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# Microfinance and the Mirage of Women's Empowerment

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The United Nations celebrated 2005 as the International Year of Microcredit. And, in 2006, the Grameen Bank and its founder Muhammad Yunus were jointly awarded the Nobel Prize for the contributions of microfinance in combating poverty and empowering women. Yunus (2013) claims that access to microfinance has the potential to empower economically poor people who have been ignored by the formal banking sector due to lack of collateral. And, as women constitute a greater proportion of the poor population, microfinance institutions preferentially target women in the provision of loans. Proponents of microfinance argue that providing credit to women 'leads to a set of mutually-reinforcing 'virtuous spirals' of increasing economic empowerment, improved well-being and social/political/legal empowerment for women' (Mayoux 1999: 959). Microfinance institutions point out the fact that a large number of women use microloans and that the loan recovery rate is around 98 per cent and support the narrative that microfinance enables women to establish microenterprises and generate profits sufficient enough to repay the loan and empower themselves, attracting the attention of governments and international development organizations (Karim 2011: xxii). The success of microfinance institutions is even more appealing as rural Bangladeshi women, facing many socio-cultural limitations, prove to be creditworthy clients in a country that has one of the poorest economies in the world (Karim 2011: xiv). Either these women are becoming successful microentrepreneurs with access to microcredit, or there exists an unrevealed story behind the high repayment rates.

The question that will be dealt with in this essay is: Does microfinance live up to its promise of women's empowerment? The central claim of microfinance institutions is that access to microcredit enables women to establish a microenterprise and 'this represented a route out of poverty' (Yunus 2013, Yeboah, Kumi and Arhin 2015: 4). And, since high repayment rates of women are cited as evidence to support this claim, the essay aims to reveal the hidden story behind the high repayment rates of women to show that the impact of microfinance on women's empowerment remains limited. The central argument of the essay is that access to microcredit, given the prevailing socio-cultural constraints, is insufficient for women to establish an enterprise productive enough to repay the loan and empower themselves. On the contrary, women have been significantly disempowered in the process of receiving and repaying loans. In assessing the impact of microfinance, the essay focuses on Bangladesh which has 'the highest microfinance penetration rate in the world' (Bateman and Chang 2012: 19). Beginning with a brief introduction to microfinance and women's empowerment, the essay first reveals the gendered assumptions underlying the preferential targeting of women through microfinance. Then, men's appropriation of women's microloans is highlighted to argue that access to microloans, without serious efforts to challenge the gendered practices, doesn't enhance women's status significantly (Hunt and Kasynathan 2001: 44). On the contrary, with increased access to microloan, women have witnessed a growing demand of dowry and increased violence (Rahman 1999: 72). Moreover, women become vulnerable to debt traps and poverty by engaging in microenterprises that almost always run below the minimum efficient scale (Bateman and Chang 2012: 17). The essay reveals that the evidence supporting the positive impact of microfinance institutions are based on biased studies (Duvendack et al. 2011; 74-76). Given the low productive microenterprises, socio-cultural limitations and men's appropriation of women's loan, women have to bear serious hardships such as decreasing food consumption, increasing workload, selling household assets and much more. Instead of empowering women, microfinance institutions exploit the gendered notion of women's honor to maintain high repayment rates (Karim 2011: 84). Rather than moving women out of poverty, access to microloans led to the 'feminization of financialization of village life, and resulted in a feminization of

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indebtedness' (Wichterich 2012: 4017). The essay concludes with summarizing the arguments to show how microfinance has fallen short of its promise of women's empowerment.

#### Microfinance

Microfinance refers to a broad range of services such as microcredits, micro-insurance, micro-savings and micropensions (Bateman and Chang 2012: 13). To a great extent, the credit for the popularity of microfinance goes to Muhammad Yunus who experimented with microcredit in the mid-1970s and laid the groundwork for the development of microfinance in Bangladesh. His belief that access to loans would give poor people an opportunity to establish microenterprises and navigate their path out of poverty led to the emergence of the Grameen Bank in Bangladesh. Following the Grameen Bank model, several microfinance institutions sprang up in Bangladesh and elsewhere. In their fledging days, microfinance institutions, to a great extent, were dependent on a continuous supply of subsidized capital, often provided by governments or the international donor community (Bateman and Chang 2012: 15). However, by the early 1990s, owing to the efforts of neo-liberal policymakers in the World Bank and other international organizations, the subsidized microfinance model was replaced by a neoliberal profit-driven model (Bateman and Chang 2012: 15). Microfinance was hailed as a tool for poverty reduction and women's empowerment because the emphasis of microfinance on self-sustainability, individual entrepreneurship and self-help was compatible with the neoliberal vision of development and shifting the responsibility of development from states to individuals (Kabeer 2005: 4709).

#### Women's Empowerment

Defining and measuring women's empowerment has been a contentious issue in the literature on microfinance (Kabeer 2001). On the one hand, it has been claimed that several studies have exaggerated the positive impact of microfinance while defining empowerment narrowly. On the other hand, it has been argued that the impact of microfinance has been underestimated because empowerment is a long-term process and focusing on immediate outcomes reveals merely a partial picture of the impact of microfinance (Kabeer 2001: 81). Moreover, how women conceive empowerment is dependent on their position within class, race, religion and culture (Kabeer 2001: 82). In fact, even within a particular caste, women, as a diverse group of individuals, might have very different needs depending on their unique individual histories. Recognizing the complexities surrounding the term 'empowerment' of women, the essay assesses the impact of microfinance by looking at potential empowerment indicators such as engagement in productive activities, self-reliance, better status at all levels, increased self-confidence, decline in violence experienced and prospects of moving out of poverty.

#### **Access to Loans**

The fact that a large number of women have utilized microloans has been often cited to support the claim that microfinance institutions are engaged in empowering women (Microcredit Summit Campaign Report 2015). One rationale for providing loans to women lies in the assumption that access to loan gives women an opportunity to establish a microenterprise. It has been claimed that women's engagement in income-generating microenterprises enhances their status and decision-making capacity within the household (Kabeer 2005: 4712). Implicit in this claim is the gendered assumption that women's unpaid labor can't give them a better status and men have greater status and decision-making power in the household because of their paid labor. Moreover, the view that giving loan to women is more strategic than giving loan to men for the family well-being (Kabeer 2001: 83) is based on the gendered assumption that women are more likely than men to spend money on the health and education of their children, freeing men from household responsibility and reinforcing the image of women as responsible caretakers. Expecting women to emerge as micro-entrepreneurs without introducing any explicit strategy to engage men in household work implies that microfinance institutions are expecting either women to do over-time or men to take over the loan of women. Several studies indicate that both women working extra-time (Kabeer 1998: 33) and men using women's loan (Goetz and Gupta 1996: 49-52) are central to the working of microfinance, raising serious concerns regarding the empowerment of women through microfinance.

To analyze the use of loans provided by microfinance institutions, it is important to bear in mind that it is not only

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women who need loans as men also live in similar poverty. Given the pervasiveness of patriarchy and poverty among both women and men, it is very likely that either the woman would willingly pass on the loan to her husband or the husband would forcefully seize the loans. Goetz and Gupta (1996), in their analysis of four prominent microfinance institutions in Bangladesh, provide further evidence to support the claim that men, to a significant extent, are using the loans granted to women. Goetz and Gupta (1996: 48-50) placed women in regard to their control over the use of loans into five categories: 'full', 'significant' 'partial', 'very limited' and 'no involvement'. In comparison to 70 percent of widowed, separated or divorced women, only 13 per cent of married women were exercising 'full' or 'significant' control over the use of loan, revealing a positive correlation between the presence of men and lack of women's control over loans (Kabeer 1998: 3). Moreover, Hunt and Kasynathan (2001: 45) note that there is a 'tendency for fieldworkers to say that loans are controlled 'jointly', even in situations where women are merely 'post-boxes' for credit and repayment. Other studies have also noted a similar appropriation of women's loan by the men in the family (Al-Amim, Hossain and Mathbor 2013:116-117, Mayoux 1999: 966-967). The founder of Grameen Bank himself recognizes that 'Grameen Bank now lends to husbands, but only through their wives. The principal borrower still remains the wife' (Yunus and Jolis 2007: 91). If loans are being used by men, then women are left with little amount to establish an enterprise and also become dependent on men for repaying the loan.

#### **Status Within Family**

However, some studies contend that even if men use women's loans, women can be empowered as men accord higher status to women because of their potential to get loans (Hashemi, Schuler and Riley 1996: 648). Given the situation in rural areas, where the absence of men might create several insecurities for women, one can't deny the importance that women accord to the presence of men in the house (Kabeer 1998: 29). For instance, if men, in high debts, decide to leave the town to avoid debtors, women by paying off their husband's debt through microloans ensure the household's security (Goetz and Gupta 1996: 54). Moreover, men might become less violent to continue getting loans granted to women (Yeboah, Kumi and Arhin 2015: 12). Schuler et al. (1996: 1735-1739), in a study of around 1300 women in rural areas of Bangladesh, point out that in comparison to 21-27 per cent of women outside credit groups, 9-13 per cent of women in credit groups reported violence by men, revealing a positive correlation between credit group memberships and decline in violence. Not only in rural areas of Bangladesh, but even in other parts of the world, several studies have shown that women's access to loan leads to decline in sexual and physical violence (Yeboah, Kumi and Arhin 2015: 12). The proponents of microfinance regard this decline in violence to be a significant step towards women's empowerment.

But, considering such effect as empowerment implies having a narrow vision of empowerment because men have started valuing women not as a human being but as a source of loans. Because men start seeing women's loan as their new source of income, women are often persuaded or forced by men to join the credit groups to get loans (Rahman 1999: 70-71). Moreover, when women are reluctant to get loans, men often employ verbal abuse or physical violence to push women to get loans (Rahman 1999: 73). Rahman (1999: 74), in his study of 120 women borrowers, notes that about 70 per cent of women witnessed an increase in violent behavior because of their engagement with the Grameen Bank. Men threaten their wives by asserting that if they do not get loans, they will look for another wife who would be willing to take loans. Such insistence of men on women to get loans implies that men see the microloan-generating potential of women as a new source of dowry (Karim 2011: 83). Women use microloans, not only, to fulfill their husband's demand of dowry, but also, to pay dowries during their daughter's marriage (Karim 2011: 84). The Grameen Bank claims that it reduces the practice of dowry by prohibiting its members from taking or receiving loans. But, Karim (2011: 83-84) points out that bank officials, in practice, encouraged poor people to take loans for dowry payments and there was not a single dowry-free marriage in her area. Such findings reveal how access to microloans, without serious efforts to challenge gendered norms, can lead to an increase in violence and facilitate practices which further subordinate women.

#### Women's Microenterprises

Although men have appropriated women's loan to a significant extent, it is important to recognize that a great number of women have managed to use loans to establish their microenterprise. But establishing a microenterprise doesn't guarantee economic empowerment. In fact, women can be severely disempowered by the failure of microenterprises.

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In a competitive business world, for all kinds of enterprises, there exists a minimum efficient scale and working above this minimum limit is important for an enterprise to survive and generate profits (Bateman and Chang 2012: 17). However, a large number of microloans have been invested in enterprises that almost always run below the minimum efficient scale (Bateman and Chang 2012: 17). The debt crisis in the Indian state of Andhra Pradesh very well elucidates how microenterprises operating below the minimum limit can lead to disastrous consequences for the poor. In this region, microfinance institutions gave microloans to farmers who had tiny subsistence farms (usually less than two hectares), which have low productivity. Since the micro farms are not big enough to properly use new irrigation schemes and technologies, farmers can't generate agricultural output sufficient enough to repay the microloan along with high rates of interest (Bateman and Chang 2012: 21). Charging high rates of interest along with hidden charges was not difficult for the microfinance institutions as highly indebted farmers were so much in need for money that they couldn't see the long-term consequences of borrowing microloan (Burke 2011). Farmers were forced to repay the loans by selling away their land, house, basic machinery or taking another microloan with a higher rate of interest. Since farmers borrowed several microloans at exorbitant rates of interest from different sources to repay the existing microloan, they ended up accumulating a huge amount of debt that was almost impossible to be repaid by low productive microenterprises. It is evident here how the failure to productively use microloan plunges the borrower into a debt trap. Given the socio-cultural limitations such as limited access to work outside home (Leach and Sitaram 2002: 577), household responsibility, lack of market awareness (Karim 2011: 98) and the men's appropriation of a significant proportion of women's loans, women are less likely to engage in highly productive microenterprises and so more likely to fall in debt-trap.

Considering the fact that almost 25 percent of Bangladesh's population has received microloans from microfinance institutions, it's no surprise that the Bangladesh's economy has witnessed a heavy proliferation of microenterprises in the last few decades (Bateman and Chang 2012: 19). A large number of tiny enterprises running below the minimum efficient scale have not only increased the vulnerability of borrowers, but also absorbed the country's scarce capital resources, depriving small and medium-sized enterprises of funding (Bateman and Chang 2012: 19). In comparison to microenterprises, small and medium enterprises, due to their relatively larger size, are better suited to invest in innovation and use sophisticated technologies, practices that are crucial for any enterprise to survive and prosper in the long run. Recognizing the need to fund small and medium-sized enterprises for a sustainable economic growth, the government of Bangladesh advised microfinance institutions to give attention to small and medium-sized enterprise sector which faced acute shortage of funding (Bateman and Chang 2012: 19). Still, microfinance institutions, especially big institutions such as Grameen Bank, Proshika, BRAC and ASA, have avoided the small and medium-sized enterprises, because they require longer maturity periods and are incapable of paying high rates of interest in initial phases of operation (Bateman and Chang 2012: 19). Diversion of fund from sustainable small- and medium-sized enterprises to low productive microenterprises further hampers the long-term growth prospects of rural economies, limiting the employment opportunities and exacerbating poverty.

If microenterprises don't have the potential for sustainable growth, then it becomes important to question the credibility of the studies that hailed microfinance as the solution to end poverty and empower women. A great number of earlier studies on microfinance were 'undertaken by, or contracted out by the microfinance institutions themselves, as well as by the rapidly expanding raft of microfinance advocacy bodies' (Bateman and Chang 2012: 16). Kabeer's note that 'I was commissioned by NORAD to evaluate the Small Enterprise Development Project (SEDP) for which they are the primary funders' (Kabeer 1998: 2) gives a subtle hint about what could be the reason behind positive evaluation of microenterprises. Several studies that are cited as evidence to support the positive impact of microfinance have been criticized to 'overstate the impact of microcredit' (Duvendack and Palmer-Jones 2012: 13). Karim (2011: xxx) informs about the effects that funding organizations can have on the research by mentioning that '[m]ost importantly, academic research foundations in the United States funded my research. Thus, I was not constrained by the policy dictates of developmental organizations faced by consultants and local researcher.' The claim that microfinance empowers women is built 'on anecdotal evidence and studies that were vulnerable to selection bias' (Garikipati et al. 2016: 2). Bias in the studies on microfinance is further confirmed by a systematic study reviewing almost all impact evaluation studies showing positive impact of microfinance (Duvendack et al. 2011). The review revealed that the impact evaluation studies are, to a great extent, biased and incomplete to support 'the notion that microfinance is pro-poor and pro-women' (Duvendack et al. 2011: 74). Thus, it is evident here that the microfinance institutions use biased studies to assert that microfinance empowers women. Microfinance

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institutions employ the claim of women's empowerment to channel out huge amount of funding from governments and international development organizations. It appears that microfinance was less about women creating enterprises and more about microfinance institutions creating enterprises out of women.

#### **High Repayment Rates**

In order to get funding from governments and international development organizations, microfinance institutions not only used biased studies, but also pointed out the high repayment rates of women borrowers. By reporting that women have a loan recovery rate of 98 per cent, the Grameen Bank claimed that microfinance has created microentrepreneurs out of poor women and thus contributed to women's empowerment (Karim 2011: xiv). So, to challenge the claims of microfinance institutions, it is important to reveal how women reach high repayment rates. As women do not have much assets to present as 'collateral', women are organized into groups while dispersing loans and collecting payment. If one member of the group defaults in her payment, other members can't avail themselves further loans until and unless they pay for the defaulting member. In this way, the group of women borrowers becomes the 'collateral' for the bank (Karim 2011: 85). The group of borrowers humiliates the women who are unable to pay back the loan. Out of the fear of humiliation, women and the household members try their best to secure the installments on time (Rahman 1999: 70). It is evident here how the Grameen Bank officials exploited the gendered 'notion of honor and shame that women embody as the custodians of family honor' (Karim 2011: 84). Often, bank officials and the group of women borrowers intrude into the house of the defaulting women, verbally abuse the women borrower and take away the saleable assets from the house. As the husband fails to fulfill his role of protecting his wife and family from the outside intrusion, the husband inflicts violence on his wife out of frustration and blames the wife for bringing shame to the family (Karim 2011: 86). Karim (2011: 90) notes that '[s]eventy-five percent of the women borrowers I interviewed noted forms of low-intensity verbal or physical abuse that were associated with loan recovery programs.' Because of such pressure surrounding repayment, women engage in arduous tasks and decrease their food consumption, endangering their health (Yeboah et al. 2015: 902). In some cases, to meet increased demands of work, women 'employ daughters and daughters-in-law as unpaid family labourers increasing their workload and decreasing their ability to attend school' (Mayoux 1999: 972). It is evident here how women are being further disempowered in the process of repaying the loans. Moreover, given the low productivity of microenterprises, men's appropriation of women's loan and the high rates of interest, it seems unlikely that women can repay the existing microloan without taking another microloan. Women take microloans at exorbitant rates of interest from the traditional moneylender and pay back the existing microloan to microfinance institutions and thus the high repayment rates of women in microfinance sector is maintained (Wichterich 2012: 408). But then to pay back the traditional moneylender, women again borrow from microfinance institutions or another moneylender. Then, 'the new over indebtness creates new poverty and misery' (Wichterich 2012: 410). Thus, it is clear that high repayment rates of women don't represent women coming out of poverty but rather represents women getting trapped into vicious debt cycles and poverty.

# Conclusion

Proponents of microfinance claim that access to microcredit positions women to establish an enterprise and move out of poverty and empower themselves in process. But the essay revealed that microfinance institutions divert scarce capital resources away from the sustainable growth-oriented small and medium-sized enterprises, engage women in microenterprises that almost always run below the minimum efficient scale and make women more vulnerable to debt cycles and poverty. Nevertheless, with access to credit, women have gained some respect from men and decision-making power in the household. But such kind of empowerment has its drawbacks as men have started valuing women not as a human being but rather as a source of income. Moreover, as men start seeing women's loan as a new source of income, women experience an increase in dowry demands and violence. As microfinance institutions do not put serious efforts to challenge the gendered norms, women are burdened with the responsibility of repaying the loans that are used mostly by men. Moreover, microfinance institutions exploit the gendered 'notion of honor and shame that women embody as the custodians of family honor' (Karim 2011: 84). Women are disempowered in the process of repaying loans as they not only suffer humiliation, verbal abuse and physical violence from men in the family, credit group members and official from microfinance institutions, but also endanger their health by decreasing consumption and increasing workload. Given the men's appropriation of

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women's loan and socio-cultural barriers, microfinance proves to be insufficient to empower women and, on the contrary, makes women more vulnerable to debt cycles. It's clear that microfinance has not lived up to its promise of women's empowerment.

#### **Bibliography**

Al-Amin, M., Hossain, Ismail and Mathbor, Golam M. (2013) 'Women Empowerment through Microcredit: Rhetoric or Reality? An Evidence From Bangladesh', *Multidisciplinary Journal of Gender Studies*, 2 (2): 107-126.

Bateman, Milford and Chang, Ha-Joon (2012) 'Microfinance and the Illusion of Development: From Hubris to Nemesis in Thirty Years', *World Economic Review*, 1:13-36.

Burke, Jason (2011) 'Impoverished Indian Families Caught in Deadly Spiral of Microfinance Debt', The Guardian, 31 January, available at: https://www.theguardian.com/world/2011/jan/31/india-microfinance-debt-struggle-suicide (last accessed 4 January 2017).

Duvendack, Maren, Palmer-Jones, Richard, Copestake, James G., Hooper, Lee, Loke, Yoon, Rao, Nitya (2011) What is the Evidence of the Impact of Microfinance on the Well-Being of Poor People, London: EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

Duvendack, Maren and Palmer-Jones, Richard (2012) 'High Noon for Microfinance Impact Evaluations: Reinvestigating the Evidence from Bangladesh', *Journal of Development Studies*, 48 (12): 1-17.

Garikipati, Supriya, Johnson, Susan, Guérin, Isabelle and Szafarz, Ariane (2016) 'Microfinance and Gender: Issues, Challenges and the Road Ahead', *The Journal of Development Studies*: 1-8.

Goetz, Anne Marie and Gupta, Rina Sen (1996) 'Who Takes the Credit? Gender, Power, and Control Over Loan Use in Rural Credit Programs in Bangladesh', *World Development*, 24 (1): 45-63.

Hashemi, Syed M., Schuler, Sidney Ruth and Riley, Ann P. (1996) 'Rural Credit Programs and Women's Empowerment in Bangladesh', *World Development*, 24 (4): 635-653.

Hunt, Juliet and Kasynathan, Nalini (2001) 'Pathways to Empowerment? Reflections on Microfinance and Transformation in Gender Relations in South Asia', *Gender and Development*, 9 (1): 42-52.

Kabeer, Naila (1998) 'Money Can't Buy Me Love? Re-evaluating Gender, Credit and Empowerment in Rural Bangladesh', IDS Discussion Paper 363, available at: http://www.ids.ac.uk/files/Dp363.pdf (last accessed 4 January 2017).

Kabeer, Naila (2001) 'Conflicts Over Credit: Re-Evaluating the Empowerment Potential of Loans to Women in Rural Bangladesh', World Development, 29 (1): 63-84.

Kabeer, Naila (2005) 'Is Microfinance a 'Magic Bullet' for Women's Empowerment? Analysis of Finding from South Asia', *Economic and Political Weekly*, 40 (44/45):4709-4718.

Karim, Lamia (2011) *Microfinance and its Discontents: Women in Debt in Bangladesh*, Minneapolis: University of Minnesota Press.

Leach, Fiona and Sitaram, Shashikala (2002) 'Microfinance and Women's Empowerment: A Lesson From India', Development in Practice, 12 (5): 575-588.

Mayoux, Linda (1999) 'Questioning Virtuous Spirals: Microfinance and Women's Empowerment in Africa', *Journal of International Development*, 11 (7): 957-984.

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Microcredit Summit Campaign Report (2015), available at: https://stateofthecampaign.org/read-the-full-2015-report/(last accessed 4 January 2017).

Rahman, Aminur (1999) 'Micro-credit Initiatives for Equitable and Sustainable Development: Who Pays?', World Development, 27 (1): 67-82.

Schuler, Sidney Ruth, Hashemi, Syed M., Riley, Ann P. and Akhter, Shireen (1996) 'Credit Programs, Patriarchy and Men's Violence Against Women in Rural Bangladesh', *Social Science and Medicine*, 43 (12): 1729-1742.

Wichterich, Christa (2012) 'The Other Financial Crisis: Growth and Crash of the Microfinance Sector in India', *Development*, 55 (3): 406-412.

Yeboah, Thomas, Arhin, Albert, Kumi, Emmanuel and Owusu, Lucy (2015) 'Empowering and Shaping Gender Relations? Contesting the Microfinance-Gender Empowerment Discourse', *Development in Practice*, 25 (6): 895-908.

Yeboah, Thomas, Kumi, Emmanuel and Arhin, Albert A. (2015) 'Do Microfinance Schemes Shape Gender Relations in Developing Countries? Insights From a Critical Review of the Literature', *International Journal of Gender Studies in Developing Societies*, available at: https://www.researchgate.net/290509332\_Do\_microfinance\_schem/publicates\_shape\_gender\_relations\_in\_developing\_countries\_Insights\_from\_a\_critical\_review\_of\_the\_literature (last accessed 4 January 2017).

Yunus, Muhammad and Jolis, Alan (2007) Banker to the Poor, India: Penguin Books.

Yunus, Muhammad (2013) 'Professor Muhammad Yunus's Acceptance Speech in the Congressional Gold Medal Ceremony', 17 April, available at: http://www.muhammadyunus.org/index.php/professor-yunus/awards/awards/congressional-gold-medal/1113-cgm-speech (last accessed 4 January 2017).

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