

Introduction

Small-scale informal enterprises are ubiquitous in low-income countries and, if such enterprises find favorable conditions to grow, can offer a route out of poverty by creating jobs and lowering unemployment rates. However, enterprise growth in the developing world is often constrained by capital, lack of training and skilled labor, market frictions and a general difficulty in identifying ventures with greater growth potential (Woodruff, 2018). In the case of women, entrepreneurship or self-employment is constrained further by several additional factors, such as lower levels of education and skills acquisition, restricted mobility, a higher burden of care work and social norms regarding appropriate work for women. Therefore, a lot of women are unable to leverage the benefits of self-employment and are only able to set up and run home-based enterprises with low economic returns (Thakuria et al., 2011; Jayachandran, 2015).

Our prior work has addressed constraints to skills acquisition and self-employment among rural women in Pakistan with low levels of income, education, and occupational mobility. Using a set of randomized controlled trials, we evaluated the impact of a government-run tailoring skills program for women in our sample region and found that the training had a positive impact on trainees' income. In a subsequent intervention aimed at improving market access, a randomized subset of these trained women was linked to the market through sales agents. The market linkage treatment had an additional positive impact on self-employment and income compared to women who had only received skills training. Nevertheless, the growth potential for their home-based businesses seemed to be constrained by demand fluctuations in the local village markets (Cheema et al., 2021).

The expansion of e-commerce and internet access in recent years has led us to investigate if digital technology could be leveraged in our setting to improve these skilled women's access to wider product markets and enhance their earnings. As we design and implement a pilot intervention to field-test this idea, we have increased our sample to include other female entrepreneurs from the sample region and expanded our survey instruments to collect additional data on important behavioral traits that are commonly linked with entrepreneurial ability in the literature. In addition to the women (trainees) who were part of our previous interventions, our sample will now include some pre-existing tailors in the same village and successful urban-based female entrepreneurs from the region (South Punjab). This will give us the opportunity to study two key research questions:

- I. Do behavioral traits, especially those studied in the entrepreneurship literature, differ systematically among the three sets of female entrepreneurs and non-entrepreneurs in our sample region?
- II. Does increased market exposure influence any of the behavioral traits associated with entrepreneurship?

Related Literature

An important challenge in helping small businesses is identifying ventures with greater potential and aspiration to grow (Woodruff, 2018). Researchers have theorized that there is a certain 'entrepreneurial ability' which predisposes individuals to choose entrepreneurship and be successful at it. While this ability inevitably includes external factors such as family background, health, age, experience, social and human capital, it also encompasses some behavioral attributes which differ significantly among successful entrepreneurs and others (Parker, 2004; Amit et al., 1993; Maitra & Neelim, 2021). After a brief overview of the

origin of literature focusing on entrepreneurial attributes, we discuss some attributes which have gained spotlight in the literature.

The earliest attempt in literature on unfolding the nature of entrepreneurs was by Richard Cantillon (1755) who presented an entrepreneur as a perceptive and intelligent person who is willing to take risks. He emphasized that by buying at certain prices and selling at uncertain ones, an entrepreneur brings the two sides of the market together, bearing all the risks in the process. Cantillon (1755)'s thoughts were further developed in two directions. Firstly, following Knight (1921), one line of research stressed the uncertainty faced by entrepreneurs and their willingness to take risks. Kihlstrom and Laffont (1979)'s general equilibrium model of firm formation is the most notable contribution in this stream as it draws some important inferences. The model demonstrates that when faced with the same choices, less risk averse individuals choose to become entrepreneurs rather than working as paid employees, and among those who choose to be entrepreneurs, the less risk averse ones expand their ventures more than the relatively high risk averse ones. The second stream of researchers focused on highlighting the exceptional alertness of entrepreneurs. They emphasized that entrepreneurs are more alert to profitable opportunities that are essentially available to all (Kirzner, 1973, 1983), and their 'entrepreneurial cognition' allows them to interpret the same business stimuli more favorably than non-entrepreneurs do (Palich & Bagby, 1995; Norton & Moore, 2002).

Since entrepreneurs are exposed to competition more than others, competitiveness and need for achievement are behavioral attributes that have been closely associated with entrepreneurs in the literature. For instance, Boyd (1984) argued that entrepreneurs exhibit 'Type A' behavior, which is characterized by competitiveness and striving for achievement among other traits. Marshall (1920, p. 23) claimed that "a manufacturer or a trader is often stimulated much more by the hope of victory over his rivals than by the desire to add something to his fortune". McClelland (1961) also highlighted that rather than a desire for monetary gains, the key characteristic of successful entrepreneurs is a need for achievement.

Entrepreneurs are also believed to have a love for independence and be extremely optimistic (Cromie, 1987; Dennis, 1996; de Meza & Southey, 1996; Kahneman, 2013). Many entrepreneurs may have an innate desire for 'being their own boss' which can explain why they choose to remain self-employed despite earning less than employees do (Aronson, 1991; Hamilton, 2000). Moreover, entrepreneurs having an optimistic outlook can be beneficial for them as it helps them stay persistent in the face of obstacles; though, an over-optimistic temperament may be detrimental to their success. Many individuals who fail in their ventures suffer from an entrepreneurial delusion which is characterized by over-optimism and over-confidence. Being prone to an illusion of control, they may overestimate their odds of success by neglecting an integral factor determining their achievement: competition (Camerer & Lovallo, 1999). As the outcome of businesses depends on the competitors' actions and changes in market conditions as much as on the entrepreneurs' own efforts, successful entrepreneurs must be aware of the market around them (Kahneman, 2013).

Our analysis will contribute to the literature on differences in attributes within women entrepreneurs, specifically the behavioral correlates of successful female enterprise. Existing literature has compared entrepreneurs with non-entrepreneurs and also compared these attributes between men and women. For instance, some studies have shown that women may be more risk averse than men in certain situations (Eckel & Grossman, 2008; Croson & Gneezy, 2009; Fletschner et al., 2010). Similarly, it has been established that women are less likely than men to enter in a competition when facing the same choice (Croson & Gneezy, 2009; Niederle & Vesterlund, 2011). This gender gap in competitiveness may be explained by men and women differing in their beliefs about own performance relative to others, since studies have mostly found no differences in baseline performance between men and women (Niederle & Vesterlund, 2007; Fletschner et al., 2010; Buser et al., 2014). While the literature finds significant differences in competitiveness and risk aversion between men and women, differences within women have been harder to find. For example, Artinger and Schade (2013) find that while willingness to compete was lower among female entrepreneurs than male entrepreneurs, it did not vary between female entrepreneurs and other women. The literature is generally inconclusive about within-gender differences in behavioral attributes of entrepreneurs.

The theoretical literature concerning behavioral traits and entrepreneurship motivated us to compare attributes of women who differ in their scale of business and target markets. One of our samples is a set of rural women who graduated from a government funded skills training course but could not leverage employment opportunities due to limited mobility. The other sets of women are a group of pre-existing rural tailors from the same villages who chose to be self-employed and another group of motivated urban entrepreneurs who have made sales through digital channels and otherwise. The three groups are distinct in the markets that they cater to. While the first group was found to stitch clothes mostly for people within their village including their family, relatives, and neighbors (Cheema et al., 2021), the pre-existing tailors might be stitching for people from outside the village while the urban entrepreneurs may have sold a wider range of products in even bigger markets. Further, the groups may vary in their socio-demographic attributes. Therefore, it will be interesting to determine whether cognitive ability and behavioral attitudes differ among the different groups of women entrepreneurs in our sample.

The establishment of a critical relationship between certain behavioral traits and entrepreneurial success stems another important question: can these traits be changed or influenced in individuals? Based on several interdisciplinary studies, these attributes have proven to be malleable under certain conditions (Schildberg-Hörisch, 2018; Meier, 2022; Maitra & Neelim, 2021). Individuals' risk attitudes have particularly been found to change under exogenous shocks such as natural disasters (Eckel et al., 2009; Page et al., 2014; Cameron & Shah, 2015; Cassar et al., 2017) and with life-changing events which instigate emotions such as fear, happiness and anger, for example, the death of a parent or a child (Meier, 2022). However, disasters and the death of a loved one are not the only all life-changing events which could influence behavioral attributes. Any intervention that exogenously changes the income opportunity set of participants can also be viewed as a life-changing event (Maitra & Neelim, 2021).

In this context, we aim to determine if market exposure influences any of the entrepreneurial traits discussed above. We will be utilizing our randomized 'market linkage' intervention to capture the differences in measures of entrepreneurial traits between the treatment and control group. Women in both these groups have participated in a government-run training program which imparted them tailoring skills. The women in the treatment group were additionally linked to sales agents who provided them with orders and raw materials to stitch clothes for the market. Some local exhibitions were also organized towards the end of the intervention which allowed the women in the treatment group to display their products and expand their intra-village client base. Since the intervention exposed women in the treatment group to a broader array of customers, it led to an exogenous increase in their income opportunity set, and it will be enlightening to learn if this affected their behavioral preferences.

Measurement of Entrepreneurial Traits

Lab-in-field experiments and incentivized measurement tasks, incorporated in our baseline survey, will be used to measure some entrepreneurial traits in our sample. Experimental techniques are considered the gold standard for measurement of behavioral traits. While they may be costly and time-consuming to implement in large samples, experimental techniques can elicit far more accurate measures than any self-reporting questionnaire since they observe real choices with real incentives in well-controlled decision situations that are comparable across individuals (Meier, 2022). The experimental methods which we are utilizing have been widely used before for a diverse group of participants, making them suitable to implement in our women-only sample. We frame our subsequent discussion around the specific attributes we are measuring, and the methods chosen to measure them.

Evaluating a Business Opportunity : We want to measure how our three distinct samples, which differ in entrepreneurial scale, respond to a potentially profit-making business opportunity. While some studies have used survey questions to elicit entrepreneurial cognition among their respondents (Asanov & McKenzie, 2018), we measure their willingness-to-pay for a potentially profitable opportunity to trade. Enumerators will show each respondent a stitched dress that was locally made. First, each respondent will be asked to assess the dress quality in detail, estimate the cost incurred in its making and predict the price at which it could be sold in their village (if they respond that it could be sold at all). If they recognize some flaws in the quality, the

respondents will further be asked if they could rectify or improve them and how they would they do so. This exercise is beneficial in two ways. Primarily, it enables us to examine how graduates of a tailoring skills course (running home-based ventures) assess the quality, cost, and price of locally made dresses compared to pre-existing tailors and successful micro-entrepreneurs from the same region. Additionally, since our baseline survey will also serve the purpose of a long run follow-up on our previous interventions, we can assess if graduates from the tailoring course have learned substantial skills related to stitching which could help them accurately assess the quality of stitching work and, hence, thrive in a competitive market.

Second, we estimate the respondents' willingness-to-pay for the dress which they were asked to analyze. For this purpose, we adapt the Becker-DeGroot-Marschak (1964) mechanism which is commonly referred to as the 'BDM' mechanism. Using the BDM approach, the enumerator will ask the respondent to report her maximum willingness-to-pay for the dress, which we denote as x . The enumerator will then randomly pick a price, which we denote as y . If y is less than or equal to x , the respondent will pay the price y and receive the dress, but if y is greater than x , respondent will neither pay nor receive the dress. Respondents will be informed beforehand that they will not be allowed to negotiate the price they are willing to pay after the random draw, which ensures they elicit an accurate willingness-to-pay.

The BDM mechanism has been widely used in experimental settings since its inception, and in recent years, it has also been adapted in field settings (Berry et al., 2011; Dizon-Ross & Jayachandran, 2022). The advantage of using BDM method over other commonly used ones, such as the take-it-or-leave-it method, is that it predicts willingness-to-pay more precisely. For instance, in the take-it-or-leave-it method, a random price, say p , for the good in question is presented to the respondent and they're asked if they would be willing to buy it at that price. If they respond affirmatively, their willingness-to-pay for the good is estimated to be p or greater, and otherwise, it is assumed to be lower than p . The disadvantage of this method is that it may shift the focus of the respondent to the stated price rather than them making a precise valuation of the good (Berry et al., 2011). In our setting, this is particularly important since we will be comparing the willingness-to-pay among our three distinct samples, and with precise valuation, we will be better able to assess the differences in ability among them. Building on Berry et al. (2011)'s BDM design implementation in a field setting in Ghana, we adopt a few additional measures to ensure better compliance with the BDM method. One such measure includes, after explaining the procedure to the respondent, having the enumerator first play a practice round with a bar of soap in which the respondent will not actually have to pay the price and buy the product. Additionally, the enumerator will review some hypothetical outcomes to ensure that the respondent has understood the mechanism.

Risk Attitudes: There is vast empirical literature deploying various methods to elicit risk attitudes among individuals and investigating whether risk attitudes differ between entrepreneurs and others. For example, using interview questions, van Praag and Cramer (2001) found that entrepreneurs were significantly more willing to gamble than employees, which could be an indicator of comparatively lower risk aversion among them. Hvide and Panos (2014) use individual level administrative data on stock market participation, fraction of wealth invested in stock markets and type of stock portfolio to measure risk tolerance and show that their measure of risk tolerance is correlated with choice to be self-employed. Another set of studies compare entrepreneurial choice and hypothetical risk preferences measured later in life using longitudinal data. Some of them find a positive relationship between choice to become self-employed and risk tolerance (Ahn, 2010; Cramer et al., 2002) while others do not. For example, Lindh and Ohlsson (1996) and Uusitalo (2001) report that self-employed people are less likely to participate in lotteries than employees.

Furthermore, there are several studies which have utilized experimental tasks to elicit risk preferences. Many of these studies adapt the multiple price list technique which was first introduced by Binswanger (1980). Holm et al. (2013) employ a multiple price list technique to elicit risk aversion in a sample of 700 entrepreneurs and 200 non-entrepreneurs in China and deduce that entrepreneurs are no more likely to have higher tolerance for risk relative to non-entrepreneurs. Similarly, Andersen et al. (2014) use a multiple price list to measure risk aversion as a part of a field experiment in Denmark, and they do not find differences in risk aversion between small scale entrepreneurs and the general population. A reason for experimental studies finding results contrary to the theory of Kihlstrom and Laffont (1979) could be that they present subjects

with standard risk situations with known probabilities of different outcomes. However, in reality, entrepreneurial decision making also involves outcomes where probabilities are uncertain and individuals may respond differently to such conditions than the standard risk situations in experiments (Holm et al., 2013). Nonetheless, the empirical literature being inconclusive about the relationship between risk attitudes and entrepreneurial success provides an opportunity for more exploration.

We will elicit risk aversion among our samples through an incentivized measurement task as a part of our survey. Specifically, we adapt Vieder et al. (2015)'s certainty-equivalent measuring approach. The multiple price lists that have been widely used have shown to systematically overestimate risk aversion, especially in the presence of noise (Crosetto & Filippin, 2015; Andersson, 2015). With our rural sample having relatively low education levels, we want to avoid this issue, and thus we adapt a method which has shown promising data quality in a rural field setting in Ethiopia. Another advantage of the certainty-equivalent method over others is the flexibility it offers in analysis. While the method can be used for structural model estimation, it also allows for simple and intuitive non-parametric analysis.

We will have three choice lists in our specified task, and in each of them, the respondent will be offered repeated choices between a prospect (with a fixed winning probability) and different fixed amounts of money. Using several choice lists has the advantage that noise can be easily separated from preference parameters in econometric analysis. Moreover, for one randomly selected choice list, the respondents will be actually paid the amount they win if they choose the prospect or the fixed amount they choose. The enumerators will inform them clearly about this procedure, which can help ensure that they treat every single decision as if it were the one that would be played for real money, and eventually lead to better data quality (Vieder et al., 2015).

Competitiveness: Empirical studies have mostly employed experimental techniques to measure this attribute, both in the lab and lab-in-field settings. Fortunately, their results are also coherent with the theoretical literature as both conclude that entrepreneurs are more likely to compete than others and a higher level of competitiveness is correlated with entrepreneurial success. Holm et al. (2013) use an experimental game in China to elicit if a group of entrepreneurs tend to compete more than a randomly selected group of non-entrepreneurs from the same region. When conducting a trivia quiz, they gave their subjects a choice between being paid a certain amount per correctly answered question or entering a competition with another subject and being paid a much higher amount per correctly answered question if the subject won the competition and a much lower amount if they lost to their competitor. They conducted another quiz too in which the subjects had the same choice, except that the competition would be with three other subjects if they chose the latter scheme of payment. They find that entrepreneurs are more willing to compete than the control group in both the bilateral and multilateral competition schemes, and the outcome is robustly significant in the multilateral competition at 5% level. Similarly, in a lab-in-field study in Germany, Urbig et al. (2019) conducted a competition game where they provided a choice to subjects between a competitive winner-takes-all tournament payment scheme and a non-competitive piece-rate payment scheme. They conclude that controlling for other factors, entrepreneurs are more likely to enter competition just for the sake of competition rather than the prospect of winning it or personal development.

We will also be using a similar lab-in-field experiment to elicit the 'willingness to compete' attribute among all our survey respondents. Our respondents will be asked to participate in a game, and before playing, they will choose between being compensated either under a piece-rate scheme or a competitive scheme where their scores will depend on the scores of some other women in the region who have already played the game. They will not be given information on how well others have performed. This exercise will, thus, help us examine if the different types of female entrepreneurs in our sample act differently when choosing between a non-competitive scheme and a tournament scheme.

Lessons Learned on Working with Rural Women Entrepreneurs

Our research, along with a rich empirical literature, has established that women face substantial mobility barriers in less developed countries which might make it difficult for them to access goods and services.

Hence, any development programs targeting women must address these access constraints. In our work, we found that women who had to travel outside their village were much less likely to enroll in a free government skills training program as compared to women who had a training center located within their own village. And a large fraction of this distance penalty was paid when crossing the boundary of their village. While compensating women for the travel cost did not mitigate this “boundary effect”, organizing a safe and reliable transport service to enable women to attend training outside their village did improve enrollment rates (Cheema et al., 2020). The same constraints which prevented many women from participation in skills training continued to limit trainees’ work, and business, opportunities post-training. We found that designing a market access program that acknowledged the existence of these constraints and offered a way around them from the outset, achieved a positive impact on earnings and entry into self-employment.

Conclusion

Given that certain ‘entrepreneurial’ attributes are found to predict business growth (Fafchamps & Woodruff, 2017; McKenzie & Sansone, 2017), it is important to study how personal attributes vary across different individual entrepreneurs and whether they change in response to an external intervention. We study how different groups of women entrepreneurs in a low-income region differ in their entrepreneurial attributes. While previous studies have compared entrepreneurs with non-entrepreneurs, we attempt to compare how measures of entrepreneurial ability differ across distinct groups of entrepreneurs in addition to comparing them with non-entrepreneurs. Moreover, our study contributes to the literature by measuring if a randomized market exposure treatment affected some of the attributes associated with entrepreneurial success. The study is expected to complete in late 2023.

Acknowledgment and Disclaimer

This work was carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada. The views expressed herein do not necessarily represent those of IDRC or its Board of Governors.

Supporting the development of small and growing businesses (SGBs) in developing countries is key to enabling job creation and poverty alleviation. Although the evidence base in this area is expanding, there is still much we do not understand about how to best support firm growth and create quality jobs. To address this gap, the Small and Growing Business (SGB) Evidence Fund, a joint effort of the International Growth Centre (IGC) and the Aspen Network of Development Entrepreneurs (ANDE), supports collaborations between researchers and practitioners to understand the most effective ways to support SGBs and the economic and social impact of SGB growth.



References

- Ahn, T. (2010). Attitudes toward risk and self-employment of young workers. *Labour Economics*, 17(2), 434–442. <https://doi.org/10.1016/j.labeco.2009.06.005>
- Amit, R., Glosten, L., & Muller, E. (1993). Challenges to theory development in entrepreneurship research. *Journal of Management Studies*, 30(5), 815–834. <https://doi.org/10.1111/j.1467-6486.1993.tb00327.x>
- Andersen, S., Di Girolamo, A., Harrison, G. W., & Lau, M. I. (2014). Risk and time preferences of entrepreneurs: evidence from a Danish field experiment. *Theory and Decision*, 77(3), 341–357. <https://doi.org/10.1007/s11238-014-9446-z>
- Andersson, O., Holm, H. J., Tyran, J. R., & Wengström, E. (2016). Risk aversion relates to cognitive ability: preferences or noise? *Journal of the European Economic Association*, 14(5), 1129–1154. <https://doi.org/10.1111/jeea.12179>
- Aronson, R. L. (1991). *Self Employment: A Labor Market Perspective*. ILR Press.
- Artinger, S., & Schade, C. (2013). Girls will be girls: an experimental study on female entrepreneurship. *Research in Agricultural and Applied Economics Working Paper*. <https://doi.org/10.22004/ag.econ.146511>
- Asanov, I., & McKenzie, D. (2018). Showing life opportunities: increasing opportunity-driven entrepreneurship and STEM careers through online courses in schools. *AEA Randomized Controlled Trials*. <https://doi.org/10.1257/rct.3593-3.5>
- Becker, G. M., Degroot, M. H., & Marschak, J. (1964). Measuring utility by a single-response sequential method. *Behavioral Science*, 9(3), 226–232. <https://doi.org/10.1002/bs.3830090304>
- Berry, J., Fischer, G., & Guiteras, R. (2020). Eliciting and utilizing willingness to pay: evidence from field trials in northern Ghana. *Journal of Political Economy*, 128(4), 1436–1473. <https://doi.org/10.1086/705374>
- Binswanger, H. P. (1980). Attitudes toward risk: experimental measurement in rural India. *American Journal of Agricultural Economics*, 62(3), 395–407. <https://doi.org/10.2307/1240194>
- Boyd, D. P. (1984). Type A behaviour, financial performance and organizational growth in small business firms. *Journal of Occupational Psychology*, 57, 137–40.
- Buser, T., Niederle, M., & Oosterbeek, H. (2014). Gender, competitiveness, and career choices. *The Quarterly Journal of Economics*, 129(3), 1409–1447. <https://doi.org/10.1093/qje/qju009>
- Camerer, C., & Lovallo, D. (1999). Overconfidence and excess entry: an experimental approach. *American Economic Review*, 89(1), 306–318. <https://doi.org/10.1257/aer.89.1.306>
- Cameron, L., & Shah, M. (2015). Risk-taking behavior in the wake of natural disasters. *Journal of Human Resources*, 50(2), 484–515. <https://doi.org/10.3368/jhr.50.2.484>
- Cantillon, R. (1755). *Essai Sur la Nature du Commerce en General*, (1931 ed.), edited and transcribed by H. Higgs, London, Macmillan.
- Cassar, A., Healy, A., & von Kessler, C. (2017). Trust, risk, and time preferences after a natural disaster: experimental evidence from Thailand. *World Development*, 94, 90–105. <https://doi.org/10.1016/j.worlddev.2016.12.042>
- Cheema, A., Khwaja, A. I., Naseer, M. F., & Shapiro, J. N. (2020). *Glass walls: experimental evidence on access constraints faced by women*. Working Paper.
- (2021). *Putting skills to work: impact of skills training and market linkage on rural women in Pakistan*. Working Paper.

- Cramer, J., Hartog, J., Jonker, N., & van Praag, C. (2002). Low risk aversion encourages the choice for entrepreneurship: an empirical test of a truism. *Journal of Economic Behavior & Organization*, 48(1), 29–36. [https://doi.org/10.1016/s0167-2681\(01\)00222-0](https://doi.org/10.1016/s0167-2681(01)00222-0)
- Cromie, S. (1987). Motivations of aspiring male and female entrepreneurs. *Journal of Organizational Behavior*, 8(3), 251–261. <https://doi.org/10.1002/job.4030080306>
- Crosetto, P., & Filippin, A. (2015). A theoretical and experimental appraisal of four risk elicitation methods. *Experimental Economics*, 19(3), 613–641. <https://doi.org/10.1007/s10683-015-9457-9>
- Croson, R., & Gneezy, U. (2009). Gender differences in preferences. *Journal of Economic Literature*, 47(2), 448–474. <https://doi.org/10.1257/jel.47.2.448>
- Dasgupta, U., Gangadharan, L., Maitra, P., Mani, S., & Subramanian, S. (2015). Choosing to be trained: Do behavioral traits matter? *Journal of Economic Behavior & Organization*, 110, 145–159. <https://doi.org/10.1016/j.jebo.2014.12.013>
- de Meza, D. & C. Southey. (1996). The borrower's curse: optimism, finance and entrepreneurship, *Economic Journal*, 106 (435), 375–86.
- Dennis, W. J. (1996). Self-employment: When nothing else is available? *Journal of Labor Research*, 17(4), 645–661. <https://doi.org/10.1007/bf02685805>
- Dizon-Ross, R., & Jayachandran, S. (2022). Improving willingness-to-pay elicitation by including a benchmark good. *AEA Papers and Proceedings*, 112, 551-55. <https://doi.org/10.1257/pandp.20221053>
- Eckel, C. C., El-Gamal, M. A., & Wilson, R. K. (2009). Risk loving after the storm: A Bayesian-Network study of Hurricane Katrina evacuees. *Journal of Economic Behavior & Organization*, 69(2), 110–124. <https://doi.org/10.1016/j.jebo.2007.08.012>
- Eckel, C. C., & Grossman, P. J. (2008). Men, women and risk aversion: experimental evidence. *Handbook of Experimental Economics Results*, 1061–1073. [https://doi.org/10.1016/s1574-0722\(07\)00113-8](https://doi.org/10.1016/s1574-0722(07)00113-8)
- Fletschner, D., Anderson, C. L., & Cullen, A. (2010). Are women as likely to take risks and compete? Behavioural findings from central Vietnam. *Journal of Development Studies*, 46(8), 1459–1479. <https://doi.org/10.1080/00220381003706510>
- Hamilton, B. (2000). Does entrepreneurship pay? An empirical analysis of the returns to self-employment. *Journal of Political Economy*, 108(3), 604–631. <https://doi.org/10.1086/262131>
- Holm, H. J., Opper, S., & Nee, V. (2013). Entrepreneurs under uncertainty: an economic experiment in china. *Management Science*, 59(7), 1671–1687. <https://doi.org/10.1287/mnsc.1120.1670>
- Hvide, H. K., & Panos, G. A. (2014). Risk tolerance and entrepreneurship. *Journal of Financial Economics*, 117(1), 200–223. <https://doi.org/10.1016/j.jfineco.2013.06.001>
- Jayachandran, S. (2015). The roots of gender inequality in developing countries. *Annual Review of Economics*, 7(1), 63–88. <https://doi.org/10.1146/annurev-economics-080614-115404>
- Kahneman, D. (2013). *Thinking, Fast and Slow* (1st ed.). Farrar, Straus and Giroux.
- Kihlstrom, R. E., & Laffont, J. J. (1979). A general equilibrium entrepreneurial theory of firm formation based on risk aversion. *Journal of Political Economy*, 87(4), 719–748. <https://doi.org/10.1086/260790>
- Kirzner, I. (1973). *Competition and Entrepreneurship*, Chicago, University of Chicago Press
- (1985). *Discovery and the Capitalist Process*, Chicago, University of Chicago Press
- Knight, F. H. (1921). *Risk, Uncertainty and Profit*, New York, Houghton-Mifflin

- Lindh, T., & Ohlsson, H. (1996). Self-employment and windfall gains: evidence from the Swedish lottery. *The Economic Journal*, 106(439), 1515–1526. <https://doi.org/10.2307/2235198>
- Maitra, P. & Neelim, A. (2021). Behavioural characteristics, stability of preferences and entrepreneurial success. *A Research Agenda for Experimental Economics*. Edward Elgar Publishing, United Kingdom. 93–118.
- Marshall, A. (1920) *Principles of Economics*, 8th ed., Macmillan & Co., London
- McClelland, D. C. (1961). *The Achieving Society*, Princeton, Van Nostrand
- McKenzie, D. & Sansone, D. (2017). Man vs. machine in predicting successful entrepreneurs: evidence from a business plan competition in Nigeria. *Policy Research Working Papers*. <https://doi.org/10.1596/1813-9450-8271>
- McKenzie, D. J., & Woodruff, C. (2014). What are we learning from business training and entrepreneurship evaluations around the developing world? *The World Bank Research Observer*, 29(1), Issue 1, 48–82. <https://doi.org/10.1093/wbro/lkt007>
- (2017). Business practices in small firms in developing countries. *Management Science*, 63(9), 2967–2981. <https://doi.org/10.1287/mnsc.2016.2492>
- Meier, A. N. (2022). Emotions and risk attitudes. *American Economic Journal: Applied Economics*, 14(3), 527–58.
- Niederle, M., & Vesterlund, L. (2007). Do women shy away from competition? Do men compete too much? *The Quarterly Journal of Economics*, 122(3), 1067–1101. <https://doi.org/10.1162/qjec.122.3.1067>
- (2011). Gender and competition. *Annual Review of Economics*, 3(1), 601–630. <https://doi.org/10.1146/annurev-economics-111809-125122>
- Norton, W. I. & W. T. Moore. (2002). Entrepreneurial risk: have we been asking the wrong question? *Small Business Economics*, 18, 281–287.
- Page, L., Savage, D. A., & Torgler, B. (2014). Variation in risk seeking behaviour following large losses: A natural experiment. *European Economic Review*, 71, 121–131. <https://doi.org/10.1016/j.euroecorev.2014.04.009>
- Palich, L. E., & Bagby, D. R. (1995). Using cognitive theory to explain entrepreneurial risk-taking: Challenging conventional wisdom. *Journal of Business Venturing*, 10(6), 425–438. [https://doi.org/10.1016/0883-9026\(95\)00082-j](https://doi.org/10.1016/0883-9026(95)00082-j)
- Parker, S. C., (2004). *The economics of self-employment and entrepreneurship*. Cambridge University Press.
- Schildberg-Hörisch, H. (2018). Are risk preferences stable? *Journal of Economic Perspectives*, 32(2), 135–154. <https://doi.org/10.1257/jep.32.2.135>
- Thakuriah, P., Tang, L., & Menchu, S. (2011). Young women's transportation and labor market experiences. *Transportation Research Board Conference Proceedings*, 2(46), 276–287. <http://dx.doi.org/10.17226/22887>
- Urbig, D., Bönnte, W., Procher, V. D., & Lombardo, S. (2019). Entrepreneurs embrace competition: evidence from a lab-in-the-field study. *Small Business Economics*, 55(1), 193–214. <https://doi.org/10.1007/s11187-019-00141-0>
- Uusitalo, R. (2001). Homo entrepreneurus? *Applied Economics*, 33(13), 1631–1638. <https://doi.org/10.1080/00036840010015778>
- van Praag, C. M. & J. S. Cramer (2001). The roots of entrepreneurship and labor demand: individual ability and low risk aversion. *Economica*, 68, 45–62.

Veider, F. M., Beyene, A., Bluffstone, R., Dissanayake, S., Gebreegziabher, Z., Martinsson, P., & Mekonnen, A. (2014). Measuring risk preferences in rural Ethiopia: risk tolerance and exogenous income proxies. *Policy Research Working Papers*. <https://doi.org/10.1596/1813-9450-7137>

Woodruff, C. (2010). *Addressing constraints to small and growing businesses*. International Growth Centre Working Paper.