

## Credit and Self-Employment

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## **I. Introduction**

Around the globe, small-scale entrepreneurship provides an important vehicle for income generation for women and men. Some people start microenterprises because they need or want more flexibility in their terms of employment, or they have innovative ideas that warrant starting a new business. Other people, often those at the lower end of the income scale, have little choice but to engage in self-employment when paid employment opportunities are scarce. A substantial proportion of the poor around the world rely on self-employment as a source of income as they navigate a host of constraints that include a lack of affordable loans from formal sources, restricted access to reliable savings accounts, few formal sources of insurance, insecure land rights, and insufficient public infrastructure such as piped water and electricity. Escobal (2001) documents that access to roads and personal assets such as education and credit are critical for diversification into non-farm sources of income generation such as self-employment. Infrastructure and financial constraints can be particularly severe for rural areas in developing countries, where between 25 and 98 percent of households living in poverty report being self-employed in agriculture.<sup>1</sup> Moreover, self-employment allows parents, and especially mothers, to combine labor market participation with childcare responsibilities. Even though household businesses tend to be small, in their entirety, such business ventures can employ a large share of the labor force, especially in developing countries with burgeoning informal sectors.

A growing body of evidence indicates that an effective policy intervention in promoting self-employment is the provision of credit through small-scale loans that are mediated via rural banking reforms and microfinance initiatives. Such initiatives target individuals who have difficulty obtaining conventional loans through commercial banks. Without access to formal loans, these individuals have often had to rely on informal-sector money lenders and other

expensive sources of credit. By offering a variety of pecuniary resources and financial services to the poor and the disenfranchised, both microfinance and rural banks have helped to lower poverty in a number of countries. In this way, increasing access to credit can promote income redistribution and macroeconomic growth.<sup>2</sup>

For example, India's government initiated a rural social banking program following the nationalization of banks in 1969 that opened new bank branches in previously unbanked rural locations. This state-led expansion of the banking sector contributed to a statistically significant reduction in poverty in rural India.<sup>3</sup> Moreover, Bangladesh's innovative Grameen Bank – which targets the poor and uses peer selection and monitoring to replace traditional collateral requirements – has also been linked with lower poverty and improved well-being.<sup>4</sup> Success stories associated with the Grameen Bank have in turn contributed to the proliferation of microfinance initiatives across countries and regions throughout the world. Also contributing to this surge in microfinance activity were other fairly small, independent programs in Latin America and South Asia during the 1970s. Since then, this movement has provided approximately 65 million low-income individuals around the globe with access to small loans without collateral and with opportunities to acquire assets and purchase insurance.<sup>5</sup> Microfinance, in turn, has contributed to a substantial increase in self-employment activities world-wide.

The remainder of this chapter explores how women's and men's employment decisions respond to credit, with a particular focus on self-employment. The chapter also explores how new opportunities for women to engage in self-employment can have spillover effects within the household, especially for women's bargaining power and the well-being of their children. Understanding the reasons why women and men decide to engage in self-employment can help

to develop new policies that better support workers and their families, stimulate employment generation in countries with rapid labor force growth, and promote innovative entrepreneurial activities.

## **II. Prevalence of Self-Employment**

Across regions, a substantial proportion of men and women engage in self-employment in order to support themselves and their families. Variations exist in self-employment rates across countries at different stages of development and with different institutional structures. To support this assertion, we performed a descriptive analysis of current self-employment shares across countries varying by region and income group. In this assessment, we constructed self-employment shares for men and women using the International Labor Organization's (ILO) published data on employment status across all regions. For a country to be selected for this comparison, it needed to report employment status data at some point during the 1999-2008 period, and it needed to report employment status separately for men and women. These criteria resulted in a sample of 129 countries. For each country, we chose the most recent year of employment status data available.<sup>6</sup> Following the ILO definition, we classified as self-employed all individuals reported to be employers, own account workers, unpaid family workers, or members of producers' cooperatives.<sup>7</sup> The self-employment share is thus self-employed individuals as a proportion of all employed individuals, and this share is constructed separately by gender. Finally, we grouped all countries according to four broad income groups: low-income economies, lower-middle-income economies, upper-middle-income economies, and high-income economies.<sup>8</sup> The results of this descriptive analysis are presented in Figures 1-3.

Figure 1, Panel A shows that self-employment shares are generally very high in low-income economies, especially in Sub-Saharan Africa. Moreover, in all countries but one

(Kyrgyzstan), self-employment shares are noticeably higher for women than they are for men. On average in low-income economies, 86 percent of women are self-employed, compared to 79 percent of men. The highest rates of self-employment are found in Sierra Leone and Tanzania, where 96 percent of women are self-employed. Panel B shows that the conclusion regarding a greater incidence of self-employment among women compared to men also holds for lower-middle-income economies. However, the overall importance of self-employment as a source of employment declines markedly. On average, 52 percent of women and 46 percent of men in lower-middle-income economies are self-employed. Some of the highest rates of self-employment in this group of countries are observed for women in Cameroon, Yemen, and Vietnam. Overall among lower-middle-income economies, self-employment constitutes a larger source of employment among African countries as compared to other regions.

#### **Insert Figure 1 Here**

As a specific example among the poorest developing countries, detailed household survey data for Nepal indicate that agricultural self-employment serves as the main source of employment for the vast majority of Nepal's female labor force. In 2006, the most recent year for which the household data were available, more than three quarters of women workers in Nepal were engaged in agricultural self-employment.<sup>9</sup> Another 8 percent of women workers had jobs as paid farm workers. Only a small proportion of the female work force (about 7 percent) worked in sales and services, with an even smaller percentage working as manual workers in the manufacturing sector. Moreover, about three quarters of working women in Nepal have no cash earnings at all. The dominance of unpaid agricultural self-employment and the limited opportunities for more remunerative work have been associated with Nepal's persistent problems of high poverty rates and income inequality.<sup>10</sup>

As shown in Figure 2, self-employment shares are substantially lower in upper-middle-income economies relative to low-income and lower-middle-income economies, and they are also higher for men than for women. On average, 32 percent of men are self-employed in upper-middle-income economies, compared to 29 percent of women. Among this group of countries, some of the highest rates of self-employment for men are found in Azerbaijan, Colombia, and the Dominican Republic, and for women in Azerbaijan, Iran, Algeria, and Peru. Among broad regions, self-employment rates tend to be higher among upper-middle-income economies in Asia and the Pacific, and while they tend to be lower in Africa and Europe.

**Insert Figure 2 Here**

Finally, self-employment shares take a noticeable step downward for the high-income economies (Figure 3). In addition, as in the upper-middle-income economies, men demonstrate a greater incidence of self-employment compared to women in the high-income economies. On average, 17 percent of men are self-employed, compared to just 10 percent of women. The variance across countries is also smaller among high-income economies compared to the other income groups, and only Korea and Greece have self-employment shares in excess of 30 percent. Among the regional groups, high-income countries in the far western part of Asia (especially Kuwait, Qatar, and United Arab Emirates) have a very low incidence of self-employment.

**Insert Figure 3 Here**

These conclusions from the assessment of self-employment shares in the past decade are supported by earlier studies regarding general patterns in self-employment across countries at different stages of economic development. For example, using a sample of 64 developing countries and 19 industrialized countries from the 1960s to the 1990s, Pietrobelli *et al.* (2004) estimates a broadly negative relationship between self-employment and economic development.

That is, self-employment rates decline with industrialization. However, this result is qualified with the observation that in some countries, innovative forms of entrepreneurship arise as a consequence of the existence of export manufacturing industries with high value-added. Moreover, primary education encourages self-employment whereas secondary education limits it. The authors argue that nothing conclusive can be said on the link between self-employment and economic and cultural factors such as financial sector development and women's labor force participation rates.

Even within advanced countries such as the United States, self-employment rates are not uniformly distributed across the population. Fairlie and Meyer (1996) document very different self-employment rates among 60 ethnic and racial groups, and the differences persist even with controls for age, education, immigrant status, and time in the country. Further, the authors find that differences in self-employment rates are influenced by each ethnic/racial group's differential between average self-employment and wage and salary earnings. In particular, the more advantaged ethnic/racial groups (as measured by income) have the highest rates of self-employment. In another study of self-employment patterns in the United States, Lofstrom and Wang (2006) argue that among Hispanics, the most rapidly increasing ethnic group in the United States, self-employment rates are low among Mexican-Hispanics but not among Hispanics from other countries. Moreover, education and access to financial assets are crucial to explaining differences in entrepreneurship trends. A reason put forth for low rates of self-employment among Mexican-Hispanics is their low rate of entry into high-barrier industries such as finance, insurance, and other professional fields with high human capital requirements.

Previous studies have also supported the findings from the descriptive assessment in Figures 1-3 on gender differences in self-employment shares across lower- and higher-income

economies. In particular, the proportion of working men who report being self-employed exceeds the proportion of working women who are self-employed in higher-income countries such as Canada, the United States, Australia, Israel, and much of Western Europe (McManus 2001). The consistency of lower self-employment rates for women as compared to men is striking given how different total self-employment rates are across these countries. McManus (2001) argues that a large part of the gender-differential in those reporting self-employment may be attributed to segregation in occupation, industry, and gender differences in business characteristics.

In addition to institutional factors, differences in self-employment rates by gender in higher-income countries may also be attributed to the manner in which individual workers react to various labor market characteristics. Using data from Germany, Georgellis and Wall (2004) finds that self-employment transition probabilities are influenced by the fact that men are more responsive to the wage differential between salaried employment and self-employed work. In addition, access to credit appears to be more binding for men as compared to women. The authors suggest that for women, self-employment appears to be a closer substitute for part-time work than it is for men.

In sum, within the population of self-employed workers, there are marked variations along gender lines. In contrast to higher-income countries, proportionately more women than men are self-employed in lower-income countries, with the implication that women have relatively less job security and more unstable incomes in these areas and thus turn to self-employment as a means of overcoming such obstacles. Moreover, in lower-income countries, self-employment commonly takes the form of a household enterprise, and women-owned household enterprises are often smaller in scale than those owned by men. The next section



addresses how improved access to credit may help to generate more income stability by increasing the scale and scope of household enterprises.

### **III. Access to Credit and Self-Employment**

In developing countries especially, conventional sources of employment entail unstable income streams and no job security. Moreover, such livelihoods often remain uncovered by formal sector labor regulations. A key area of policy intervention to mitigate these risks is the provision of small-scale loans, especially to women, through microfinance and rural banks, in order to stimulate entrepreneurship. Providing greater access to credit in order to finance self-employment activities can be particularly beneficial in regions with limited paid-employment opportunities for women due to labor markets characterized by discrimination, imperfect information, or insufficient labor demand.<sup>11</sup> In these contexts, employment in home-based enterprises can reduce women's vulnerability, providing them with earnings potential and improving their social security and that of their households. When women do face constraints in finding sufficient opportunities for wage employment, they may be willing to borrow in order to start their own small business or to increase the scale of an existing microenterprise.

In the case of rural households in poor countries, a high proportion of women workers has little formal schooling and is restricted in their geographic mobility. In such a scenario, women are likely to be self-employed in agriculture or in "female" trades such as spinners, weavers, and makers of tobacco products, which tend to be small-scale and only marginally profitable. In this context, improved access to credit can provide the opportunity for women workers to move up the ladder of self-employment activities and to undertake more profitable work in larger-scale operations, thus facilitating the move toward poverty reduction.

Previous research suggests that the targeted use of small loans can support and incentivize women's labor market activities and promote economic welfare. As the first microfinance program of its kind, Bangladesh's Grameen Bank has been the subject of numerous studies that have generally found positive results. For example, Pitt and Khandker (1998) found that credit given to women participants through the Grameen Bank had a strong positive effect on women's labor supply, while income effects associated with the increased supply of credit reduced men's labor supply. Impacts of the same direction but smaller in magnitude were found for two other group-based lending programs in Bangladesh: the Bangladesh Rural Advancement Committee (BRAC) and the Bangladesh Rural Development Board's (BRDB) RD-12 program. Also assessing the impact of Bangladesh's largest microfinance programs, Hashemi *et al.* (1996) concluded that loan recipients used the credit primarily for self-employment in small-scale activities ranging from animal husbandry to artisan crafts. Women reported that the credit they received helped to increase their control over finances, improve their economic and social standing, and raise their productivity in both paid and unpaid work. Other research has shown that credit and non-credit services made available by participation in Grameen programs has contributed to positive profits from self-employment in Bangladesh, and that the presence of village-level microfinance has boosted asset growth and occupational mobility in Thailand.<sup>12</sup>

Another important example is India's rural social banking program, which focused primarily on opening new bank branches in previously unbanked rural locations. Evidence in Menon and Rodgers (2011a) indicates that India's rural banking reform program increased the likelihood of women engaging in gainful self-employment beyond unpaid family work, while having little effect on men's self-employment work as own-account workers. A likely explanation is that women have restricted access to formal employment in developing countries

such as India, so when a household obtains a loan, it is rational for women to become self-employed and to earn a livelihood from their own trade or home-based business. These conclusions are supported with a recent study on women's mobility in India suggesting that historically disadvantaged groups are more likely to respond to new economic opportunities.<sup>13</sup>

Moreover, the increase in women's self-employment in India's rural sector appears to have occurred in more productive economic activities. Menon and Rodgers (2011a) report that increased access to credit facilitated the shift of women workers out of cultivation into other entrepreneurial activities, including more capital-intensive livestock and dairy farming. Between 1983 and 2000, the proportion of women with credit who were employed as dairy and livestock farmers rose from about 25 percent in 1983 to 28 percent in 2000. These results concur with findings in Ramkumar *et al.* (2004) showing that women would rather be engaged in self-employment as cattle herders and dairy farmers as opposed to working in agricultural cultivation. They preferred self-employment in herding and dairy because it provided stronger financial security, gave the women more autonomy, allowed for a more flexible working schedule, and was physically less arduous. More broadly, the move into more productive economic activities was one possible channel through which India's social banking program worked to reduce poverty. In support of this argument, Lanjouw and Murgai (2009) find that diversification of economic activities in India's rural sector, and the growth of non-farm employment including other types of self-employment endeavors, contributed to poverty reduction. Furthermore, the growth of non-farm employment placed upward pressure on agricultural wages, which had additional beneficial spillover effects on poverty reduction in the rural sector.

The importance of credit in encouraging self-employment is also evident from studies in higher-income countries. Evans and Jovanovic (1989) develop and test a model of

entrepreneurial choice using data from the United States to show that capital constraints play a role in limiting entrepreneurship, and that conditional on education, experience, and demographic characteristics, the effect of assets on the likelihood of initiating a business is positive. Using information on windfall gains from the Swedish lottery and inheritances, Lindh and Ohlsson (1996) find that the decision to become self-employed is curtailed by access to credit, and that the probability of becoming self-employed increases for recipients of lottery winnings and unanticipated inheritances. For Swedish women, the probability of self-employment is in general lower as compared to men. The study does not provide adequate information to answer whether the probability of self-employment increases more for women recipients of lottery winnings or inheritances, as compared to their male counterparts. Taylor (2001) implements a comparable study for Britain and provides additional evidence that relaxing liquidity constraints can increase self-employment probabilities. Using lottery and inheritance data is a clever way to circumvent problems of self-selection that plague credit evaluation studies, since those who choose to take credit may be systematically different from those who do not.<sup>14</sup>

Providing further evidence on the liquidity constraints that stand in the way of self-employment, Lindh and Ohlsson (1998) argue that self-employment rates should be higher in countries where the distribution of income is more unequal, because the number of people who are able to provide collateral for loans is higher in populations with unequal income distributions. This argument is supported with data from Sweden. These results have implications for gender-differentiated distributions of income within industrialized countries and for the higher self-employment shares for men as compared to women. One possible explanation

is that within an unequal income distribution, women tend to be at the lower end of the distribution whereas men are more likely to be at the higher end.

Not all previous research, however, has shined a favorable light on credit expansion, especially as embodied in microfinance and the widespread delivery of small-scale loans. Some have argued that because most microfinance schemes are not public programs, the proliferation of microfinance has shifted the burden of poverty reduction away from governments to the poor themselves (especially women). Moreover, the small loans provided by microfinance programs can act like a trap that prevents women entrepreneurs from raising their income levels beyond the poverty threshold. Critics also argue that microfinance has become a magnet for large financial-sector firms, who view the relatively high interest rates as profitable. This development can signal hardship for the poor and subvert the intended goal of poverty reduction.<sup>15</sup> Some of this criticism may be context-specific, as other studies have shown that even high interest consumer loans lead to improved welfare. For example, using data from South Africa, Karlan and Zinman (2010) show that individuals who borrowed consumer credit at rates as high as 200 per cent per annum, benefitted from doing so as compared to their next best alternative.

Others have argued that women's self-employment may be less responsive to new credit sources as compared to men. For example, de Mel *et al.* (2008) demonstrated that small grants in the form of cash or in-kind support given to a randomly-selected group of small businesses in Sri Lanka resulted in high rates of return for men, on the order of about 5 percent per month. Women-owned microenterprises, however, had rates of return that were essentially zero. Moreover, group-lending programs for women in Northeast Thailand examined by Coleman (1999) had no statistically significant impact on indicators of economic activity that included production, sales, and time spent working. Furthermore, Kevane and Wydick (2001) showed that

women entrepreneurs who borrowed from microenterprise lending institutions did not create new employment with their businesses as compared to other entrepreneurs. Finally, McKenzie's (2009) assessment of microenterprises and finance in developing countries concluded that simply providing greater access to capital is not sufficient to help microenterprises grow. Rather, additional policies that improve business training, offer business-development services, and assist in the shift toward more profitable activities, were most effective in strengthening the impact of credit on microenterprises.

The argument that credit alone is not enough to stimulate productive self-employment is not new. A well-known counter example is the Self Employed Women's Association (SEWA) of India, a trade union for self-employed women from poor households that was founded in 1972. One of SEWA's main objectives has been to empower self-employed women through increased organization of individual disenfranchised women. Although savings and credit groups have played an integral role in SEWA's functions, SEWA has also provided services related to housing, trade, education, skill development, entrepreneurship training, political activism, and general insurance as well as community based health insurance. SEWA increases the productivity of its members by providing integrated services that connect important aspects of business creation such as training, capital, and access to markets. For example, in addition to providing know-how on occupations as varied as dairy farming and handicrafts, SEWA also provides support services in infrastructure development financed through micro-loans and disaster rehabilitation and relief.<sup>16</sup> One motivation for why SEWA moved to providing interspersed services was because the organization's clientele was composed of poor women who had multiple occupations in the informal sector. That is, women in the informal economy are often forced to take up more than one job in order to generate sufficient income. Thus, the

provision of integrated services generated more value-added for such women who were not specialized. SEWA has gained the support of major multilateral agencies and donors given its broad-ranging impact on women's empowerment and poverty reduction.<sup>17</sup>

Other studies have also de-emphasized the role of credit in furthering self-employment, and they have stressed the importance of alternative determinants such as human capital. In a study of inter-generational links in self-employment using data from the United States, Dunn and Holtz-Eakin (1996) find that although financial assets of young men do exert a significant effect on the probability of being self-employed, the magnitude of the effect is quantitatively small. What appears to matter most is parent's human capital in self-employment, with father's experience in self-employment having the largest impact.

Finally, reforms that enable increased asset ownership could have implications for self-employment, even though they might not work by directly improving access to credit in the short run. For example, Do and Iyer (2008) examine the economic impact of the 1993 Land Law of Vietnam which created a land market by giving households the power to exchange, lease, and mortgage their land use rights. Using variation in the speed of implementation of the reform to identify effects, the authors find that as a consequence of the additional land rights, households increased their labor in non-farm work. However, since household borrowing did not exhibit much variation during the period of analysis (1993-1998), these effects are attributed mainly to the additional security of land tenure rather than increased access to credit. It is probable that a five year window is too small to see the implications on access to credit from the creation of a land market. Long-run comparisons that use more recent waves of data could possibly show stronger implications on non-farm work arising from the improved access to credit that land titling enabled.

#### **IV. Self-Employment, Women's Autonomy, and Child Health**

A high proportion of women in developing countries engage in low-paid jobs that remain uncovered by national labor standards. Providing women with increased access to credit serves as a viable means of incentivizing the shift from low-paid work in marginally productive activities to more remunerative work in productive activities. Ultimately, the creation of productive self-employment and new wage-employment opportunities will increase women's cash earnings. Increased income in the hands of women, in turn, has beneficial impacts on women's autonomy and the well-being of their children.

The income that mothers earn impacts their children's well-being in different ways than the income that fathers earn, given women's tendency to allocate a greater portion of household budgets on children's educational, health, and nutritional needs. Raising women's control over income can contribute not only to greater expenditures on food, but also to expenditures on foods with improved nutritional content. More broadly, increased income involves changes in norms and attitudes that influence the economic decisions and nutrition-related behaviors of mothers and fathers. Central to the social context in which mothers and fathers operate is bargaining power, and an important change that comes with more productive employment for women is increased empowerment and autonomy. Women's earnings can strengthen their bargaining power within the household by improving their fallback position, which can then facilitate decision-making that improves child health outcomes by, for example, moving households away from adherence to less useful traditional practices. Greater autonomy for women and a shift in intra-household power dynamics toward the mother can have many useful consequences including greater utilization of antenatal care and vaccination programs for their children, as well as improved feeding practices.



A growing body of work has substantiated the relationship between women's control over financial resources, greater expenditures on children, and improved child health.<sup>18</sup> For example, in Cote d'Ivoire, raising the share of household cash income controlled by the wife leads to a positive and statistically significant increase in the household budget share allocated toward food, and a decrease in the share allocated toward adult-oriented items - even after controlling for household characteristics. In particular, doubling the share of household cash income controlled by wives caused a 1.9 percent increase in the budget share of food for the household, and decreases of 25 percent and 15 percent in the budget shares allocated toward alcohol and cigarettes.<sup>19</sup>

Raising household income is associated with higher child survival rates and with declines in children's nutritional deprivation. However, because women are more likely to spend money on food items with high nutritional content than men, these improvements are greater if the income is controlled by the mother. Evidence from Brazil indicates that the marginal effect of additional income in the hands of women on child survival is twenty times as large as that of additional income in the hands of the father, while the marginal effects on child wasting and stunting differ by factors of eight and four, respectively.<sup>20</sup> Similar conclusions were also made for the case of Bangladesh, where credit allocated to women through the Grameen Bank and similar microfinance programs had stronger positive effects on children's nutritional status as measured by arm circumference and height-for age, as compared to credit allocated to men (Pitt *et al.* 2003). Moreover, research in Duflo (2003) on the expansion of South Africa's pension program to the black population indicated that this large cash transfer resulted in improvements in weight-for-height of all girls and in height-for-age of younger girls. These effects were attributed entirely to the pensions received by women and not by men.

Enabling greater ownership of assets can have important repercussions for self-employment in general as shown in Do and Iyer (2008), however, improving women's control over assets such as land can have especially powerful consequences. The availability of collateral facilitates additional borrowing, which in turn gives households the capital required to finance home-based self-employment work. As noted above, such work is often the province of women in developing country households. This additional income in the hands of women members has different effects on household and child outcomes as compared to male-controlled resources. Additional evidence that supports this conclusion is provided in Allendorf (2007), which finds that children are less likely to be underweight if their mothers own land. This relationship is attributed to the additional resources that women's ownership of land brings, and is not solely due to the empowering effect of land ownership. Thinking about the joint implications of these earlier studies, an interesting question is thus whether land titles registered in the names of both husbands and wives show stronger positive impacts on child human capital indicators, as compared with titles registered in the name of husbands only.

The beneficial impact of endowing women with more control over resources via self-employment has implications on demographic behavior such as fertility and contraception as well. Amin *et al.* (1995) documents that women loan recipients of Bangladesh's Grameen, BRAC, and BRDB programs were more likely to use contraceptives, have fewer children, report an increase in the desire for no more children, and be more empowered (as measured by physical mobility, authority and aspiration). Schuler and Hashemi (1994) find that participation in Grameen and BRAC programs has positive effects on empowerment as measured by economic security, political and legal awareness, and freedom from violence within the family. Focusing only on demographic behavior such as contraception and fertility, Pitt *et al.* (1999) use data from

Grameen, BRAC, and BRDB to show that with a more rigorous control for heterogeneity bias, women's participation in group-based credit programs has no effect on contraception or fertility. Alternatively, male participation does reduce fertility and increase contraceptive use, although the latter effect is small in magnitude.

Hence a large body of developing country literature indicates that additional income controlled by men and women can contribute to improved own and child well-being, although the effects are not always indisputable. In the same vein, mothers' market-based work could reduce the quantity or quality of time spent caring for children, with potentially adverse effects on child health. Absence from children while working in the labor market could reduce the ability of mothers to engage in care practices that influence child development and health. Mothers may have less time to breastfeed, prepare nutritious foods, engage in preventive health-seeking practices, or take children to public services that improve child well-being.

Self-employment, however, may help to mitigate this tradeoff between increased income and reduced time for child care if the self-employment conditions are compatible with child rearing. In such cases, women engage in market-based work with their children present, although the pressures associated with this generally low-pay work, often on a piece-rate basis, may not allow mothers to have much high-quality interaction with their children. Work within or close to the home should be, in principle, more compatible with child care, but the actual benefits to children may be tempered by the informality of such work and the lack of flexibility in the work requirements. Women may not find their work compatible with child care if it is inconvenient or unsafe to bring their children with them, or if their work involves pressure to complete a quota within a certain amount of time. In countries where the agricultural sector still provides a large source of employment, women may bring their children with them to the field while they are

farming. In this case, farm work may be more compatible with the continuation of breastfeeding compared to other types of work where mothers are separated from their infants. Finally, mothers' direct time spent with children may not vary much with the type of labor market activity if they live in a household in which other family members, especially older siblings and grandparents, can care for young children.<sup>21</sup>

The empirical evidence on the compatibility of self-employment with healthy child care practices is mixed. For example, Chutikul's (1986) study of rural Thailand found that mother's work in the informal sector had a positive impact on children's nutritional status, while mother's work in the formal sector had a negative impact. The compatibility of child care with informal-sector work served as the main explanation for these effects.<sup>22</sup> In contrast, Glick and Sahn (1998) found that in urban Guinea, maternal working hours in self-employment and in wage-employment had negative effects of equal size on children's height-for-age, even after controlling for the mother's earnings brought in by her employment. The feasibility of combining employment with child care in self-employment was not strong enough to counteract the negative impact of maternal hours in market work. As another example, among low-income urban households in Chile, maternal employment had a net positive effect on infants' weight (Vial *et al.* 1989). However, this effect operated mostly through the additional income that mothers earned at work, rather than the type of work. Distance to work and type of employment did not serve as determining factors.

## **V. Conclusion and Challenges for Research**

Household enterprises tend to rely on family labor, which contributes to the tendency for individual ventures to remain small in scale. Thus, policies that support the operations of household enterprises and help them to expand their sales can transform them into stronger

engines for job creation. By providing the means for initiating entrepreneurship, or for increasing the scale of existing enterprises, improving access to credit can serve as the impetus to greater financial independence.

However, assessments of the impact of credit programs are fraught with endogeneity problems. These problems embody primarily two types – self selection and non-random program placement.<sup>23</sup> Self-selection occurs when unmeasured individual-specific factors influence selection into the program and the outcome being studied. For example, it is possible that the most able women, or those who have prior experience with self-employment, are the first to join microfinance programs. Since ability is unmeasured, the researcher cannot control for its effects explicitly. Without such control, some part of the measured impact of credit will pick up the fact that the woman is able or very motivated, leading to misleading inferences on the true impact of loans. Pitt and Khandker (1998) controlled for such self-selection using a quasi-experimental framework. However, more recent evaluations have tried to randomize access to loans, thus inducing exogenous variations in which types of women receive a loan. Randomization is useful in that we can be confident that selection is not at work. But the results of a randomized study are particular only to that experiment, limiting its implications for wider policy analysis.<sup>24</sup>

The second endogeneity problem deals with selection not at the individual level, but at the regional level. Non-random program placement implies that credit programs are not allocated exogenously to regions. For example, it is possible that the most vulnerable villages in Bangladesh were the first to receive a microfinance program because the need for credit was the highest in such areas. Alternatively, altruistic governments might choose to first locate public programs in the poorest districts. Not controlling for such motivations can also lead to misleading inferences on the impact of credit and programs. A structural solution would be the

use of fixed effects models, but these models need the strong assumption that the endogeneity is time invariant.<sup>25</sup> On the other hand, randomly allocating regions to receive programs would help to circumvent this problem. But, as noted already, the broader implications of such randomization are limited in scope and remain constrained to the study at hand. In evaluating the impact of credit on self-employment or other outcomes, the challenge for the researcher is to think clearly about what the main aim of her work is, and then, ideally, construct a combination of structural and experimental methods that build-on the strengths of each.

Having outlined the challenges for research in understanding the effect of credit access, we conclude by outlining best practices in this area. In particular, greater support for business owners to acquire training in accounting and management procedures would serve as useful mechanisms for enhancing the productivity of household businesses and for expanding their capacity to generate wage-based employment. Subsidies and targeted tax incentives can also assist small business owners in purchasing new profit-enhancing technologies. Public-sector assistance to women entrepreneurs in marketing and selling their products can provide a valuable function in cases when women business owners face obstacles in accessing business networks. The Kenya Women's Finance Trust (KWFT) constitutes a good example along these lines. KWFT is the largest women-only financial organization in Africa, providing loans and know-how to entrepreneurs on different facets of their business.<sup>26</sup> It started thirty years ago in response to a growing recognition that women entrepreneurs had little to no access to financial assets as compared to the rest of the population.

Another good model is the Women Workers Employment and Entrepreneurship Development (WEED) program in the Philippines, which provides skills training, entrepreneurship development, and credit assistance to women who are underemployed, home-

based, and/or employed in the informal sector.<sup>27</sup> Programs such as WEED can facilitate a switch from low-paid work to work that yields greater returns. This program proved to be a particularly valuable component of the policy response by the Philippines' government to the global financial crisis of 2009, which led to a reduction in self-employment opportunities for women.<sup>28</sup> This setback for women arose because the economic crisis reduced demand for the small-scale products and services that women produce and sell, thus reinforcing the need for strengthening the social safety net for individuals who may slip through the cracks during times of crisis.

In closing, this chapter has assessed the prevalence of self-employment across lower-income and higher-income economies, as well as gender differences in the tendency to engage in self-employment. It has also presented a synopsis of the current state of understanding on the inter-relationship of credit and self-employment across countries at different stages of development. The discussion also focused on the positive externalities of entrepreneurship income – especially income that is concentrated in the hands of women – on women's autonomy and child welfare. In general, there is an inverse relationship between self-employment shares and the economic development level of a country. Self-employment serves as a relatively larger source of employment for women in lower-income countries, while higher-income countries report a greater incidence of self-employment for men. Moreover, access to credit facilitates self-employment, but with qualifications. Enterprise productivity also depends on a variety of other factors including training, and the provision of marketing expertise and business development support services. Standing to gain the most from publicly-funded interventions that integrate training and best management practices are small-scale women-owned businesses that are credit constrained and isolated from business networks that provide information and sources of support.

However, particularly in developing countries, the importance of credit in facilitating self-employment, a secure and stable source of income for the poor, cannot be over-emphasized.



## References

- Acharya, Sanjaya. 2008. "Poverty Alleviation and the Industrial Employment of Women (The Case of Nepal)," *Journal of International Development* 20 (5): 670–685.
- Allendorf, Keera. 2007. "Do Women's Land Rights Promote Empowerment and Child Health in Nepal?" *World Development* 35 (11): 1975-1988.
- Amin, Ruhul, Robert Hill, and Yiping Li. 1995. "Poor Women's Participation in Credit-Based Self-Employment: The Impact on their Empowerment, Fertility, Contraceptive Use, and Fertility Desire in Rural Bangladesh," *Pakistan Development Review* 34(2): 93-119.
- Banerjee, Abhijit, and Esther Duflo. 2007. "The Economic Lives of the Poor," *Journal of Economic Perspectives* 21 (1): 141–167.
- Berik, Günseli, and Yana Rodgers. 2009. "Engendering Development Strategies and Macroeconomic Policies: What's Sound and Sensible?" in Günseli Berik, Yana Rodgers, and Ann Zammit (eds.), *Social Justice and Gender Equality: Rethinking Development Strategies and Macroeconomic Policies*. New York and London: Routledge Press, pp. 1–43.
- Besley, Timothy, and Robin Burgess. 2003. "Halving Global Poverty," *Journal of Economic Perspectives* 17 (3): 3–22.
- Bianchi, Suzanne. 2000. "Maternal Employment and Time with Children: Dramatic Change or Surprising Continuity?" *Demography* 37 (4): 401–14.
- Blumberg, Rae Lesser. 1988. "Income under Female versus Male Control: Hypotheses from a Theory of Gender Stratification and Data from the Third World," *Journal of Family Issues* 9 (1): 51–84.

- Burgess, Robin, and Rohini Pande. 2005. "Do Rural Banks Matter? Evidence from the Indian Social Banking Experiment," *American Economic Review* 95 (3): 780–795.
- Chen, Martha, Renana Jhabvala, Ravi Kanbur, and Carol Richards (eds). 2007. *Membership-Based Organizations of the Poor*. New York and Oxon: Routledge.
- Chutikul, Sirilaksana. 1986. "Malnourished Children: An Economic Approach to the Causes and Consequences in Rural Thailand," Papers of the East West Population Institute, No. 102. Honolulu, Hawaii: East West Center.
- Coleman, Brett. 1999. "The Impact of Group Lending in Northeast Thailand," *Journal of Development Economics* 60: 105–141.
- Crowell, Daniel. 2003. *The SEWA Movement and Rural Development: The Banaskantha and Kutch Experience*. Thousand Oaks, California: Sage Publications.
- Datta, Rekha. 2003. "From Development to Empowerment: The Self-Employed Women's Association in India," *International Journal of Politics, Culture, and Society* 16 (3): 351-368.
- de Aghion, Beatriz Armendariz, and Jonathan Morduch. 2005. *The Economics of Microfinance*. MIT Press, Cambridge, MA.
- de Mel, Suresh, David McKenzie, and Christopher Woodruff. 2008. "Returns to Capital in Microenterprises: Evidence from a Field Experiment," *Quarterly Journal of Economics* 123 (4): 1329–1372.
- Do, Quy-Toan, and Lakshmi Iyer. 2008. "Land Titling and Rural Transition in Vietnam," *Economic Development and Cultural Change* 56(3): 531-579.
- Duflo, Esther. 2003. "Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa," *World Bank Economic Review* 17 (1): 1–25.

- Dunn, Thomas, and Douglas Holtz-Eakin. 1996. "Financial Capital, Human Capital, and the Transition to Self-Employment," National Bureau of Economic Research Working Paper No. 5622.
- Escobal, Javier. 2001. "The Determinants of Nonfarm Income Diversification in Rural Peru," *World Development* 29 (3): 497-508.
- Evans, David, and Boyan Jovanovic. 1989. "An Estimated Model of Entrepreneurial Choice Under Liquidity Constraints," *Journal of Political Economy* 97(4): 808-827.
- Fairlie, Robert, and Bruce Meyer. 1996. "Ethnic and Racial Self-Employment Differences and Possible Explanations," *Journal of Human Resources* 31(4): 757-793.
- Georgellis, Yannis, and Howard Wall. 2004. "Gender Differences in Self-Employment," The Federal Reserve Bank of St. Louis Working Paper Series 1999-008C.
- Glick, Peter, and David Sahn. 1998. "Maternal Labour Supply and Child Nutrition in West Africa," *Oxford Bulletin of Economics and Statistics* 60 (3): 325-55.
- Haddad, Lawrence, John Hoddinott, and Harold Alderman. 1997. *Intrahousehold Resource Allocation in Developing Countries: Models, Methods, and Policy*. Baltimore, MD: Johns Hopkins University Press.
- Hashemi, Syed, Sidney Ruth Schuler, and Ann Riley. 1996. "Rural Credit Programs and Women's Empowerment in Bangladesh," *World Development* 24 (4): 635-653.
- Hoddinott, John and Lawrence Haddad. 1995. "Does Female Income Share Influence Household Expenditure Patterns? Evidence from Cote d'Ivoire," *Oxford Bulletin of Economics and Statistics* 57 (1): 77-96.
- Holtz-Eakin, Douglas, David Joulfaian, and Harvey Rosen. 1994a. "Entrepreneurial Decisions and Liquidity Constraints," *Rand Journal of Economics* 25 (2): 334-47.

- Holtz-Eakin, Douglas, David Joulfaian, and Harvey Rosen. 1994b. "Sticking it Out: Entrepreneurial Survival and Liquidity Constraints," *Journal of Political Economy* 102 (1): 53-75.
- Holvoet, Nathalie. 2005. "Credit and Women's Group Membership in South India: Testing Models of Intrahousehold Allocative Behavior," *Feminist Economics* 11 (3): 27–62.
- International Labor Organization (ILO). 2011. *Labor Force Statistics Database*. Geneva: ILO. Available at <http://laborsta.ilo.org>.
- Johnson, Susan. 1998. "Microfinance North and South: Contrasting Current Debates." *Journal of International Development* 10 (6): 799–809.
- Kaboski, Joseph, and Robert Townsend. 2005. "Policies and Impact: An Analysis of Village-Level Microfinance Institutions," *Journal of the European Economic Association* 3 (1): 1–50.
- Karlan, Dean, and Jonathan Morduch. 2009. "Access to Finance: Credit Markets, Insurance, and Saving," in Dani Rodrik and Mark Rosenzweig, eds., *Handbook of Development Economics, Volume 5* (Amsterdam: Elsevier Science & Technology, chapter 71).
- Karlan, Dean, and Jonathan Zinman. 2010. "Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts," *Review of Financial Studies* 23 (1): 433-464.
- Kevane, Michael, and Bruce Wydick. 2001. "Microenterprise Lending to Female Entrepreneurs: Sacrificing Economic Growth for Poverty Alleviation?" *World Development* 29 (7): 1225–1236.
- Lanjouw, Peter, and Rinku Murgai. 2009. "Poverty Decline, Agricultural Wages, and Nonfarm Employment in Rural India: 1983–2004," *Agricultural Economics* 40 (2): 243–263.

- Lindh, Thomas, and Henry Ohlsson. 1996. "Self-Employment and Windfall Gains: Evidence from the Swedish Lottery," *Economic Journal* 106(439): 1515-1526.
- Lindh, Thomas, and Henry Ohlsson. 1998. "Self-Employment and Wealth Inequality," *Review of Income and Wealth* 44(1): 25-42.
- Lofstrom, Magnus, and Chunbei Wang. 2006. "Hispanic Self-Employment: A Dynamic Analysis of Business Ownership," IZA Discussion Paper No. 2101.
- Luke, Nancy, and Kaivan Munshi. 2011. "Women as Agents of Change: Female Income and Mobility in India," *Journal of Development Economics* 94 (1): 1–17.
- Manasan, Rosario. 2009. "Reforming Social Protection Policy: Responding to the Global Financial Crisis and Beyond," Philippine Institute for Development Studies (PIDS), Discussion Paper No. 2009-22, Makati City, Philippines: PIDS.
- McKenzie, David. 2009. "Impact Assessments in Finance and Private Sector Development: What Have We Learned and What Should We Learn?" World Bank Policy Research Working Paper No. 4944.
- McKernan, Signe-Mary. 2002. "The Impact of Microcredit Programs on Self-Employment Profits: Do Noncredit Program Aspects Matter?" *The Review of Economics and Statistics* 84 (1): 93–115.
- McManus, Patricia. 2001. "Women's Participation in Self-Employment in Western Industrialized Nations," *International Journal of Sociology* 31(2): 70-97.
- Menon, Nidhiya, and Yana Rodgers. 2011a. "How Access to Credit Affects Self-Employment: Differences by Gender during India's Rural Banking Reform," *Journal of Development Studies* 47 (1): 48–69.

- Menon, Nidhiya, and Yana Rodgers. 2011b. "War and Women's Work: Evidence from the Conflict in Nepal," Report submitted to the World Bank, Washington, DC.
- Pietrobelli, Carlo, Roberta Rabellotti, and Matteo Aquilina. 2004. "An Empirical Study of the Determinants of Self-Employment in Developing Countries," *Journal of International Development* 16 (6): 803-820.
- Pitt, Mark, and Shahidur Khandker. 1998. "The Impact of Group-Based Credit Programs on Poor Households in Bangladesh: Does the Gender of Participants Matter?" *Journal of Political Economy* 106 (5): 958-996.
- Pitt, Mark, Shahid Khandker, Omar Chowdhury, and Daniel Millimet. 2003. "Credit Programs for the Poor and the Health Status of Children in Rural Bangladesh," *International Economic Review* 44(1): 87-118.
- Pitt, Mark, Shahid Khandker, Signe-Mary McKernan, and M. Abdul Latif. 1999. "Credit Programs for the Poor and Reproductive Behavior in Low Income Countries: Are the Reported Causal Relationships the Result of Heterogeneity Bias?" *Demography* 36(1): 1-21.
- Pollin, Robert, Mwangi wa Githinji, and James Heinz. 2007. *An Employment Targeted Economic Program for Kenya*, International Poverty Centre, Brasilia.
- Quisumbing, Agnes, and John Maluccio. 2000. "Intrahousehold Allocation and Gender Relations: New Empirical Evidence From Four Developing Countries." FCND Discussion Paper No. 84. Washington, DC: International Food Policy Research Institute.
- Ramkumar, S., S.V.N. Rao, and Kevin Waldie. 2004. "Dairy Cattle Rearing by Landless Rural Women in Pondicherry: A Path to Empowerment," *Indian Journal of Gender Studies* 11 (2): 205-22.

- Ravallion, Martin. 2009. "Should the Randomistas Rule?" *The Economists' Voice* 6 (2), Article 6, pp. 1-5.
- Rodgers, Yana, and Nidhiya Menon. 2010. "Impact of the 2008–2009 Food, Fuel, and Financial Crisis on the Philippine Labor Market," Report submitted to the World Bank, Washington, DC.
- Schuler, Sidney, and Syed Hashemi. 1994. "Credit Programs, Women's Empowerment, and Contraceptive Use in Rural Bangladesh," *Studies in Family Planning* 25(2): 65-76.
- Seguino, Stephanie, Günseli Berik, and Yana Rodgers. 2010. "An Investment that Pays Off: Promoting Gender Equality as a Means to Finance Development," Friedrich Ebert Stiftung Occasional Paper, May 2010. Berlin: Friedrich Ebert Stiftung.
- Taylor, Mark. 2001. "Self-Employment and Windfall Gains in Britain: Evidence from Panel Data," *Economica* 68: 539-565.
- Thomas, Duncan. 1997. "Incomes, Expenditures, and Health Outcomes: Evidence on Intrahousehold Resource Allocation," in Lawrence Haddad, John Hoddinott, and Harold Alderman, eds., *Intrahousehold Resource Allocation in Developing Countries: Models, Methods and Policy*. Baltimore and London: Johns Hopkins University Press.
- Vial, Isabel, Eugenia Munchnik, and Francisco Mardones. 1989. "Women's Market Work, Infant Feeding Practices, and Infant Nutrition Among Low-Income Women in Santiago, Chile," in Leslie, Joanne, and Michael Paolisso (eds.), *Women, Work, and Child Welfare in the Third World*. Boulder, CO: Westview Press for the American Association for the Advancement of Science, pp. 131–59.

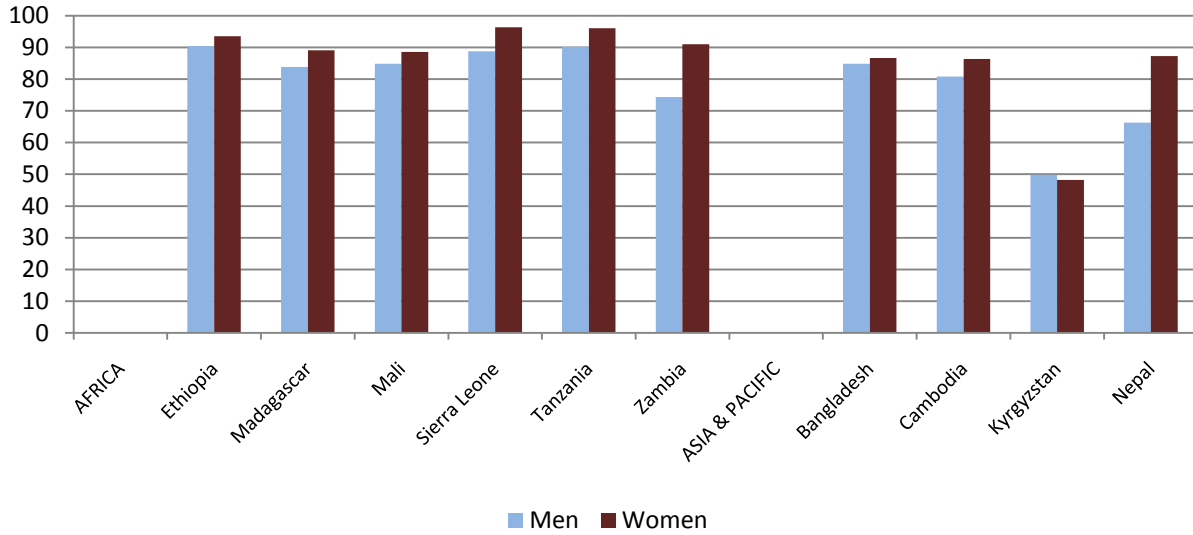
Wolfe, Barbara, and Jere Behrman. 1982. "Determinants of Child Mortality, Health, and Nutrition in a Developing Country," *Journal of Development Economics* 11 (2): 163–193.

World Bank. 2001. *Engendering Development: Through Gender Equality in Rights, Resources, and Voice*. Oxford University Press, Oxford.

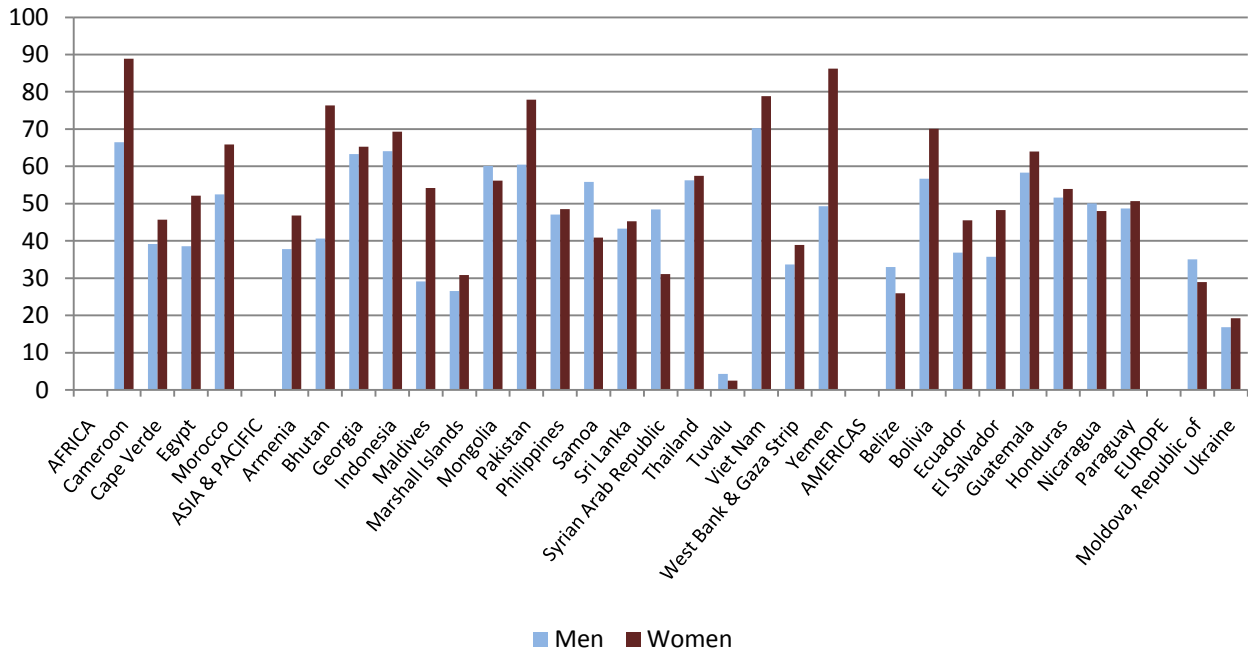


**Figure 1.** Self-Employment Shares by Gender in Low-Income and Lower-Middle-Income Economies, 1999-2008.

Panel A. Low-Income Economies



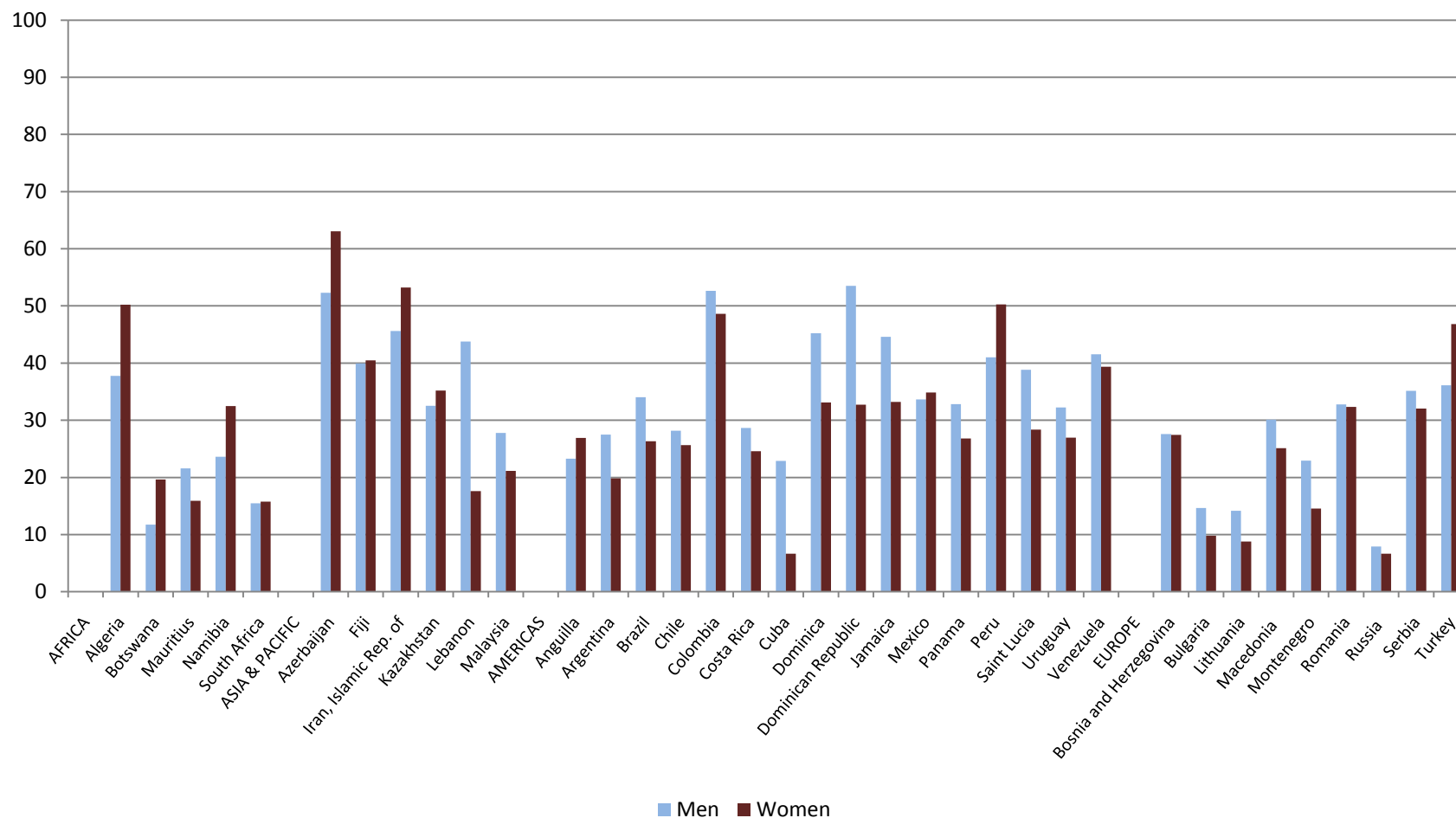
Panel B. Lower-Middle-Income Economies



**Note:** For each country, the data are for the most recent year available between 1999 and 2008.

**Source:** Authors' calculations using data from ILO (2011).

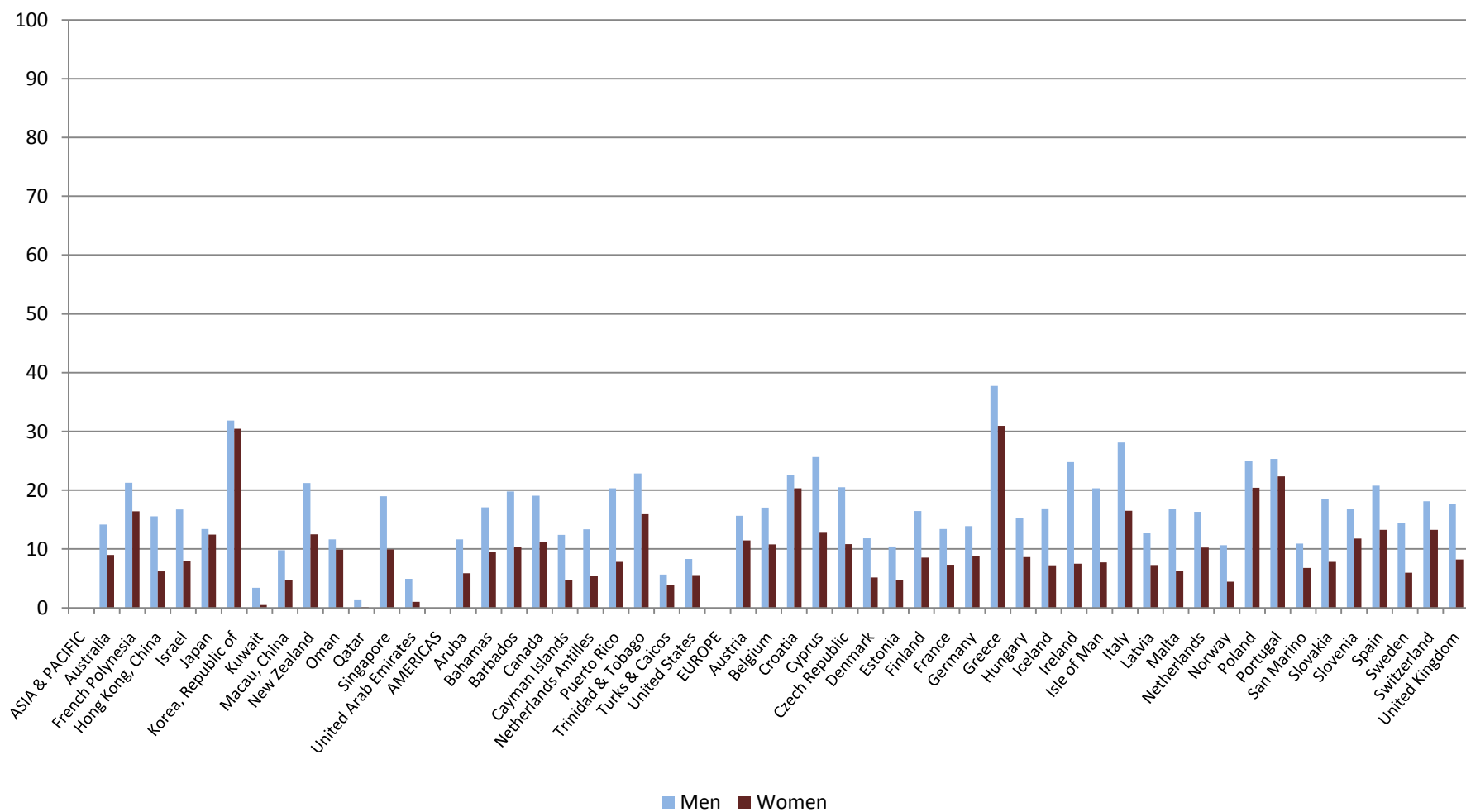
**Figure 2.** Self-Employment Shares by Gender in Upper-Middle-Income Economies, 1999-2008.



**Note:** For each country, the data are for the most recent year available between 1999 and 2008.

**Source:** Authors' calculations using data from ILO (2011).

**Figure 3.** Self-Employment Shares by Gender in High-Income Economies, 1999-2008.



**Note:** For each country, the data are for the most recent year available between 1999 and 2008.

**Source:** Authors' calculations using data from ILO (2011).

## Endnotes

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<sup>1</sup> These numbers are from Banerjee and Duflo (2007).

<sup>2</sup> This point about the benefits of expanding access to credit is made in Besley and Burgess (2003).

<sup>3</sup> See Burgess and Pande (2005) for evidence linking India's rural banking reforms with poverty reduction.

<sup>4</sup> See Pitt and Khandker (1998) and de Aghion and Morduch (2005) for empirical evidence of the impacts of the Grameen Bank.

<sup>5</sup> See de Aghion and Morduch (2005) for more discussion of the background and prevalence of microfinance programs.

<sup>6</sup> A number of countries reported two sets of statistics on employment status: those based on population census data, and those based on labor force surveys. In this situation, as a general rule we chose the data based on labor force surveys because they tended to be more recent. Several other countries reported two sets of employment status data, one for the entire country and one for just urban areas. In this latter situation, as a general rule we chose the data for the entire country.

<sup>7</sup> This definition is found on the ILO's "Main Statistics (Annual) Employment" webpage at <http://laborsta.ilo.org/applv8/data/c2e.html>.

<sup>8</sup> The classification of countries follows the World Bank's definition of income groups, found at <http://data.worldbank.org/about/country-classifications/country-and-lending-groups>.

<sup>9</sup> These averages on self-employment in Nepal are from Menon and Rodgers (2011b).

<sup>10</sup> See especially Acharya (2008) on the generation of new employment opportunities in industry for women in Nepal.

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<sup>11</sup> See Karlan and Morduch (2009) for more discussion of this argument.

<sup>12</sup> See especially results in McKernan (2002) and Kaboski and Townsend (2005).

<sup>13</sup> This additional evidence for India is from Luke and Munshi (2011).

<sup>14</sup> Other studies for industrialized countries have also found that the decision to become self-employed is constrained by access to credit, and relief of those constraints through a loan or a windfall gain increases the probability of becoming or remaining self-employed. See especially Holtz-Eakin *et al.* (1994a, 1994b).

<sup>15</sup> These arguments are explored further in Johnson (1998), Pollin *et al.* (2007), Berik and Rodgers (2009), and Seguino *et al.* (2010).

<sup>16</sup> See Crowell (2003).

<sup>17</sup> There is a large literature on the impacts of SEWA in India. See, for example, Datta (2003) and Chen *et al.* (2007).

<sup>18</sup> See Blumberg (1988), Haddad *et al.* (1997), Quisumbing and Maluccio (2000), World Bank (2001), and Holvoet (2005).

<sup>19</sup> These findings are from Hoddinott and Haddad (1995).

<sup>20</sup> This evidence on income and expenditures in Brazil is from Thomas (1997).

<sup>21</sup> See Bianchi (2000) for a review of studies supporting these arguments on the potential tradeoffs, or lack thereof, between market work and time spent with children in developing countries.

<sup>22</sup> Similar results were found for Nicaragua in Wolfe and Behrman (1982).

<sup>23</sup> Omitted variables that are correlated with the outcomes of interest may also induce problems with estimating the impact of credit.

<sup>24</sup> See Ravallion (2009).

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<sup>25</sup> See Pitt and Khandker (1998).

<sup>26</sup> For more discussion of the KWFT, see Pollin *et al.* (2007).

<sup>27</sup> This program is discussed in Manasan (2009).

<sup>28</sup> This reduction in women's self-employment opportunities is documented in Rodgers and Menon (2010).