The Impact of Entrepreneurship Access on Household Welfare in Kenya

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ABSTRACT

Entrepreneurship promotion is a central pillar of Kenya's development strategy, yet the causal pathways through which access to entrepreneurial opportunities improves household welfare remain poorly specified. Moving beyond the conventional focus on average treatment effects, the analysis distinguishes between household-level mediators, such as business income and asset accumulation, and community-level mediators, including local market density and social capital formation. The article argues that the welfare effects of entrepreneurship access are contingent on a sequential mediation structure in which household-level resource mobilisation must precede community-level spillover effects. A formal multilevel mediation model is specified, and the identification assumptions required for causal inference are examined critically, with particular attention to the role of programme placement and spillover contamination in the Kenyan context. The framework proposes that entrepreneurship access operates through distinct pathways whose relative importance varies with the institutional environment and the type of welfare outcome considered. The analysis concludes that policy evaluations which ignore mediation structure risk misattributing welfare gains and overlooking the conditions under which entrepreneurship access translates into sustainable improvements in household wellbeing.

Keywords: *entrepreneurship access, household welfare, causal mediation, multilevel analysis, Kenya, programme evaluation*

The Problem of Mechanism in Entrepreneurship and Welfare Research

Kenya'S Policy Landscape Has Been Shaped By A Persistent Conviction

Kenya's policy landscape has been shaped by a persistent conviction that expanding access to entrepreneurship constitutes a reliable route out of poverty. Successive national development plans, most recently the Bottom-Up Economic Transformation Agenda, have allocated substantial public resources to credit schemes, business development services and enterprise training programmes. The implicit causal claim embedded in these investments is that entrepreneurship access does not merely create firms but also transforms household living conditions.

Yet the empirical literature that might substantiate this claim remains curiously silent on the pathways through which such transformation is supposed to occur. The dominant evaluation paradigm in development economics has concentrated on estimating the average effect of entrepreneurship interventions on household outcomes. Randomised controlled trials of microcredit programmes, for instance, have generated influential null results that have been interpreted as evidence that access to finance does not reliably improve welfare (Banerjee et al., 2015).

The Dominant Evaluation Paradigm In Development Economics Has Concentrated On

What these studies establish, however, is only that the average treatment effect is small or indistinguishable from zero in particular contexts. They do not reveal whether the absence of an average effect conceals heterogeneous pathways, offsetting mechanisms or conditions under which meaningful welfare gains do occur. The policy question for Kenya is not simply whether entrepreneurship access works but how it works, for whom and under what institutional conditions.

The argument proceeds in four stages. First, the existing evidence on entrepreneurship and welfare is examined to identify the implicit mechanism assumptions that have shaped both research design and policy interpretation. Second, a conceptual model is developed that distinguishes household-level from community-level mediators and specifies their sequential relationship.

Third, the identification conditions required for causal mediation analysis in a multilevel setting are examined, with particular attention to the threats posed by programme placement and interference between households. Fourth, the implications of the framework for evaluation practice and policy design in Kenya are drawn out.

From Average Effects to Mediating Pathways

The Intellectual Trajectory Of Entrepreneurship Research In Developing Countries Reveals

The intellectual trajectory of entrepreneurship research in developing countries reveals a progressive refinement of the questions being asked. Early scholarship was preoccupied with establishing whether entrepreneurship contributes to economic growth and poverty reduction at the aggregate level (Acs & Armington, 2006). A subsequent wave of micro-level studies, often employing experimental or quasi-experimental designs, shifted attention to the individual and household effects of specific interventions such as microcredit, grants and training (McKenzie & Woodruff, 2014).

The most recent developments have begun to interrogate heterogeneity in treatment effects, asking whether particular subgroups of entrepreneurs benefit more than others from access to programmes and resources. What remains underdeveloped in this trajectory is systematic attention to mediation. The distinction between asking whether an intervention affects an outcome and asking through what mechanisms it does so is methodologically consequential.

An intervention may have a negligible average effect not because it fails to change mediating processes but because it activates opposing pathways whose effects cancel out. Alternatively, an intervention may produce substantial changes in mediators that do not translate into welfare improvements because of constraints operating downstream in the causal chain. Without explicit mediation analysis, evaluations cannot distinguish these possibilities.

What Remains Underdeveloped In This Trajectory Is Systematic Attention To

The mediation question acquires particular complexity in the context of entrepreneurship because the hypothesised causal chain spans multiple levels of social organisation. Entrepreneurship access is typically delivered to individuals or households, but its welfare consequences are theorised to operate through household resource allocation decisions, local economic spillovers and community-level institutional changes. A household that gains access to credit may increase its business income, but whether that income translates into improved nutrition, education or health depends on intra-household bargaining and expenditure priorities.

Similarly, the entry of new enterprises into a local economy may generate employment and market effects that benefit households beyond those directly targeted by the intervention. The multilevel structure of these hypothesised mechanisms has important implications for both theory and method. Single-level mediation models that treat all mediators as operating at the household level cannot capture the cross-level interactions that entrepreneurship theory identifies as central.

A community that experiences an influx of new enterprises may develop denser supplier networks, more competitive markets and stronger norms of entrepreneurial behaviour, all of which may condition the returns that individual households derive from their own entrepreneurial activities. These community-level mediators are not merely additional variables to be controlled for; they are integral components of the causal process through which entrepreneurship access affects welfare.

A Multilevel Model of Entrepreneurship Access and Household Welfare

The Conceptual Model Developed Here Distinguishes Three Components Of The

The conceptual model developed here distinguishes three components of the causal process linking entrepreneurship access to household welfare. The first component is the treatment itself, defined as access to entrepreneurial opportunities through programmes, policies or institutional reforms. The second component comprises the mediators, which are organised into two levels: household-level mediators capturing changes in household economic behaviour and resources, and community-level mediators capturing changes in the local economic and social environment.

The third component is the outcome, household welfare, which is itself multidimensional and includes consumption, asset ownership, human capital investment and subjective wellbeing. Household-level mediators are theorised to include business creation and survival, business income, household asset accumulation and changes in labour allocation. The hypothesised pathway is that entrepreneurship access enables households to establish or expand enterprises, generating income streams that augment household resources and enable welfare-enhancing expenditures.

This pathway is consistent with the household production model in which time and capital are allocated across activities to maximise utility (Singh et al., 1986). The strength of this pathway is expected to depend on household characteristics such as initial assets, human capital and risk preferences, as well as on the design features of the entrepreneurship programme itself. Community-level mediators operate through a different logic.

When entrepreneurship access is delivered to multiple households within a locality, the resulting concentration of new or expanded enterprises may generate agglomeration effects that alter the local economic environment. These effects include increased demand for local inputs, denser supplier and customer networks, knowledge spillovers between entrepreneurs and the development of specialised business services (Glaeser et al., 1992). The hypothesised pathway is that these community-level changes create an environment in which household-level entrepreneurial activities become more productive and more reliably translate into welfare improvements.

Household-Level Mediators Are Theorised To Include Business Creation And Survival

The sequential relationship between household-level and community-level mediators is central to the proposed framework. Community-level effects are theorised to emerge only after a sufficient number of households have successfully mobilised entrepreneurial resources. This implies a temporal ordering in which household-level mediation operates first, creating the conditions for community-level mediation to become active.

The framework therefore proposes a sequential mediation structure in which the total effect of entrepreneurship access on household welfare is transmitted through household-level mediators and then through community-level mediators, with the latter pathway becoming available only after the former has operated. This sequential structure has a formal representation in the potential outcomes framework for causal mediation analysis. Let A denote entrepreneurship access, M denote the vector of household-level mediators, C denote the vector of community-level mediators and Y denote household welfare.

The total effect of A on Y can be decomposed into the indirect effect operating through M, the indirect effect operating through C, the indirect effect operating through the sequential pathway M then C, and the direct effect operating through all other pathways. This decomposition requires careful definition of counterfactual quantities that involve intervening on mediators in sequence.

$$TE = \bar{Y}(1, M(1), C(1, M(1))) - \bar{Y}(0, M(0), C(0, M(0))) \quad (1)$$

The sequential nature of the mediation structure means that the community-level mediator is allowed to depend on the household-level mediator, reflecting the theoretical claim that community effects emerge from the aggregation of household-level entrepreneurial activity. This specification distinguishes the proposed framework from parallel mediation models in which mediators are assumed to operate independently. The distinction is not merely technical; it embodies a substantive claim about the causal architecture of entrepreneurship-led development.

Identification of Causal Mediation Effects in Multilevel Settings

Causal Mediation Analysis Requires Assumptions Beyond Those Needed For The

Causal mediation analysis requires assumptions beyond those needed for the identification of total effects. The sequential ignorability assumption, which underpins much of the mediation literature, requires that the treatment is independent of potential mediators and outcomes conditional on covariates, and that the mediators are independent of potential outcomes conditional on the treatment and covariates (Imai et al., 2011). In the context of entrepreneurship programmes in Kenya, both components of this assumption face serious threats that must be confronted explicitly.

The first threat concerns programme placement. Entrepreneurship interventions are rarely assigned randomly across communities. Programmes may deliberately target areas with high poverty rates, strong entrepreneurial potential or particular political constituencies.

If placement is correlated with community characteristics that independently affect welfare, then comparisons between treated and untreated communities will be confounded. The standard response to this threat is to condition on observable community characteristics, but the possibility of unobserved confounders remains a persistent concern. The second threat concerns spillover effects and interference between units.

When entrepreneurship access is delivered at the community level or when treated households interact with untreated households within the same community, the stable unit treatment value assumption is violated. The welfare of a household that does not receive entrepreneurship access may nevertheless be affected by the entrepreneurial activities of neighbouring households that do receive access. This interference pattern is not merely a nuisance to be eliminated; it is substantively important because community-level mediation is theorised to operate precisely through such spillover effects.

The First Threat Concerns Programme Placement

The third threat concerns mediator-outcome confounding. Even if treatment assignment is unconfounded, the identification of mediation effects requires that mediators are independent of outcomes conditional on treatment and covariates. In the entrepreneurship context, unobserved household characteristics such as motivation, ability or social connections may affect both the extent to which a household exploits entrepreneurial opportunities and the welfare outcomes it achieves.

Similarly, unobserved community characteristics such as local leadership quality or social cohesion may affect both the development of community-level mediators and household welfare. The proposed framework addresses these threats through a combination of design-based and model-based strategies. The design-based strategy exploits the multilevel structure of entrepreneurship programmes, many of which are delivered through a phased rollout that creates natural variation in the timing of access across communities.

The model-based strategy employs sensitivity analysis to assess the robustness of mediation effect estimates to violations of sequential ignorability. This combination of strategies does not eliminate the need for substantive assumptions, but it makes those assumptions explicit and subjects them to scrutiny. A further identification challenge arises from the sequential structure of the proposed mediation model.

When community-level mediators are allowed to depend on household-level mediators, the identification of the sequential pathway requires assumptions about the absence of unobserved confounding at each stage of the causal chain. The framework addresses this challenge by drawing on the literature on causal mediation analysis with multiple mediators, which has developed identification results for sequential mediation structures under varying assumptions about confounding (Daniel et al., 2015). These results provide a formal basis for estimating the indirect effects that the conceptual model identifies as substantively important.

Measurement and Estimation Considerations for the Kenyan Context

The Translation Of The Conceptual And Identification Framework Into An

The translation of the conceptual and identification framework into an empirical research design requires careful attention to measurement. Household welfare in Kenya is typically measured through consumption expenditure, which is collected in national surveys such as the Kenya Continuous Household Survey Programme and the Kenya Integrated Household Budget Survey. Consumption-based measures have the advantage of capturing actual living standards rather than income, which may be volatile for entrepreneurial households.

However, consumption measures also have limitations, including recall error and the difficulty of valuing home-produced goods and services. The measurement of entrepreneurship access requires attention to the distinction between access and uptake. A household may have access to credit, training or business development services without actually using them.

The mediation framework is most naturally interpreted in terms of access, since the policy question concerns whether making entrepreneurial opportunities available improves welfare. However, the distinction between access and uptake has implications for the interpretation of mediation effects. If access affects welfare only through the mediators that are activated when households actually engage with entrepreneurial opportunities, then the mediation analysis must be careful to distinguish the effect of access from the effect of engagement.

The measurement of mediators presents particular challenges in the Kenyan context. Household-level mediators such as business income and asset accumulation can be measured through household surveys, although the reliability of business income data is a well-documented concern in developing country contexts (De Mel et al., 2009). Community-level mediators such as market density and social capital are more difficult to measure.

The Measurement Of Entrepreneurship Access Requires Attention To The Distinction

Market density can be proxied by the number and diversity of enterprises operating in a locality, which may be captured through business registries or community-level surveys. Social capital requires measurement of trust, networks and norms of reciprocity, which are typically assessed through specially designed survey modules. The estimation of multilevel mediation models raises both statistical and computational considerations.

The multilevel structure of the data, with households nested within communities, requires estimation methods that account for within-community correlation in outcomes and mediators. The sequential mediation structure requires estimation of a system of equations in which community-level mediators depend on household-level mediators, which in turn depend on treatment. The potential outcomes framework suggests estimation strategies based on regression or weighting approaches that can accommodate the multilevel and sequential structure of the model.

The framework also has implications for the design of future data collection efforts. The identification of community-level mediation effects requires data on multiple communities with variation in the intensity of entrepreneurship access. The identification of sequential mediation effects requires longitudinal data that can capture the temporal ordering of household-level and community-level changes.

These requirements suggest that the evaluation of entrepreneurship programmes in Kenya would benefit from designs that combine household panels with community-level data collection, allowing the estimation of cross-level mediation pathways.

Implications for Evaluation Practice and Policy Design

The Mediation Framework Developed In The Present Analysis Has Implications

The mediation framework developed in the present analysis has implications for how entrepreneurship programmes in Kenya should be evaluated and designed. The first implication concerns the interpretation of null results. An evaluation that finds no average effect of an entrepreneurship programme on household welfare cannot distinguish between the possibility that the programme failed to activate any mediating pathway and the possibility that it activated pathways with offsetting effects.

Mediation analysis provides the analytical tools needed to make this distinction, thereby generating more diagnostically informative evidence for programme improvement. The second implication concerns the timing of welfare effects. The sequential mediation structure implies that community-level effects emerge only after household-level effects have operated for some period.

Evaluations that measure welfare outcomes too early may miss community-level effects that require time to develop. This has implications for the design of evaluation timelines and for the interpretation of evaluations that find small or null effects in the short term. The framework suggests that entrepreneurship programmes may require a longer observation window than is typical in development evaluations.

The third implication concerns the design of entrepreneurship programmes themselves. If community-level mediation is an important pathway to welfare improvement, then programmes that are delivered in a geographically concentrated manner may generate larger welfare effects than programmes that spread resources thinly across many communities. This is because concentration is required to reach the threshold at which community-level agglomeration effects become active.

The Second Implication Concerns The Timing Of Welfare Effects

The framework therefore provides a rationale for place-based entrepreneurship policies that focus resources on particular localities rather than individual-based policies that treat households in isolation. The fourth implication concerns the measurement of welfare outcomes. The framework distinguishes between household-level mediators, which capture changes in household economic resources, and welfare outcomes, which capture changes in living standards.

This distinction is important because the translation of business income into welfare improvements is not automatic. Households may earn more from entrepreneurial activities but allocate the additional income in ways that do not improve measured welfare, or they may invest in assets that generate welfare benefits only over the longer term. Evaluations that measure only final welfare outcomes may miss the intermediate changes that indicate whether the causal pathway is operating as theorised.

The framework also speaks to the broader policy debate about the role of entrepreneurship in African development. The scepticism generated by null results in microcredit evaluations has led some observers to question whether entrepreneurship promotion is an effective poverty reduction strategy (Banerjee et al., 2015). The mediation perspective suggests that this debate is conducted at too high a level of aggregation.

The relevant question is not whether entrepreneurship access works but which mechanisms are activated under which conditions. By shifting the analytical focus from average effects to mediating pathways, the framework offers a more constructive basis for policy learning.

Boundary Conditions and Limitations of the Framework

The Framework Developed In The Present Analysis Is Subject To

The framework developed in the present analysis is subject to boundary conditions that delimit its applicability. The first boundary condition concerns the type of entrepreneurship access being considered. The framework is most naturally applicable to programmes that provide households with access to credit, training or business development services.

It is less directly applicable to policies that affect the regulatory environment for entrepreneurship, such as business registration reform or tax policy, which may operate through different mechanisms that are not captured by the household-level and community-level mediators specified here. The second boundary condition concerns the welfare outcomes that the framework is designed to explain. The framework is most directly applicable to material welfare outcomes such as consumption, income and asset ownership.

It is less directly applicable to non-material welfare outcomes such as subjective wellbeing, empowerment or social status, which may be affected by entrepreneurship through pathways that are not captured by the economic mediators specified in the model. The extension of the framework to non-material outcomes would require the specification of additional mediating pathways. The third boundary condition concerns the institutional context.

The framework was developed with the Kenyan context in mind, and its assumptions about the nature of entrepreneurship programmes and the structure of local economies reflect that context. The relative importance of household-level versus community-level mediation pathways may differ in other institutional environments. In contexts with weaker local economic linkages, community-level mediation may be less important; in contexts with stronger social networks, community-level mediation may operate through different mechanisms than those specified here.

The Second Boundary Condition Concerns The Welfare Outcomes That The

The framework also has limitations that should be acknowledged. The sequential mediation structure imposes a particular temporal ordering on the causal process, but the actual timing of household-level and community-level effects may be more complex than the model allows. Community-level effects may begin to operate before household-level effects have fully materialised, particularly if the anticipation of entrepreneurship access changes community dynamics.

The framework's assumption of a strict temporal ordering is a simplification that may not hold in all settings. A further limitation concerns the identification assumptions required for causal mediation analysis. The sequential ignorability assumption is strong, and although sensitivity analysis can assess the robustness of conclusions to violations, it cannot eliminate the possibility of unobserved confounding.

The framework should therefore be understood as providing a template for mediation analysis rather than a guarantee that such analysis will produce causally identified estimates in any particular application. The quality of the empirical conclusions will depend on the quality of the design and data available in specific evaluation contexts.

Conclusion: Toward Mechanism-Based Entrepreneurship Policy

The Central Argument Of The Present Analysis Is That The

The central argument of the present analysis is that the relationship between entrepreneurship access and household welfare in Kenya cannot be adequately understood through the estimation of average treatment effects alone. What is required is a shift in analytical focus from whether entrepreneurship access improves welfare to how it does so, for whom and under what conditions. The multilevel causal mediation framework developed here provides the conceptual and methodological resources for making this shift.

The framework's principal contribution is to specify the sequential structure of the causal pathways linking entrepreneurship access to household welfare. Household-level mediators, including business income and asset accumulation, are theorised to operate first, creating the conditions for community-level mediators, including market density and social capital, to become active. This sequential structure has implications for the timing of welfare effects, the design of entrepreneurship programmes and the interpretation of evaluation results.

The Framework'S Principal Contribution Is To Specify The Sequential Structure

The identification analysis reveals the challenges that must be addressed in empirical applications of the framework. Programme placement, spillover effects and mediator-outcome confounding all threaten the causal interpretation of mediation effects. The framework responds to these challenges through a combination of design-based strategies, including the exploitation of phased programme rollout, and model-based strategies, including sensitivity analysis.

These strategies do not eliminate the need for substantive assumptions, but they make those assumptions explicit and testable. The policy implication of the framework is that entrepreneurship promotion should be designed and evaluated with explicit attention to mechanisms. Programmes that are delivered in geographically concentrated ways may be more likely to activate community-level mediation pathways than programmes that spread resources thinly.

Evaluations that measure welfare outcomes at multiple time points may be better able to capture the sequential unfolding of household-level and community-level effects. And policy learning should focus not on whether entrepreneurship works but on the conditions under which particular mechanisms are activated and the pathways through which they improve household living standards.

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