		0.0000	

Notes: The dependent variable is the logarithm of household jewellery expenditure. Robust t-statistics are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Determinants of Jewellery Expenditure

Table 8: Determinants of Jewellery Expenditure by Income Category

	Log (Jewellery Expenditure)					
	Low-income category		Moderate-income category		High-income category	
Regressors	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Constant	36.008***	15.50	129.2883***	3.33	127.5885	1.11
Log income	0.2235***	5.81	0.8585***	6.59	0.0942	1.13
Price of jewellery	-0.0057***	-12.84	-0.0257***	-3.32	-0.0237	-1.03
Location (Urban = 1)	-0.0541*	-1.94	-0.0947***	-2.99	0.1218***	3.60
Earning members	-0.0531***	-3.77	-0.0829***	-4.43	-0.019	-1.02
Education level	0.1421***	7.96	0.1993***	10.90	0.2229***	11.04
Status index	0.0586***	4.27	-0.0262	-1.54	-0.0439***	-3.00
Expenditure on other goods	0.0624**	2.19	-0.1488***	-4.46	0.0825**	2.27
Occupation status	0.0007	0.09	-0.0126	-1.15	-0.0033	-0.32
Adjusted R^2	0.1258		0.0824		0.0953	
F-statistic	61.55		27.07		29.38	
P-value	0.0000		0.0000		0.0000	

Notes: The dependent variable is the logarithm of household jewellery expenditure. Robust t-statistics are reported in parentheses. ***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Determinants of Jewellery Expenditure

Table 9: Determinants of Jewellery Expenditure by Education Level

	Log (Jewellery Expenditure)					
	Low-educated		Moderate-educated		High-educated	
Regressors	Estimate	t-stat	Estimate	t-stat	Estimate	t-stat
Constant	32.6893***	13.01	36.2275***	4.58	38.7688***	5.09
Log income	0.4227***	10.76	0.4144***	9.94	0.4154***	11.10
Price of jewellery	-0.0055***	-11.20	-0.0062***	-3.94	-0.0067***	-4.41
Location (Urban = 1)	0.0493*	1.70	-0.0694**	-2.14	-0.0719**	-2.21
Earning members	-0.0406***	-2.63	-0.0739***	-4.14	-0.0413**	-2.32
Status index (z-score)	0.1230***	3.47	0.1121***	3.10	0.0368	0.81
Status × Income level	-0.0658***	-3.07	-0.0227	-1.32	-0.0482***	-2.60
Expenditure on other goods	-0.0134	-0.42	0.0288	0.87	0.0506*	1.73
Occupation status	-0.0278***	-3.30	0.0230**	2.01	-0.0019	-0.19
Adjusted R^2	0.1770		0.1749		0.1724	
F-statistic	85.47		60.78		66.32	
P-value	0.0000		0.0000		0.0000	

Notes: The dependent variable is the logarithm of household jewellery expenditure.The status index is standardized as a z-score.Robust t-statistics are reported in parentheses.***, **, and * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Does Conspicuous Jewellery Expenditure does have tradeoff with the development expenditure of the households?

- Objective: Examine whether household gold expenditure crowds out development expenditure (education, health, food, etc.).
- Gold expenditure may be **endogenous** due to:
  - Reverse causality
  - Omitted wealth preferences
  - Precautionary savings motives
  - Simultaneous spending decisions
- Example: Wealthier households may spend more on both gold and education, causing gold expenditure to correlate with the error term.
- Hence, OLS estimates may be biased and inconsistent.
- **Instrumental Variables Used: Price of jewellery, Status index**
  - **Price of jewellery**
  - **Status index**
- **Validity of IVs:**
  - Strongly correlated with gold expenditure

2SLS Estimation Framework

First Stage Equation:

$$gold\_exp\_share_i = \alpha_0 + \alpha_1 price\_jew_i + \alpha_2 status\_index_i + \alpha_3 ln\_income\_mid_i + \alpha_4 occup\_status_i$$
$$+\alpha_5 location_i + \alpha_6 fem\_members_i + \alpha_7 earning\_members_i + \alpha_8 edu\_level_i + u_i$$

Second Stage Equation:

$$routine\_exp\_share_i = \beta_0 + \beta_1 \widehat{gold\_exp\_share}_i + \beta_2 ln\_income\_mid_i + \beta_3 occup\_status_i$$
$$+\beta_4 location_i + \beta_5 fem\_members_i + \beta_6 earning\_members_i + \beta_7 edu\_level_i + \varepsilon_i$$

- Instruments used: **Price of Jewellery** and **Status Index**
- $\widehat{gold\_exp\_share}$ represents predicted gold expenditure from first stage.

Instrumental Variables (2SLS) Regression Results

Table 1: Dependent Variable: Routine Expenditure Share

Regressors	Coef.	Std. Err.	t-value	Sig.
gold_exp_share	0.143	0.020	7.30	***
ln_income_mid	0.006	0.003	2.34	**
occup_status	0.000	0.000	1.32	
location	0.000	0.001	0.34	
fem_members	0.004	0.001	6.27	***
earning_members	0.004	0.000	7.73	***
edu_level	-0.002	0.001	-1.87	*
Constant	-0.050	0.037	-1.34	
Observations		7911		
Chi-square		599.812		
Prob > chi2		0.000		

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

First stage summary statistics

First-stage regression summary statistics

Variable	R-sq.	Adjusted R-sq.	Partial R-sq.	F(2,7902)	Prob > F
gold_exp_s~e	**0.2130**	**0.2122**	**0.0122**	**48.7344**	**0.0000**

Minimum eigenvalue statistic = **48.7344**

Critical Values	# of endogenous regressors:	**1**
Ho: Instruments are weak	# of excluded instruments:	**2**

	5%	10%	20%	30%
2SLS relative bias		(not available)		

	10%	15%	20%	25%
2SLS Size of nominal 5% Wald test	**19.93**	**11.59**	**8.75**	**7.25**
LIML Size of nominal 5% Wald test	**8.68**	**5.33**	**4.42**	**3.92**

Theoretical Framework (Objective 3)

Moav and, Omer, and Zvika Neeman. "Saving rates and poverty: The role of conspicuous consumption and human capital." The Economic Journal 122.563 (2012)

- Overlapping generations model(OLG) of a one-good economy with a continuum of individuals.
- An Individual lives for two periods. Young- receives education (human capital). Old- Earns income and allocates it.
- The good can be used for consumption (c), conspicuous consumption (x), and investment in human capital or bequest (b). x is imported at p_f and real expenses $p_f x/p_d = p_d tx$, where t=terms of trade.

$$c + b + p_d tx \leq y$$

- Individuals' preferences are represented by the following Cobb-Douglas utility function:

$$u(c, b, x) = B\left(c^{1-\beta} b^{\beta}\right)^{1-\lambda} x^{\lambda}$$

Theoretical Framework (cont.)

- where $\beta \in (0,1)$ and $\lambda \in (0,1)$ are parameters that capture the relative weight given to consumption, bequest, and status.
- $$B \equiv \left((1-\beta)^{\beta-1}\beta^{-\beta}\right)^{1-\lambda}$$
  is a constant coefficient.
- The maximization of individuals' utility function subject to their budget constraint implies that for any level of expenditure on conspicuous consumption, x, the bequest that individuals leave to their offspring is
  $$b* = \beta(y - p_d tx)$$
  and individuals' consumption is
  $$c* = (1-\beta)(y - p_d tx)$$

Theoretical Framework (cont.)

- In their second period of life, (old) individuals spend a fixed amount of their time working. An individual with human capital h produces a non-negative quantity

$$y = h(b) + \pi(\rho, t); \rho = E_t p_{dt+1} - p_{dt}$$

- ρ represents the expected gain from the gold price rise
- $$h(b) = \theta + \gamma b$$

  where $\theta > 0$ and $\gamma > 1$
- $$h_{t+1} = \theta + \gamma\beta(y(\rho, t) - p_d tx)$$
- Standard models assume $y'(\rho) = 0$, implying conspicuous consumption generates no return to future income.
- In our framework, $y'(\rho) > 0$, as expenditure on gold jewellery can increase income through social networks, marriage prospects, informal credit access, or status effects.

Thoeretical Framework (cont.)

- The revised human capital equation becomes:

$$h_{t+1} = \theta + \gamma\beta[y(\rho, t) - p_d tx]$$

- Human capital dynamics now depend on the net effect of conspicuous expenditure on income.
- If $[y(\rho, t) - p_d tx] > 0$, the income gains from gold expenditure exceed its cost, leading to higher bequests, human capital, and future income.
- If $[y(\rho, t) - p_d tx] < 0$, the cost of conspicuous expenditure dominates the income gains, reducing future human capital and income.

Thank You!