

Marketplace Literacy as a Pathway to a Better World: Evidence from Field Experiments in Low-Access Subsistence Marketplaces

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Abstract

Multinational companies increasingly focus on subsistence marketplaces, given their enormous market potential. Nevertheless, their potential is untapped because subsistence consumers face extreme constraints. The authors contend that subsistence consumers need marketplace literacy to participate effectively and beneficially in marketplaces. Marketplace literacy entails the knowledge and skills that enable them to participate in a marketplace as both consumers and entrepreneurs. This is crucial for subsistence consumers, as they often must function in both roles to survive. Previous research, however, has not empirically examined the influence of marketplace literacy on well-being or marketing outcomes related to well-being. To address this gap, the authors implemented three large-scale field experiments with approximately 1,000 people in 34 remote villages in India and Tanzania. They find that marketplace literacy causes an increase in psychological well-being and consumer outcomes related to well-being (e.g., consumer confidence, decision-making ability), especially for subsistence consumers with lower marketplace access, and it causes an increase in entrepreneurial outcomes related to well-being (e.g., starting a microenterprise) for those with higher marketplace access. Overall, this research generates practical implications for the use of marketplace literacy as a pathway to a better world.

Keywords

consumer well-being, entrepreneurship, field experiment, marketplace access, marketplace literacy, randomized control trial, subsistence contexts

Online supplement: <https://doi.org/10.1177/0022242921998385>

We demonstrate that marketing can serve as a pathway to a better world by improving the lives and livelihoods of subsistence consumers, many of whom live in extreme poverty and lack access to marketplaces (i.e., are among the world's most vulnerable consumers). The success of marketers who look to emerging markets for growth is inextricably linked to the well-being of hundreds of millions of subsistence consumers and microentrepreneurs, who face poor infrastructure, material resource constraints, and low literacy. Yet such markets are some of the fastest growing in the world (Tanchua and Shand 2016), with nearly \$5 trillion of consumption spending annually (Global Consumption Database 2017). As a result, many multinational companies (e.g., Procter & Gamble, Nokia, Unilever) market products to subsistence consumers.¹ A primary

disconnect between marketers' engagement in such markets and subsistence consumers' demand for their products, however, is the latter's inability to participate in marketplaces effectively and beneficially. Effective participation entails the knowledge and skills of what to buy and sell, how to participate in the marketplace as both a consumer *and* an entrepreneur, and a deeper understanding of why marketplace activities occur. Unique to subsistence marketplaces is that microentrepreneurship serves as a primary source of livelihood to meet consumption needs (Alvarez and Barney 2014). Beneficial marketplace

¹ The term "subsistence" describes a state of having only enough resources to barely make ends meet. It captures conditions characterized by a range within the low income, from extreme poverty to the cusp of low and lower-middle income.

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participation involves making optimal consumer decisions and generating income by creating value for others through micro-entrepreneurship. With low marketplace participation and sub-optimal decision making, firms may sell substandard products (Garrette and Karnani 2010). Moreover, firms may not partner with local entrepreneurs, which is an important strategy for market entry in emerging markets (Sheth 2011).

We contend that subsistence consumers' effective and beneficial marketplace participation requires not only material resources (e.g., access to capital) but also marketplace literacy (Viswanathan, Gajendiran, and Venkatesan 2008). We define marketplace literacy as the knowledge and skills that enable marketplace participation as both a consumer and an entrepreneur. This form of literacy is distinct from consumer literacy, as it encompasses marketing at a broader level to include the perspective of buyers and sellers. Marketplace literacy is crucial for people in subsistence contexts because they often need to function in both consumer and entrepreneurial roles to survive (Viswanathan, Rosa, and Ruth 2010). In particular, such literacy helps consumers evaluate product quality, compare prices, and develop consumer confidence. It also helps entrepreneurs envision a business opportunity, market to new customers, distribute products efficiently, and run a microenterprise profitably (Viswanathan, Gajendiran, and Venkatesan 2008). Despite the importance of marketplace literacy, we lack empirical research on its impact. We assess the causal impact of marketplace literacy on improvements in subsistence consumers' lives and livelihoods, which manifest in their psychological well-being and consumer and entrepreneurial outcomes related to well-being.

An important moderator of the effect of marketplace literacy on these outcomes is marketplace access,² a contextual variable that is taken for granted in resource-rich contexts but is a severe challenge in many subsistence marketplaces. In particular, many subsistence consumers lack access to marketplaces (Sheth 2011) due to distance and cost, both of which constrain their ability to obtain important marketing information (Talukdar 2008). We examine how varying levels of marketplace access moderate the effect of marketplace literacy on several outcomes that relate to well-being.

To test our framework, we implemented three large-scale randomized control trials (RCTs) with approximately 1,000 individuals (who consisted of women farmers and isolated tribal members) across 34 villages in rural India and Tanzania. Across our field experiments, we implemented a marketplace literacy educational program for a treatment group and either no program or a placebo educational program for a control group and measured changes in several perceptions and self-reported behaviors. An analysis of the treatment effect showed

that marketplace literacy (which was gained through the educational program) caused an increase in psychological well-being and consumer outcomes (e.g., consumer confidence, decision-making ability), especially for those with lower marketplace access. In addition, the treatment effect caused an increase in entrepreneurial outcomes (e.g., entrepreneurial intention, starting a microenterprise) for those with higher marketplace access.

We generate several theoretical implications. First, we advocate that subsistence consumers play a significant role in mainstream marketing research because they represent a sizable proportion of consumers globally and function in extreme conditions that challenge the theories developed for resource-rich consumers and markets. Second, although existing work has described marketplace literacy educational programs (e.g., Viswanathan et al. 2009; Viswanathan, Gajendiran, and Venkatesan 2008), our research is the first to demonstrate the causal effect of marketplace literacy on several outcomes related to well-being. We provide rigorous evidence that disentangles the causal effect of marketplace literacy from potential biases, such as omitted variables, that increase well-being and reverse causality (Anderson, Chandy, and Zia 2018). In doing so, we demonstrate that marketplace literacy offers a pathway to a better world for subsistence consumers and highlight its value as a central individual difference variable for future research. This pathway is fundamentally about literacy in a marketing domain, which encompasses buyers, sellers, and their interplay. Third, we introduce marketplace access as an important contextual factor that should be measured and incorporated when studying a range of marketing phenomena across income levels.

From a practical standpoint, we identify marketplace literacy as a critical form of marketing-related literacy (in addition to financial literacy) that should be cultivated to enable subsistence consumers' effective and beneficial participation in marketplaces. Both of these outcomes benefit marketers and society as a whole. We make recommendations on how firms, public policy makers, and development organizations can work in concert to cultivate marketplace literacy. Further, we describe how marketplace literacy interventions can be scaled and how governments can help subsistence consumers to overcome a lack of marketplace access to engage in entrepreneurship. Importantly, through conducting this research, hundreds of low-income and resource-constrained individuals in remote areas of India and Tanzania experienced improvements in their lives and livelihoods.

Theory and Hypotheses

Conceptual Foundations

Subsistence marketplaces. Subsistence, which entails the condition of existing with extremely limited financial and basic (e.g., food, water, housing) resources, is a harsh reality for much of the world's population, especially in developing countries (World Bank 2020). In such contexts, subsistence

² When we discuss marketplace access, we refer to access to specific marketplaces, which are concentrated and organized commercial areas that bring together a volume of buyers and sellers to allow for a variety of marketing exchanges. We illustrate the importance of marketplaces in subsistence contexts in Web Appendix A.

consumers face the persistent stress of material resource deprivation and cognitive and affective constraints (Viswanathan and Rosa 2007). Low income co-occurs with low basic literacy, which exacerbates the limitations that subsistence consumers face in making decisions that require abstract thinking (Viswanathan 2013; Viswanathan, Rosa, and Harris 2005). Another distinctive feature of subsistence marketplaces is the intertwined nature of consumption and entrepreneurship (Viswanathan, Rosa, and Ruth 2010). Given their chronic resource constraints, a lack of access to financial capital, limited technical skills, and periodic surges in household expenses, subsistence consumers become entrepreneurs out of necessity rather than by opportunity or choice (Alvarez and Barney 2014). They operate multiple seasonal microenterprises to meet their short-term needs, including selling fruits and vegetables, making handicrafts, or managing an eatery (Viswanathan, Rosa, and Ruth 2010). Indeed, their entrepreneurship helps drive their consumption, and vice versa (Viswanathan, Rosa, and Ruth 2010). Finally, subsistence marketplaces are rich in social capital, characterized by strong interpersonal relationships with frequent one-on-one interactions that provide a platform for learning among and between buyers and sellers (Viswanathan et al. 2012). In turn, this relational environment helps subsistence consumers overcome their constraints.

Subsistence marketplaces and marketplace literacy. Marketplace literacy has been broadly described as a capability necessary to participate in the marketplace as a consumer and an entrepreneur (Viswanathan et al. 2009). We build on this description to formally define marketplace literacy as the knowledge and skills that enable marketplace participation as both a consumer and an entrepreneur. This definition parallels definitions of functional literacy in other domains (e.g., financial literacy; Gaurav, Cole, and Tobacman 2011), which emphasize an understanding of information and having the skills to use this information to complete tasks in life. Thus, we isolate this core functional literacy, which centers on knowledge and skills, from the outcomes that it can lead to, such as confidence and well-being.

Marketplace literacy is distinct from previously examined forms of literacy in several ways. First, unlike consumer knowledge and consumer literacy, it incorporates entrepreneurial literacy. Marketplace literacy not only allows for more effective consumer decision making but also enables subsistence consumers to start and maintain income-generating activities. Second, it incorporates the “know-why” of marketing exchanges, which is essential to making better choices (Wright 2002). Third, it is distinct from marketing-related entrepreneurial skills, which have only recently been explored (e.g., Anderson, Chandy, and Zia 2018), and does not incorporate consumer literacy and its synergy with entrepreneurship. Further, whereas prior research has described the usefulness of marketplace literacy educational programs (e.g., Viswanathan et al. 2009; Viswanathan, Gajendiran, and Venkatesan 2008), the causal outcomes of marketplace literacy have not been empirically assessed through field experiments. We address

these gaps in this article (for a review of the literature, see Web Appendix B).

Marketplace literacy comprises three types of knowledge and skills: know-what, know-how, and know-why (Viswanathan et al. 2009). Know-what is a person’s objective knowledge, such as knowing what to buy and pay as a buyer (Park, Mothersbaugh, and Feick 1994) and what to sell and for what price as a seller. Know-how is a person’s procedural skill set, such as an ability to compare product attributes to make a purchase decision (Adkins and Ozanne 2005a; McGregor 2011) and to differentiate one’s enterprise from that of competitors to attract consumers (Boso, Story, and Cadogan 2013). Unique to marketplace literacy is the know-why of marketplace exchanges, which can address a difficulty with abstract thinking and cognitive constraints. This form of conceptual knowledge enables subsistence consumers to make decisions with a deeper understanding of cause-and-effect relationships. For example, the value assigned to a marketing exchange is up to a customer, but an understanding of why value is important results in improved consumer outcomes (e.g., being confident about a decision, choosing the right product from the right seller). Further, in terms of entrepreneurship, knowing why a certain business is better to pursue than another or why customer orientation matters yields better entrepreneurial outcomes. Thus, a person’s know-why, over and above their know-what and know-how (Viswanathan et al. 2009), can place that person on a path to search for and process marketing information more effectively (Moorman et al. 2004).

Marketplace literacy can enable subsistence consumers to choose the right store, negotiate the right price, compare products, assess quality, and purchase the right product. It also fosters greater consumer confidence, which is the ability to assertively acquire information and protect oneself from deception (Bearden, Hardesty, and Rose 2001). Further, the evaluation of marketing information also requires an understanding of sellers’ motives and marketing tactics (Friestad and Wright 1994). Entrepreneurial literacy enables subsistence consumers to function as more effective consumers because it helps them make better decisions on the basis of their knowledge of a seller’s motivations, capacities, and constraints. This generates immediate benefits, such as saving money, obtaining better quality products, and purchasing products that better fit one’s needs. Further, entrepreneurial knowledge and skills help subsistence consumers pursue microentrepreneurship more effectively, including being able to identify a marketing opportunity, starting a microenterprise, and running it profitably (Mano et al. 2012).

Due to deprivation on multiple fronts, however, many subsistence consumers lack marketplace literacy. Given that low income is strongly associated with low literacy, subsistence consumers face several cognitive constraints (Viswanathan, Rosa, and Harris 2005) that impede their development of marketplace literacy (Viswanathan et al. 2009). For example, they engage in concrete thinking and form product impressions by processing isolated pieces of information (e.g., buying the least expensive product) rather than abstracting information across product attributes to gauge overall value. Alternatively, they

engage in pictographic thinking and rely on their visual sense in place of reading and processing textual and numerical information. For example, rather than use units of measurements, they visualize usage situations and estimate an amount to buy. Subsistence consumers may visualize dollar bills in place of actually calculating the total cost of a basket of products. They may pass up on a discount as they are unable to compute the final price (Viswanathan, Rosa, and Harris 2005). Overall, it is challenging for subsistence consumers to combine disparate pieces of information to draw abstract, higher-level judgments of value, such as combining the “give” with the “get.” Difficulty with abstractions that is reflected in concrete and pictographic thinking also inhibits a deeper understanding of basic concepts (e.g., good health, being a consumer, what a business does) and causal relationships (i.e., knowing why gauging value can lead to money saved and better-quality products; Viswanathan, Rosa, and Harris 2005). Further, many subsistence consumers face affective constraints and consequently avoid unfamiliar products and settings as well as valuable marketing experiences to maintain their self-esteem and not have their low literacy exposed (Adkins and Ozanne 2005b; Viswanathan, Rosa, and Harris 2005).

Entrepreneurs in subsistence contexts also may lack marketplace literacy. In terms of sellers’ cognitive constraints, the very notion of an enterprise may be difficult to envision, and an understanding of why one should pursue a particular business over another can be limited. Indeed, given the cognitive constraints they face, many subsistence entrepreneurs may be unable to draw a causal connection between being customer oriented and being successful, even though such an orientation can benefit them. A majority of subsistence microenterprises are formed by replicating the business models of successful entrepreneurs in the marketplace (Nikiforou, Dencker, and Gruber 2019). Many potential entrepreneurs, however, are excluded from institutions and experience social inequalities, which hinder their ability to participate in the marketplace, scan their environment for opportunities, and start their own enterprise (Nikiforou, Dencker, and Gruber 2019). By gaining marketplace literacy, potential entrepreneurs can overcome such barriers to engage in entrepreneurship confidently and effectively (Venugopal, Viswanathan, and Jung 2015). We present our conceptual framework in Figure 1).

Predictions

Marketplace literacy and psychological well-being. Well-being is a multidimensional construct (Diener 1994) composed of two dimensions (Haq and Zia 2013). The first (objective) dimension refers to individuals’ satisfaction with making choices that will enhance their quality of life, which is reflected in their socioeconomic indicators and behavioral choices. The second (subjective) dimension captures individuals’ psychological well-being, which includes autonomy, self-acceptance, positive relations, situational control, personal growth, and purpose in life (Ryff 1989). Psychological well-being is a broad concept; and thus, we focus on only some aspects that are relevant

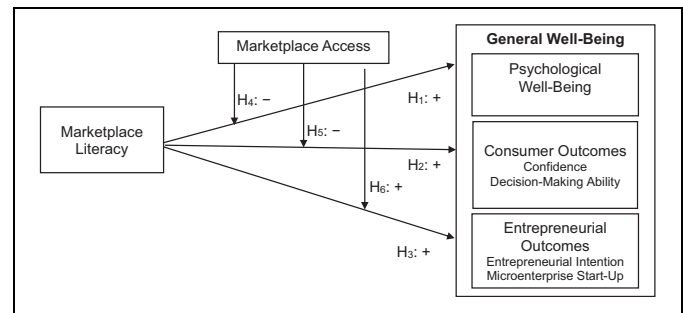


Figure 1. Conceptual framework.

to our research context, such as autonomy, empowerment, and domestic stability. If people’s choices are constrained by external forces beyond their control or they are compelled to behave in a way that prevents them from satisfying their needs and aspirations, then their autonomy is threatened (Ryan and Deci 2006). Low-income consumers sense a loss of control due to severely constrained options in the marketplace (Hill 1991), and as a result, they are forced to make suboptimal choices. In addition to these material resource constraints, gender-based norms impede low-income women’s autonomy and empowerment in general, and their ability to enforce decisions within their families in particular. However, when they have some degree of control over their environment, a voice in their family’s decisions, and a stable home, women experience well-being (Annan et al. 2019).

Given the multiple sources of deprivation that subsistence consumers face, consumer and entrepreneurial knowledge and skills can have broad ripple effects that extend beyond these domains to both objective and subjective (i.e., psychological) dimensions of well-being. In subsistence marketplaces, consumption and entrepreneurship are necessary for not only a person’s survival but also improving their quality of life (Venugopal, Viswanathan, and Jung 2015). Yet, a variety of negative factors can arise for subsistence consumers in a marketplace, such as humiliation, unfamiliarity, a lack of confidence, and an inability to visualize future outcomes. As a result, subsistence consumers are unable to function effectively as consumers, which reduces their well-being (Martin and Hill 2012). Alternatively, those with marketplace literacy can be more effective in acquiring and consuming products that meet their families’ needs (Viswanathan et al. 2009). More effective consumer behavior leads to saving money, obtaining better-quality products, avoiding being cheated, and processing marketing information to make the right decision. In turn, marketplace literacy can lead to a person feeling in control of their decisions and performing purchase-related tasks with confidence. Such a sense of autonomy and competence has a positive influence on well-being (Ryan and Deci 2006).

Further, marketplace literacy can lead to the confidence to start a business, source from the right supplier, innovate, and market to the right customer to generate income. Autonomy

and empowerment can enable individuals to gain control of their physical environment, but they usually lack the knowledge or skills to find and make use of such opportunities (Hill 1991). Entrepreneurship can offer a path for individuals to alleviate their material constraints and function with autonomy (Tobias, Mair, and Barbosa-Leiker 2013). For example, microentrepreneurs report greater life satisfaction due to higher financial security and a sense of achievement after starting a microenterprise (Bhuiyan and Ivlevs 2019). Therefore, we propose:

H₁: An increase in marketplace literacy causes an increase in psychological well-being.

Marketplace literacy and consumer outcomes related to well-being.

We expect that marketplace literacy will lead to consumer-specific outcomes related to well-being, such as consumer confidence and decision-making ability. These outcomes influence both subjective and objective dimensions of well-being, such as individuals' satisfaction with their choices and improvements in their livelihoods (Haq and Zia 2013), which include consumer savings and purchasing better-quality products. Consumer confidence is the extent to which a consumer feels capable of making decisions in the marketplace, can assertively acquire and use information to make decisions, and can protect themselves from being misled by sellers (Bearden, Hardesty, and Rose 2001). Confident consumers search for information more effectively and have more positive experiences in a marketplace (Loibl et al. 2009). Acquiring market-related information, however, involves navigating the marketplace in search of sources of new information (Schmidt and Spreng 1996). Yet many subsistence consumers avoid unfamiliar marketplace environments and interactions with marketers due to low self-esteem and the stigma of being perceived as poor or low-literate (Adkins and Ozanne 2005b; Viswanathan 2013; Viswanathan, Rosa, and Harris 2005). As a result, they face deceptive practices from sellers (Hill 2002).

We build on prior work (e.g., Viswanathan et al. 2009) to argue that marketplace literacy will engender consumer confidence in subsistence consumers. Previous research has linked various forms of literacy, such as basic (Wallendorf 2001), financial (Gaurav, Cole, and Tobacman 2011), and consumer literacy (Jae and Delvecchio 2004; McGregor 2011), to perceptions of self-efficacy in decision making. In addition, marketplace literacy offers subsistence consumers a deeper understanding of why marketing exchanges occur, and an ability to comprehend abstract notions, such as exchange value. It can enable people to assertively navigate the marketplace to gather information from stores and sellers and determine how and why to make specific judgments. Further, it enables individuals to understand marketers' persuasive tactics (Wright 2002) and to have the autonomy and judgment to differentiate useful from redundant information, all of which should lead to confidence in the marketplace.

Central consumer decisions include what to buy and at what price (Bettman, Johnson, and Payne 1991). Whereas such

decisions seem straightforward for most, especially in resource-rich contexts, for subsistence consumers who face cognitive and affective constraints, such decisions are difficult. When achieved, however, these decisions can increase well-being (Martin and Hill 2012). Marketplace literacy enables individuals to function as more effective consumers by aiding them in knowing how and why to gauge product quality and negotiate better prices. These actions are rudimentary, yet central, aspects of decision making that capture exchange value, or "the get" (quality) and "the give" (price), which is a cornerstone of effective consumer decision making (Pels 1999). Therefore, we propose:

H₂: An increase in marketplace literacy causes an increase in consumer confidence and decision-making ability.

Marketplace literacy and entrepreneurial outcomes related to well-being.

Similar to consumer outcomes, entrepreneurial outcomes influence a broader notion of well-being (Haq and Zia 2013). Entrepreneurship creates economic and social value for people who are living in poverty (Bruton, Ketchen, and Ireland 2013). "Entrepreneurship," or the process of removing constraints to identify entrepreneurial opportunities, however, requires skills and capabilities (Tobias, Mair, and Barbosa-Leiker 2013). As we have noted, consumer and entrepreneurial roles are two sides of the same coin in subsistence contexts, but becoming an entrepreneur requires additional resources. In addition to a lack of infrastructure, financial capital, and government support, potential entrepreneurs who live in poverty face other limitations. For example, they may not be willing to take risks, know how to deal with the formal aspects of running a business (Klinger and Schündeln 2011), or know why to market to a certain customer.

Beyond general business (Klinger and Schündeln 2011), financial (Bulte, Lensink, and Vu 2017), and marketing (Anderson, Chandy, and Zia 2018) education, we expect that marketplace literacy is central to engendering entrepreneurship, as it covers what microenterprise to start, how to start it, and why to start it over another option. Marketplace literacy also provides an understanding of customer orientation and, thus, sheds light on how to attract and retain customers and why being mindful of the competition can reduce the risks involved with operating a microenterprise. Indeed, starting a microenterprise can greatly improve a person's quality of life (Tobias, Mair, and Barbosa-Leiker 2013).

Marketplace literacy also equips potential entrepreneurs with consumer literacy, which helps them understand how and why consumers make decisions despite resource constraints (Viswanathan et al. 2009). This is necessary for entrepreneurs in subsistence marketplaces because, here, marketing actions are likely to succeed when undertaken through a communal perspective (Boso, Story, and Cadogan 2013) due to the frequent one-on-one interactions that occur among buyers and sellers (Viswanathan et al. 2012). Specifically, knowing what to sell and how and why to sell it over an alternative is driven

by what customers want to buy, how they will acquire it, and why they should buy it over a competitive product. Therefore, we propose:

H₃: An increase in marketplace literacy causes an increase in entrepreneurial intentions and microenterprise start-ups.

Moderating role of marketplace access. Next, we develop predictions about the moderating role of an important contextual variable: marketplace access. Marketplace access can be viewed in several ways, such as geographic proximity (e.g., physical distance by road; Talukdar 2008) or low cost or duration of travel (e.g., transportation alternatives; Stifel and Minten 2017) to a marketplace. In addition to providing a platform for buying and selling, marketplaces provide a variety of marketing information and the opportunity for buyers and sellers to interact with one another and with marketing information (Wright 2002). Given that many subsistence consumers lack marketplace access (Sheth 2011), they are unable to rely on the marketplace to provide them with marketing information and to learn from other consumers and entrepreneurs about how to make decisions confidently and effectively. For example, individuals in rural communities need to overcome a significant information divide to adopt beneficial products (Miller and Mobarak 2015). We contend that overcoming such a divide requires marketplace literacy, which can be developed even with limited marketplace access.

Individuals who live in remote contexts can indeed develop marketplace literacy, although they need to overcome the barriers of scarce marketplace information and their own cognitive and affective constraints. As market information becomes less accessible to subsistence consumers who already face cognitive constraints, their search for products and evaluation of product choices becomes even more challenging. Nevertheless, individuals have been shown to overcome these challenges through a variety of coping strategies (Viswanathan 2013; Viswanathan, Rosa, and Harris 2005). One means is through one-on-one social interactions, which offer a way to develop knowledge from the few buyers and sellers in their community (Viswanathan et al. 2012). In particular, they use local social connections to obtain and validate information (Miller and Mobarak 2015). Thus, although individuals with low marketplace access are disadvantaged by sparse information from the marketplace, they develop marketplace literacy through alternative means. In low-access contexts, individuals face additional deprivation and, as a result, need to develop capabilities to overcome such constraints to survive (Hill 1991). As such, marketplace literacy may develop organically out of necessity to address urgent needs. Thus, for subsistence consumers with lower (vs. higher) marketplace access, we expect that their marketplace literacy will be even more consequential because they require the knowledge and skills to analytically process sparse marketing information to make independent decisions without relying on the marketplace to provide such information. In

other words, marketplace literacy will have greater influence on subsistence consumers' autonomous functioning when marketplaces are less accessible.

In contrast, subsistence consumers with relatively higher access to marketplaces can more easily leverage the external information provided by the marketplace—such as information from other consumers, sellers, and competitors, and marketing cues—to make decisions independently. When accessing information in a marketplace is less effortful, consumers develop familiarity through repeated exposure to marketing cues (Alba and Hutchinson 1987) and, thereafter, utilize their memory to make purchase decisions (Park, Iyer, and Smith 1989). We predict that when subsistence consumers can obtain marketing information in higher-access contexts, their marketplace literacy will play a smaller role in affecting their psychological well-being, consumer confidence, and decision-making ability. Therefore, we propose:

H₄: An increase in marketplace literacy causes an increase in psychological well-being for those with lower access to marketplaces.

H₅: An increase in marketplace literacy causes an increase in consumer confidence and decision-making ability for those with lower access to marketplaces.

In contrast to our arguments in H₄ and H₅, we argue that *higher* (vs. lower) marketplace access will lead to a higher impact of marketplace literacy on entrepreneurship. Starting a business is much more resource intensive than what is required to function as a consumer. For entrepreneurs, marketplace access provides the infrastructure, financial and otherwise, to build a business and to attract a volume of customers as well as a social network of entrepreneurs from whom to learn. Such relational-based learning and emulating is essential in subsistence marketplaces (Viswanathan et al. 2012).

Because subsistence entrepreneurship is born out of necessity rather than opportunity, the creation of microenterprises is enabled with access to the market institutions and infrastructure to compensate for a lack of resources (Nikiforou, Dencker, and Gruber 2019) and skills to act on such external resources (Tobias, Mair, and Barbosa-Leiker 2013). For example, access to finance through market institutions is critical for the success of entrepreneurs in poverty contexts (Karlan and Valdivia 2011). In resource-constrained contexts, entrepreneurs gather financial resources from social connections in the marketplace (Bruton, Ketchen, and Ireland 2013), which would not be possible unless a potential entrepreneur has access. In addition to material and financial resources, developing knowledge and skills to identify and act on entrepreneurial opportunities also requires marketplace participation, which is easier when access to marketplaces is convenient and less costly. Thus, unlike our prediction for psychological well-being and consumer outcomes, we expect that higher (vs. lower) marketplace access will lead to a bigger impact of marketplace literacy on entrepreneurship. Therefore, we propose:

H₆: An increase in marketplace literacy causes an increase in entrepreneurial intentions and microenterprise start-ups for those with higher access to marketplaces.

Overview of Field Experiments

We tested our hypotheses with primary data obtained from three large-scale panel field experiments in India and Tanzania. For each field experiment, we implemented an RCT with individuals who live in remote subsistence contexts as our unit of analysis. Our experiments consisted of five parts: (1) sample recruitment, (2) pretreatment measurement of the outcomes for all participants, (3) random assignment of participants into either a treatment group or a control group, (4) implementation of an educational intervention to manipulate our focal construct, and (5) posttreatment measurement of outcomes. As a result, our randomly assigned interventions, which manipulate our theoretical variables exogenously, are orthogonal to other factors that could potentially drive changes in the outcomes of interest (Anderson, Chandy, and Zia 2018). We present a timeline of our field experiments in Web Appendix C.

In all three field experiments, we manipulated our core construct, marketplace literacy, with the use of an established educational program that has been used to develop marketplace literacy for subsistence consumers (Viswanathan et al. 2009; Viswanathan, Gajendiran, and Venkatesan 2008). The marketplace literacy program has been conducted in several countries (e.g., India, Tanzania, Argentina, Mexico, Honduras, Uganda, United States). It has ranged from four- to eight-hour educational sessions over one to six days and is taught using pictures, verbal discussions, hands-on exercises, and slides and videos shown on a laptop. The content focuses on knowing what, how, and why marketplace exchanges occur in terms of interactions between consumers and sellers/entrepreneurs.

Aspects of consumer literacy include the objective knowledge of what to buy, the procedural knowledge of how to buy products at the right store at the right price, and the conceptual knowledge of why to look for value in an exchange. Aspects of entrepreneurial literacy include the objective knowledge of what to sell, the procedural knowledge of how products move through the value chain, and the conceptual knowledge of why to choose a business over another and why being customer oriented is important. The program teaches consumer and entrepreneurial literacy in an iterative way, in which each is mutually reinforced. Participants are asked to role play as a buyer and a seller. They are then asked about what has occurred in the role plays (bargaining between a consumer and a seller), how it occurred (ways to negotiate a better price as a consumer or garner a higher price as a seller), and why (to save money as a consumer or generate profit as a seller). We present a list of topics that we covered in our marketplace literacy program and our method in Web Appendix D.

We created our control condition in different ways across our studies and detail this subsequently. Further, we examined how marketplace access moderates the impact of marketplace literacy on several outcomes related to well-being. We both

manipulated and measured marketplace access to capture variability in its measurement, using various proxies.

Field Experiment I: Women Farmers in Rural India

Method

We conducted a field experiment with women farmers across several villages in the rural parts of the state of Tamil Nadu, India, to test the main effect of marketplace literacy on psychological well-being (H_1) and whether this relationship is moderated by marketplace access (H_4). We worked with an established field research team that had two decades of experience in implementing educational programs in over 100 villages in rural India.

Procedure

We manipulated marketplace literacy with the marketplace literacy program and manipulated marketplace access by identifying three clusters of villages. Each cluster varied in its road-based geographic distance to a large marketplace. Drawing on these distances, we implemented our treatment (marketplace literacy program vs. a control) at three levels of access within each cluster of villages to ensure variability in marketplace access in both the treatment and control (relatively low, medium, and high marketplace access). In terms of our analysis, we used the actual geographic distances in kilometers to a marketplace. We summarize our experiment next and provide more detail in Web Appendix E.

In each village, the field research team recruited 22 to 25 women farmers who agreed to participate in the longitudinal experiment in exchange for an incentive (400 Indian rupees, approximately US\$6). We focused on women farmers due to their known positive impact on their families (Duflo 2012). Our total sample consisted of 392 women farmers (196 who participated in the marketplace literacy program and 196 who did not).³ The participants in the treatment groups and control groups were comparable across multiple variables (i.e., the treatment was randomized; see Web Appendix E for details).

To begin, the research team administered a presurvey to the 392 women farmers across the 18 villages. The survey was translated into the local language of Tamil and was administered in person to each participant, one at a time. Then, the marketplace literacy program was delivered to the treatment group of 196 women farmers in nine villages over two half-day sessions. Three instructors, each assigned to a cluster of villages, delivered the program in three villages each (with one village at each of the three access levels). Then, nine weeks after the presurvey and eight weeks after the program, the research team individually administered the postsurvey with

³ After the field experiment was completed, the field research team provided the marketplace literacy program to the control group participants so they could also derive benefits from the program.

Table 1. Variables and Measures.

Construct	Description	Adapted From	Measure	Scale
Marketplace literacy program	Independent variable	Viswanathan et al. (2009)	Treatment: marketplace literacy program versus control	Treatment = 1, control = 0
ΔPsychological well-being	Dependent variable		My home life is stable I can stand up to family members if something is not right I am in control of my life I have a say in what happens within my family I have the freedom to make my own decisions	1 ("Strongly disagree") to 5 ("Strongly agree"); mean of post – pre
Cronbach's alpha: Field Experiment 1: pre (.51); post (.53) Field Experiment 2: pre (.78); post (.67)				
Measured marketplace access	Moderator	Talukdar (2008)	Measured distance (kilometers) from participants' villages to marketplace (r)	Ratio data
ΔConsumer confidence	Dependent variable	Bearden, Hardesty, and Rose (2001)	Information Acquisition I know where to find the information I need prior to making a purchase I know where to look for product information I am confident in my ability to research important purchases I ask the right questions to ask when shopping I have the skills required to obtain needed info. before making important purchases Consideration Set Formation I am confident in my ability to recognize a brand I can tell which brands meet my expectations I trust my judgement when choosing brands to consider I know which stores to shop at I focus easily on a few good brands Personal Outcomes Decision Making I have doubts about my purchase decisions (r) I agonize over what to buy (r) I wonder if I've made the right purchase selection (r) I never seem to buy the right thing for me (r) The things I buy are not satisfying (r)	1 ("Strongly disagree") to 5 ("Strongly agree"); mean of post – pre
Cronbach's alpha: Field Experiment 2: pre (.79); post (.83)				
Marketplace literacy measure	Manipulation Check	None	I know why... ...buyers choose one product over another ...buyers choose one shop over another ...buyers gather information before buying ...buyers evaluate products before buying ...sellers choose to sell what they sell ...sellers should understand the needs of customers ...sellers gather information about marketplaces ...sellers price a product in a certain way	1 ("Strongly disagree") to 5 ("Strongly agree"); mean of post – pre
Cronbach's alpha: Field Experiment 2: pre (.70); post (.70) Field Experiment 3: pre (.87); post (.91)				
Reported marketplace access	Moderator	Stifel and Minten (2017)	Self-reported distance to marketplace in minutes and cost, normalized, summed, reverse-coded	Ratio data
ΔQuality assessment	Dependent variable	Huang, Lurie, and Mitra (2009)	I check the quality of products before purchase	3 = "Yes," 2 = "Maybe," and 1 = "No"; post – pre
ΔPrice negotiation	Dependent variable	Levy and Gvili (2020)	I negotiate to get a good price from a seller	3 = "Yes," 2 = "Maybe," and 1 = "No"; post – pre
ΔEntrepreneurial intention	Dependent variable	Chen, Greene, and Crick (1998)	I intend to set up a business in the future	1 ("Strongly disagree") to 5 ("Strongly agree"); post – pre
Started a microenterprise	Dependent variable	None	Did you start a NEW business AFTER attending the program?	1 = "Yes," 0 = "No"

Notes: pre = pretreatment data; post = posttreatment data; N.A. = not present in the field experiment; ✓ = present in the field experiment; (r) = reverse-coded. For Field Experiment 1, control was the absence of the marketplace literacy program; for Experiments 2 and 3, the control was a sustainability literacy program.

the same measures as the presurvey to the 392 women farmers. A marketing research firm in India entered the data.

Measures

Dependent variable. Our dependent variable, psychological well-being, is an umbrella concept that encompasses a person's sense of control of their life choices and life satisfaction (Lee et al. 2002). However, for subsistence consumers, their role in

their family's decision-making process is an important component of their autonomous functioning (Seymour and Peterman 2018). Scholars who study vulnerable consumers argue that well-being should incorporate autonomy (Martin and Hill 2012), empowerment (Baker, Gentry, and Rittenburg 2005), and domestic stability (Annan et al. 2019). We reflected these aspects in our measure and assessed the 392 women farmers' pre- and posttreatment psychological well-being with a five-item, five-point Likert scale (Table 1). We summed their

Table 2. Variable Creation and Model Specification.

Field Experiment 1	
Change dependent variable [(posttreatment) _{t+1} – (pretreatment) _t]	$\Delta\text{Psychological well-being}_{(t+1)-t} = (\text{Mean Psychological well-being}_{t+1}) - (\text{Mean Psychological well-being}_t)$
First-difference OLS regression model	(1) $\Delta\text{Psychological well-being}_{i,(t+1)-t} = \beta_0 + \beta_1\text{Marketplace Literacy}_i + \beta_2\text{Measured Marketplace Access} + \beta_3(\text{Marketplace Literacy} \times \text{Measured Marketplace Access})_i + \Delta\varepsilon_{i,(t+1)-t}$
Field Experiment 2	
Change dependent variables [(posttreatment) _{t+1} – (pretreatment) _t]	$\Delta\text{Psychological well-being}_{(t+1)-t} = (\text{Mean Psychological well-being}_{t+1}) - (\text{Mean Psychological well-being}_t)$ $\Delta\text{Consumer Confidence}_{(t+1)-t} = (\text{Mean Consumer Confidence}_{t+1}) - (\text{Mean Consumer Confidence}_t)$
Two OLS first-difference regression models	(2) $\Delta\text{Psychological well-being}_{i,(t+1)-t} = \beta_0 + \beta_1\text{Marketplace Literacy}_i + \beta_2\text{Reported Marketplace Access}_i + \beta_3(\text{Marketplace Literacy} \times \text{Reported Marketplace Access})_i + \Delta\varepsilon_{i,(t+1)-t}$ (3) $\Delta\text{Consumer Confidence}_{i,(t+1)-t} = \beta_0 + \beta_1\text{Marketplace Literacy}_i + \beta_2\text{Reported Marketplace Access}_i + \beta_3(\text{Marketplace Literacy} \times \text{Reported Marketplace Access})_i + \Delta\varepsilon_{i,(t+1)-t}$
Field Experiment 3	
Change dependent variables [(posttreatment) _{t+1} – (pretreatment) _t]	$\Delta\text{Quality Assessment}_{(t+1)-t} = (\text{Quality Assessment}_{t+1}) - (\text{Quality Assessment}_t)$ $\Delta\text{Price Negotiation}_{(t+1)-t} = (\text{Price Consideration}_{t+1}) - (\text{Price Negotiation}_t)$ $\Delta\text{Entrepreneurial Intention}_{(t+1)-t} = (\text{Entrepreneurial Intention}_{t+1}) - (\text{Entrepreneurial Intention}_t)$
Three OLS first-difference regression models	(4) $\Delta\text{Quality Assessment}_{i,(t+1)-t} = \beta_0 + \beta_1\text{Marketplace Literacy}_i + \beta_2\text{Reported Marketplace Access}_i + \beta_3(\text{Marketplace Literacy} \times \text{Reported Marketplace Access})_i + \Delta\varepsilon_{i,(t+1)-t}$ (5) $\Delta\text{Price Negotiation}_{i,(t+1)-t} = \beta_0 + \beta_1\text{Marketplace Literacy}_i + \beta_2\text{Reported Marketplace Access}_i + \beta_3(\text{Marketplace Literacy} \times \text{Reported Marketplace Access})_i + \Delta\varepsilon_{i,(t+1)-t}$ (6) $\Delta\text{Entrepreneurial Intention}_{i,(t+1)-t} = \beta_0 + \beta_1\text{Marketplace Literacy}_i + \beta_2\text{Reported Marketplace Access}_i + \beta_3(\text{Marketplace Literacy} \times \text{Reported Marketplace Access})_i + \Delta\varepsilon_{i,(t+1)-t}$
Logistic regression model	(7) $P(\text{Start a Microenterprise})_t = 1 / \{1 + \exp[\beta_0 + \beta_1\text{Marketplace Literacy}_i + \beta_2\text{Reported Marketplace Access}_i + \beta_3(\text{Marketplace Literacy} \times \text{Reported Marketplace Access})_i + \varepsilon_{it}]\}$

Notes: i = Indian woman farmer in Field Experiments 1 and 2 and Tanzanian tribal member in Experiment 3; OLS = ordinary least squares; t = Time, $\Delta = [(\text{posttreatment})_{t+1} - (\text{pretreatment})_t]$.

responses to these items, computed a mean, and created a change-based dependent variable (for details on variable creation, see Table 2).⁴

Independent variables. We coded our focal variable, marketplace literacy, as 1 if the participant received the marketplace literacy program and 0 if she did not. Following prior research (e.g., Talukdar 2008), we measured our moderator, measured marketplace access, by the road distance to the preidentified marketplace. Our field research team drove from the epicenter of each village to the hub marketplace along commonly used transportation routes and recorded the exact number of

kilometers (range: 2.3 km to 19.7 km). We reverse-coded this measure to interpret our results in terms of increasing access (i.e., shorter distance in kilometers).⁵

Model

We estimated a first-difference ordinary least squares (OLS) regression model with $\Delta\text{psychological well-being}$ as a function of marketplace literacy, measured marketplace access, and their interaction for woman farmer *i* with robust standard errors clustered at the village level to account for nonindependent observations within a given training session. We present our model specification in Table 2.

⁴ We acknowledge the marginal to moderate internal consistency reliability of this five-item measure across our two studies. We captured aspects of an umbrella construct and traded internal consistency reliability for content validity from a sample in a broad and diverse domain. Further, the lower literacy and income levels of our participants played a role. Finally, we used fewer items to accommodate our participants with lower literacy in a very challenging setting. Details of psychometric analyses are available upon request.

⁵ Because we randomly assigned our treatment, the marketing literacy program, to our sample, we did not include demographics or other controls in our estimation because the experimental design rules them out as predictors of changes in our dependent variable. Further, we verify that the treatment and control groups were very similar (see Web Appendix E, Table E2).

Table 3. Difference-in-Differences Model Free Evidence of Main Effect of Marketplace Literacy.

	Treatment Group				Control Group				Change from Pre to Post			
	Pre	Post	t	p-Value	Pre	Post	t	p-Value	Treatment	Control	t	p-Value
Field Experiment 1												
Psychological well-being	4.15	4.45	3.79	<.01	4.14	4.16	.29	.81	.31	.02	2.07	<.05
Field Experiment 2												
Psychological well-being	3.11	3.62	1.79	.08	3.17	3.19	.02	.98	.51	.02	1.72	.09
Consumer confidence	3.18	3.82	2.10	<.05	3.20	3.09	-1.09	.29	.64	-.11	3.74	<.01
Marketplace literacy	3.20	4.36	2.11	<.05	3.39	3.25	-1.01	.32	1.26	-.14	2.23	<.05
Field Experiment 3												
Quality assessment	2.07	2.69	2.03	<.05	2.13	2.06	-1.54	.56	.62	-.07	2.16	<.05
Price negotiation	2.17	2.49	1.86	<.10	2.24	2.26	.34	.72	.32	-.03	1.96	<.05
Entrepreneurial intention	3.73	4.21	2.11	<.05	3.81	4.17	1.97	<.05	.48	.36	1.20	.21
Microenterprise start-up	0	42	N.A.	N.A.	0	37	N.A.	N.A.	42	37	N.A.	N.A.
Marketplace literacy	2.56	3.90	4.56	<.01	2.39	2.48	.96	.67	1.34	.09	4.37	<.01

Notes: N.A. = not applicable. This table features participants' mean responses to each scale. The treatment was a marketplace literacy program versus a control (no program in Experiment 1 and a sustainability literacy program in Experiments 2 and 3). Differences between the pretreatment stage between treatment and control groups are nonsignificant in all cases ($p > .25$).

Results

We present model-free evidence with a difference-in-differences analysis of pre- and posttreatment psychological well-being between the treatment (marketplace literacy program) and control (no program) groups in Table 3. We find initial support for H_1 . We present the model estimation results of Equation 1 in Table 4. Marketplace literacy (as manipulated through the marketplace literacy program) caused an increase in psychological well-being ($b = 2.612$, $p < .01$; H_1 is supported). Measured marketplace access had no effect on a change in psychological well-being ($b = .000$, $p = .75$), which was expected, given a random assignment of our treatment across access levels. In terms of a heterogeneous treatment effect, for participants with relatively higher access to marketplaces as measured marketplace access increased, marketplace literacy caused a smaller increase in psychological well-being ($b = -.402$, $p < .01$). Thus, in support of H_4 , we find that marketplace literacy caused a larger increase in psychological well-being for the women farmers with lower access to a marketplace.

Field Experiment 2: Women Farmers in Rural India

Method

In our second field experiment, we aimed to retest the effect of marketplace literacy on psychological well-being (H_1) and the moderating effect of marketplace access on this relationship (H_4). Further, we aimed to test the effect of marketplace literacy on consumer outcomes related to well-being, such as consumer confidence (H_2) and the moderating effect of marketplace access on this relationship (H_5). We improved on our first experiment in a few ways. First, although marketplace literacy

Table 4. Field Experiment 1 Estimation Results.

Focal Variables	Change in Well-Being	
	β (SE)	p-Value
Marketplace literacy	2.612 (.582)	<.01
Measured marketplace access	.000 (.000)	.75
Marketplace literacy $\times$ Measured marketplace access	-.402 (.100)	<.01
Sample size	380	
Adjusted R-square	.143	

Notes: The results feature beta coefficients with standard errors in parentheses.

programs have been shown to generate marketplace literacy (e.g., Viswanathan et al. 2009), in our second experiment, we developed an independent measure of this construct to serve as a manipulation check. Second, because the control condition in our previous experiment was a nonintervention (i.e., no program), in this experiment, we used a different kind of educational program as an active control, one that was unrelated to marketplace literacy in content but was similar in duration and delivery. We ensured that the same instructor implemented treatment and control programs. Third, we selected villages with relatively lower access, even within the narrow range we studied, to create a strong test of our hypotheses in terms of the influence of marketplace access. Finally, we measured marketplace access on the basis of monetary cost and duration (Stifel and Minten 2017), rather than geographic distance to reach a marketplace, to test a more comprehensive measure of access.

We worked with the same field research team as in our first field experiment. We identified ten villages that had similar profiles in terms of population, square mileage, and number of working households. We randomly assigned five villages to

a treatment group in which we administered a marketplace literacy program. We randomly assigned the other five villages to a control group in which we administered a program identical to the marketplace literacy program (in terms of contact hours, facilities, instructors, monetary incentive, and medium of instruction), except for topical content. The control program was a sustainability literacy program on environmental issues, such as air, land, and water pollution. Participants in the control and treatment groups were comparable across multiple variables (Web Appendix F).

Procedure

In each village, the field research team recruited 25 to 28 women farmers who agreed to participate in the experiment in exchange for an incentive (410 Indian rupees, approximately US\$6). Each participant completed a presurvey, an educational program (marketplace literacy program; treatment) or sustainability literacy program (control) and a postsurvey. The experiment was administered over approximately 50 days in a staggered fashion (for the timeline, see Web Appendix C). In the first phase, the field research team administered a presurvey to the 258 women farmers, in person and one at a time, in all ten villages to measure their baseline marketplace literacy, psychological well-being, and consumer confidence. Then, those in the treatment group received the marketplace literacy program, and those in the control group received the sustainability literacy program from the same instructor (for details, see Web Appendix F). The instructor traveled to the ten villages in succession to deliver the content in two-day sessions in each village. Two weeks after the 258 participants received either the treatment or the control, the research team administered a postsurvey with the same measures as the presurvey. A marketing research firm in India entered the data.

Measures

Dependent variables. In both the pre- and postsurveys, we captured each participant's psychological well-being using the same scale as in our first field experiment (Table 1). Further, we measured consumer confidence using a multi-item Likert scale of three types of confidence (Bearden, Hardesty, and Rose 2001): information acquisition, consideration set formation, and decision making. We added the three scales together and computed their mean. Then, we created two change-based dependent variables (for details on variable creation, see Table 2).

Independent variables. We coded marketplace literacy as 1 if the participant received the marketplace literacy program and 0 if she received the sustainability literacy program. In terms of marketplace access, for each village, the field research team identified a major hub marketplace that served the village and referenced this marketplace when they collected two measures of access in the presurvey. Participants reported the number of minutes it took and how much it cost (in Indian rupees) to

reach the marketplace. We normalized the temporal distance ($\text{min} = 1$ minute, $\text{max} = 180$ minutes, $\text{mean} = 48.12$ minutes) and cost ($\text{min} = 0$ Indian rupees, $\text{max} = 400$ Indian rupees, $\text{mean} = 73.24$ Indian rupees) and then created a composite variable by adding the normalized measures together. We reverse-coded this variable, reported marketplace access, to interpret the results in terms of increasing access. Finally, we created a manipulation check of the marketplace literacy program by developing an eight-item scale of marketplace literacy and included it in the pre- and postsurveys (Table 1).

Model

We estimated two OLS first-difference regression models, one for each outcome of Δ psychological well-being and Δ consumer confidence, as a function of marketplace literacy, reported marketplace literacy, and their interaction for woman farmer i with robust standard errors clustered at the village level to account for nonindependent observations (for our model specification, see Equations 3 and 4 in Table 2).

Results

We present model-free evidence of our treatment effect, which provides initial support for H_2 , with a difference-in-differences analysis (Table 3). We present the estimation results of Equations 2 and 3 in Table 5. Marketplace literacy caused an increase in psychological well-being (marginal; $b = .234$, $p = .08$) and consumer confidence ($b = .301$, $p < .01$), which supports H_1 and H_2 , respectively. Reported marketplace access is not associated with change in psychological well-being ($b = .000$, $p = .87$) and consumer confidence ($b = .103$, $p = .12$). For participants with relatively higher access to marketplaces, marketplace literacy caused a smaller increase in psychological well-being ($b = -.848$, $p < .05$) and confidence ($b = -.168$, $p < .01$). Thus, in support of H_4 and H_5 , we found that marketplace literacy had a stronger impact on psychological well-being and consumer confidence for the women farmers with the lower (vs. higher) marketplace access.⁶

Field Experiment 3: Isolated Tribal Communities in Tanzania

Method

We ran a third field experiment for a few reasons. First, we wanted to explore additional outcomes other than consumer confidence, such as consumer decision-making ability. Second,

⁶ A potential concern is that our treatment, the marketplace literacy program, might cause changes in reported marketplace access, which could then make this measure of access endogenous. To examine this, we remeasured reported marketplace access in the postsurvey and then tested whether the marketplace literacy program versus the sustainability literacy program caused a change in reported marketplace access. We did not find a change in reported marketplace access between conditions and across time ($M_{\text{marketplace lit prog pre-to-post}} = .06$, $M_{\text{sustainability lit prog pre-to-post}} = .04$, $t = .22$, $p = .69$).

Table 5. Field Experiment 2 Estimation Results.

Focal Variables	Change in Well-Being		Change in Consumer Confidence	
	β (SE)	p-Value	β (SE)	p-Value
Marketplace literacy	.234 (.142)	<.10	.301 (.091)	<.01
Reported marketplace access	.000 (.000)	.87	.100 (.065)	.12
Marketplace literacy $\times$ Reported marketplace access	-.848 (.431)	<.05	-.168 (.045)	<.01
Sample size	239		239	
Adjusted R-square	.131		.125	

Notes: The results feature beta coefficients with standard errors in parentheses.

we wanted to test the effect of marketplace literacy and marketplace access on entrepreneurial outcomes to test H_3 and H_6 . Finally, to study whether the benefits of marketplace literacy extend beyond rural Indian villages to even more remote settings, we focused on men and women in isolated tribal areas of Tanzania. We worked with a field research team with seven years of experience in the implementation of educational programs in rural Tanzania.

The research team identified four tribal villages that ranged from 0 to 13 kilometers from a weekly marketplace. Within each village, the team identified two clusters of dwellings that were geographically separated from each other, to arrive at a total of eight locations. In each location, the research team recruited approximately 25 to 30 women and men, which totaled 248 participants who agreed to participate for an incentive (20,000 Tanzanian shillings [TZS], approximately US\$8).⁷ Within each village, we randomly assigned one location to the treatment group, the marketplace literacy program, and the other location to the control group, the sustainability literacy program. The locations and participants were comparable across several factors (see Web Appendix G). The topics were similar to what we taught in our previous experiments.

Procedure

We administered our experiment over 34 days in a staggered fashion (see Web Appendix C for the timeline). In the first phase, the field research team administered a presurvey to the 248 participants, in person and one at a time, in the eight locations. The survey was translated into the local language of Swahili. Then, the instructor traveled to the eight locations in succession to deliver the treatment in a four-hour, single-day session in each location. Those in the treatment group received the marketplace literacy program, and those in the control group received the sustainability literacy program from the same instructor. Three weeks after the treatment, the research team administered a postsurvey. Our field team in Tanzania entered the data.

⁷ The research team ensured that none of the participants were microentrepreneurs to test the effect of our treatment on starting a microenterprise. Previously, the participants did not work outside the home (i.e., were homemakers) or were farmers.

Measures

Dependent variables. In both the pre- and postsurveys, we captured participants' decision-making ability with two proxies: quality assessment (whether they check product quality before making a purchase; adapted from Huang, Lurie, and Mitra, 2009) and price negotiation (whether they negotiate for a better price; adapted from items in engagement in price negotiation scale [Levy and Gvili 2020]) (Table 1).⁸ In terms of their entrepreneurial behaviors, we measured their pre- and postentrepreneurial intention with a single-item Likert scale that captured their intention to start a business (Chen, Greene, and Crick 1998). Finally, in the postsurvey, we assessed whether they started a microenterprise three weeks after the educational intervention (1 = yes, 0 = no; 25% of the participants started a microenterprise). For the three measures that we captured in the pre- and postsurveys, we created change-based measures (Table 2).

Independent variables. We coded the variable marketplace literacy as 1 if the participant received the marketplace literacy program and 0 if they received the sustainability literacy program. In terms of marketplace access, we used the same measure of reported marketplace access as our second field experiment, in which we recorded the reported temporal distance (min = 0 minutes, max = 150 minutes, mean = 46.65 minutes) and monetary cost (min = 0 TZS, max = 2,500 TZS, mean = 803.46 TZS) to a weekly marketplace and created a composite measure of their normalized scores. We reverse coded this variable to interpret the results in terms of increasing access. Finally, we measured participants' marketplace literacy to subsequently serve as a manipulation check (Table 1).

Model

We estimated three OLS first-difference regression models, one for each outcome of Δ quality assessment, Δ price negotiation, and Δ entrepreneurial intention, as a function of marketplace literacy, reported marketplace access, and their interaction for tribal participant i with robust standard errors

⁸ We focused on single-item, three-point scales (yes, maybe, no) as opposed to the multi-item scales used in our studies in India due to these participants' very low basic literacy. We strived to keep the data collection to a short duration.

Table 6. Field Experiment 3 Estimation Results.

Focal Variables	Consumer DVs				Entrepreneurial DVs			
	Change in Quality Assessment		Change in Price Negotiation		Change in Entrepreneurial Intention		Started a Microenterprise	
	β (SE)	<i>p</i> -Value	β (SE)	<i>p</i> -Value	β (SE)	<i>p</i> -Value	β (SE)	<i>p</i> -Value
Marketplace literacy	.185 (.091)	<.05	.090 (.540)	<.10	.270 (.542)	.62	.021 (.052)	.68
Reported marketplace access	.000 (.000)	.23	.000 (.000)	.46	.109 (.055)	<.05	.302 (.184)	<.10
Marketplace literacy $\times$ Reported marketplace access	-.001 (.000)	<.10	-.002 (.001)	<.05	.658 (.395)	<.10	.366 (.210)	<.10
Sample size	248		248		248		248	
Adjusted R-square	.077		.084		.075		.062	

Notes: DVs = dependent variables. The results feature beta coefficients with standard errors in parentheses.

clustered at the village level. We also estimated a logistic regression model for the outcome of started a microenterprise (see Table 2 for Equations 4–7).

Estimation Results

We present model-free evidence with a difference-in-differences analysis in Table 3, which supports our manipulation and provides support for H_2 but not for H_3 . The latter result, which allows for the possibility that we explore subsequently, is that the effect of marketplace literacy on entrepreneurial outcomes emerges at a specific level of marketplace access. We present the estimation results of Equations 4–7 in Table 6. Marketplace literacy caused an increase in quality assessment ($b = .185, p < .05$) and price negotiation (marginal; $b = .090, p = .09$), which provided support for H_2 . Reported marketplace access was not associated with quality assessment ($b = .000, p = .23$) or price negotiation ($b = .000, p = .46$). For those with greater reported marketplace access, marketplace literacy caused a smaller increase in quality assessment (marginal; $b = -.001, p = .07$) and price negotiation ($b = -.002, p < .05$). Thus, in support of H_5 , we found that marketplace literacy impacted consumer decision-making ability more for the tribal men and women with lower marketplace access.

Marketplace literacy did not have a main effect on a change in entrepreneurial intention ($b = .270, p = .62$) or microenterprise start-ups ($b = .021, p = .68$). Thus, we do not find support for H_3 . Reported marketplace access was associated with entrepreneurial intention ($b = .109, p < .05$) and participants' starting a microenterprise (marginal; $b = .302, p = .09$). For the participants with greater marketplace access, their marketplace literacy caused an increase in entrepreneurial intention (marginal; $b = .658, p = .07$) and the start-up of a microenterprise (marginal; $b = .366, p = .09$). Although these results achieve only marginal significance, they are indicative of a major shift in entrepreneurial behavior in a context in which it is difficult to detect such changes in just three weeks. Thus, in support of H_6 , we find that marketplace literacy led to more

entrepreneurship for the tribal women and men with higher access to marketplaces.⁹

A Post Hoc Field Experiment of Marketplace Versus Consumer Literacy

A relevant question is whether marketplace literacy is needed to generate consumer outcomes related to well-being over and above consumer literacy alone. To assess this, we ran a field experiment in an isolated tribal region of Tanzania (Web Appendix H). We implemented the treatment (a marketplace literacy program) and an active control (a consumer literacy program that did not cover entrepreneurial literacy). We measured quality assessment and price negotiation, pre- and post-treatment. A difference-in-differences analysis showed that consumer decision making improved in both conditions but was greater for those in the marketplace literacy condition than for those in the consumer literacy condition. Thus, we demonstrate that whereas consumer literacy is important, subsistence consumers benefit to a greater extent from a marketplace-level understanding with buyer and seller perspectives to improve their consumer decision making. Although these initial results support our line of reasoning, we acknowledge that further research is needed.

Discussion

We demonstrate that marketing can serve as a pathway to a better world by improving the lives and livelihoods of subsistence consumers. We now discuss the theoretical and practical implications of our findings.

⁹ The main effect of marketplace literacy is not significant, but its interaction with marketplace access is. This makes sense for a few reasons. First, this is in line with Simpson's paradox, which proves that a trend can appear in different groups of data but disappear when these groups are combined. For the effect of marketplace literacy to emerge, it is important to examine varying levels of access. Second, our results are consistent with other work that uses the RCT method that does not find a main effect but finds heterogeneous treatment effects (i.e., interaction effects).

Theoretical Implications and Directions for Future Research

We offer four takeaways from our research, which we subsequently describe in detail.

First, research on low-income and low-literate consumers should occupy a larger focus in marketing research because improvements in their well-being can have broad ripple effects. Second, whereas consumer knowledge/literacy have been tied to improved consumer decision making, in subsistence contexts, marketplace literacy, which comprises both entrepreneurial and consumer literacy, is required to improve people's lives and livelihoods. Third, whereas consumer knowledge and skills relate to knowing *what* to do and *how* to do it, knowing *why* marketplace exchanges between buyers and sellers occur can improve subsistence consumers' well-being. Fourth, marketplace access is an important variable that enables buying and selling and should not be taken for granted. Rather, it should be considered to assess when marketplace literacy will yield specific well-being outcomes.

A substantial body of work on subsistence marketplaces has described individuals' cognitive and affective constraints (e.g., Viswanathan 2013; Viswanathan et al. 2009) that negatively impact their well-being. Subsistence consumers' well-being can be constrained by their inability to participate beneficially and effectively in the marketplace. We identify marketplace literacy as a pathway to address this challenge. Research on how to develop marketing interventions to improve well-being should place a greater emphasis on subsistence consumers.

Conventionally, marketing is consumer-focused, but subsistence consumers often depend on entrepreneurial ventures to meet their basic consumption needs (Alvarez and Barney 2014), and thus, consumption and entrepreneurship are inextricably interlinked (Viswanathan, Rosa, and Ruth 2010). We show that in addition to consumer-specific knowledge and skills, subsistence consumers need seller-based knowledge and skills to function effectively as consumers and entrepreneurs. This broadened view of marketing, which incorporates both buyers' and sellers' perspectives, is unique to marketplace literacy and has sizeable implications for helping subsistence consumers benefit from livelihood opportunities.

We extend previous descriptions of marketplace literacy to formally define and operationalize it. Our conceptualization and measurement of marketplace literacy captures its unique focus on a person's know-why, in addition to know-what and know-how, which gives them a deeper understanding of cause-and-effect relationships and leads to better decision making (Viswanathan, Rosa, and Harris 2005). We recommend that future work on consumer literacy incorporate not only *what* consumers do and *how* to be an effective consumer but also *why* to engage in effective consumer practices and *why* various marketing activities occur.

Despite the fact that several emerging economies suffer from chronic infrastructure constraints, work on the pervasive effects of contextual factors, such as marketplace access, is limited. We identify marketplace access as an important

moderator of the relationship between marketplace literacy and well-being that leads to differing effects for psychological well-being and consumer outcomes versus entrepreneurial outcomes. Future research should take into account multiple physical deprivations to understand how they limit or enhance the effect of literacy (in its different forms) on outcomes related to well-being. A promising avenue is to examine the moderating effect of limited virtual access (due to a lack of access to the internet, bandwidth, or ability to navigate online shopping environments).

Methodologically, we address a gap in empirical work on marketplace literacy by testing its causal effect on consequential outcomes in field contexts with the use of RCTs. By recruiting a sample of individuals and implementing primary data collection methods pre- and posttreatment, we constructed a novel panel data set with participants who are extremely difficult to reach. As a result, hundreds of individuals in India and Tanzania benefited. Marketing researchers should implement RCTs with educational manipulations to identify causal effects to rule out bias that arises from omitted variables and reverse causality. Importantly, such educational RCTs benefit participants during the research process.

Practical Implications

Substantive implications. Marketplace literacy leads to significant improvements in psychological well-being and confidence, especially for subsistence consumers who were far from a marketplace. It also leads to tangible improvements in subsistence consumers' behaviors. For example, after the marketplace literacy program, many participants began to negotiate a product's price or check its quality. Such behaviors can result in greater cost savings and better quality products purchased. Further, just three weeks after our program, 11% of our participants far from a marketplace, and 25% of those close to a marketplace, started a microenterprise. Follow-up interviews revealed that such income-generating activities differed from their pretreatment life circumstances.

Scaling marketplace literacy education. Even brief programs (4–12 hours) with rudimentary methods can aid in the development of marketplace literacy and generate substantive outcomes. Such programs can be customized for different audiences (e.g., women vs. men) and occupations (farmers vs. artists) and can have their causal impact assessed. Lessons can be reinforced through short clips on web-based smartphone applications (e.g., WhatsApp, which has widespread adoption, even in rural areas of developing economies) or through text messages on feature phones. Further, our measure of marketplace literacy can be calibrated to identify literacy levels in communities and individuals within communities. This provides a basis to create, scale, and assess physical and virtual programs that are tailored to specific audiences.

Facilitating marketplace access. Partnerships with entrepreneurs are central for multinational companies to access underserved

consumers in markets that are difficult to reach (Sheth 2011). We find that marketplace access is central in translating marketplace literacy into entrepreneurship, especially for potential entrepreneurs who live in remote areas. Marketplace literacy programs in remote areas can be supplemented with organized visits in which participants are exposed to marketplaces. We advocate for the provision of virtual marketplace access through feature phones and smartphones, both of which have rapidly increased in adoption in subsistence marketplaces (Vimalkumar, Singh, and Sharma 2020). Virtual access also can enable the dissemination of marketplace literacy, such as through lesson summaries in WhatsApp clips combined with virtual learning forums.

Generalizing beyond subsistence contexts in emerging markets. We acknowledge that our work is restricted to subsistence contexts in emerging markets. Nevertheless, in marketing contexts in advanced economies, a certain level of literacy is assumed, even though many people in advanced economies lack marketplace literacy. Thus, marketplace literacy programs may need to be designed to address a mismatch between low literacy and low income and a literate shopping environment. Further, given that most in advanced economies operate as employees more so than entrepreneurs, marketplace literacy should include employee literacy in concert with consumer literacy. The benefits of marketplace literacy may also extend to resource-rich contexts in which people are confronted with radically new products and business models that place higher-income and more literate stakeholders in circumstances of situationally low to moderate literacy.

Public policy and development implications. Policies designed to focus on broader marketplace exchanges with seller and buyer perspectives are an important alternative to the current practice of almost exclusively providing a consumer perspective (e.g., the Bureau of Consumer Protection). Further, given that multinational firms engage in corporate social responsibility initiatives to build stakeholder engagement, policy makers should hold marketers accountable for playing a central role in engineering marketplace literacy. This can be achieved through consumer and entrepreneur protection agencies, subsidies, and metrics that reward firms adhering to such standards. In terms of broader implications, we recommend that the United Nations include marketplace literacy explicitly in its sustainable development goals to build consumer and entrepreneurial knowledge and skills and improve well-being.

Limitations

We conducted field experiments in India and Tanzania in rural contexts with moderately low to extremely low marketplace access. Similar research should be conducted in other low-income urban and rural contexts in other developing economies as well as advanced economies to capture the social and cultural heterogeneity that exists in how individuals obtain marketplace information. Future research also should explore

individual-level heterogeneity in the effect of marketplace literacy on outcomes of well-being. For example, gender roles, income, and general education will likely influence the extent to which marketplace literacy influences well-being, especially at different access levels. We also acknowledge the potential for a Hawthorne effect, such that those who participated in our marketplace literacy program may have reported improvements in dependent variables simply because they received the education or because they were being observed, although, we addressed this issue by implementing an active control condition in Field Experiments 2 and 3 (control participants received sustainability literacy education). In light of the extraordinary challenge of obtaining such data in these remote contexts, we used self-reports to capture behavioral outcomes. Although this is typical of such research, it is nevertheless a limitation of our work. Finally, we demonstrated our effects within relatively short time spans. Future research should study longer time frames to determine the long-term effects of marketplace literacy on consumer and entrepreneurial outcomes.

Associate Editor

Vikas Mittal

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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