

When Information Is Not Enough:

The limits of energy labels in selling clean cookstoves in Kenya

1. Executive Summary

Globally, clean cooking remains a critical challenge, with billions of people relying on polluting fuels. Inefficient cookstoves contribute to severe health risks, environmental degradation and persistent gender inequities. While energy efficiency labels — visual displays affixed to products that communicate performance levels — have succeeded in high-income countries as behavioral nudging tools, there is limited evidence of their effectiveness in lower- and lower-middle-income cooking contexts. The Clean Cooking Alliance conducted a behavioral experiment to explore whether efficiency labeling could influence consumer choice and drive the adoption of improved cookstoves in rural Kenya.

The experiment tested a proposed label developed by the Clean Cooking Association of Kenya, designed to rate cookstove fuel efficiency on a scale of one to five flames. The label was based on Kenyan national standards and aimed to provide consumers with clearer information to support purchasing decisions. The study assessed changes in willingness to pay, stove selection and understanding of efficiency concepts. It was conducted in Kakamega, a rural region characterized by heavy reliance on biomass fuels and limited exposure to clean cooking technologies.

The findings revealed that labels alone do not significantly drive behavior change. While the concept of efficiency resonated positively with consumers, actual understanding remained limited. Some increases in willingness to pay were observed, but these did not justify the higher costs of cleaner stoves — or even the label itself. Stove selection continued to be heavily influenced by cost and fuel type, with wood fuel dominating due to its familiarity and accessibility. This entrenched behavior suggests that labels are not potent enough to disrupt established fuel choices, nor are they sufficient to improve conceptual understanding of energy efficiency — especially when baseline awareness is low.

These findings underscore that clean cooking efficiency labels are not a silver bullet in the lower- and lower-middle-income country context. For labeling to be effective, it must be part of a broader system that addresses both awareness and affordability. In contexts where financial constraints control decision-making, informational nudges require complementary interventions to shift consumer behavior meaningfully.

Given the limitations observed during the experiment and the need for broader market readiness, the following recommendations aim to strengthen the role of labeling within a comprehensive clean cooking strategy:

- **Reassess labeling as a lone informational strategy:** Efficiency labels may be effective under specific conditions, but the high costs of labeling programs and market constraints require a rigorous cost-benefit analysis.
- **Address market realities through combined interventions:** When efficiency labels are used and their effect on willingness to pay is marginal, they can be paired with financial mechanisms, such as subsidies, to reduce upfront costs.
- **Prioritize testing and piloting:** Small-scale, context-specific pilots can be used to validate core assumptions before large-scale deployment.

2. Introduction and Context

The Clean Cooking Problem

More than 2.1 billion people worldwide — approximately one-quarter of humanity — cook with traditional, polluting fuels like kerosene, wood and charcoal.¹ This practice contributes to more than three million deaths annually, primarily among women and children in South and Southeast Asia, sub-Saharan Africa and Central America, due to traditional gender roles and cultural practices that assign them responsibility for domestic labor.² Indoor air pollution remains one of the leading global environmental health risks, contributing to pneumonia, stroke, heart disease and lung cancer.³ Traditional cooking methods also drive forest degradation, biodiversity loss and annual carbon emissions equivalent to the entire airline industry.⁴

Even beyond the health risks associated with indoor air pollution, the human costs are staggering: women and girls spend up to 10 hours per week gathering cooking fuel — a form of time poverty that robs them of opportunities for education or income-generating activities. Furthermore, the process of collecting fuel

¹ International Energy Agency, International Renewable Energy Agency, United Nations Statistics Division, World Bank & World Health Organization. (2024). *Tracking SDG 7: The Energy Progress Report*. World Bank, Washington, DC. <https://trackingsdg7.esmap.org/data/files/download-documents/sdg7-report2024-0611-v9-highresforweb.pdf>.

² World Health Organization. (2024). *Household air pollution*. WHO. <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>.

³ World Health Organization. (n.d.). *Air quality, energy and health*. WHO. <https://www.who.int/teams/environment-climate-change-and-health/air-quality-energy-and-health/sectoral-interventions/household-air-pollution/health-risks>.

⁴ Masera, O.R., Bailis, R., Drigo, R., Ghilardi, A. & Ruiz-Mercado, I. (2015). Environmental Burden of Traditional Bioenergy Use. *Annual Review of Environment and Resources*, 40, 2015. doi: 10.1146/annurev-environ-102014-021318.

often exposes women and girls to heightened risks of gender-based violence, as they travel long distances in isolated areas.⁵ These impacts perpetuate cycles of poverty and gender inequality.

Efforts to address the gap have included both clean cookstoves (LPG, electric, biogas) and improved cookstoves (more efficient wood or charcoal stoves), each with its own set of barriers and opportunities. Despite technological advances in cooking solutions, alongside innovative business models using subscriptions, mobile payments and carbon credit monitoring, adoption rates lag far behind the requirements to meet the United Nations' Sustainable Development Goal 7 of universal access to clean cooking by 2030.¹ In sub-Saharan Africa, where population growth outpaces clean cooking adoption, the absolute number of people using traditional fuels has increased by 17 percent since 2010.⁶ It has become apparent that better products alone are insufficient to drive widespread adoption.

The urgency of this issue is particularly pronounced in Kenya, where roughly 75 percent of households — and more than 90 percent in rural areas — use solid fuels for cooking.⁷ The Kenyan government, aligned with SDG7, has committed to expanding clean cooking access by 2030, integrating this goal into national energy policies and mobilizing significant funding to support its adoption. As such, Kenya has become something of a regional testing ground for clean cooking innovations, with numerous pilot programs and initiatives launched by international donors, local governments and NGOs.

The Opportunity and Gap

To address these deep-rooted challenges, efforts have primarily focused on two strategies: financial incentives and information campaigns aimed at driving clean cooking adoption.

- **Financial incentives:** Subsidies from donors, governments and carbon credits help reduce the higher upfront costs of clean or improved cookstoves. In some cases, stoves are even distributed for free to remove cost barriers entirely.
- **Information campaigns:** Initiatives that aim to educate communities on the health risks associated with traditional cookstoves and the benefits of cleaner alternatives through marketing, media outreach, product demonstrations and public health messaging.

This report focuses on the latter approach — specifically, the potential for cookstove efficiency labeling as a nudging tool to drive consumer behavior. Labels are designed to address information asymmetry by providing consumers with clearer signals about product efficiency, quality and performance. A well-known

⁵ Clean Cooking Alliance. (2023). *Gender and Clean Cooking*. CCA. <https://cleancooking.org/wp-content/uploads/2023/07/Gender-and-Clean-Cooking.pdf>.

⁶ International Energy Agency. (2024). *SDG7: Data and projections – Access to clean cooking*. IEA. <https://www.iea.org/reports/sdg7-data-and-projections/access-to-clean-cooking>.

⁷ Clean Cooking Association of Kenya & Republic of Kenya Ministry of Energy. (2019). *Kenya Household Cooking Sector Study*. CCAK & MOE. https://rise.esmap.org/data/files/library/kenya/Electricity%20Access/Kenya_MoE-Kenya%20Cooking%20Sector%20Study_2019.pdf.

example of this is the Energy Star program in the United States, which has dramatically increased consumer adoption of energy-efficient products, from lightbulbs to kitchen appliances. Today, products bearing the Energy Star label account for more than 75 percent of market share, collectively saving American consumers an estimated \$35 billion in energy costs annually.⁸

Yet most such successful labeling programs and related research have emerged from the high-income country context and focus primarily on electric appliances. Little is known about whether energy efficiency labels for non-electric appliances shift behavior in lower- and lower-middle-income countries. The Clean Cooking Alliance aimed to fill that gap by exploring whether efficiency labels could influence purchasing decisions toward cleaner cookstove options in rural Kenya, specifically biomass improved cookstoves.

Key Assumptions

The clean cooking labeling theory rests upon several key assumptions:

- **People lack clarity about what constitutes a better product.** There is a gap in understanding the benefits of improved cookstoves versus traditional models, alongside the long-term cost savings of energy-efficient products. Labels are intended to bridge that gap by visually signifying performance.
- **People will buy better products if they understand their benefits.** If consumers can easily recognize which cookstoves are more efficient, they will want to purchase those options. The information on energy-efficient labels, backed up by an explanation of energy efficiency, can positively affect people's perception of energy-efficient cookstoves.
- **People are willing to spend more on better products.** An increase in willingness to pay on energy-efficient cookstoves, even slightly, can compensate for a lower ability to pay and help close the affordability gap — making improved cookstoves financially viable without the need for direct subsidies.

These assumptions predict that an improved understanding and signaling of efficiency will drive cleaner cooking adoption; however, in testing, such expectations were not fully realized. The effectiveness of labeling as an agent of behavior change in the lower- and lower-middle-income country clean cooking context, its limitations and opportunities are explored in this report.

⁸ U.S. Environmental Protection Agency. (2020). *ENERGY STAR By the Numbers – 2019*. EPA. https://www.energystar.gov/sites/default/files/asset/document/2020_EPA_ES_Factsheet_ByTheNumbers_v4_For508.pdf.

3. About the Experiment

Site Selection

The design of the study was grounded in research conducted by CCA and CCAK, which highlighted stark disparities in consumer familiarity with clean cooking technologies across Kenya. This initial research, consisting of interviews and field observations in both urban (Nairobi) and rural (Kakamega County) settings, exposed a critical gap in understanding what constitutes a more efficient cookstove. In Nairobi, a more mature market, the majority (62 percent) of respondents expressed high familiarity with clean cooking technologies, including LPG and electric stoves. In contrast, awareness was substantially lower in Kakamega, with many respondents noting that while they had heard of clean cookstoves, they had never used them personally.

Figure 1: Location of Kakamega County in Kenya



This divergence in familiarity signaled that an intervention designed to bridge the information gap would be most impactful in a rural setting with low prior exposure to clean cooking. Kakamega (Figure 1) is heavily reliant on firewood for daily cooking and faces ongoing issues of fuel shortages, deforestation and mounting land-use pressures. This context presented an ideal testing ground for evaluating whether simple, standardized labels could effectively inform and shift consumer purchasing behavior toward more efficient cookstove options.

Research Objectives

The experiment in Kakamega was designed with three primary research objectives. It aimed to evaluate whether efficiency labels could increase consumers' willingness to pay for improved cookstoves without additional financial incentives. Second, the study sought to determine whether labeling could improve consumer understanding of energy efficiency. Finally, the study assessed whether labeling could influence consumers to select cleaner, more efficient stoves over traditional biomass options.

Study Design

At the core of the experiment was a proposed standardized efficiency label developed by CCAK. The label design (Figure 2) was based on real efficiency test data and aligned with Kenyan national standards. It featured a visual representation of flames, ranging from one to five, to indicate the level of fuel efficiency. The visual simplicity of this design was intentional: Each additional flame symbolized greater efficiency, providing consumers with a quick, intuitive way to assess stove quality at the point of sale. The label also included the catchphrase, "More Flames, More Savings," reinforcing the intended message that higher-rated stoves consume less fuel, resulting in cost savings over time.

Figure 2: Cookstove Fuel Efficiency Sample Label



CCA tested this label through a randomized controlled trial to rigorously evaluate the impact

on consumer behavior in Kakamega. Participants were randomly assigned to four distinct groups, each receiving varying levels of information about energy efficiency concepts more broadly and the labeling system itself. By isolating the effect of different information conditions, researchers could determine the success of specific education and messaging strategies.

To simulate real-world purchasing decisions, the study used a discrete choice experiment, a method that presents participants with side-by-side product options and asks them to choose their preferred one. In this case, participants compared hypothetical cookstoves that varied by five key attributes: brand, efficiency rating, fuel type, pot size and price. The specific attribute options utilized in the choice sets are listed below (Table 1); ultimately, there were 144 distinct choice-set possibilities tested.

Table 1: Cookstove Choice-Set Attributes

Brand	Efficiency	Fuel Type	Pot Size	Price
<ul style="list-style-type: none"> Jikokoa Kuniokoa 	<ul style="list-style-type: none"> No rating 1 Flame 3 Flames 5 Flames 	<ul style="list-style-type: none"> Charcoal Pellets/Briquettes Wood 	<ul style="list-style-type: none"> 5 liters 7 liters 	<ul style="list-style-type: none"> Low: 500 KSh Medium: 600 KSh High: 750 KSh

The hypotheticals were presented in pairs and each participant asked to pick between one of the two or given the option to opt out if they did not think they would choose either. A sample card design of what participants saw is outlined in Table 2:

Table 2: Sample Card Design

Feature	Option 1	Option 2	None of These Options
Brand	Kuniokoa	Jikokoa	
Price	500 KSh	600 KSh	
Efficiency Rating	5 Stars	1 Star	
Fuel Type	Charcoal	Pellets/Briquettes	
Pot Size	5 Liters	7 Liters	

In addition to the discrete choice experiment, respondents answered a series of willingness-to-pay questions, asking how much they would spend on cookstoves with and without efficiency labels. Finally, participants completed a maximum difference scaling exercise, which helps identify what matters most when people are forced to make trade-offs. They were shown small sets of potential benefits of cookstoves — such as saving time, using less fuel or reducing indoor smoke — and asked to pick the most and least important benefit in each set. By combining the discrete choice experiment with willingness-to-pay and MaxDiff questions, the study captured both behavioral trade-offs and stated intent, offering a more comprehensive picture of how consumers evaluate improved cookstoves.

What is a discrete choice experiment (DCE) and why use it?

A DCE is a research method used to understand how people make decisions when faced with multiple options. Rather than asking people directly what they prefer or how much they value something, a DCE presents them with hypothetical pairings (or sets) of choices and asks them to select the option they would choose in each case. Each option varies across key attributes, and participants are shown repeated, randomized combinations to observe how they make decisions between competing priorities.

For example, someone might choose between two cookstoves: one is cheaper but less efficient, and the other costs more but uses less fuel. By analyzing patterns across multiple participants and

repeated choices, researchers can identify which features matter most and how much people are willing to give up in one area (e.g., price) to gain in another (e.g., efficiency).

The strength of DCEs for testing consumer behavior is reducing social desirability bias — the tendency for people to give answers they think sound good or are expected, rather than what they truly believe or would do. For instance, in a survey, someone might claim they are willing to pay more for an improved cookstove because it seems like the “correct” answer, but when forced to choose between specific attributes, their actual priorities become more transparent.

Results

A total of 418 participants were recruited, reflecting typical stove users in Kakamega. Most were women, as recruitment aligned with times when they were more likely to be at home and available (Figure 3). Nearly 90 percent of participants reported monthly incomes under 10,000 KSh (around \$77), significantly lower than the Kenyan national average earnings of approximately 78,000 KSh per month.⁹ Each of the four groups — ranging from no information to comprehensive explanations with visual labels — demonstrated varying levels of willingness to pay, understanding of efficiency and tendency to select improved cookstoves. The groups, their treatment and the results are summarized in

Table 3, with full methodology and results found in the appendix.

Figure 3: Participant Demographics



⁹ CEIC Data. (n.d.). *Kenya Monthly Earnings – 2023*. CEIC. https://www.ceicdata.com/en/indicator/kenya/monthly-earnings?utm_source.

Table 3: Participant Treatment Groups and Results

Group	Treatment	Results
Control Group	This group received no information . It served as the baseline to measure the natural purchasing behavior of participants without intervention	The average willingness to pay for a generic improved cookstove was 1,137 KSh. This group established the benchmark against which all other treatments were measured, confirming the pre-existing market preference and price sensitivity among local stove users.
Treatment Group 1	Participants received a basic explanation of energy efficiency principles but were not exposed to the visual label . This treatment aimed to evaluate whether minimal conceptual information alone could influence consumer decisions.	Results from this group showed no meaningful change in willingness to pay or purchase intent when compared to the control. While the information was intended to boost understanding of fuel savings and efficiency, participants did not demonstrate improved comprehension of efficiency concepts. This finding suggested that text-based information alone was insufficient to drive behavior change in this context
Treatment Group 2	This group received a basic explanation of both energy efficiency and the label (e.g., that the flames corresponded with efficiency testing results based on Kenya's national standards). The objective was to measure the combined impact of general information and visual signaling on decision-making.	Participants in this group showed a modest increase in willingness to pay , averaging 1,510 KSh for 5-flame stoves, which was a minor improvement over the control group. More respondents in this group were able to correctly associate energy efficiency with reduced fuel usage, suggesting that the visual representation provided clarity that text alone did not achieve. The presence of the label also made participants more likely to select stoves with higher efficiency ratings, indicating a tangible impact of the label as a decision-making nudge
Treatment Group 3	Participants in this group received an extended, detailed explanation of energy efficiency as well as a full breakdown of the labeling system. This final group was designed to test whether more comprehensive information would further influence	Surprisingly, this group experienced a backfire effect. Compared to the control group, participants were 13 percent less likely to report that the label influenced their decision. This was attributed to potential cognitive overload: the extensive amount of information provided may have overwhelmed participants, diminishing the effectiveness of the

	purchasing behavior compared to simpler messaging.	labeling intervention. Rather than enhancing understanding, the heavy detail appeared to confuse or disengage participants
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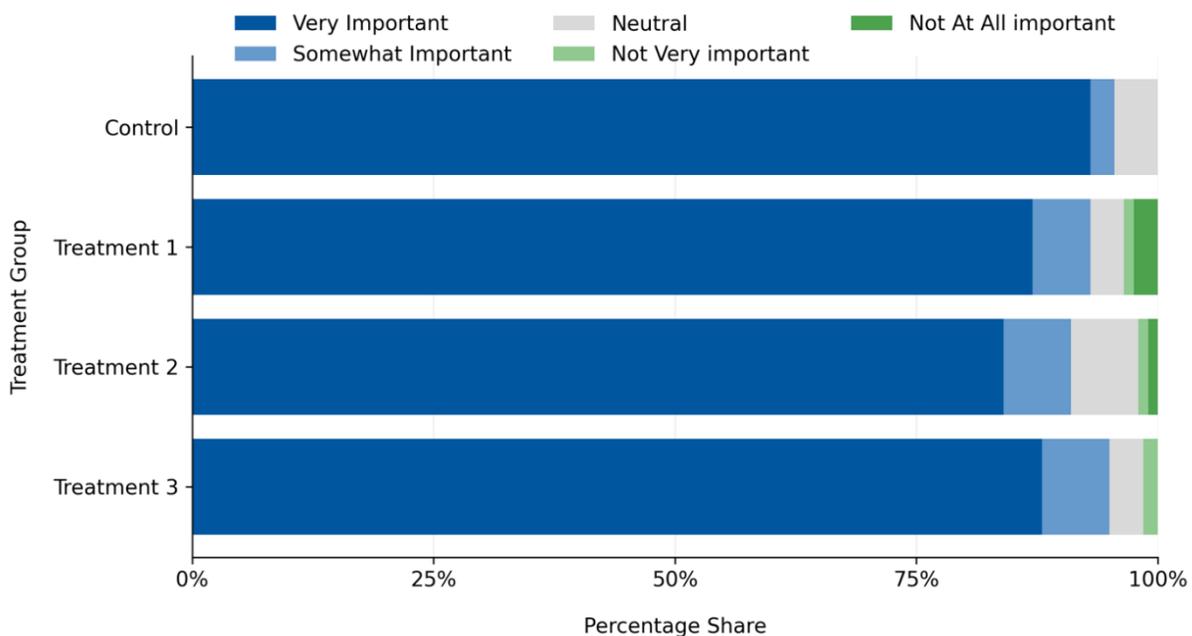
While Treatment 2's simple messaging combined with visual cues proved most effective, it is important to note that **no group showed statistically significant changes in knowledge, intentions or behavior**. The results suggest that while labels can modestly influence willingness to pay and improve selection toward efficient stoves, the intervention alone may not be sufficient to drive large-scale behavior change.

4. Key Findings

The results uncovered several critical insights that illustrate both the potential and limitations of clean cooking efficiency labeling in rural, biomass-dependent contexts.

People like the idea of efficiency, but do not necessarily understand it

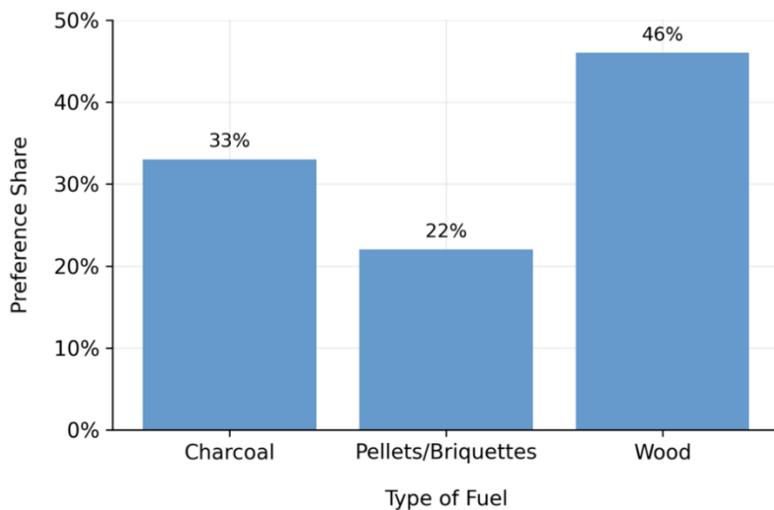
When asked directly in a survey, 90 percent of participants said that efficiency was "very important" when choosing a cookstove (Figure 4). However, this stated importance did not carry through to their actual choices in the discrete choice experiment, where preferences for efficient stoves were far less consistent. This disconnect may reflect social desirability bias, in which inauthentic answers are given because they sound "better," but also conceptual misunderstandings.

Figure 4: Cookstove Energy Efficiency Stated Importance by Treatment Group

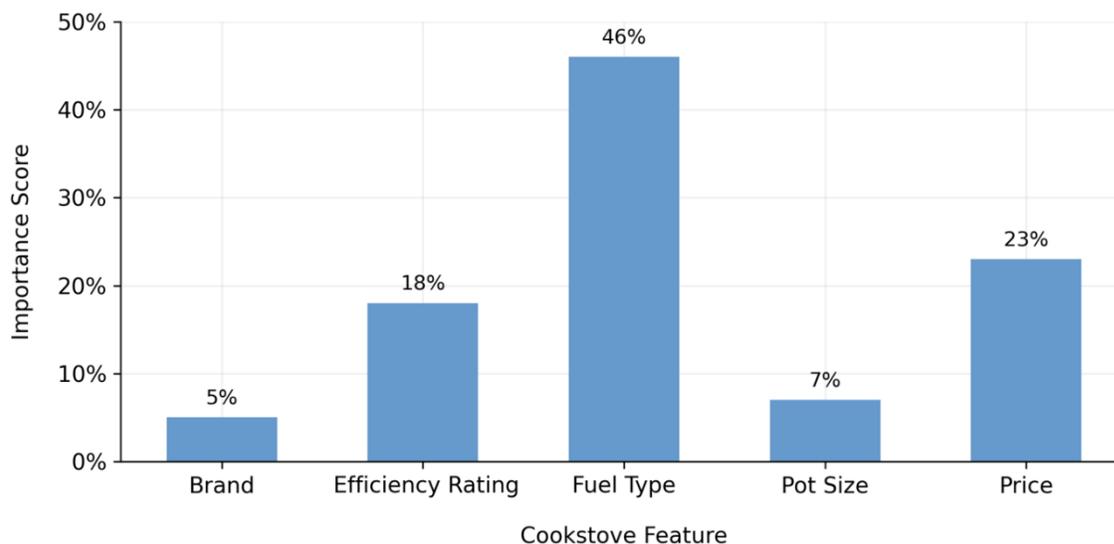
While the idea of efficiency resonated in principle, participants' actual understanding of the term — or of what the efficiency label was intended to convey — remained limited. In surveys, 55 percent of respondents chose the correct interpretation of energy efficiency, linking it to reduced fuel consumption, yet 45 percent did not make that connection. This knowledge gap persisted even among those who received detailed explanations; in Treatment Group 3, which was exposed to the most comprehensive breakdown of efficiency concepts, nearly half of the participants still misunderstood what efficiency entailed. The difference in information between the participants did not seem to correlate to any significant improvements in understanding. Respondents expressed confusion over terminology and the practical implications of efficiency, underscoring the reality that mere exposure to technical information does not guarantee comprehension.

Wood is king

Figure 5: Fuel Type Preferences



The testing also highlighted a deeply entrenched preference for wood as a primary cooking fuel (Figure 5), even in comparative scenarios where the wood-burning option held a lower efficiency rating. Feature importance analysis from the discrete choice experiment — based on the range of predicted choice probabilities within and across attributes — is visualized in Figure 6, showing that fuel type ultimately had the greatest influence on stove choice, followed by price. This finding stands in sharp contrast to participants' self-reported values: efficiency was consistently deprioritized in actual trade-offs.

Figure 6: Cookstove Feature Importance Analysis

The specific fuel preference is driven by multiple factors: Wood is often free or very low cost, it is widely available in rural areas, and it is deeply familiar to users. Behaviorally, this reflects a form of status quo bias: the inclination to stick with familiar options even when new ones are presented as superior. For many participants, the idea of switching to a different fuel type, regardless of efficiency gains, represented a logistical and psychological shift that the label alone could not overcome. Additionally, fuel stacking (the practice of using multiple fuel types simultaneously) meant that wood remained a staple even when charcoal or improved cookstoves were introduced.

Price is a significant factor in decision-making

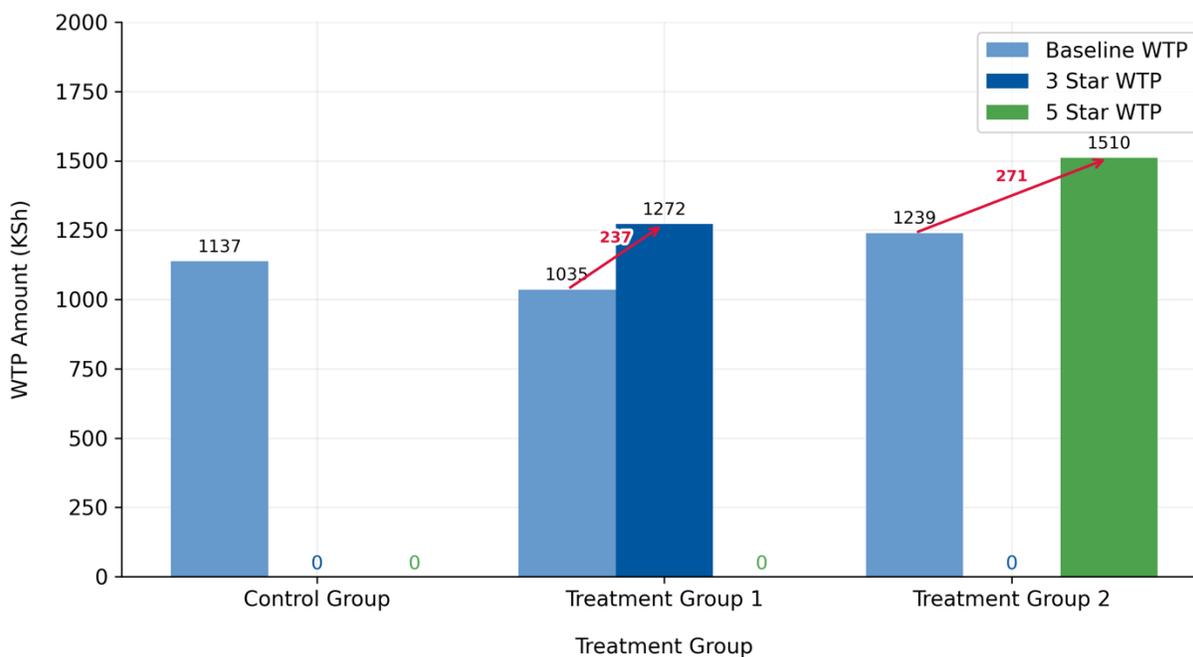
Although efficiency labels influenced willingness to pay modestly, a dominant driver of stove choice remained price sensitivity. The study's findings demonstrated steep price elasticity — when faced with the option of a more efficient, yet more expensive stove, participants across all treatment groups consistently favored the lowest-cost options (Figure 7) and less efficient models. For context, the cost of a basic clay stove ranges between 250-1,500 KSh, while improved cookstoves can cost 4,000-7,000 KSh. For many households in Kakamega, a 750 KSh traditional stove represents nearly 13 percent of their monthly income, making even moderate price increases a substantial barrier.

Figure 7: Cookstove Price Preferences

This highlights a core tension in clean cooking interventions: affordability only improves when both willingness and ability to pay align. In this case, ability to pay was simply too low for efficiency signals to make a difference and shift purchasing behavior. Even when the visual label suggested greater fuel savings, the upfront cost remained a more powerful determinant of choice. The potential for long-term savings through fuel efficiency was not clearly understood or valued by participants, suggesting that labels did not effectively communicate the idea of payback over time.

Labels do help, but only to a point

The efficiency labels did have a real, albeit limited, impact on consumer behavior. Among participants in Treatment Group 2, willingness to pay for a 5-flame stove rose to 1,510 KSh, compared to 1,239 KSh in the control group, a more than 20 percent increase (Figure 8). However, this \$2-\$3 difference in willingness to pay is not sufficient to cover the price gap between basic clay stoves and improved biomass cookstoves — or even the cost of the label itself.

Figure 8: Comparison of Willingness to Pay for Improved Cookstoves Based on Efficiency Rating

Moreover, the labels were not universally well-received. Some users preferred unlabeled stoves to those with one flame, misinterpreting low-flame ratings as an indicator of poor quality. This negative perception suggests that labeling, if not paired with adequate education, could inadvertently dissuade consumers from upgrading to improved cookstoves. While labels can nudge consumer behavior somewhat, their real impact is constrained by deeper market dynamics — primarily affordability, fuel availability and the strength of ingrained habits — and persistent educational gaps.

5. Lessons Learned and Recommendations

The study in Kakamega offered a unique lens into the complexities of using efficiency labels as a tool to drive cleaner cooking adoption. The labeling initiative assumed that **(1)** people lack clarity about what constitutes a better product, **(2)** people will buy better products if they understand their benefits and **(3)** people are willing to spend more on better products. Through the testing process, it became evident that these assumptions were more complicated than initially imagined. The following lessons emerged as critical reflections, with strategic recommendations to better enable labeling to succeed as part of a clean cooking strategy.

Labels are not silver bullets

One of the foundational assumptions of the study was that providing clear visual signals of stove efficiency would close the gap in understanding what constitutes a better product. Yet, even when presented with an explanation of energy efficiency, consumers struggled to understand what it meant in practical terms.

For many rural consumers, the concept of thermal efficiency remained abstract and disconnected from their lived experiences of daily cooking with wood. A label indicating five flames might signal "better," but without a deep understanding of how that improvement translates to fuel savings, payback over time or health benefits, it lacked real persuasive power. For labels to influence consumer behavior, the market itself must be ready, and consumers must have at least a basic understanding of what those labels signify, which would require long-term awareness-raising campaigns that are embedded in community settings.

Moreover, the experiment uncovered a crucial vulnerability in the labeling strategy: oversimplification can be misleading. The efficiency labels tested were fuel-agnostic, meaning the ratings system did not distinguish between the types of fuel used: charcoal, pellets or wood. As a result, consumers were left to interpret efficiency ratings without understanding the vastly different health and environmental impacts associated with each fuel type. This lack of differentiation risks creating perverse incentives, where, for example, a 5-flame wood stove might be perceived as superior to a pellet gasifier stove with no label or with fewer stars on its label, even though a pellet gasifier stove produces less harmful smoke and pollutants. Further, cost savings are ambiguous when the same label is affixed to stoves using different fuel sources, meaning they have fundamentally different operating costs. While integrating fuel-specific indicators could improve transparency, doing so would introduce additional layers of complexity — both in visual design and consumer education. Given that even basic concepts of efficiency struggled to resonate with consumers during the experiment, further complicating the label may not be the optimal solution.

Recommendation: Reassess labeling as a lone informational strategy

While labels could be a useful tool under specific circumstances, they are not sufficient on their own to shift consumer behavior. Alternative or complementary forms of information communication may offer stronger behavioral levers — for instance, peer influence can build legitimacy and trust. Future studies could test the role of community figures or neighbor endorsements, alongside or in lieu of formal labels, in increasing willingness to pay for efficient cookstoves. Similarly, in-person cooking demonstrations have proven effective in bridging the gap between abstract benefits and tangible experience. These allow users to see — and even feel — fuel savings, heat retention and ease of use in real life, which may resonate more deeply than a sticker.

Ultimately, labeling interventions are expensive endeavors — one of the unexpected findings was the high cost of the label stickers themselves, which could high due to fireproofing and waterproofing requirements. Further, effective labeling requires awareness campaigns to build consumer understanding, certification processes to ensure accuracy and reliability, regulatory enforcement to prevent counterfeits and ongoing monitoring to maintain trust. These components are not only logistically complex but financially demanding. Given that labeling programs are typically funded by donors or government agencies, there is heightened pressure to demonstrate cost-effectiveness. A comprehensive cost-benefit analysis is necessary to determine if the marginal increases in willingness to pay justify the high implementation cost. If these costs cannot be justified, public financing may be more effectively directed toward other initiatives that address immediate barriers to adoption.

Market reality matters

The second and third assumptions underpinning the experiment were that people will prefer and pay more for better products if they understand the benefits. However, the realities of Kakamega's rural market challenge this notion. While efficiency may be an appealing concept, the study found that stove choice is overwhelmingly driven by constraints rather than preferences.

For many households in lower- and lower-middle-income countries, choosing a stove is less about aspiration and more about survival. Wood remains the dominant fuel not because it is superior, but because it is free or extremely cheap, widely available and familiar. The shift to a labeled, efficient stove represents not just a financial outlay but a shift in cooking practice — something that is rarely undertaken without substantial incentive. This disconnect illustrates that consumer behavior in rural lower- and lower-middle-income country settings is not solely driven by information or perceived benefits. Without addressing the economic and logistical barriers that drive current stove use, informational nudges like labels will have limited influence.

Recommendation: Address market realities through combined interventions

For labels to be effective, they need to be supported by market structures that ensure authenticity, consumer trust and affordability. However, these conditions rarely exist organically, and strategic interventions are necessary to create such market readiness for labeling to have its intended effect.

As previously noted, clean cooking programs traditionally operate using two main strategies: informational interventions and financial incentives that reduce upfront costs. This study intentionally focused on the informational side, aiming to remedy knowledge gaps through efficiency labeling in the hopes that this would increase willingness to pay and improve cookstove affordability. However, the findings suggest that successful clean cooking interventions cannot function if only one strategy is deployed; both information and direct financial support addressing ability to pay are essential for success. For labels to drive meaningful uptake, they likely need to be paired with cost-reducing mechanisms that

make efficient stoves financially accessible. These mechanisms could include subsidies or finance options, directly lowering the initial purchase barrier and enhancing market readiness.

Future work could prioritize testing combination interventions — for example, coupling labels with targeted subsidies — to evaluate if this dual approach increases affordability and accelerates adoption. Making the market ready for labels means strategically pairing awareness with financial access.

Testing works; assumptions do not

Perhaps the most crucial lesson learned is the essential role of testing before large-scale rollout of clean cooking interventions. The assumptions underpinning the proposed labeling intervention — that consumers would understand energy efficiency, labels would drive purchasing decisions and significant price increases would be accepted — were not actualized. Instead, the foundational belief that information clarity and visual cues would be enough to drive behavior change was challenged by the realities of economic constraints, consumer understanding and deeply ingrained habits. The experiment revealed that consumer choice is not purely rational.

If a pilot had been deployed at scale without this testing, the cost implications could have been dire, with little evidence of meaningful market transformation. Instead, the controlled setting of the experiment allowed for critical learning and adaptation; demonstrating that "one-size-fits-all" approaches from high-income country contexts cannot be simply transposed to rural lower- and lower-middle-income country settings.

Recommendation: Prioritize testing and piloting

Real-world testing is required to validate the core assumptions that underpin labeling interventions. These assumptions are highly context-specific; consumer awareness, market availability and fuel preferences can vary widely — not only between countries but also across different regions within the same country. Experiments in diverse settings is crucial to capture this variability and ensure that labels are effective wherever they are deployed, avoiding misaligned investments or program failures.

Labeling programs can begin with controlled testing designed to isolate key variables (e.g., price sensitivity, awareness and label interpretation) to understand which levers are most effective, and then piloting deployed based on these results. Too often, pilots are conflated with full-scale projects, resulting in multi-variable designs that obscure actionable insights. In this sense, pilots must be designed for learning, not just implementation; targeted pilots allow for cleaner analysis and a clearer path to scaling only what works. By prioritizing rigorous testing and pilots, labeling interventions can be grounded in evidence, so that public or donor financing is better spent on solutions that genuinely shift consumer behavior.

For policymakers and funders, the takeaway is clear: tools like efficiency labels have the potential to support cleaner cooking transitions, but they cannot drive them alone. If clean cooking is to scale equitably and sustainably, interventions must reflect the realities of consumer behavior in lower- and lower-middle-income countries — not just what people value, but what they can afford, understand and trust. The path forward is not about abandoning informational tools, but embedding them within broader systems of subsidy, education and social proof. As this experiment demonstrated, behavior change requires more than just better products — it also requires better strategies.

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Appendix: Methodological Notes & Quantitative Analysis

Offering Overview – Features and Levels Tested

Feature	Level 1	Level 2	Level 3	Level 4
Brand	Kuniokoa	Jikokoa	N/A	N/A
Price	KES 500	KES 600	KES 750	N/A
Efficiency Rating	No rating	One Star	Three Stars	Five Stars
Fuel Type	Charcoal	Pellets/Briquettes	Wood	N/A
Pot Size	5 Litres	7 Litres		N/A

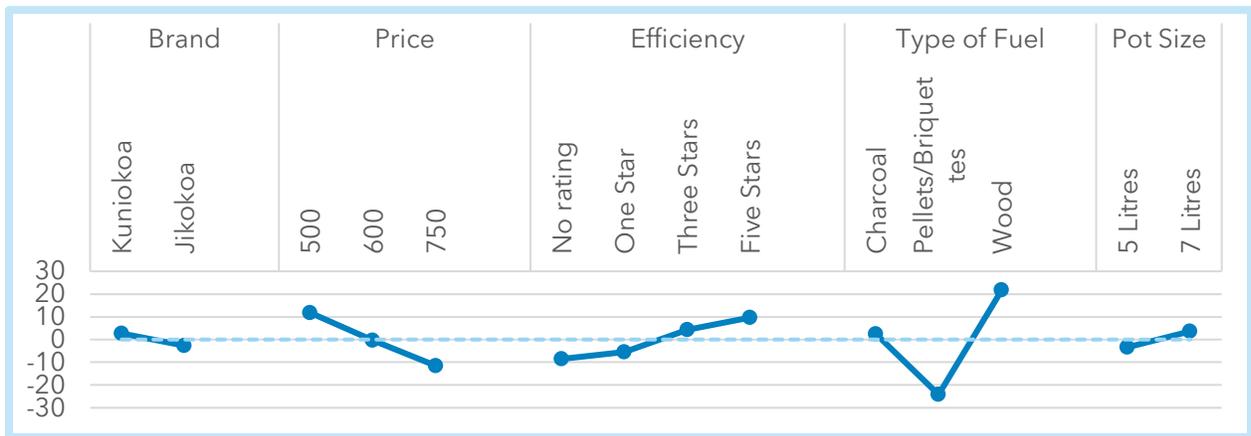
Sample Card – What Participants Saw Offering Overview – Features and Levels Tested

This is a sample card design where each participant was asked between one of the two options, or to opt out of choice.

Feature	Option 1	Option 2	None of These
Brand	Kuniokoa	Jikokoa	None of These Options
Price	KES 500	KES 600	
Efficiency Rating	Five Stars	One Star	
Fuel Type	Charcoal	Pellets/Briquettes	
Pot Size	5 Litres	7 Litres	

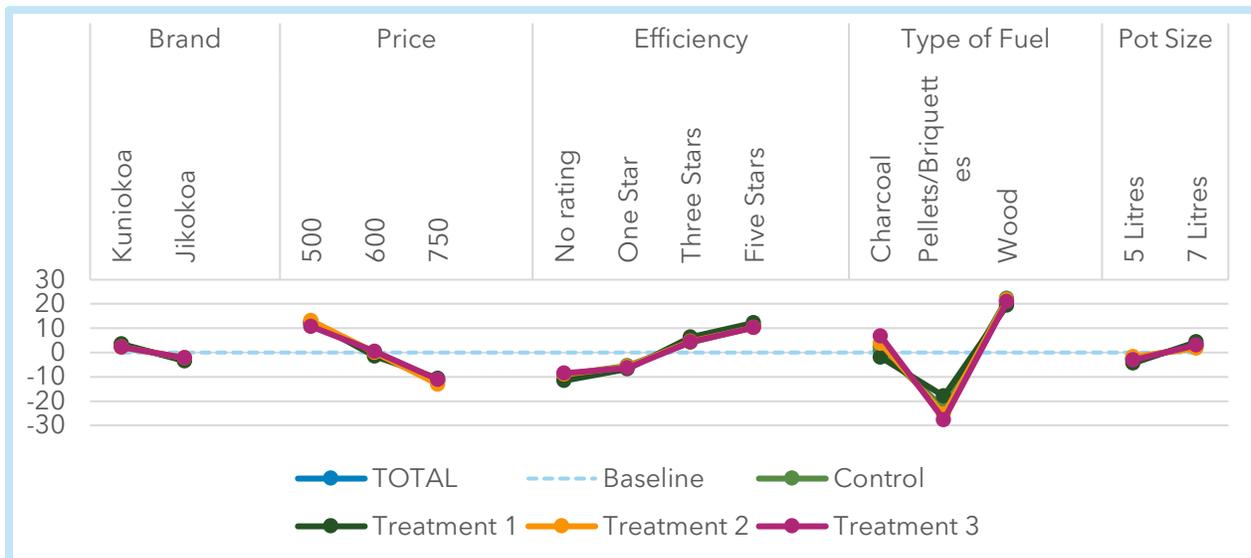
Utility Curves – Relative Part-Worth Utility by Feature Level

Below is a utility distribution, which is a computational means of **estimating preferences** at each attribute level. There is no significantly meaningful interpretation to these without converting them into choice probabilities, but it is worth noting that these measures, and their variabilities, are what generate feature importance.



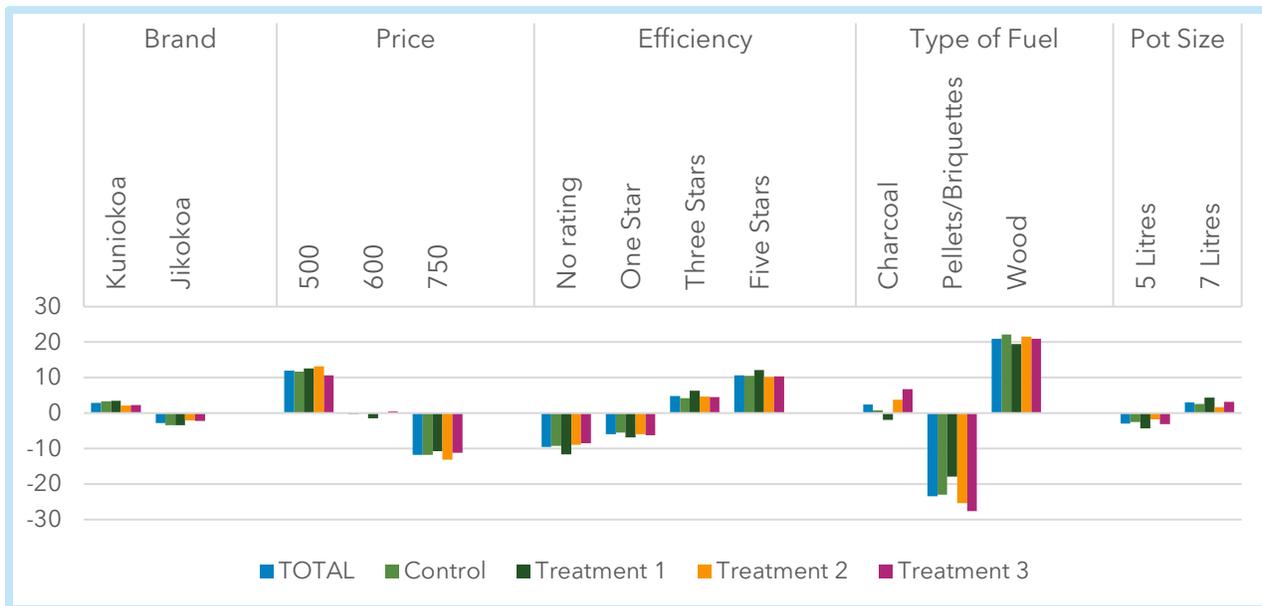
Utility Curves – Relative Part-Worth Utility by Feature Level – Treatments

Below is a utility distribution, which is a computational means of **estimating preferences** at each attribute level. There is no significantly meaningful interpretation to these without converting them into choice probabilities, but it is worth noting that these measures, and their variabilities, are what generate feature importance.



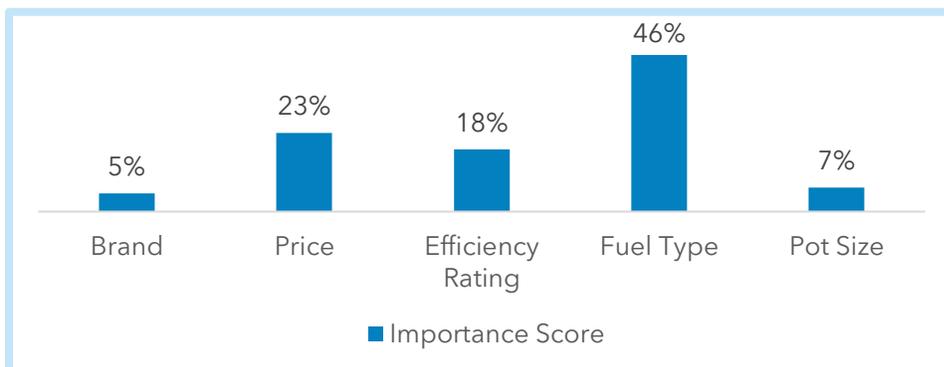
Utility Curves – Relative Part-Worth Utility by Feature Level – Treatments

Below is a utility distribution, which is a computational means of **estimating preferences** at each attribute level. There is no significantly meaningful interpretation to these without converting them into choice probabilities, but it is worth noting that these measures, and their variabilities, are what generate feature importance.



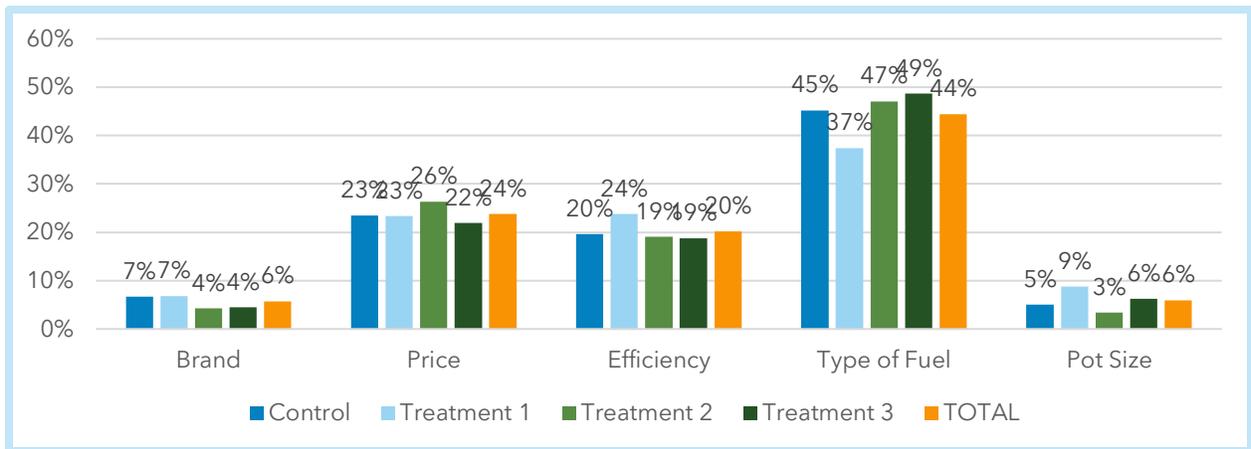
Feature Importance

- Feature Importance, estimated by the range of predicted choice probabilities within feature, and against the range of other features, shows that Fuel Type is the highest grade, followed by Price.
- Worthy of note: the possibility of “No Option,” only about 2% of the market would opt out, either by disinterest or lacking comprehension.



Feature Importance- – ALL TREATMENTS

- Feature Importance, estimated by the range of predicted choice probabilities within feature, and against the range of other features, shows that Fuel Type is the highest grade, followed by Price.
- Worthy of note: the possibility of “No Option,” only about 2% of the market would opt out, either by disinterest or lacking comprehension



Top Simulated Combinations at Critical Gain and Critical Loss Level

Critical Gain

Brand	Price	Efficiency	Type of Fuel	Pot Size	Index
Kuniokoa	Low	Five Stars	Wood	7 Litres	1.77
Kuniokoa	Low	Five Stars	Wood	5 Litres	1.68
Jikokoa	Low	Five Stars	Wood	7 Litres	1.67
Kuniokoa	Low	Three Stars	Wood	7 Litres	1.65
Kuniokoa	Moderate	Five Stars	Wood	7 Litres	1.61
Jikokoa	Low	Five Stars	Wood	5 Litres	1.57
Kuniokoa	Low	Three Stars	Wood	5 Litres	1.54
Kuniokoa	Low	Three Stars	Wood	7 Litres	1.54
Kuniokoa	Low	One Star	Wood	7 Litres	1.52
Kuniokoa	Moderate	Five Stars	Wood	5 Litres	1.51
Jikokoa	Moderate	Five Stars	Wood	7 Litres	1.50
Kuniokoa	Low	Five Stars	Charcoal	7 Litres	1.50
Kuniokoa	Low	No rating	Wood	7 Litres	1.49

Critical Loss

Brand	Price	Efficiency	Type of Fuel	Pot Size	Index
Jikokoa	High	No rating	Pellets/Briquettes	5 Litres	0.33
Jikokoa	High	One Star	Pellets/Briquettes	5 Litres	0.35
Jikokoa	High	No rating	Pellets/Briquettes	7 Litres	0.41
Kuniokoa	High	No rating	Pellets/Briquettes	5 Litres	0.41
Jikokoa	High	One Star	Pellets/Briquettes	7 Litres	0.43
Kuniokoa	High	One Star	Pellets/Briquettes	5 Litres	0.43
Jikokoa	High	Three Stars	Pellets/Briquettes	5 Litres	0.45
Jikokoa	Moderate	No rating	Pellets/Briquettes	5 Litres	0.46
Jikokoa	Moderate	One Star	Pellets/Briquettes	5 Litres	0.49
Kuniokoa	High	No rating	Pellets/Briquettes	7 Litres	0.49
Kuniokoa	High	One Star	Pellets/Briquettes	7 Litres	0.52

Choice Probability Matrix Simulation – Brand = Jikoko

- The matrix below is a full-factorial choice probability simulation. There are several key areas of opportunity, noted in green, and some areas of higher risk, noted in red.
- Note the higher proportion of **Red** values for this brand, with a similar pattern in relative blocks within the matrix.

		Efficiency												Pot Size	
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars		
Price	Low	31.5%	32.5%	37.1%	41.8%	20.0%	20.9%	25.2%	29.7%	41.3%	42.4%	46.9%	51.4%	5 Litres	
		29.2%	30.2%	34.8%	39.5%	18.0%	18.9%	23.0%	27.5%	39.0%	40.1%	44.7%	49.2%	7 Litres	
	Moderate	20.2%	21.1%	25.4%	29.9%	10.8%	11.5%	14.8%	18.6%	29.4%	30.5%	35.1%	39.7%	5 Litres	
		35.1%	36.1%	40.8%	45.4%	23.3%	24.3%	28.7%	33.3%	44.9%	46.0%	50.4%	54.7%	7 Litres	
	High	25.7%	26.7%	31.2%	35.9%	15.1%	15.9%	19.8%	24.0%	35.4%	36.5%	41.1%	45.7%	5 Litres	
		23.4%	24.4%	28.9%	33.5%	13.3%	14.1%	17.7%	21.8%	33.0%	34.1%	38.7%	43.3%	7 Litres	
		Charcoal				Pellets/Briquets				Wood					
		Fuel Type													

Note: **Bolded values** denote a minimum of 1.5X standard deviations from the base rate of 33%

Choice Probability Matrix Simulation – Brand = Kuniokoa

- The matrix below is a full-factorial choice probability simulation. There are several key areas of opportunity, noted in green, and some areas of higher risk, noted in red.
- Note the higher proportion of **Green** values for this brand, with a similar pattern in relative blocks within the matrix

		Efficiency												Pot Size
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	
Price	Low	35.2%	36.3%	40.9%	45.5%	23.4%	24.4%	28.8%	33.4%	45.1%	46.1%	50.5%	54.8%	5 Litres
		32.9%	34.0%	38.6%	43.3%	21.3%	22.3%	26.6%	31.1%	42.8%	43.8%	48.3%	52.7%	7 Litres
	Moderate	23.6%	24.6%	29.0%	33.6%	13.4%	14.2%	17.8%	21.9%	33.1%	34.2%	38.8%	43.5%	5 Litres
		38.9%	39.9%	44.5%	49.0%	26.8%	27.9%	32.4%	37.1%	48.6%	49.6%	53.9%	58.0%	7 Litres
	High	29.3%	30.4%	35.0%	39.6%	18.1%	19.0%	23.2%	27.6%	39.2%	40.2%	44.8%	49.3%	5 Litres
		27.0%	28.0%	32.6%	37.2%	16.2%	17.0%	21.0%	25.3%	36.8%	37.8%	42.5%	47.0%	7 Litres
		Charcoal				Pellets/Briquets				Wood				
		Fuel Type												

Treatment Analysis

Choice Probability Matrix Simulation – Aggregate

The matrix below is a full-factorial choice probability simulation. There are several key areas of opportunity, noted in green, and some areas of higher risk, noted in red.

Brand = Jikokoa		Efficiency												Pot Size
		Charcoal				Pellets/Briquets				Wood				
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	
Price	Low	31.5%	32.5%	37.1%	41.8%	20.0%	20.9%	25.2%	29.7%	41.3%	42.4%	46.9%	51.4%	5 Litres
		29.2%	30.2%	34.8%	39.5%	18.0%	18.9%	23.0%	27.5%	39.0%	40.1%	44.7%	49.2%	7 Litres
Moderate		20.2%	21.1%	25.4%	29.9%	10.8%	11.5%	14.8%	18.6%	29.4%	30.5%	35.1%	39.7%	5 Litres
		35.1%	36.1%	40.8%	45.4%	23.3%	24.3%	28.7%	33.3%	44.9%	46.0%	50.4%	54.7%	7 Litres
High		25.7%	26.7%	31.2%	35.9%	15.1%	15.9%	19.8%	24.0%	35.4%	36.5%	41.1%	45.7%	5 Litres
		23.4%	24.4%	28.9%	33.5%	13.3%	14.1%	17.7%	21.8%	33.0%	34.1%	38.7%	43.3%	7 Litres

Brand = Jikokoa		Efficiency												Pot Size
		Charcoal				Pellets/Briquets				Wood				
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	
Price	Low	35.2%	36.3%	40.9%	45.5%	23.4%	24.4%	28.8%	33.4%	45.1%	46.1%	50.5%	54.8%	5 Litres
		32.9%	34.0%	38.6%	43.3%	21.3%	22.3%	26.6%	31.1%	42.8%	43.8%	48.3%	52.7%	7 Litres
Moderate		23.6%	24.6%	29.0%	33.6%	13.4%	14.2%	17.8%	21.9%	33.1%	34.2%	38.8%	43.5%	5 Litres
		38.9%	39.9%	44.5%	49.0%	26.8%	27.9%	32.4%	37.1%	48.6%	49.6%	53.9%	58.0%	7 Litres
High		29.3%	30.4%	35.0%	39.6%	18.1%	19.0%	23.2%	27.6%	39.2%	40.2%	44.8%	49.3%	5 Litres
		27.0%	28.0%	32.6%	37.2%	16.2%	17.0%	21.0%	25.3%	36.8%	37.8%	42.5%	47.0%	7 Litres

Note: **Bolded values** denote a minimum of 1.5X standard deviations from the base rate of 33%

Choice Probability Matrix Simulation – Control Group

The matrix below is a full-factorial choice probability simulation. There are several key areas of opportunity, noted in green, and some areas of higher risk, noted in red.

Brand = Jikoko		Efficiency												Pot Size	
		Charcoal				Pellets/Briquets				Wood					
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars		
Price	Low		18.9%	31.5%	19.9%	26.7%	10.8%	21.4%	11.6%	17.2%	33.5%	46.8%	34.7%	42.0%	5 Litres
			18.6%	31.1%	19.6%	26.3%	10.6%	21.1%	11.4%	16.9%	33.1%	46.4%	34.3%	41.6%	7 Litres
	Moderate		10.8%	21.3%	11.6%	17.1%	5.1%	12.7%	5.6%	9.5%	23.1%	36.2%	24.2%	31.3%	5 Litres
			22.2%	35.2%	23.2%	30.3%	13.4%	24.8%	14.3%	20.3%	37.2%	50.3%	38.3%	45.6%	7 Litres
	High		15.6%	27.5%	16.5%	22.9%	8.4%	17.9%	9.0%	14.0%	29.4%	42.8%	30.6%	37.9%	5 Litres
			13.3%	24.7%	14.2%	20.2%	6.8%	15.5%	7.4%	11.9%	26.6%	39.9%	27.7%	35.0%	7 Litres

Brand = Kunioko		Efficiency												Pot Size	
		Charcoal				Pellets/Briquets				Wood					
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars		
Price	Low		28.4%	41.8%	29.6%	36.9%	18.7%	31.3%	19.7%	26.5%	43.8%	56.4%	44.9%	51.9%	5 Litres
			28.0%	41.4%	29.2%	36.5%	18.4%	30.9%	19.4%	26.1%	43.4%	56.0%	44.5%	51.6%	7 Litres
	Moderate		18.6%	31.1%	19.6%	26.3%	10.6%	21.1%	11.4%	16.9%	33.1%	46.5%	34.3%	41.6%	5 Litres
			32.1%	45.4%	33.2%	40.6%	21.9%	34.9%	23.0%	30.0%	47.4%	59.5%	48.5%	55.3%	7 Litres
	High		24.5%	37.7%	25.6%	32.8%	15.4%	27.3%	16.3%	22.6%	39.7%	52.7%	40.9%	48.1%	5 Litres
			21.8%	34.8%	22.9%	29.9%	13.1%	24.5%	14.0%	20.0%	36.8%	50.0%	38.0%	45.3%	7 Litres

Note: **Bolded values** denote a minimum of 1.5X standard deviations from the base rate of 30%

Choice Probability Matrix Simulation – Treatment Group 1

The matrix below is a full-factorial choice probability simulation. There are several key areas of opportunity, noted in green, and some areas of higher risk, noted in red.

Brand = jikokoa		Efficiency												Pot size				
		No rating				One Star				Three Stars					Five Stars			
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars		No rating	One Star	Three Stars	Five Stars
Price	Low	19.9%	16.7%	28.9%	35.4%	20.9%	17.7%	30.1%	36.6%	31.2%	27.5%	40.8%	47.3%	5 Litres				
		19.0%	15.9%	27.9%	34.4%	20.0%	16.9%	29.1%	35.6%	30.2%	26.5%	39.8%	46.3%	7 Litres				
Moderate	High	11.1%	8.8%	18.5%	24.4%	12.0%	9.5%	19.5%	25.5%	20.5%	17.3%	29.6%	36.2%	5 Litres				
		30.9%	27.3%	40.6%	47.0%	32.1%	28.4%	41.8%	48.2%	42.9%	39.2%	52.2%	58.0%	7 Litres				
High	Low	10.1%	7.9%	17.2%	23.0%	10.9%	8.6%	18.2%	24.1%	19.2%	16.1%	28.1%	34.6%	5 Litres				
		20.3%	17.1%	29.4%	35.9%	21.4%	18.1%	30.6%	37.1%	31.7%	28.0%	41.3%	47.8%	7 Litres				
Charcoal				Pellets/Briquets				Wood										
Fuel Type																		

Brand = Kuniokoa		Efficiency												Pot Size				
		No rating				One Star				Three Stars					Five Stars			
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars		No rating	One Star	Three Stars	Five Stars
Price	Low	24.5%	21.1%	33.9%	40.5%	25.6%	22.2%	35.1%	41.7%	36.3%	32.5%	45.9%	52.1%	5 Litres				
		23.5%	20.2%	32.9%	39.5%	24.7%	21.2%	34.1%	40.7%	35.2%	31.5%	44.9%	51.2%	7 Litres				
Moderate	High	14.8%	12.1%	23.0%	29.3%	15.8%	12.9%	24.2%	30.5%	25.2%	21.8%	34.7%	41.3%	5 Litres				
		36.0%	32.3%	45.6%	51.9%	37.2%	33.5%	46.8%	53.0%	47.9%	44.2%	56.8%	62.3%	7 Litres				
High	Low	13.6%	11.0%	21.6%	27.8%	14.6%	11.8%	22.7%	29.0%	23.8%	20.4%	33.2%	39.7%	5 Litres				
		25.0%	21.5%	34.4%	41.0%	26.1%	22.6%	35.6%	42.2%	36.8%	33.0%	46.4%	52.6%	7 Litres				
Charcoal				Pellets/Briquets				Wood										
Fuel Type																		

Choice Probability Matrix Simulation – Treatment Group 2

The matrix below is a full-factorial choice probability simulation. There are several key areas of opportunity, noted in green, and some areas of higher risk, noted in red.

Brand = Jikokoa		Efficiency												Pot Size
		Charcoal				Pellets/Briquets				Wood				
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	
Price	Low	56.7%	53.3%	63.8%	63.8%	40.2%	36.3%	48.6%	48.5%	66.2%	63.2%	72.1%	72.1%	5 Litres
		41.5%	37.6%	49.8%	49.8%	24.3%	20.8%	32.6%	32.6%	52.7%	49.1%	60.2%	60.2%	7 Litres
	Moderate	36.1%	32.2%	44.6%	44.5%	19.4%	16.2%	27.3%	27.2%	47.6%	43.8%	55.5%	55.5%	5 Litres
		49.6%	45.9%	57.4%	57.3%	32.3%	28.5%	40.9%	40.9%	60.0%	56.7%	66.7%	66.7%	7 Litres
	High	49.1%	45.4%	57.0%	56.9%	31.9%	28.1%	40.5%	40.4%	59.6%	56.3%	66.4%	66.3%	5 Litres
		28.3%	24.6%	36.8%	36.8%	13.1%	10.5%	20.1%	20.0%	39.9%	36.0%	48.3%	48.2%	7 Litres
		Charcoal				Pellets/Briquets				Wood				
		Fuel Type												

Brand = Kuniokoa		Efficiency												Pot Size
		Charcoal				Pellets/Briquets				Wood				
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	
Price	Low	54.0%	50.4%	61.4%	61.3%	37.1%	33.2%	45.6%	45.5%	63.8%	60.7%	70.1%	70.0%	5 Litres
		38.4%	34.5%	46.9%	46.8%	21.5%	18.1%	29.6%	29.5%	49.8%	46.1%	57.6%	57.5%	7 Litres
	Moderate	33.0%	29.2%	41.6%	41.5%	16.8%	13.8%	24.4%	24.3%	44.6%	40.8%	52.8%	52.7%	5 Litres
		46.6%	42.8%	54.7%	54.6%	29.3%	25.6%	37.9%	37.8%	57.4%	53.9%	64.4%	64.3%	7 Litres
	High	46.1%	42.4%	54.2%	54.2%	28.8%	25.1%	37.4%	37.3%	56.9%	53.5%	64.0%	64.0%	5 Litres
		25.3%	21.8%	33.7%	33.7%	11.0%	8.6%	17.4%	17.4%	36.8%	32.9%	45.3%	45.3%	7 Litres
		Charcoal				Pellets/Briquets				Wood				
		Fuel Type												

Note: **Bolded values** denote a minimum of 1.5X standard deviations from the base rate of 31%

Choice Probability Matrix Simulation – Treatment Group 3

The matrix below is a full-factorial choice probability simulation. There are several key areas of opportunity, noted in green, and some areas of higher risk, noted in red.

Brand = Jikokoa		Efficiency												Pot Size	
		Charcoal				Pellets/Briquets				Wood					
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars		
Price	Low		34.4%	30.1%	36.6%	41.8%	13.5%	10.6%	15.2%	19.6%	35.5%	31.2%	37.7%	42.9%	5 Litres
			41.4%	37.1%	43.6%	48.7%	19.2%	15.6%	21.2%	26.0%	42.5%	38.2%	44.7%	49.8%	7 Litres
	Moderate		29.3%	25.2%	31.5%	36.8%	10.1%	7.6%	11.5%	15.4%	30.4%	26.2%	32.6%	37.9%	5 Litres
			39.9%	35.6%	42.2%	47.3%	17.9%	14.5%	19.9%	24.6%	41.0%	36.8%	43.3%	48.4%	7 Litres
	High		35.8%	31.5%	38.1%	43.3%	14.6%	11.5%	16.4%	20.9%	36.9%	32.6%	39.2%	44.4%	5 Litres
			34.9%	30.6%	37.1%	42.4%	13.9%	10.9%	15.6%	20.0%	36.0%	31.7%	38.2%	43.4%	7 Litres
		Charcoal				Pellets/Briquets				Wood					
		Fuel Type													

Brand = Kuniokoa		Efficiency												Pot Size	
		Charcoal				Pellets/Briquets				Wood					
		No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars	No rating	One Star	Three Stars	Five Stars		
Price	Low		35.2%	30.9%	37.4%	42.6%	14.1%	11.1%	15.9%	20.3%	36.3%	32.0%	38.5%	43.7%	5 Litres
			42.2%	37.9%	44.4%	49.5%	19.9%	16.3%	21.9%	26.8%	43.3%	39.0%	45.5%	50.5%	7 Litres
	Moderate		30.1%	26.0%	32.3%	37.6%	10.6%	8.0%	12.1%	16.0%	31.2%	27.0%	33.4%	38.7%	5 Litres
			40.8%	36.5%	43.0%	48.1%	18.6%	15.1%	20.6%	25.4%	41.8%	37.6%	44.1%	49.1%	7 Litres
	High		36.6%	32.3%	38.9%	44.1%	15.3%	12.1%	17.1%	21.6%	37.7%	33.4%	40.0%	45.2%	5 Litres
			35.7%	31.4%	37.9%	43.2%	14.5%	11.4%	16.3%	20.7%	36.8%	32.5%	39.0%	44.2%	7 Litres
		Charcoal				Pellets/Briquets				Wood					
		Fuel Type													