

MARKET EVIDENCE · CONTINGENT VALUATION

The Economics of AI in Education

Parental willingness to pay for AI learning tools in low-resource settings, from a double-bounded contingent valuation survey of 560 Kenyan households.

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Kernel Institute generates evidence for reducing societal-scale risks from transformative technologies. kernelinstitute.org

What would Kenyan parents actually pay for AI tutoring, and does it cover the cost of building it? This snapshot summarizes a double-bounded dichotomous-choice contingent valuation survey of 560 households, comparing willingness to pay (WTP) under personal payment against school-supported payment where institutions share the cost and confer legitimacy. Median monthly WTP is KES 1,250, below the KES 1,500–3,000 typically charged for commercial subscriptions, and 40% of households report WTP below KES 500 under personal payment. Household income is the strongest predictor of acceptance, followed by education and urban location; school endorsement lifts mean WTP from KES 2,607 to KES 3,040. Left to market pricing alone, AI-enabled learning tools will exclude the households that stand to benefit most.

FINDINGS

 **Median WTP sits below market price:** KES 1,250/mo
Well under the KES 1,500–3,000 typical market range for commercial AI-enabled learning subscriptions in Kenya.

 **Income is the strongest predictor:** +24.4 pp per unit
A one-unit increase in log household income raises acceptance probability by 24.4pp under personal payment, 20.7pp under school support.

 **4 in 10 households can't afford the cheapest tier:** 40% below KES 500
Under personal payment, 40% of households value the tool below the lowest bid tested, even a KES 500/month basic plan.

 **Older parents are harder to convert:** –2.1 pp per year
Each additional year of parental age reduces acceptance probability, consistent with generational technology-adoption patterns.

 **School endorsement lifts value:** KES 2,607 → 3,040
Mean WTP rises and the share willing to pay ≥KES 5,000 climbs from 24.8% to 30.7% when schools share cost and confer legitimacy.

 **Geography rivals income as a barrier:** +23–28 pp urban
Urban and suburban households are 23–28 percentage points more likely to accept than rural households, at identical prices.

IMPLICATIONS

 **Deploy means-tested subsidies**
Target the bottom-WTP quartile directly; market pricing alone will exclude roughly 4 in 10 households from even a basic tier.

 **Use schools as the primary distribution channel**
Bulk procurement through schools lifts both trust and price tolerance, especially for middle-income families who hesitate to buy direct.

 **Build flexible, mobile-money payment plans**
Pay-as-you-go and deferred billing aligned to income cycles match Kenya's mobile-money infrastructure and reduce upfront barriers.

 **Treat rural connectivity as a precondition**
The location premium rivals the income effect in size; without infrastructure investment, pricing fixes alone won't reach rural households.

 **Run trusted-messenger awareness campaigns**
Target older, less-educated parents through teachers and community leaders; skepticism, not only cost, is blocking adoption for this group.

 **Structure PPPs with explicit equity obligations**
Link procurement contracts and tax incentives to service commitments for low-income and rural populations, not uptake alone.

METHODOLOGY AT A GLANCE

SAMPLE

560
Kenyan households

METHOD

DBDC CVM
Bivariate probit

BID LEVELS

KES 500/2K/5K
2 payment vehicles

ETHICS REVIEW

NACOSTI
Permit P/25/4178956

COVARIATES TESTED

Income **Education** **Location**
Age **Employment**

1 CONTEXT: PRICING A CREDENCE GOOD



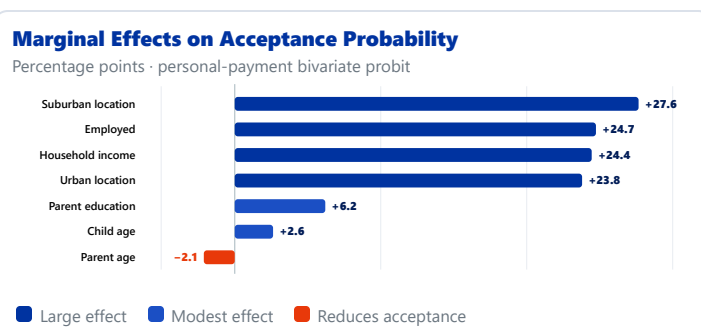
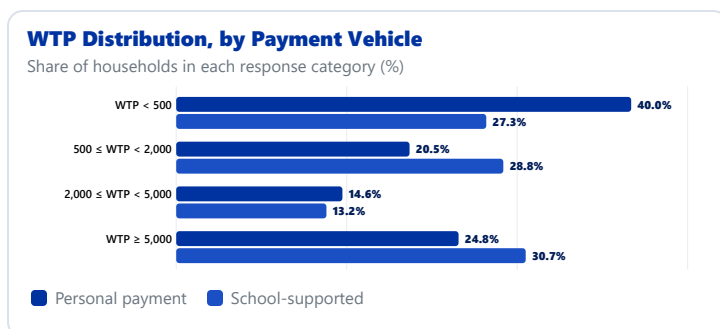
- Opportunity**
AI tutoring could deliver expert-level, individualized support at scale in classrooms constrained by teacher shortages.
- Information asymmetry**
As a credence good, parents can't fully verify quality or safety before use; price and institutional endorsement become signals.
- Equity concern**
Income and geography jointly gate access, the same forces that already widen Kenya's education gap.
- Access barrier**
Rural households are 23–28 points less likely to accept at any price: a connectivity gap, not just a cost gap.

2 RESEARCH DESIGN: DOUBLE-BOUNDED BID SEQUENCE

RESPONSE PATTERN	WTP BOUND IMPLIED	PERSONAL PAYMENT	SCHOOL-SUPPORTED
Yes – Yes	$WTP \geq \text{KES } 5,000$	24.8% of households	30.7% of households
Yes – No	$\text{KES } 2,000 \leq WTP < 5,000$	14.6% of households	13.2% of households
No – Yes	$\text{KES } 500 \leq WTP < 2,000$	20.5% of households	28.8% of households
No – No	$WTP < \text{KES } 500$	40.0% of households	27.3% of households

Each respondent faced an initial bid of KES 2,000/month, then a higher (KES 5,000) or lower (KES 500) follow-up bid depending on their first answer, under both payment vehicles. Estimated via bivariate probit with 6 covariates.

3 KEY QUANTITATIVE RESULTS



4 WHO GETS PRICED OUT

“The same forces that already widen Kenya's education gap, income, geography, parental education, will determine who gets AI tutoring first.”

INCOME

+24.4 pp

Acceptance-probability gain per unit increase in log household income: the single strongest predictor in the model.

LOCATION

+23.8 / +27.6 pp

Urban and suburban households are far more likely to accept than rural households, at identical prices.

AFFORDABILITY

40% below KES 500

Under personal payment, 4 in 10 households cannot afford even the cheapest tier tested.

5 BOTTOM LINE

TAKE-AWAY FOR DEVELOPERS, POLICYMAKERS & FUNDERS

AI-enabled learning tools face real, quantifiable demand in Kenya, but without subsidies and school-based delivery, market pricing will exclude the households AI could help most.