BUKTI KORESPONDENSI

ARTIKEL JURNAL INTERNASIONAL

Judul Artikel : Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia

Jurnal : Social Business: an interdisciplinary journal, 2019, volume 9(2), 157-182

Penulis : Adwin Surja Atmadja, Parmendra Sharma dan Jen-Je Su

No	Perihal	Tanggal
1	Bukti konfirmasi submit artikel dan artikel yang disubmit	19 Okt 2017
2	Bukti korespondensi permintaan revisi 1 oleh reviewer	11 Des 2017
3	Bukti konfirmasi submit revisi 1 dan artikel yang direvisi	7 Jun 2018
4	Bukti korespondensi permintaan revisi 2 oleh reviewer	6 Jul 2018
5	Bukti konfirmasi submit revisi 2 dan artikel yang direvisi	9 Sep 2018
6	Bukti konfirmasi artikel accepted	19 Sep 2018

Bukti konfirmasi submit artikel dan artikel yang disubmit

(19 Oktober 2017)

UNIVERSITAS KRISTEN PETRA

Adwin Surja A. <aplin@petra.ac.id>

Social Business - Manuscript ID SB-2017-0032

Social Business <onbehalfof+sbeditorial+westburn.co.uk@manuscriptcentral.com> 19 October 2017 at 14:05
Reply-To: sbeditorial@westburn.co.uk
To: aplin@petra.ac.id

19-Oct-2017

Dear Dr. Atmadja:

Reference No.: SB-2017-0032.

This is to acknowledge, with thanks, receipt of your article entitled "Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia". You can track the status and view details of all your manuscripts by logging in and clicking the Author Centre link and going to 'My Manuscripts'.

Sincerely,
Anne Foy;Fiona Lees
Social Business Editorial Office

Please mention the above reference number in all future correspondence or when calling the office for questions. If there are any changes in your street address or e-mail address, please log in to ScholarOne Manuscripts at https://mc.manuscriptcentral.com/wpsb and edit your user information as appropriate.

Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia

Journal:	*Social Business*
Manuscript ID	SB-2017-0032
Manuscript Type:	Original Article
Keywords:	microcredit, micro-entrepreneurs, empowerment, Indonesia

Does Microcredit Empower Micro-entrepreneurs? Empirical Evidence from Indonesia

Abstract

Purpose : This study provides fresh survey-based evidence from Indonesia on the impact of microfinance on empowerment of micro-entrepreneurs.

Methodology : Data was collected from a survey of microcredit-funded microenterprises in Surabaya and its surroundings—556 microenterprises participated voluntarily in the survey. Weighted least square mean and variance adjusted structural equation modelling (WLSMV-SEM) estimator is used to analyse the data.

Findings : Three main findings emerge: microfinance is positively and significantly associated with empowerment; and while business performance might promote empowerment, it may not significantly mediate the microfinance—empowerment relationship.

Limitations : Some limitations noted in this study are that the sample was obtained from one region of Indonesia, and was unbalanced in gender. The cross-sectional data of this study limits inferences of causality in the analyses, and prohibits it from assessing longitudinal effects and from examining non-recursive models.

Contribution : At least in the case of Indonesia, the microfinance strategy might be working and the actions of policymakers and donors might be justified. However, more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest in microfinance at the cost of other competing alternative strategies.

Keywords: microfinance, micro-entrepreneurs, empowerment, Indonesia.

1. Introduction

Over the last several years, microfinance has increasingly become a common financial policy tool for supporting and enhancing formation and expansion of microenterprises worldwide, particularly in developing and emerging markets. At the same time, over the last decade, empirical research has also exploded assessing the impact of microfinance on various aspects of micro entrepreneurship, including business formation and expansion, empowerment, and poverty alleviation—challenges which, among others, microfinance is believed to help facilitate. To date, the empirical evidence has been mixed—on one hand, studies show that microcredit raises incomes and consumption, empowers micro-entrepreneurs, fosters a feeling of community and establishes creditworthiness and financial self-sufficiency, on the other hand, they contend that it can lead to over-indebtedness resulting in perpetual poverty and crowds out other anti-poverty interventions[1]. Nevertheless, millions of dollars continue to be dispensed into microfinance related activities[2], suggesting that more country-specific and broader empirical evidence is required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microfinance at the cost of other competing alternative strategies.

And that is precisely the objective of the present study. The study takes a fresh look at the relationship between microfinance and empowerment of micro-entrepreneurs, using survey-based evidence from an economy that is increasingly becoming an economic powerhouse in Asia—Indonesia. With a population of 258 million, growing at a rate of 1.2% pa and GDP of 2,842 billion (PPP, current international $), growing at around 4.8% pa (World Bank, 2015), Indonesia is the world's fourth most populous nation, the world's 10th largest economy, and a member of the G-20—it is also Southeast Asia's largest economy. A diverse archipelago of more than 300 ethnic groups, Indonesia has recorded impressive economic growth following the 1997 Asian financial crisis (AFC)—since the year of 2000, the country's economy has grown at 5.3% p.a. on average. The country's gross national income per capita has increased steadily, from $560 in 2000 to $3,630 in 2014 and poverty

[1] For example, see (Crépon, Devoto, Duflo, and Parienté (2011); Garikipati (2008); Imai, Arun, and Annim (2010); Johnston and Morduch (2008); Kaboski and Townsend (2012); Karlan and Zinman (2009); Khandker (2003); Kondo, Orbeta, Dingcong, and Infantado (2008); Panda (2009); Pitt, Khandker, and Cartwright (2006); Ssendi and Anderson (2009))

[2] For example, in the fiscal year 2014, the IFC committed US$ 519 million to 47 projects with microfinance institutions (MFIs). The IFC cumulative investment portfolio in microfinance exceeded US$ 3.5 billion, with outstanding commitments of $1.68 billion (IFC, 2015). ADB allocated US$46.125 million to only microfinance institutional development projects in the Asia–Pacific region during 2011–2013 (ADB, 2015).

alleviation efforts have also been considerable—the rate has more than halved since 1999, to 11.2% in 2015.

Yet, colossal challenges remain, not the least of which includes sustainable economic growth and poverty reduction. In the 2007 to 2011 period, the poverty rate declined by 1% pa but the rate has fallen considerably to only 0.3% pa since 2012. Around 11.2% of Indonesians still lived below the international poverty line ($1.90 a day 2011 PPP) in 2014 (World Bank, 2015). In terms of HDI, the country ranks 110 out of 188 in the world (UNDP, 2015), equivalent to countries such as Egypt, the Philippines, Vietnam, and India—all below the average of 0.710 for countries in the East Asia and the Pacific (UNDP, 2015). Income inequality is also a key national concern. In 2011, the country's Gini Index of 38.1 indicated a wide income gap between the rich and the poor (World Bank, 2015). Gender inequality is also prevalent. In a number of areas, such as labour market and in education, the male-female gap remains high.

Responding to these challenges, the Indonesian Government introduced various strategies encompassing fiscal policies to financial inclusion programs. With regard to the latter, among others, the government, through the central bank launched the *Kredit Usaha Rakyat* (KUR – Credit for People's Business) program in 2007[3]—geared at providing working capital and/or business investment loans to micro, small, and medium enterprises (MSMEs) that are feasible but not yet bankable. Although KUR was guaranteed by the government, so that collateral was not required for obtaining credit, in practice, participating banks did require prospective borrowers to provide collateral, resulting in access to finance by MSMEs remaining a considerable challenge.

Recognising these further challenges, the government turned to microfinance as a poverty alleviation tool (ProFI, 2003). Consequently, the microfinance industry has boomed to now include a large variety of institutions, programs, services, clients, and target groups. Numerous Government bodies (e.g. Ministry of Cooperatives and Small and Medium Enterprises, Indonesia Financial Service Authority), state-owned companies, private corporations, cooperatives, non-governmental organisations, and higher educational institutions responsible for promoting as well as strengthening the country's microfinance industry have also been established. Microfinance has indeed expanded into a substantially

[3] The Central Bank requires all commercial banks operating in Indonesia to distribute at least 20% of their total credit outstanding to MSMEs in 2018—see Regulation of Bank Indonesia Number 14/22/PBI/2012.

large industry[4]—what is more, in line with worldwide practices, it continues to expand rapidly. The foregoing scenario thus provides an excellent lab to test the microfinance and empowerment relationship.

As explained later, we use 'microcredit' as a proxy for microfinance, and 'control over resources' as a proxy for economic empowerment. Thus, we frame our main question as follows—how has microcredit improved control over resources in the case of Indonesian microenterprises? A related question we ask, on the basis of literature is—does *business performance* promote the microcredit – empowerment relationship? To address these questions, we conducted a survey of microcredit-funded microenterprises in Surabaya, the second largest city in Indonesia—556 microenterprises participated voluntarily in the survey. Structural equation modelling with weighted least square mean and variance adjusted structural equation modelling (WLSMV-SEM) estimator was used to analyse the data.

Three main findings emerge: (i) microcredit has a positive and significant relationship with economic empowerment; (ii) business performance promotes empowerment; but (iii) business performance does not significantly mediate the microcredit—empowerment relationship. Thus, this study confirms previous findings of a positive microfinance—empowerment relationship, suggesting that if empowerment is a goal then at least in the case of Indonesia, a populous, developing economy, the microfinance strategy might be working and the actions of policymakers and donors might be justified. However, the findings may not apply to other developing economies—more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microfinance at the cost of other competing alternative strategies.

The rest of this paper is outlined as follows. Section 2 outlines relevant literature review and hypothesis development linked to the main research question, followed by the research method in section 3. Section 4 analyses the data and explains the empirical results. Section 5 discusses the findings and policy implication. Section 6 concludes.

[4] According to Bank Indonesia (2016), the outstanding SME credits of the country's commercial banks grew 15.17% in 2016 to 399.4 trillion IDR (around US$ 29.9 billion)—177.8 trillion IDR for microenterprises, and 221.6 trillion IDR for small enterprises—as of April 2016 compared to 346.8 trillion IDR as of April 2015. These figures did not include microcredit provided by non-banking MFIs.

2. Literature review and hypothesis development

2.1. Conceptualising empowerment

The literature has developed various definitions and frameworks of empowerment based on both the focus and the extent to which they are conceptualised. For example, the World Bank views empowerment as the expansion of material assets (both physical and financial) and of individual's or collective capabilities for individuals to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives—see Narayan (2002). Nevertheless, for poor individuals, asset deficiency limits their capacity to negotiate deals for themselves and thus increases their vulnerability[5]. The lack of voice and power, as well as the deeply rooted social barriers may also discourage them to exercise their individual rights; hence, collective capabilities gained from their social capital through family/friends or organisation networks might be needed (Narayan, 2002).

Some studies have linked empowerment to the concept of human agency—introduced by Amartya Sen (1999)—focusing on the importance of inner transformation of individuals as an essential factor in the formulation of choices (Kabeer, 1999b; Malhotra, Schuler, & Boender, 2002; Nussbaum, 2001). Individuals should be able to define self-interest and choice, and should consider themselves as able and entitled to make a choice.

Kabeer (1999b), in particular, defines empowerment as the process of change by which those who have been previously denied the ability to make strategic life choices acquire such an ability. There is thus a logical inverse association between poverty and empowerment because resources deficiency for meeting basic needs often causes an inability to exercise meaningful choice.

The ability to exercise meaningful choice can be viewed in terms of three inter-related dimensions: resources, agency, and achievement (Kabeer, 1999b). Resources as a precondition consist of material resources (non-financial and financial), human capital, and social capital. Resources, which are distributed and exchanged according to the rules and norms in the societies, have a role as enabling factors of empowerment. Resources are needed by people to reach their personal goals (Diener & Biswas-Diener, 2005)[6].

[5] See Kabeer (2005) for the concept of vulnerability.

[6] In some cases, resources are also treated as catalysts, which accelerate the empowerment process, rather than as parts of empowerment itself (Malhotra, 2003).

Agency[7], the essence of empowerment, is defined as the ability to express individual goals or meaningful choices and to act upon them, which includes the ability to formulate strategic choices, to have control over resources and to make decisions that affect their lives (Malhotra, 2003). Individuals should not be considered to be making empowered choice when they lack agency (Malhotra et al., 2002). Consequently, providing individuals greater access to resources can bring about empowerment, only if they have the ability to utilise the resources for their own interests (Garikipati, 2008; Goetz & Gupta, 1996; Leach & Sitaram, 2002).

While resources and agency can be treated as enabling factors and the essence of empowerment, the other dimension, achievement, can be deemed as the outcome. Like resources and agency, achievement may come in various forms. These three inter-related dimensions are indivisible in determining the meaning of any empowerment indicator (Kabeer, 1999b).

2.2. Microcredit and economic empowerment

Providing microcredit to the poor may deliver stronger economic and social impacts (Armendariz de Aghion & Morduch, 2005; Khandker, 2005), and may improve human empowerment level (Kabeer, 2001; Mahmud, Shah, & Becker, 2012; Pitt & Khandker, 1998; Pitt et al., 2006).

Using the livelihood entitlement status approach, Lakwo (2006) explained that there are two practical domains of change in the gender relations of microcredit borrowers. Firstly, the change in the borrowers' wellbeing, indicated by their asset base, may change the livelihood endowment status[8], which includes the overall asset portfolio owned by a household. Secondly, the change in the endowment status has a direct effect on the borrowers' livelihood entitlement status, focusing not only on the rights to access but also on the ownership of and the decision-making power over assets and strategies. The entitlement status may change the borrowers' agency in claiming their empowerment, which can take place at several levels. At the individual level, joining the market and experiencing changes

[7] Kabeer (1999b) explains that agency encompasses the meaning, motivation and purpose which individuals bring to their activity, their sense of agency, or 'the power within'. Agency may operationally take a number of forms (e.g. decision-making, bargaining or negotiation, manipulation, resistance as well as cognitive processes of reflection and analysis), and can be either individually or collectively exercised (Malhotra et al., 2002).

[8] The endowment status represents the resource base where power inheres for the agency to unequivocally challenge hegemony and to produce achievements in gender equality (Kabeer, 1999a, 1999b).

in their livelihood practices, which may change the borrowers' economic and social status, may have effects on some issues related to self-actualization manifested in self-esteem and pride. At intra-household level, becoming involved in a microfinance programme might provide borrowers with opportunities to experience changes in private property ownership rights and decision-making position.

Other studies also report that higher income and private property ownership resulting from microcredit programs strengthened individuals' positions—in decision making, access to economic resources, and control over resources—within their households (Khandker, 2003; Pitt & Khandker, 1998; Pitt et al., 2006).

Using a Bangladeshi survey, Hashemi, Schuler, and Riley (1996) examined the effect on empowerment of a microcredit programme. The study showed that joining a microcredit programme was likely to increase the level of empowerment (i.e. an index constructed by several indicators such as mobility, economic security, ability to make small purchases, ability to make larger purchases, etc.). When decomposing the index, they also found that microcredit programmes positively affected some individuals' aspects, such as economic security (i.e. owning house, having productive assets, having savings) and control over the use of money or assets earned. Another study, by Lakwo (2006) in Uganda, found a positive association between microcredit and borrowers' ownership over business resources.

An experimental study employing the randomised supply decisions method, conducted by Karlan and Zinman (2009) using South African data, shows that expanding access to consumer credit has a positive and significant effect on the 'control and outlook' index, particularly for low income groups of microcredit borrowers in the country.

Thus, in light of the foregoing,

Hypothesis 1: microcredit is positively related to economic empowerment of micro-entrepreneurs in Indonesia.

2.3. Business performance as a mediating variable in the microcredit–economic empowerment relationship

The literature suggests that the relationship between microcredit and economic empowerment might also be mediated by business success. For example, Golla, Malhotra, Nanda, and Mehra (2011) suggested that business success or economic advancement can promote power and agency of micro-entrepreneurs. To be able to advance economically, individuals need resources and skills, as well as fair and equal access to economic

institutions. Resources, such as financial capital (e.g. microcredit, savings), human capital (e.g., education, skills), physical capital (e.g. land, machinery) and social capital (e.g. ties, networks), are the enabling factor that can improve the ability of individuals to advance economically.

Thus, in the case when business is well performing, earnings generated from the business increase the entrepreneurs' earning capabilities and their ability to accumulate autonomous assets (IBRD, 2012). An increase in earning capabilities and assets might in turn enhance economic status of the entrepreneurs, leading to greater power in control over resources within their household (Mahmud et al., 2012).

In light of the foregoing,

Hypothesis 2: business success has a direct and positive relationship with economic empowerment in Indonesia.

Hypothesis 3: business success mediates the relationship between microcredit and economic empowerment in Indonesia.

3. Research method

3.1. The variables

The literature proposes different approaches for measuring empowerment using various frameworks, dimensions, and indicators depending on their goals and contexts. Some authors agree that, as a process, empowerment cannot be measured directly, but only through proxies (Ackerly, 1995; Kishor, 2000). There have been increasing moves to capture the process through direct measures of decision-making and control or choice; these are seen as the most effective representations of the process of empowerment, as they are closest to the measuring agency (Batliwala, 1994; Garikipati, 2008; Mahmud et al., 2012; Malhotra et al., 2002; Mason & Smith, 2000).

Dependent variable. Control over resources (*con*) is used as a proxy for economic empowerment. It is a latent dependent variable measured by respondents' self-reported ability to control business resources (*c1*), household resources (*c2*), and borrowed money—loan (*c3*). The use of multiple measures to represent control over resources is better than a single measure (DeVellis, 1991), since it can reduce the measurement error of the concept, and can improve the statistical estimation of the relationship between concepts by accounting for measurement error in the concepts (Hair Jr, Black, Babin, & Anderson, 2010). In this study,

the term 'control' includes ability to spend, save, use, purchase or sell either financial or non-financial resources/assets.

Independent variable. Microcredit (*l*), the independent variable, is operationally defined as the amount of microcredit received by the individual respondent during a one-year time period (January 2013 – January 2014). The amount is then transformed into a natural logarithm.

Mediating variable. Business performance (*bp*)—a proxy of business success or economic advancement—is the mediating variable. The variable is measured by a respondent's self-reporting of changes (i.e. decrease/about the same/increase) in sales (*b1*), assets (*b2*), number of employees (*b3*) and profits (*b4*) across two consecutive years (2013 – 2014). These four observed indicators of performance are most commonly suggested measures in literature (Ardishvili, Cardozo, Harmon, & Vadakath, 1998; Delmar, 2006; Weinzimmer, Nystrom, & Freeman, 1998). The subjective self-reported performance as a measure of business performance, while not ideal, has been used in other studies with reasonable reliability (Anna, Chandler, Jansen, & Mero, 2000; Cruz, Justo, & De Castro, 2012; Wiklund & Shepherd, 2003). Self-reported measures are reasonable proxies when, as is common in most developing countries including Indonesia, micro entrepreneurs tend not to keep proper records of their business transactions—quite often they are not properly trained, qualified or otherwise equipped to do so.

Control variables. The control variables include human capital (i.e. level of education and prior work experience), respondent's age and the squared of respondent age, lending schemes, gender, marital status, length of microfinance membership, media exposure, age gap, education and health gaps. Some researchers have suggested that economic empowerment might be influenced by human capital—the level of education and prior work experience. Higher education gives individuals, especially women, more egalitarian and progressive views of their role within the household (Chioda, 2013), while prior work experience equips them with a greater ability to understand and handle business, which might also be applicable for households' matters (Bosma, van Praag, Thurik, & de Wit, 2004; Karlan & Valdivia, 2010). The level of education (*h1*) is measured as a dummy variable—1 for university graduate, 0 otherwise. Prior work experience (*h3*) is also a dummy variable—1 for 'yes', 0 otherwise.

Age (*a*) is the age of respondent measured in years. Gender (*g1*) is 1 for female, 0 otherwise. Marital status (*md*), is 1 for unmarried, widowed, and divorced, and 0 for married

couple. Lending schemes (*g*), the lending scheme applied to microcredit, is 1 for group lending scheme, 0 otherwise. Length of microfinance membership (*lm*) is proxy by the duration for which a respondent had been a member of the MFI counted from the year when the first loan was taken out[9]. Media exposure (*ep1*) is measured by the time spent for watching television or reading newspapers/magazines. Age gap (*ep2*) is the gap between the ages of the respondents and their spouse. Education gap (*ep3*) is the gap between the respondents' level of education and their spouses', while health gap (*ep4*) is the gap between the respondents' health condition and their spouses'.

3.2. The survey

The data was obtained from a survey conducted in Surabaya, the second largest city in Indonesia, and its surroundings in 2014. Of the fourteen MFIs, five, including two cooperatives, two Islamic-style microfinance institutions registered as cooperatives and a government-sponsored microfinance, agreed to participate. The sample provides a reasonable mix of microcredit providers. For example, the sample includes small (205 membership) to large (12,470 membership) providers, which are relatively new (2010) to relatively well–established (1978), cover different types—Islamic, cooperatives and others—and with different combinations of lending group versus individual credit schemes and different make up in terms of men and women memberships.

At the time of the survey, the five lenders had a total membership of 17,553, of which 5,531 (i.e. BKM Merisi = 205, SBW = 3164, Assakinah = 738, ABU = 575, and Madani = 849 [10]) satisfied the key survey criterion of 'owns a microenterprise'—In Indonesia, both business owners and non-business owners may apply for credit from microcredit providers. Of those 5,531 borrowers, 1,424 (or 26%) were with individual lending schemes and the rest (74%) had borrowed via group lending schemes.

Of the eligible respondents, those with the group lending scheme belonged to around 178 lending groups (i.e. Assakinah = 41, SBW = 108, BKM Merisi = 29). From each of these groups, two to three members were randomly selected as prospective respondents—a total of 530. For respondents using the individual lending scheme, around 270 were randomly

[9] For individual credit schemes, membership commences when a borrower obtains their first loan. For group lending credit schemes, the first loan is usually granted to a member within their first year of membership.

[10] BKM Merisi is a *Badan Keswadayaan Masyarakat* (Community Self-reliance Body), a government sponsored microcredit provider. SBW (Setya Bhakti Wanita) and Assakinah are multipurpose cooperatives. ABU (Artha Bina Ummat) and Madani are Islamic-based microfinance institutions (*baitul maal wat tamwil* – BMT).

selected as prospective respondents. Thus, a total of 800 prospective respondents were identified and initially contacted by the providers, on behalf of the researchers, for their voluntary participation. Of these, 556 (405 group lending and 151 individual scheme) agreed to be interviewed.

Ten senior undergraduate economics students from a final year research methods class of a local university were employed as interviewers. The researcher took a full-day training session with the students prior to the survey, and closely supervised the interviews during the data collecting process to minimise any potential interviewer bias. The interviews were conducted mostly at the respondent's residence or business place to observe their real-life conditions; occasionally, the interviews were conducted at group meetings. Of the 556 interviews, 483 completed responses (92 men and 391 women) were found to be valid for the purposes of the analysis—incomplete responses and some outliers were excluded.

3.3. The data

The age of respondents ranged from 23 to 66, and around 94% were married. Most respondents were senior high school graduates (51.97%), some were university graduates (20.29%); the rest had only primary education.

The length of membership varied from 1 to 37 years. On average, a respondent had obtained 8.61 million rupiah (USD 645.47) of microcredit from the participating providers during the sample period (January 2013 – January 2014).

Most respondents (74.54%) were lending group members from three microcredit providers (Assakinah, SBW, and BKM Merisi); the rest took their loans via individual lending scheme offered by four providers (excluding BKM Merisi). The group sizes ranged from 3 to 51 members (on average, 23 members per group). Loan repayment was the main agenda in group meetings, which were mostly held once per month. Of the 360 respondents, 277 (76.94%) respondents placed loan repayment issues as high priority, followed by business ideas (16.39%), community news (3.33%), and spiritual issues (2.78%); none discussed personal/family issues.

The survey also revealed that, regarding control over resources, majority (about 70%) respondents were able to take control over their business resource and loans. However, only 48% of the total respondents had ability to control their household resources or assets.

The data also show that of the 483 respondents, 419 respondents held their own incomes, and 353 also held majority of household incomes. Interestingly, the proportion of

women controlling their own incomes and households incomes were greater than men, and more women (82.61%) than men (66.30%) had personal saving; however, the proportion of male respondents who contributed to more than 50% of household expenses were more than twice the female number (59.78% versus 25.83%).

With regard to business performance, 65.84% of the respondents reported an increase in annual profit over the sample period, while the others experienced no change (19.46%) or a decrease (14.70%). In terms of sales, with average monthly sales revenues ranging from Rp. 400,000 to Rp. 25,000,000 (equivalent to around USD 30 to USD 1,888), the proportion of respondents experiencing an increase, about the same, and a decrease in annual sales were respectively, 66.46%, 18.43% and 15.11%. Most respondents reported no change in annual total assets and number of employees (57.35% and 88.20%, respectively); most of them did not employ others. The main business activities included manufacturing (38.65%), trading (40.99%), and providing services such as hair salon, car/motorcycle mechanics, laundry, boarding houses, computer or electronic devices repair (22.36%).

4. Models and empirical results

In this study, two models (Model 1 and Model 2) are developed. Model 1 is the baseline model without mediating variable. Model 1 directly links all covariates to the dependent variables. Model 2 involves business performance as mediating variable in the microcredit—control over resources relationship. In Model 2, some control variables, such as human capital (i.e. *h1* and *h3*), respondent age (*a*) and the squared of age (*a2*), lending schemes (*g*), gender (*g1*) and the length of microcredit membership (*lm*) are also expected to have indirect relationship with economic empowerment through business performance.

To test the hypotheses, the structural equation modelling (SEM) with weighted least squares mean and variance adjusted (WLSMV) estimator is applied for both models. According to Bandalos (2008), Brown (2006), Flora and Curran (2004) and Lei (2009), the WLSMV estimator is a robust estimator, providing more accurate parameter estimates and model fit when the assumption of multivariate normality is severely violated, especially in the case of categorical or ordered data. Treating categorical/ordinal scale as continuous scale might lead to biased (either in positive or negative direction) parameter estimates, incorrect standard errors and model test statistics—see Green, Akey, Fleming, Hershberger, and Marquis (1997), Muthe´n, du Toit, and Spisic (1997), and Muthe´n and Kaplan (1992) for further detail.

Prior to the hypothesis testing, descriptive statistics presented in Table 1 provides a basic understanding about the data. It shows that the inter-correlation among the control over resources (*con*) factor indicators are all below 0.80, meaning that the construct do not seem to have inter-correlational problems—see O'Rourke, Psych, and Hatcher (2013). However, in the case of business performance (*bp*), the table shows that the inter-correlation between change in sales (*b1*) and change in profits (*b4*) is 0.91; hence one of these variables should be removed based on suggestions of Tabachnick and Fidell (2012) and Ullman (2013). This might be because the majority (63.35%) of types of business for these respondents—as common in the microenterprise sector—were trading and providing services, which are more likely to have relatively stable costs of production, compared to those of manufacturing. The changes in profit might directly reflect the changes in sales revenue. Considering the analysis, change in sales (*b1*) is then removed from business performance because as profit equals sales revenue minus costs, changes in profit might be caused by changes in sales, but not vice versa. Thus, changes in sales affect sales revenue, and changes in sales revenue lead to changes in profit, assuming that the costs of production remains unchanged. The pairwise correlation analysis also shows that correlations among other covariates appear to be relatively small (all smaller than 0.80), implying that multi-collinearity might not be too much a concern—see Grapentine (2000), Grewal, Cote, and Baumgartner (2004).

Table 1. Statistic summary and pairwise correlation

No	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Control over business resource (c1)	1.00																		
2	Control over household resources (c2)	0.53	1.00																	
3	Control over loan (c3)	0.72	0.63	1.00																
4	Change in sales (b1)	0.06	0.16	0.02	1.00															
5	Change in assets (b2)	0.13	0.25	0.14	0.49	1.00														
6	Change in employees (b3)	0.20	0.17	0.21	0.26	0.29	1.00													
7	Change in profit (b4)	0.07	0.14	0.03	0.91	0.47	0.25	1.00												
8	Microcredit (l)*	0.02	-0.04	0.09	-0.06	-0.04	-0.01	-0.04	1.00											
9	Education level (h1)	-0.05	0.06	0.04	-0.06	0.02	-0.01	-0.04	0.18	1.00										
10	Working experience(h3)	-0.09	0.02	-0.06	0.19	0.23	0.18	0.20	-0.13	-0.04	1.00									
11	Respondent age (a)	0.09	0.05	0.03	0.01	-0.08	-0.04	0.02	0.09	-0.08	-0.17	1.00								
12	Lending schemes (g)	0.07	-0.10	0.01	-0.08	-0.05	-0.09	-0.05	0.01	0.05	-0.09	0.31	1.00							
13	Gender (g1)	-0.07	-0.20	0.00	-0.10	-0.17	-0.15	-0.09	0.44	0.14	-0.20	0.07	0.20	1.00						
14	Marital status (md)	0.16	0.22	0.17	0.03	0.00	-0.01	0.03	0.01	-0.06	-0.03	0.13	0.00	0.05	1.00					
15	Length of membership	-0.03	-0.10	-0.02	-0.04	-0.10	-0.04	-0.02	0.39	0.06	-0.09	0.38	0.34	0.29	0.02	1.00				
16	Media exposure (ep1)	-0.12	-0.02	-0.13	0.17	0.02	-0.05	0.18	0.05	-0.06	0.06	0.04	-0.01	0.08	0.07	0.16	1.00			
17	Age gap (ep2)	0.00	-0.04	-0.03	0.00	-0.02	-0.01	0.02	-0.05	0.15	-0.08	-0.03	0.00	-0.02	-0.10	0.00	0.04	1.00		
18	Education gap (ep3)	-0.10	0.10	-0.12	0.16	0.03	-0.07	0.16	-0.02	0.11	-0.02	0.04	-0.10	-0.12	0.01	0.05	0.21	0.15	1.00	
19	Health gap (ep4)	0.03	0.07	-0.01	0.13	-0.04	-0.02	0.11	0.02	-0.03	-0.04	0.18	0.01	0.04	0.27	0.10	0.26	0.04	0.22	1.00
	Mean	5.14	4.20	5.00	2.51	2.36	2.06	2.51	15.6	0.20	0.24	45.4	0.75	0.81	2.15	8.44	2.94	-4.78	2.02	2.08
	Standard deviation	1.80	1.87	1.79	0.74	0.55	0.34	0.74	0.85	0.40	0.43	7.77	0.44	0.39	0.53	6.81	1.78	4.31	0.59	0.39
	Max	7.00	7.00	7.00	3.00	3.00	3.00	3.00	18.0	1.00	1.00	66.0	1.00	1.00	5.00	37.0	9.00	7.00	3.00	3.00
	Min	1.00	1.00	1.00	1.00	1.00	1.00	1.00	13.0	0.00	0.00	23.0	0.00	0.00	2.00	1.0	0.00	-25.0	1.00	1.00

Note : * The values are in natural logarithm

The SEM estimation procedures require a two-steps analysis. First is to analyse the measurement part of the model, which is carried out by the confirmatory factor analysis (CFA); second is to analyse the structural part of the model.

The measurement model analysis

The CFA in SEM requires that a measurement model must be 'identified'. To address this, the first factor loadings that link the observed indicators to their underlying latent construct are fixed to 1.00 (Wang & Wang, 2012). With the first factor loading fixed to 1, the CFA results of the both models show that the standardised factor loadings of *con*'s indicators are above the minimum requirement of 0.40 (Ford, MacCallum, & Tait, 1986), suggesting that the indicators are viable for the subsequent analysis.

Model 1 is 'just-identified' according to the three-indicator rule of O'Brien (1994). With the degrees of freedom equal to zero, the goodness of fit test results are not meaningful because the model is a perfect fit by definition (Hair Jr et al., 2010; Kline, 2005). The measurement model's construct/composite reliability (CR) score is 0.896, which is above the cut-off point of 0.70, and the average variance extracted (AVE) score shows that more than 50% variance captured by the latent construct is shared among its observed indicators indicating that the construct reliability and validity are established (Hair Jr et al., 2010).

On the other hand, while the Chi-square test of Model 2 rejects the null hypothesis that the model's estimated variance/covariance and the observed sample variance/covariance are statistically indifferent is not held[11], the other fit indices (i.e. RMSEA=0.070, CFI=0.995, and TLI=0.991) and construct validity indicators (i.e. composite reliability, convergent validity and discriminant validity) indicate that the model is viable for the subsequent analysis—e.g. Fornell and Larcker (1981), Gefen et al. (2000), Hu and Bentler (1999).

[11] Merely relying on the model χ^2 as the sole fit statistic could lead to several problems. Firstly, its power—the ability to reject the null hypothesis when it is false—is unknown (Bielby & Hauser, 1977) leading to the acceptance of a false theory. Secondly, the χ^2 is associated with the impact of the sample size on the statistic (Jöreskog, 1969). As the sample increases, generally above 200 (Schumacker & Lomax, 2010), the value of χ^2 tends to reject the null hypothesis, although the differences between estimated and observed covariance are actually small (Kline, 2005).

TABLE 2. The CFA results of the microcredit – economic empowerment models

Latent constructs	Observed indicators	Model 1		Model 2	
		Loading	S.E.	Loading	S.E.
Control over resource (con)	business resources (c1)	0.831**	0.020	0.834**	0.020
	household resources (c2)	0.779**	0.019	0.785**	0.019
	microcredit (c3)	0.966**	0.017	0.960**	0.018
Business performance (bp)	change in assets (b2)			0.883**	0.056
	change in number of employees (b3)			0.641**	0.070
	change in profit			0.759**	0.055
Covary					
bp-con				0.304**	0.050
Chi-square		0.000*		27.080**	
Degree of freedom		0		8	
RMSEA		0.000		0.070	
CFI		1.000		0.995	
TLI		1.000		0.991	
CR (con)		0.896		0.897	
CR (bp)				0.809	
AVE (con)		0.744		0.744	
AVE (bp)				0.589	
Inter-construct correlations bp-con				0.304	
Number of observation		483		483	

Note: ** significant at 5%.

All estimated factor loadings and standard errors (SE) reported are in standardised values.

RMSEA, CFI and LTI are to assess the goodness of fit of the models. RMSEA (Root Mean Square Error of Approximation) is an absolute fit index, while CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) are relative fit indexes—see Hu and Bentler (1999).

The CFA-based composite reliability (CR), developed by Raykov (2004), is used for assessing construct reliability that is the degree to which a set of indicators of a latent construct is internally consistent based on the degree of interrelation of the indicators with each other (Hair Jr et al., 2010).

Convergent validity, assessed by Average Variance Extracted (AVE), refers to the extent to which a measure is related to other measures that are designed to assess the same construct. Discriminant validity, by contrast, is to test whether concepts or measurements that are supposedly unrelated are, in fact, unrelated. Discriminant validity is said to be established if the construct's AVE is larger than the squared inter-construct correlations (Fornell & Larcker, 1981; Gefen et al., 2000). Convergent and discriminant validity are the two subtypes of validity for construct validity, defined as the extent to which a set of observed indicators reflects the theoretical latent construct those indicators are designed to measure (Hair Jr et al., 2010).

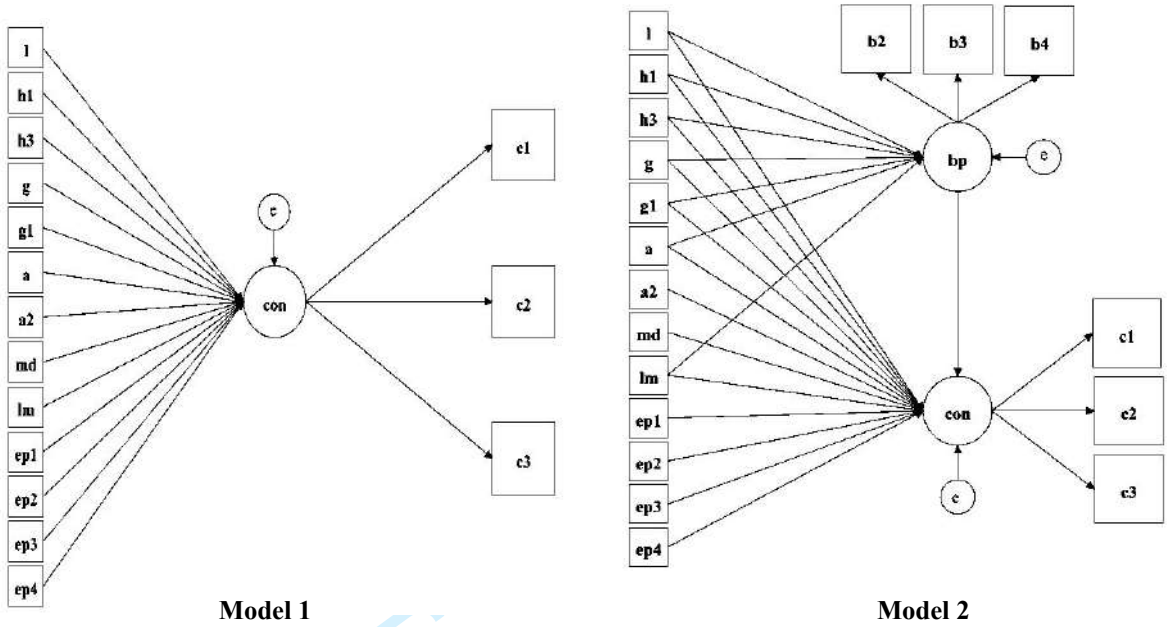
The structural model analysis

Following the measurement model analysis, the path diagrams of the structural models are constructed and presented in Figure 1. The standardised path coefficients, standardised standard errors and statistic tests results are presented in Table 3.

The table shows that both models are over-identified—the number of unique elements (136 and 190) exceeds the number of free parameters (34 and 52). The structural model evaluation results also show that, although the models' χ^2 rejects the null hypothesis (at 5% level), the fit indices (RMSEA, CFI and TLI) suggest that the models are good fit, confirmed by the construct reliability and validity indicators (CR, AVE and the squared of inter-construct correlations).

As table 3 shows, microcredit is significantly and positively related to control over resources in both models ($\beta = 0.140$, SE = 0.058 for Model 1, and $\beta = 0.111$, SE = 0.054 for Model 2). The results indicate that larger loans significantly increase the likelihood of having a higher degree of control over resources; thus, confirming our hypothesis 1. Model 2 in Table 3 also shows that business performance is significantly and positively associated with empowerment ($\beta = 0.349$, SE = 0.047), confirming our hypothesis 2.

Figure 1. The path diagram of the models



Model 1 **Model 2**

Note: "e" is residual error in the prediction of an unobserved variable.
The variables' covariances (as well as means and variances) are not fixed to zero, however the double-headed arrows linking the observed exogenous variables to each other are not presented for simplification reason.

Table 3. The WLSMV-SEM estimation results of the microcredit – economic empowerment model with business performance as a mediating variable

Variables	Model 1		Model 2			
	Control over resource (con)		Business performance (bp)		Control over resource (con)	
	β	S.E.	β	S.E.	β	S.E.
Independent variables						
Microcredit (l)	0.140**	0.058	0.083	0.067	0.111**	0.054
Mediating variable:						
Business performance (bp)					0.349**	0.047
Control variables:						
Education level (h1)	0.021	0.048	0.02	0.056	0.014	0.048
Prior work experience (h3)	-0.044	0.046	0.308**	0.055	-0.152**	0.049
Age (a)	0.712	0.474	-0.201	0.523	0.783*	0.474
Age squared (a2)	-0.633	0.470	0.222	0.526	-0.713	0.466
Lending schemes (g)	-0.004	0.052	0.008	0.062	-0.007	0.051
Gender (g1)	-0.180**	0.056	-0.179**	0.063	-0.118**	0.054
Marital status (md)	0.246**	0.058			0.246**	0.058
Length of membership (lm)	-0.085	0.060	-0.083	0.073	-0.056	0.059
Media exposure (ep1)	0.086*	0.051			0.086*	0.051
Age gap (ep2)	0.016	0.047			0.016	0.047
Education gap (ep3)	-0.041	0.050			-0.041	0.050
Health gap (ep4)	0.017	0.052			0.017	0.052
con R-square	0.116				0.220	
bp R-square					0.147	
Number of unique elements	136				190	
Number of free parameters	34				52	
The model chi-square value	68.432**				103.976**	
Degree of freedom (df)	26				65	
RMSEA	0.058				0.035	
CFI	0.986				0.989	
TLI	0.978				0.985	
WRMR	0.617				0.771	
CR con	0.906				0.907	
CR bp					0.828	
AVE con	0.765				0.765	
AVE bp					0.618	
Inter-construct correlations bp-con					0.313	
Number of observation	483				483	

Note: ** significant at 5%, * significant at 10%. All estimated path coefficients (βs) and standard errors (SE) reported are in standardised values.

The tests for mediating effect (Table 4), based on the Sobel test (Sobel, 1982) with standard error calculated using the multivariate delta method (MacKinnon, 2008), also show that an indirect relationship may not exist as the total indirect effect of microfinance – empowerment via business performance is not statistically significant (β = 0.029, SE = 0.023)[12].Therefore, hypothesis 3 is rejected. In summary, while our empirical result in Indonesia shows a positive effect of business performance on empowerment, it does not support that business performance might act as a mediator of microfinance toward empowerment.

Turning now to the control variables, in both models, marital status appears to matter for empowerment. Compared to married couples, unmarried, widowed and divorced individuals, on average, tend to have a higher degree of empowerment. Media exposure appears to positively influence empowerment, and women on average tend to feel less empowered than men. Education and health levels do not seem to have much influence on empowerment levels nor does the type of lending scheme—group or individual.

Regarding gender, estimation results in Table 3 and Table 4 indicate that the relationship between gender and empowerment is partially mediated by business performance. This is confirmed by the VAF (variance accounted for) score of 34.81%—the VAF equals the total indirect effect (or mediated effect) divided by the total effect; the rule of thumb is that if the VAF score between 0.20 – 0.80 can be characterised as partial mediation (Hair Jr, Hult, Ringle, & Sarstedt, 2014)

[12] Since there is no significant indirect effect of microcredit on empowerment via business performance, we analysed an alternative model by treating business performance as a latent exogenous variable. This model is aimed to examine whether business performance still has a significant role in economic empowerment if it is treated as an exogenous variable. The estimation results confirm that business performance has a significant direct links to control over resource. The results of this model are available up on request.

Table 4. The tests for mediating effect of business performance on the microcredit – economic empowerment relationship

Variables	Total indirect effect		Direct effect		Total effect	Mediation
	coef	S.E.[a]	coef	S.E.		
l→bp→con	0.029	0.023	0.111**	0.054	0.140	No
h1→bp →con	0.007	0.023	0.014	0.048	0.021	No
h3→bp→con	0.108**	0.026	-0.152**	0.049	-0.044	No
a→bp→con	-0.070	0.183	0.783*	0.474	0.713	No
a2 → bp →con	0.077	0.184	-0.713	0.466	-0.636	No
g→bp→con	0.003	0.022	-0.007	0.051	-0.004	No
g1→bp→con	-0.063**	0.024	-0.118**	0.054	-0.181	partial
lm→bp→con	-0.029	0.026	-0.056	0.059	-0.085	No

Note: All estimated coefficients and standard errors (SE) reported are in standardised values.
** Significant at 5%, * significant at 10%.
[a] Calculated by using bootstrap approach.

5. Discussion and policy implications

5.1. Microcredit and economic empowerment

The impact of microcredit on the economic empowerment of its recipients remains an issue of debate. Proponents believe that microcredit programmes can promote economic empowerment of the poor, particularly women (Karlan & Zinman, 2009; Khandker, 2003; Lakwo, 2006; Pitt & Khandker, 1998; Pitt et al., 2006), while opponents have argued that the effectiveness of microfinance programme for economic empowerment is far from reality (Garikipati, 2008; Goetz & Gupta, 1996; Mayoux, 1999). This study finds that in the case of Indonesia, microcredit might positively and significantly influence empowerment levels of micro entrepreneurs.

The microcredit – empowerment relationship might be explained as follows: the latent variable of control over resources, a proxy of empowerment, is a combination of the three observed indicators— *c1* and *c3*, which are more related to business, and *c2*, which is less related to business. While a positive direct effect of microcredit on business-related resource controls is more obvious, it is less clear whether microcredit might have a spill-over effect on non-business-related control.

To test the existence of this spill-over effect, a further analysis was conducted by decomposing the latent variable (i.e. *con*) back to its observed indicators (i.e. *c1*, *c2* and *c3*), and then regressing these indicators on the covariates and the mediating variable. Results show that microcredit has significant direct effects on the business-related controls (*c1* and *c3*), but not on non-business-related controls (*c3*)—see Appendix 1 for the decomposition analysis results. This indicates that, in Indonesia, microcredit had improved the borrowers' ability to control loan and own business; however, its benefits had not had a significant spill-over effect on their ability to control household resource or assets.

This study also shows that business performance appears to be strongly associated with control over resources. The empirical finding suggests that the business success of microenterprise has promoted economic empowerment. A better business performance is more likely to increase the earning capacity of the entrepreneurs, which might then improve their capability of increasing their economic status within household. This enhances the entrepreneurs' confidence to take significant positions in their households, which may eventually lead to a higher degree of ability to control over resources at household level—see for example, Hashemi et al. (1996) and Mahmud et al. (2012).

Nevertheless, as no significant relationship was found between business performance and microcredit, the indirect relationships between microcredit and control over resources via business performance did not exist. This provides an indication that business advancement was associated with control over resources, but did not significantly mediate the relationship between microcredit and control over resources of Indonesian micro-entrepreneurs.

Findings also show that some other factors should be considered as important contributors for the economic empowerment of micro-entrepreneurs in Indonesia. For example, knowledge acquired from media is significant for control over resources. Media might become a potential source for empowerment, providing individuals with empowerment-related information (Kishor & Kamla, 2004), which might improve individual self-confidence in taking responsibility and control over resources at household level.

Prior studies suggest that microcredit lending schemes, and group-lending schemes in particular, might have advantageous effects on economic empowerment (Gobezie & Garber, 2007; Holvoet, 2005; Pitt & Khandker, 1998). A lending group's regular meetings can facilitate members to establish and strengthen networks outside their kinship groups (Larance, 1998), which might yield not only access to finance, but also new forms of bridging and linking social capital that emerge from participation in the groups (Servon, 1998).

This study, however, finds that microcredit lending schemes did not have a significant relationship with empowerment. On average, respondents participating in lending groups did not seem to have significantly higher levels of control over resources compared to those who were not. The fact that the conversations during the group meetings were dominated by loan repayment issues, rather than business and other issues, might explain this finding.

Lastly, gender might potentially become a key factor of control over resources. The study finds that, compared to women, men averaged higher abilities for control over resource, confirming some previous studies (Garikipati, 2008; Goetz & Gupta, 1996; Kabeer, 2001, 2005; Leach & Sitaram, 2002). Moreover, results also show that the relationship between gender and control over resources is partly mediated by business performance. Thus, it might be argued that having better business performance than women helped men to have a higher level of control over resources at household level.

5.2. Policy implications

Three main policy implications might be drawn from these findings. Firstly, microcredit might have a substantial role in enhancing individuals' abilities for empowerment

at household level. Increases in earning capacity resulting from microcredit programme have not only helped micro-entrepreneurs to cope with household vulnerability, but have also strengthened their economic status, leading to more power in control over resources.

Secondly, although microcredit might help micro-entrepreneurs to purchase more private properties increasing their abilities for control over resource, microcredit might also potentially make the entrepreneurs more dependent on the loans in maintaining such abilities, especially if the properties purchased are non-productive items. In the future, this might build up a financial burden for the entrepreneurs as the loans must be repaid and on time. Nevertheless, business performance might be strongly related to control over resource, and is positively but not significant associated with microcredit. Thus, supposing micro-entrepreneurs can make effective use of the loan for productive purposes (i.e. purchasing goods or working capital), so that it can bring a significant improvement in business performance, this might deliver a stronger impact on their empowerment level. This is because higher incomes generated from the business might increase not only their economic status, but also their self-confidence, enabling them to take more control over household resources. In view of that, improving micro-entrepreneurs' abilities in financial management and business skills appears essential, not only for business success, but also for their empowerment levels.

Thirdly, the study finds that gender is still an important factor of empowerment. The relationship between gender and control over resources is also partially mediated by business performance, highlighting the important role of business success in economic empowerment. The study finds that men, on average, have higher ability for control over resources than women. One possible reason might be that men, on average, have better economic status than women, as represented by business success. Accordingly, encouraging women to have better business performance by providing more business-related support might be useful in promoting economic empowerment and gender equality.

The study's results show that microcredit programme and microenterprise business success might become alternative pathways for enhancing micro-entrepreneurs' level of empowerment. However, human empowerment issues in Indonesia need not only to be addressed by strengthening individuals' capabilities through microcredit programme, but should also be reinforced by pro-gender equality norms and institutional reforms. While Indonesia is known as a country where women possess relatively high status and where female autonomy has long been recognized (Frankenberg & Thomas, 2001; Panjaitan-

Drioadisuryo & Cloud, 1999), the patriarchal norms, which give men a dominant role in their families, to some extent still remain in the society. Thus, further reforms in legal and policy structures, economic systems, marriage, inheritance, education system (Golla et al., 2011), social systems, pattern behaviour (Narayan, 2002), private property ownership, and health care systems might also be considered to accelerate gender equality and human empowerment. In such cases, government interventions might be necessary.

6. Conclusion

Some previous studies find that microfinance enhances economic empowerment of micro entrepreneurs. Other studies disagree. Moreover, the case of Indonesia is not known in the literature. This study fills the gap via a survey of 556 microenterprises in Surabaya, the second largest city in Indonesia, using microcredit as a proxy for microfinance and control over resources as a proxy for empowerment. Structural equation modelling with weighted least square mean and variance adjusted structural equation modelling estimator was used to analyse the data.

Three main findings emerge: (i) microcredit has a positive and significant relationship with economic empowerment; (ii) business performance promotes empowerment; but (iii) business performance does not significantly mediate the microcredit—empowerment relationship. Thus, this study confirms previous findings of a positive microcredit—empowerment relationship, suggesting that if empowerment is a goal then at least in the case of Indonesia, a developing economy, the microfinance strategy might be working and the actions of policymakers and donors might be justified. However, the findings may not always apply to other developing economies—more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microfinance at the cost of other competing alternative strategies.

Some limitations noted in this study might offer motivation for future research. Firstly, this study involves only one developing country, Indonesia. The sample was obtained from one region, Surabaya and its surroundings, and was unbalanced in gender. A large number of potential male respondents who were mostly individual scheme borrowers refused to be interviewed. As a consequence, the heterogeneity of the sample might not be adequate to precisely represent the entire population. Secondly, the cross-sectional data of this study limits inferences of causality in the analyses. It also prohibits this study from assessing

longitudinal effects and from examining non-recursive models of the business performance – economic empowerment and the microcredit – business performance relationships. Therefore, future research involving a larger, more heterogeneous and longitudinal sample gathered from other regions, with more balanced gender composition might be useful to obtain a more representative sample. Thirdly, this study involves a limited number of explanatory variables. Thus, its ability to explain reasons behind the findings is also limited. In the future, it might be necessary to include more explanatory variables to provide further explanations of the relationships noted in this study: first, why loan size does not matter to MEs business performance; how to create social networks within a lending group that might benefits MEs and economic empowerment, and whether there are any other factors that contribute to economic empowerment. Although some limitations are noted, in the meantime, this study provides useful research-based findings that might be useful for relevant policy development in Indonesia.

References

Ackerly, B. A. (1995). Testing the Tools of Development: Credit Programmes, Loan Involvement, and Women's Empowerment. *IDS Bulletin, 26*(3), 56-68.

ADB. (2015). ADB and Microfinance. Retrieved May 8th, 2015, from Asian Development Bank http://www.adb.org/sectors/finance/microfinance

Anna, A. L., Chandler, G. N., Jansen, E., & Mero, N. P. (2000). Women Business Owners in Traditional and non-Traditional Industries. *Journal of Business Venturing, 15*(3), 279-303.

Ardishvili, A., Cardozo, S., Harmon, S., & Vadakath, S. (1998, 21-23 May 1998). *Towards a Theory of New Venture Growth.* Paper presented at the The 1998 Babson Entrepreneurship Research Conference, Ghent, Belgium.

Armendariz de Aghion, B., & Morduch, J. (2005). *The Economics of Microfinance*. Cambridge, MA: The MIT Press.

Bandalos, D. L. (2008). Is Parceling Really Necessary? A Comparison of Results From Item Parceling and Categorical Variable Methodology. *Structural Equation Modeling: A Multidisciplinary Journal, 15*(2), 211-240.

Bank Indonesia. (2016). Outstanding Micro, Small and Medium Enterprises Credits of Commercial Banks. Retrieved July 11st, 2016, from Bank Indonesia http://www.bi.go.id/en/statistik/seki/terkini/moneter/Contents/Default.aspx

Batliwala, S. (1994). *Women's empowerment in South Asia: Concepts and practices*: Asian South Pacific Bureau of Adult Education.

Bielby, W. T., & Hauser, R. M. (1977). Structural Equation Models. *Annual Review of Sociology, 3*, 137-161.

Bosma, N., van Praag, M., Thurik, R., & de Wit, G. (2004). The Value of Human and Social Capital Investments for the Business Performance of Startups. *Small Business Economics, 23*(3), 227-236.

Brown, T. A. (2006). *Confirmatory Factor Analysis for Applied Research*. New York: Guilford Publications.

Chioda, L. (2013). *Work and Family: Latin American and Caribbean Women in Search of a New Balance*. Washington DC: World Bank.

Crépon, B., Devoto, F., Duflo, E., & Parienté, W. (2011). Impact of Microcredit in Rural Areas of Morocco: Evidence from a Randomized Evaluation *MIT Working Paper*. Cambridge, MA: MIT.

Cruz, C., Justo, R., & De Castro, J. O. (2012). Does Family Employment Enhance MSEs Performance? Integrating Socioemotional Wealth and Family Embeddedness Perspectives. *Journal of Business Venturing, 27*(1), 62-76.

Delmar, F. (2006). Measuring Growth: Methodological Considerations and Empirical Results. In P. Davidsson, F. Delmar & J. Wiklund (Eds.), *Entrepreneurship and the growth of firms* (pp. 62-86). Glos, UK: Edward Elgar Publishing Ltd.

DeVellis, R. (1991). *Scale Development: Theories and Application*. Thousand Oaks, CA: Sage.

Diener, E., & Biswas-Diener, R. (2005). Psychological Empowerment and Subjective Well-being. In D. Narayan (Ed.), *Measuring empowerment: Cross-disciplinary perspectives* (Vol. 125). Washington DC: The World Bank.

Flora, D. B., & Curran, P. J. (2004). An Empirical Evaluation of Alternative Methods of Estimation for Confirmatory Factor Analysis With Ordinal Data. *Psychological Methods, 9*(4), 466-491.

Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The Application of Factor Analysis in Applied Psychology: A Critical Review and Analysis. *Personnel Psychology, 39*(2), 291-314.

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1), 39-50.

Frankenberg, E., & Thomas, D. (2001). *Measuring Power*. Food Consumption and Nutrition Division Discussion Paper No. 113. International Food Policy Research Institute. Washinton DC.

Garikipati, S. (2008). The Impact of Lending to Women on Household Vulnerability and Women's Empowerment: Evidence from India. *World Development, 36*(12), 2620-2642.

Gefen, D., Straub, D., & Boudreau, M.-C. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the association for information systems, 4*(1), 7.

Gobezie, G., & Garber, C. (2007). *Impact Assessment of Microfinance in Amhara Region of Northern Ethiopia.* Paper presented at the International Conference on Rural Finance Research: Moving Results into Policies, Rome, Italy.

Goetz, A. M., & Gupta, R. S. (1996). Who Takes the Credit? Gender, Power, and Control over Loan Use in Rural Credit Programs in Bangladesh. *World Development, 24*(1), 45-63.

Golla, A., Malhotra, A., Nanda, P., & Mehra, R. (2011). Understanding and Measuring Women's Economic Empowerment: Definition, Framework and Indicators. *International Center for Research on Women (ICRW)*.

Grapentine, T. (2000). Path Analysis vs Structural Equation Modeling. *Marketing Research, 12*(3).

Green, S. B., Akey, T. M., Fleming, K. K., Hershberger, S. L., & Marquis, J. G. (1997). Effect of the Number of Scale Points on Chi-square Fit Indices in Confirmatory Factor Analysis. *Structural Equation Modeling: A Multidisciplinary Journal, 4*(2), 108-120.

Grewal, R., Cote, J. A., & Baumgartner, H. (2004). Multicollinearity and Measurement Error in Structural Equation Models: Implications for Theory Testing. *Marketing Science, 23*(4), 519-529.

Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Mutivariate Data Analysis: A Global Perspective 7th Edition*. London: Pearson.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Los Angeles: SAGE Publications.

Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural Credit Programs and Women's Empowerment in Bangladesh. *World Development, 24*(4), 635-653.

Holvoet, N. (2005). The Impact of Microfinance on Decision Making Agency: Evidence of South India. *Development and Change, 36*(1), 75-102.

Hu, L. T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling, 6*(1), 1-55.

IBRD. (2012). Wowen's Economic Empowerment *Policy Lessons from the World Bank Gender Plan*. Washington DC: International Bank for Reconstruction and Development / The World Bank.

IFC. (2015). Financial Institutions: Microfinance. Retrieved May 8th, 2015, from International Finance Corporation

http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Financial+Markets/MSME+Finance/Microfinance/

Imai, K. S., Arun, T., & Annim, S. K. (2010). Microfinance and Household Poverty Reduction: New Evidence from India. *World Development, 38*(12), 1760–1774.

Johnston, D. J., & Morduch, J. (2008). The Unbanked: Evidence from Indonesia. *The World Bank Economic Review, 22*(3), 517-537.

Jöreskog, K. G. (1969). A General Approach to Confirmatory Maximum Likelihood Factor Analysis. *Psychometrika, 34*(2), 183-202.

Kabeer, N. (1999a). *The Conditions and Consequences of Choice: Reflections on the Measurement of Women's Empowerment*. UNRISD Discussion Paper No. 108. Discussion Paper UNRISD Geneva.

Kabeer, N. (1999b). Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and Change, 30*(3), 435-464.

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

Kabeer, N. (2005). Is Microfinance a 'Magic Bullet' for Women's Empowerment? Analysis of Findings from South Asia. *Economic and Political Weekly, 40*(44/45), 4709-4718. doi: 10.2307/4417357

Kaboski, J. P., & Townsend, R. M. (2012). The Impact of Credit on Village Economies. *American Economic Journal Applied economics, 4*(2), 98-133.

Karlan, D., & Valdivia, M. (2010). Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions. *Review of Economics and Statistics, 93*(2), 510-527.

Karlan, D., & Zinman, J. (2009). Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts. *Review of Financial Studies*.

Khandker, S. R. (2003) Microfinance and Poverty: Evidence Using Panel Data from Bangladesh. *World Bank Policy Research Working Paper 2945*. Washington, DC: World Bank.

Khandker, S. R. (2005). Microfinance and Poverty: Evidence using Panel Data from Bangladesh. *World Bank Economic Review, 19*(2), 263-286.

Kishor, S. (2000). Empowerment of Women in Egypt and Links to the Survival and Health of Their Infants. In H. Presser & G. Sen (Eds.), *Women's Empowerment and Demographic Processes: Moving Beyond Cairo*. New York: Oxford University Press.

Kishor, S., & Kamla, G. (2004). Women's Empowerment in India and Its States: Evidence from the NFHS. *Economic and Political Weekly, 39*(7), 694-712.

Kline, R. B. (2005). *Principle and Practice of Structural Equation Modeling Second Edition* (2 ed.). New York: The Guilford Press.

Kondo, T., Orbeta, A., Dingcong, C., & Infantado, C. (2008). Impact of Microfinance on Rural Households in the Philippines. *IDS Bulletin, 39*(1), 51-70.

Lakwo, A. (2006). *Microfinance, Rural Livelihoods, and Women's Empowerment in Uganda*. Leiden African Studies Centre, Leiden University.

Larance, L. Y. (1998). *Building Social Capital from the Center: A Village-level Investigation of Bangladesh's Grameen Bank*. Working Paper. George Warren Brown School of Social Work. Washington University. St. Louis, Missouri.

Leach, F., & Sitaram, S. (2002). Microfinance and Women's Empowerment: A Lesson from India. *Development in Practice, 12*(5), 575-588.

Lei, P. W. (2009). Evaluating Estimation Methods for Ordinal Data in Structural Equation Modeling. *Quality and Quantity, 43*(3), 495-507.

MacKinnon, D. P. (2008). *Introduction to Statistical Mediation Analysis*. New York: Erlbaum.

Mahmud, S., Shah, N. M., & Becker, S. (2012). Measurement of Women's Empowerment in Rural Bangladesh. *World Development, 40*(3), 610-619.

Malhotra, A. (2003). *Conceptualising and Measuring Women's Empowermentas A Variable in International Development*. Paper presented at the Workshop on Measuring Empowerment: Cross-Disciplinary Perspective, Washinton DC

Malhotra, A., Schuler, S. R., & Boender, C. (2002). *Measuring Women's Empowerment as a Variable in International Development*. Paper presented at the The World Bank Workshop on Poverty and Gender: New Perspectives Report retrieved from http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf

Mason, K. O., & Smith, H. L. (2000). Husbands' versus Wives' Fertility Goals and Use of Contraception: The Influence of Gender Context in Five Asian Countries. *Demography, 37*(3), 299-311.

Mayoux, L. (1999). Questioning Virtuous Spirals: Microfinance and Women's Empowerment in Africa. *Journal of International Development*(11), 63-84.

Muthe´n, B. O., du Toit, S. H. C., & Spisic, D. (1997). *Robust Inference using Weighted Least Squares and Quadratic Estimating Equations in Latent Variable Modeling with Categorical and Continuous Outcomes*. Unpublished manuscript. Unpublished manuscript. Retrieved from http://www.statmodel.com/wlscv.shtml

Muthe´n, B. O., & Kaplan, D. (1992). A Comparison of Some Methodologies for the Factor Analysis of Non-normal Likert Variables: A Note on the Size of the Model. *British Journal of Mathematical and Statistical Psychology, 45*(1), 19-30.

Narayan, D. (Ed.). (2002). *Empowerment and Poverty Reduction: A Sourcebook*. Washinton DC: World Bank Publications.

Nussbaum, M. (2001). *Women and Human Development: The Capabilities Approach*. Cambridge, UK Cambridge University Press.

O'Brien, R. M. (1994). Identification of Simple Measurement Models with Multiple Latent Variables and Correlated Errors. In P. V. Marsden (Ed.), *Sociological methodology* (pp. 137-170). Blackwell.

O'Rourke, N., Psych, R., & Hatcher, L. (2013). *A Step-by-step Approach to Using SAS for Factor Analysis and Structural Equation Modeling, Second Edition* (2nd ed.). Carrt, NC: Sas Institute.

Panda, K. (2009). Participation in the Group Based Microfinance and its Impact on Rural Households: A Quasi-experimental Evidence from an Indian State. *Global Journal of Finance and Management, 1*(2), 171-183.

Panjaitan-Drioadisuryo, R. D. M., & Cloud, K. (1999). Gender, Self-employment and Microcredit Programs: An Indonesian Case Study. *The Quarterly Review of Economics and Finance, 39*(5), 769-779.

Pitt, M. M., & Khandker, S. R. (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. doi: 10.1086/250037

Pitt, M. M., Khandker, S. R., & Cartwright, J. (2006). Empowering Women with Micro Finance: Evidence from Bangladesh. *Economic Development and Cultural Change, 54*(4), 791-831.

ProFI. (2003). Improving Access to Financial Service for Low Income Rural Households and Microenterprises in Indonesia.

Raykov, T. (2004). Behavioral Scale Reliability and Measurement Invariance Evaluation using Latent Variable Modeling. *Behavior Therapy, 35*(2), 299-331.

Schumacker, R. E., & Lomax, R. G. (2010). *A Beginner's Guide to Structural Equation Modelling Third Edition* (3 ed.). New York: Routledge.

Sen, A. K. (1999). *Development as Freedom*. Oxford: Oxford University Press.

Servon, L. J. (1998). Credit and Social Capital: The Community Development Potential of US Microenterprise Programs. *Housing Policy Debate, 9*(1), 115-149.

Sobel, M. E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. *Sociological methodology, 13*(1982), 290-312.

Ssendi, L., & Anderson, A. R. (2009). Tanzanian Micro Enterprises and Micro Finance: The Role and Impact for Poor Rural Women. *Journal of Entrepreneurship, 18*(1), 1-19.

Tabachnick, B. G., & Fidell, L. S. (2012). *Using Multivariate Statistics 6th Edition* (6th ed.). New York: Pearson.

Ullman, J. B. (2013). Structural Equation Modeling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using Multivariate Statistics 6th Edition* (6th ed., pp. 681-777). Boston: Pearson.

UNDP. (2015). 2015 Human Development Reports: Indonesia (ed.). New York: United Nations Development Programme.

Wang, J., & Wang, X. (2012). *Structural Equation Modeling: Application Using Mplus*. Sussex UK: John Wiley& Sons.

Weinzimmer, L. G., Nystrom, P. C., & Freeman, S. J. (1998). Measuring Organizational Growth: Issues, Consequences and Guidelines. *Journal of Management, 24*(2), 235-262.

Wiklund, J., & Shepherd, D. (2003). Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities. *Journal of Management Studies, 40*(8), 1919-1941.

World Bank. (2015). GINI Index. Retrieved July 1st, 2015, from The World Bank http://data.worldbank.org/indicator/SI.POV.GINI

APPENDIX 1

Summary of the decomposition analysis for control over resources

Variable	control over business resources (c1)		control over household resources/assets (c2)		control over loan (c3)	
	β	*SE*	*β*	*SE*	*β*	*SE*
Independent variables						
Microcredit (l)	0.104*	0.055	0.064	0.053	0.119**	0.052
Mediating variable:						
Business performance (bp)	0.311**	0.049	0.288**	0.050	0.313**	0.050
Control variables:						
Education level (h1)	-0.054	0.050	0.076	0.049	0.016	0.051
Prior work experience (h3)	-0.177**	0.049	-0.103**	0.047	-0.120**	0.048
Age (a)	1.104**	0.462	0.312	0.478	0.612	0.469
Age squared (a2)	-1.056**	0.444	-0.232	0.469	-0.600	0.463
Lending schemes (g)	0.055	0.052	-0.057	0.048	-0.009	0.051
Gender (g1)	-0.104**	0.052	-0.181**	0.053	-0.046	0.051
Marital status (md)	0.196**	0.054	0.237**	0.057	0.216**	0.055
Length of membership (lm)	-0.051	0.054	-0.057	0.061	-0.040	0.058
Media exposure (ep1)	-0.081*	0.048	-0.032	0.049	-0.104**	0.049
Age gap (ep2)	0.052	0.048	-0.020	0.045	0.012	0.047
Education gap (ep3)	-0.072	0.051	0.068	0.048	-0.091*	0.048
Health gap (ep4)	0.036	0.052	-0.010	0.049	0.019	0.049

Note: ** significant at 5%, * significant at 10%. All estimated path coefficients (*β*s) and standard errors (SE) reported are in standardised values.
Analysed based on Model 2 by using the WLSMV estimator.

Bukti korespondensi permintaan revisi 1 oleh reviewer

(11 Desember 2017)

UNIVERSITAS KRISTEN PETRA

Adwin Surja A. <aplin@petra.ac.id>

FW: Social Business - Decision on Manuscript ID SB-2017-0032

Social Business <onbehalfof@manuscriptcentral.com> 11 December 2017 at 18:08
Reply-To: mjb@westburn.co.uk
To: aplin@petra.ac.id
Cc: fiona.lees@westburn.co.uk

11-Dec-2017

Dear Dr. Atmadja:

Manuscript ID SB-2017-0032 entitled "Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia" which you submitted to Social Business, has been reviewed. The comments of the reviewer is included at the bottom of this letter.

To begin with, you will see that there is only one review of your paper as eight of the nine people I approached declined the invitation. However, you have been extremely lucky in that the person who has reviewed the paper is internationally recognised as an expert in the field but, more important, he has spent a lot of time in preparing a comprehensive and detailed critique.

While many other academics would have rejected your paper he sees intrinsic merit in what you are trying to achieve. Even more important he states explicitly what you would need to do to make this paper suitable for publication. Given the time and effort that he has put into his assessment I hope that you will be motivated to attempt the revisions that he is looking for. Accordingly I invite you to respond to his comments and revise your manuscript.

When resubmitting your revised paper, please upload three copies as follows:
- The complete paper containing all author details and with the changes marked (for the Editor's use)
- The complete version of the paper containing all author details but without the changes marked (this will be the one that is used by the copyeditor should your paper be accepted)
- The main document without the author information and without the changes marked (this will be sent to the referees for re-review).

You may also click the below link to start the revision process (or continue the process if you have already started your revision) for your manuscript. If you use the below link you will not be required to login to ScholarOne Manuscripts .

*** PLEASE NOTE: This is a two-step process. After clicking on the link, you will be directed to a webpage to confirm. ***

https://mc.manuscriptcentral.com/wpsb?URL_MASK=4143c711c5a544c8a91e9810ae878662

You will be unable to make your revisions on the originally submitted version of the manuscript. Instead, revise your manuscript using a word processing program and save it on your computer. Once the revised manuscript is prepared, you can upload it and submit it through your Author Centre.

When submitting your revised manuscript, you will be able to respond to the comments made by the reviewer(s) in the space provided. You can use this space to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the reviewer(s). Please also take care not to identify the author(s) in the response to reviewer(s).

IMPORTANT: Your original files are available to you when you upload your revised manuscript. Please delete any redundant files before completing the submission.

Because we are trying to facilitate timely publication of manuscripts submitted to Social Business, your revised manuscript should be uploaded as soon as possible. If it is not possible for you to submit your revision in a reasonable amount of time, we may have to consider your paper as a new submission.

Once again, thank you for submitting your manuscript to Social Business and I look forward to receiving your revision.

Sincerely,
Professor Michael Baker
Editor, Social Business

Reviewer(s)' Comments to Author:

Reviewer: 1

Comments to the Author
I hope the attached comments are clear enough and that a revised paper appears soon.

Social-Business-Manuscript-ID-SB---Review-1.pdf
641K

Social Business Manuscript ID SB-2017-0032

"Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia"

Reviewer's Comments

Introduction and Overview

I approached this paper in a very positive frame of mind. Microfinance is clearly a very important issue and very pertinent to the mission of *Social Business*. It would be excellent, in my view, if we could attract more papers on this topic. Furthermore, the paper reports on a very large sample of data and well-grounded empirical work is crucial to this field.

My enthusiasm was tempered, however, by two fundamental (and interwoven) factors. These factors are central to the comments in this review.

First, the paper focuses upon "empowerment". Whilst I have no problem with this, I was struck by the paper's avoidance of making a strong case for such a focus – as opposed to (say) poverty alleviation or economic growth or whatever. More especially still, it seems to transpire that the paper is primarily motivated by agency (which is fine) but which is partially understood as empowerment which in turn is proxied by "economic empowerment" which in turn again, is proxied by control over resources. I know it isn't as linear as this suggest, but the terminology is rather sloppy and when we recognise that the terms "microfinance" and "microcredit" are used almost interchangeably we end up with a paper which effectively asks whether giving people access to finance increase their control over economic resources. This is very close to a tautology and not especially interesting. I think there is probably rather more in the paper than this, but it is obscured by this lack of precision.

The second factor that bothers me is, I think, closely related. The paper is very focused on a positivist methodology and the employment of substantial statistical method. Let me stress: there is absolutely <u>*nothing*</u> wrong with that, in and of itself. However, I would respectfully suggest that positivism brings certain expectations with it and that (what looks like) a prior commitment to positivism rather overwhelms the data, the method and the interpretation. I will try to explain briefly:

i. The principal value of positivism lies, arguably, in its ability to bring precision to bear on, especially, our estimates of uncertainty in the data. The imprecise use of terminology, the somewhat inconsistent or poorly-justified use of proxies and the speculative use of "may" and "might", *inter alia,* all contribute to an imprecise air which the attempt to employ substantial statistical method rather obscure in my judgement.

ii. The data is not fully explained. The data is explicitly qualitative data, obtained via interview and involving self-reporting. It is very puzzling then to see the unquestioned use of quantitative method on such clearly qualitative data. This is not addressed as far as I could see.

iii. The basis of the interviews, how they were decided upon? how they were conducted? the format of the interviews, the inevitable bias of the interviewers and so on is not mentioned. This is the very basis of any external validity you might wish to infer. It must, surely, be addressed.

iv. I found myself wondering what this data might show us. It is clearly wide ranging and complex but we never learn anything of the richness it must contain.

v. Why, when discussing methodology, are none of the methodological issues considered, however briefly? It is striking to see a methodology section in the abstract speaking of method and statistics but with no explanation for why this approach was taken or why this statistical method was chosen as the most appropriate. Some thought to research design would have been very helpful.

These are very substantive points but I do not find either of them necessarily fatal. What they do, in my judgement, is obscure the core of the paper and seriously distract from what the paper did (or did not) find. Inference from data such as this is always conditional: your job as researcher is to assess the conditionality and help us understand to what extent (if at all) we can rely upon it.

Most – but not all - of the comments that follow might be grouped alongside these two principal concerns.

Possible Suggestions

- There is much about this paper to welcome but I would encourage the author to be a little more sensitive to the audience of SB. The paper dominantly sees the world through a very narrow economic lens that not all readers will share and which can alienate readers and get in the way of both implicit inferences and possible interpretations. Furthermore, I was inclined to the view that the paper was not trying to reflect on the complexity of microfinance for a generalised audience (Social Business has not had many papers published on microfinance and cannot be assumed to have an especial expertise in the field). I think there is a major contribution to be made here within the paper.

- Early in your introduction I would suggest that it would make more persuasive sense to examine the relationships of microfinance and thereby provide a basis from which you might be able to deduce the importance of a (carefully defined) notion of empowerment. This would prevent, what I found to be a difficulty namely, constantly questioning "why empowerment?" "what empowerment?"

- I would encourage a greater reflection upon your data and your method and methodology. See especially on page 11 where, for example, you give no information on what the students did and did not cover in the interviews or how the data was recorded. You only seem to report the quantitative data. The importance of interviews typically lies in the richness that they elicit. I could not help but think that a more interpretative approach would have yielded richer and more useful data on pages 11 and 12. I tend to the view that descriptive data helps the reader follow the issues more clearly and helps show how and why you draw such inferences as you do. Instead you plough almost directly into 10 pages of (at times) somewhat obscure statistical analysis based on data we are rather asked to take on trust. A strange balance.

- I definitely had a problem with the intensity of the statistical exposition. This gave rise to two issues: (i) in places the paper was beyond my knowledge and facility to follow in detail and (ii) I wondered if we were missing more useful insights that a more qualitative interpretation might have produced. Elements were a bit bewildering. The modelling on page 12 seems a bit speculative and under-specified. SB is not a statistical journal but can, I think, expect reasonable statistical awareness. It therefore seems appropriate to explain why one is approaching the issues the way one is – i.e. to spend some time on the research design issues.

- In essence, the paper seemed to be far more interested in its statistical analysis than in how the data might (at least in a social realist sense) reflect a complex social experience.

A Selection of detailed observations of varying substance

- Abstract, Findings: It might be clearer if rather than "empowerment" you said "perceptions of empowerment"?
- I know gender is an issue in this field but the term crops up intermittently (see page 6 for example) and, it seems to me, gratuitously at odd points in the paper. I am not aware that you make much of gender here? Gender seems to make a brief appearance as a substantive issue on Page 12 but I was left wanting more…..
- Page 2, sentence 3 starting "To date": this early sentence sets the tone, it is rather sweeping and rather long: a more measured approach to this summary might be more engaging perhaps? The use of "they" when you mean "the literature" is a little misleading
- Page 2 et seq: the detail about Indonesia comes earlier in the paper than I think is appropriate. This is not major but might be more useful as the context for your method and data. I would certainly find an introduction to what you really mean by empowerment and why it matters would be more appropriate this early in the paper.
- Page 4 introduces some of your proxies. I was very unclear why you were using proxies at all. Isn't a paper on micro-credit and access to resources – subject to the tautology question – interesting enough?
- Page 5:
    - I would be astonished to really discover that the excellent Amartya Sen was the first person to introduce the notion of agency in 1999… be more careful!
    - The talk about self-interest rather reveals one's priors
    - The definition of empowerment here talks of inner transformation – very properly. The link between that and economic control over resources is not completely obvious – they are poor proxies I would have thought.
    - The mention of personal gaols towards the end of the page rather fudged issue of poverty and needs – I think only liberal economists think that needs, wants and gaols are the same things.
- Page 6, second paragraph: I found this summary of Kabeer (199b) stimulating but probably contestable. It might be worth expanding on this issue slightly.
- Page 6/7: the paragraph from "Using the livelihood method…" seems oddly out of place and very unhelpfully speculative.
- Page 7: Lakwo's (2006) findings are not a surprise are they? …… and they relate to the potential tautology I mentioned earlier.
- Page 7: The sentence "An experimental study… " is bizarrely and irrelevantly detailed… surely? What has consumer credit got to do with it?
- Page 8 reveals the issue of any lack of explicit consideration of external validity.

- Page 9: I was surprised by the distinction between independent, mediating and control variables and the absence of other factors like inherited wealth, status and employment. IN addition, the assertion about the reliability of proxies is self-serving and self-destructive…. How could one know this to be true?
- Page 10: you might re-define MFI. As far as I can see it only appears in full in an earlier footnote.
- Page 12: I apologise if I missed it but I couldn't find where you explain why "multivariate normality is severely violated"
- Page 13: You'll have to pardon my apparent ignorance but I would have thought that an autocorrelation of 80% was very high. Your statements here are surprising – I don't say wrong, but it seems to me that your cross tab Figure 1 has more interest in it than you derive and I would be interested to see a little more reflection upon what I would have thought was obvious multi-collinearity? (I doubt I will be the only reader of SB who might struggle with this).
- Page 15: I confess I am lost here: do I really need this level of statistical sophistication to tease out a few relationships in some very soft data? Over the next few pages I remained sceptical that this level on statistical involvement was needed and it certainly seemed to swamp the issues you are trying to tease out. I may very well be wrong but I suspect (I hope correctly) that my levels of statistical sophistication (which are not as high as those required to red the paper) will be higher than a great many who read SB. In such circumstances it makes sense to try and explain to your intended readership what you are doing and why and leave the technical detail in (say) footnotes. This, at least, is what I do when writing for non - statistical journals.
- The point being that page 20 contains some really interesting and potentially important claims – I'd love to be able to see these more clearly in the data without the intervening variables of advanced statistical language. Is this possible? I don't know if this makes any sense - but I found the exposition on pages 22-23 perfectly clear and helpful.

Finally, there are also a number of careless expressions and slips in sense in sentences which will need a careful editing before final submission.

Bukti konfirmasi submit revisi 1 dan artikel yang direvisi

(7 Juni 2018)

Social Business

Preview (SB-2017-0032)

From: sbeditorial@westburn.co.uk

To: aplin@petra.ac.id

CC:

Subject: Social Business - Manuscript ID SB-2017-0032.R1

Body: 07-Jun-2018

Dear Dr. Atmadja:

Reference No.: SB-2017-0032.R1.

Thank you submitting your revised paper "Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia" and response to reviewers. Your paper will be sent back to the original reviewers for further comment. You can track the status and view details of all your manuscripts by logging in and clicking the Author Centre link and going to 'My Manuscripts'.

Sincerely,
Anne Foy;Fiona Lees
Social Business Editorial Office

Please mention the above reference number in all future correspondence or when calling the office for questions. If there are any changes in your street address or e-mail address, please log in to ScholarOne Manuscripts at https://mc.manuscriptcentral.com/wpsb and edit your user information as appropriate.

Date Sent: 07-Jun-2018

Close Window

Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia

Journal:	*Social Business*
Manuscript ID	SB-2017-0032.R1
Manuscript Type:	Original Article
Keywords:	microcredit, micro-entrepreneurs, empowerment, Indonesia

Does Microcredit Empower Micro-entrepreneurs? Empirical Evidence from Indonesia

Abstract

Purpose : This study provides fresh survey-based evidence from Indonesia on the impact of microcredit on empowerment of micro-entrepreneurs.

Methodology : Data was collected from a survey of microcredit-funded microenterprises in Surabaya and its surroundings—556 microenterprises participated voluntarily in the survey. Weighted least square mean and variance adjusted structural equation modelling (WLSMV-SEM) estimator was used to analyse the data.

Findings : Results show that microcredit has a positive and significant relationship on control over resources, but business performance does not significantly mediate the microcredit – empowerment relationship.

Limitations : Some limitations noted in this study are that the sample was obtained from one region of Indonesia, and was unbalanced in gender. The cross-sectional data of this study limits inferences of causality in the analyses, and prohibits it from assessing longitudinal effects and from examining non-recursive models.

Contribution : At least in the case of Indonesia, the microcredit programme might be working and the actions of policymakers and donors might be justified. However, more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest in microcredit programme at the cost of other competing alternative strategies.

Keywords: microcredit, micro-entrepreneurs, empowerment, Indonesia.

1. Introduction

Over the last several years, microcredit[1],—the act of providing small amounts of credit at no or low interest rates to unemployed, low-income, and/or financially excluded individuals or groups—has increasingly become a common financial policy tool for supporting and enhancing formation and expansion of microenterprises worldwide, particularly in developing and emerging markets. Microcredit is also believed to help alleviate poverty and empower the foregoing disadvantaged segments of society. Predictably, this widespread policy action has prompted an explosion of empirical research, particularly over the last decade, testing the microcredit vis-à-vis business formation, poverty alleviation and empowerment relationships.

The evidence so far has been mixed. Some studies show that microcredit increases income and consumption, enhances empowerment, fosters a feeling of community and establishes creditworthiness and financial self-sufficiency. Other studies show that microcredit may lead to over-indebtedness resulting in perpetual poverty and crowds out other anti-poverty interventions[2]. Nevertheless, millions of dollars continue to be dispensed into microcredit related activities[3], suggesting that more country-specific and broader empirical evidence is required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microcredit at the cost of other competing alternative strategies.

And, that is precisely the objective of the present study. The study takes a fresh look at the microcredit – empowerment relationship in the case of Indonesia. Empowerment is defined variously in the literature, including expansion of physical and financial assets, ability of individuals and groups to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives (Narayan, 2002). Studies have also linked empowerment to the concept of human agency focusing on the importance of inner

---

1 A major component of "microfinance", which encompasses other basic banking and insurance services and products as well.

2 For example, see Crépon, Devoto, Duflo, and Parienté (2011); Garikipati (2008); Imai, Arun, and Annim (2010); Johnston and Morduch (2008); Kaboski and Townsend (2012); Karlan and Zinman (2009); Khandker (2003); Kondo, Orbeta, Dingcong, and Infantado (2008); Panda (2009); Pitt, Khandker, and Cartwright (2006); Ssendi and Anderson (2009).

3 For example, in the fiscal year 2014, the IFC committed US$ 519 million to 47 projects with microfinance institutions (MFIs). The IFC cumulative investment portfolio in microfinance exceeded US$ 3.5 billion, with outstanding commitments of $1.68 billion (IFC, 2015). ADB allocated US$46.125 million to only microfinance institutional development projects in the Asia–Pacific region during 2011–2013 (ADB, 2015).

transformation of individuals as an essential factor in the formulation of choices (Kabeer, 1999; Malhotra, Schuler, & Boender, 2002; Nussbaum, 2001).

Kabeer (1999), in particular, defines empowerment as the process of change by which those who have been previously denied the ability to make strategic life choices acquire such ability. There is thus a logical inverse association between poverty and empowerment because resource deficiency for meeting basic needs often impedes the ability in exercising meaningful choice, which can be viewed in terms of three inter-related dimensions: resources, agency, and achievement.

While resources[4] are enabling factors of empowerment, agency is the essence of empowerment. Agency is defined as the ability to express individual goals or meaningful choices and to act upon them, which includes the ability to formulate strategic choices that affect their lives, and to have control over resources (Malhotra, 2003). In this study, empowerment is defined as agency, proxied by control over decisions to spend, save, use, purchase or sell material resources, including, business resources and household resources plus control over borrowed funds such as microcredit.

Having defined empowerment as control over resources, the study then endeavours to investigate if microcredit might enhance empowerment. The microcredit-empowerment evidence so far is mixed but also, empirical evidence from Indonesia—world's fourth most populous and tenth largest economy, Southeast Asia's largest economy and a member of the G-20 is scarce, if any. And, in Indonesia, microcredit is widespread, amounting to millions of dollars per annum. Thus, while contributing to the microcredit-empowerment debate, this study provides first comprehensive empirical evidence from Indonesia.

A related question we ask, on the basis of literature is does business performance mediate the microcredit – empowerment relationship? Microcredit or financial capital is critical not only for start-up stage, but is equally important for survival and growth (Bates, 1995; Cooper, Gimeno-Gascon, & Woo, 1994; Cooper, Woo, & Dunkelberg, 1988; Demirguc-Kunt, Beck, & Honohan, 2008). A thriving business is likely to enhance owners' earning capabilities which, in turn, is likely to enhance their economic status and thereby empowerment via greater control over resources.

To address these questions, we conducted a survey of microcredit-funded microenterprises in Surabaya, the second largest city in Indonesia. The eligible respondents

[4] Resources consist of material resources (non-financial and financial), human capital, and social capital.

needed to be at least 18 years old, have at least one microenterprise at the time of the survey, be a member of a microfinance institution (MFI) since at least 2012, and have a current outstanding balance of no more than 50 million rupiahs (about USD 3,521, assumed USD 1 = Rp. 14,200). Of the fourteen MFIs approached, five provided formal consent for voluntary participation by their members. Of the 800 prospective respondents, 556 agreed to be interviewed. Of these, 483 complete responses (92 men and 391 women) were valid and reliable for the purposes of analysis.

Structural equation modelling with weighted least square mean and variance adjusted structural equation modelling (WLSMV-SEM) estimator was used to analyse the data. The estimator can accurately estimate multiple and interrelated dependent relationships incorporated in integrated models, which contain some latent or unobservable variables (i.e. business performance and control over resourses) that need to be measured by using some categorical observable indicators.

Results show that microcredit has a positive and significant relationship on control over resources, but business performance does not significantly mediate the microcredit – empowerment relationship. Thus, this study confirms previous findings of a positive microcredit – empowerment relationship, suggesting that if empowerment is a goal then at least in the case of Indonesia, a populous, developing economy, the microcredit strategy might be working and the actions of policymakers and donors might be justified. However, these findings may not apply to other developing economies—more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microcredit at the cost of competing alternative strategies.

The rest of this paper is outlined as follows. Section 2 outlines relevant literature review and hypothesis development linked to the main research question, followed by the research method in section 3. Section 4 analyses the data and explains the empirical results. Section 5 discusses the findings and policy implication. Section 6 concludes.

2. Literature review and hypothesis development

2.1. Microcredit and economic empowerment

Providing microcredit to the poor may deliver stronger economic and social impacts (Armendariz de Aghion & Morduch, 2005; Khandker, 2005), and may improve human empowerment level (Kabeer, 2001; Mahmud, Shah, & Becker, 2012; Pitt & Khandker, 1998;

Pitt et al., 2006). This might be due to the design of the credit (e.g. collateral requirement, modes of payment, loan size and timing, types of savings product) that may encourage empowerment processes to occur (Eyben, Kabeer, & Cornwall, 2008). Evidence shows that microcredit links to human empowerment, because it assists the recipients to have access to finance (Alsop & Heinsohn, 2005; Kabeer, 1999; Malhotra et al., 2002), and then enables them to gain economic advancement and to exercise power and agency (Golla, Malhotra, Nanda, & Mehra, 2011).

Mayoux (1999), on the other hand, provides a strong critique of the naive belief that the credit by itself creates a 'virtuous spiral' of economic, social, and political empowerment, without it being considered necessary to develop explicit strategies to address other dimensions of poverty or gender subordination. The author considers as highly simplistic the view that mere participation in such a scheme is sufficient for empowerment. In conjunction with the critique, Garikipati (2008) emphasises that access to credit does not affect empowerment especially given their lack of co-ownership of family's productive assets, which means that even when their loans are used for productive purposes they are unable to divert any of the incomes from loan-sponsored activities into repayments. Most women, in particular, are apparently unable to take full control over the use of money they borrow from MFIs, instead their spouses take more power to decide what the money is spent for[5]. The loan may easily diverge into enhancing household assets and incomes. In such a situation, the household may benefit and generally help the households strengthen their ability to deal with the household vulnerability indicators, however the woman herself is likely to see further deepening of the resource division between her and her husband.

Other studies report that higher income and private property ownership resulting from microcredit programs which strengthened individuals' positions—in decision making, access to economic resources, and control over resources—within their households (Khandker, 2003; Pitt & Khandker, 1998; Pitt et al., 2006). Using a Bangladeshi survey, Hashemi, Schuler, and Riley (1996) examined the effect on empowerment of a microcredit programme. The study showed that joining a microcredit programme was likely to increase the level of empowerment (i.e. an index constructed by several indicators such as mobility, economic security, ability to make small purchases, ability to make larger purchases, etc.). When

[5] This finding somewhat confirms the conclusion of previous studies done by Goetz and Gupta (1996) and Leach and Sitaram (2002) who found that loans made to women are usually controlled by their husbands, leading to women's heavily dependence on them for loan repayments.

decomposing the index, the study also found that microcredit programmes positively affected some individuals' aspects, such as economic security (i.e. owning house, having productive assets, having savings) and control over the use of money or assets earned.

Thus, in light of the foregoing,

Hypothesis 1: microcredit enhances empowerment of micro-entrepreneurs in Indonesia.

2.2. Business performance as a mediating variable in the microcredit–economic empowerment relationship

The literature suggests that the relationship between microcredit and economic empowerment might be indirect through business success. For example, Golla et al. (2011) suggest that business success or economic advancement can promote power and agency of micro-entrepreneurs. To be able to advance economically, individuals need resources. Resources, such as financial capital (e.g. microcredit, savings), human capital (e.g., education, skills), physical capital (e.g. land, machinery) and social capital (e.g. ties, networks), are the enabling factor that can improve the ability of individuals to advance economically.

Thus, where business is performing well, revenues generated from the business increase the entrepreneurs' earning capabilities and their ability to accumulate autonomous assets (IBRD, 2012). An increase in earning capabilities and assets might in turn enhance economic status of the entrepreneurs, leading to greater power in control over resources within their household (Mahmud et al., 2012).

In light of the foregoing,

Hypothesis 2: business success mediates the relationship between microcredit and empowerment in Indonesia.

3. Research method

3.1. The variables

The literature proposes different approaches for measuring empowerment using various frameworks, dimensions, and indicators depending on their goals and contexts. Some authors agree that, as a process, empowerment cannot be measured directly, but only through proxies (Ackerly, 1995; Kishor, 2000), while others argue that commonly used proxies (e.g. education, health, employment) might be misleading (Govindasamy & Malhotra, 1996; Mason, 1995). Nonetheless, there have been increasing moves to capture the process through

direct measures of decision-making and control or choice; these are seen as the most effective representations of the process of empowerment, as they are closest to the measuring agency (Batliwala, 1994; Garikipati, 2008; Mahmud et al., 2012; A. Malhotra et al., 2002; Mason & Smith, 2000).

Dependent variable. The ability to control resources (*con*) is used as a proxy for agency—the essence of empowerment. Control over resources or incomes is one of commonly used dimensions of empowerment in household level (A. Malhotra, 2003). *Con* is a latent or unobservable dependent variable measured by respondents' self-reported ability to control business resources (*c1*), household resources (*c2*), and borrowed money—loan (*c3*). The use of multiple measures to represent control over resources is better than a single measure (DeVellis, 1991), since it can reduce the measurement error of the concept, and can improve the statistical estimation of the relationship between concepts by accounting for measurement error in the concepts (Hair Jr, Black, Babin, & Anderson, 2010). In this study, the term 'control' includes the respondents' ability to spend, save, use, purchase or sell material resources (either financial or non-financial) in their own business and household as well as control over loans.

Independent variable. Microcredit (*l*), the independent variable, is operationally defined as the amount of credit received by the individual respondent during a one-year time period (January 2013 – January 2014). The amount is then transformed into a natural logarithm.

Mediating variable. Business performance (*bp*)—a proxy of business success—is the mediating variable. The variable is measured by a respondent's self-reporting of changes (i.e. decrease/about the same/increase) in sales (*b1*), assets (*b2*), number of employees (*b3*) and profits (*b4*) across two consecutive years (2013 – 2014). These four observed indicators of performance are most commonly suggested measures in literature (Ardishvili, Cardozo, Harmon, & Vadakath, 1998; Delmar, 2006; Weinzimmer, Nystrom, & Freeman, 1998). The subjective self-reported performance as a measure of business performance, while not ideal, has been used in other studies with reasonable reliability (Anna, Chandler, Jansen, & Mero, 2000; Cruz, Justo, & De Castro, 2012; Wiklund & Shepherd, 2003). Self-reported measures are reasonable proxies when, as is common in most developing countries including Indonesia, micro entrepreneurs tend not to keep proper records of their business transactions—quite often they are not properly trained, qualified or otherwise equipped to do so.

Control variables. The control variables include human capital (i.e. level of education and prior work experience), respondent's age and the squared of respondent age, lending schemes, gender, marital status, length of microcredit membership, media exposure, age gap, education and health gaps. Some researchers have suggested that economic empowerment might be influenced by human capital—the level of education and prior work experience. Higher education gives individuals, especially women, more egalitarian and progressive views of their role within the household (Chioda, 2013), while prior work experience equips them with a greater ability to understand and handle business, which might also be applicable for households' matters (Bosma, van Praag, Thurik, & de Wit, 2004; Karlan & Valdivia, 2010). The level of education (*h1*) is measured as a dummy variable—1 for university graduate, 0 otherwise. Prior work experience (*h3*) is also a dummy variable—1 for 'yes', 0 otherwise.

Age (*a*) is the age of respondent measured in years. Gender (*g1*) is 1 for female, 0 otherwise. Marital status (*md*), is 1 for unmarried, widowed, and divorced, and 0 for married couple. Lending schemes (*g*), the lending scheme applied to microcredit, is 1 for group lending scheme, 0 otherwise. Length of microcredit membership (*lm*) is the duration for which a respondent had been a member of the microcredit programme counted from the year when the first loan was taken out[6]. Media exposure (*ep1*) is measured by the time spent for watching television or reading newspapers/magazines. Age gap (*ep2*) is the gap between the ages of the respondents and their spouse. Education gap (*ep3*) is the gap between the respondents' level of education and their spouses', while health gap (*ep4*) is the gap between the respondents' health condition and their spouses'.

3.2. The survey

The data was obtained from a survey conducted in Surabaya, the second largest city in Indonesia, and its surroundings in 2014. Five of the fourteen MFIs agreed to participate in the survey, including two cooperatives (Assakinah and Setya Bhakti Wanita), two Islamic-style microcredit institutions registered as cooperatives (BMT ABU and BMT Madani) and a government-sponsored microcredit (BKM Merisi). Prior to the interviews, the respondents received complete information by phone and in writing regarding the nature and purpose of the interview; their rights as a respondent were clearly outlined.

[6] For individual credit schemes, membership commences when a borrower obtains their first loan. For group lending credit schemes, the first loan is usually granted to a member within their first year of membership.

The sample provides a reasonable mix of microcredit providers. For example, the sample includes small (205 members, BKM Merisi) to large (12,470 members, SWB) MFIs, as well as relatively new (2010, BKM Merisi) to relatively well established (1978, SWB), covering different types—Islamic, cooperatives and others. The sample also covered different combinations of lending group versus individual credit schemes[7] and different make up in terms of men and women memberships.

At the time of the survey, the five lenders had a total membership of 17,553, of which 5,531 (i.e. BKM Merisi = 205, SBW = 3164, Assakinah = 738, BMT ABU = 575, and BMT Madani = 849) satisfied the key survey criteria of owns at least a microenterprise[8] and a current outstanding balance of no more than 50 million rupiahs. Of those 5,531 borrowers, 1,424 (or 26%) were with individual lending schemes and the rest (74%) had borrowed via group lending schemes.

Of the eligible respondents, those with the group lending schemes belonged to around 178 lending groups (i.e. Assakinah = 41, SBW = 108, BKM Merisi = 29). From each of these groups, two to three members were randomly selected as prospective respondents—a total of 530. For respondents using the individual lending scheme, around 270 were randomly selected as prospective respondents. Thus, a total of 800 prospective respondents were identified and initially contacted by the providers, on behalf of the researchers, for their voluntary participation. Of these, 556 (405 group lending and 151 individual scheme) agreed to be interviewed.

A structured questionnaire was designed, on the basis of extant literature—e.g. Bradley, McMullen, Artz, and Simiyu (2012), Golla et al. (2011), A. Malhotra et al. (2002)—to address the research questions of this study. The questionnaire contained closed-ended questions with mostly multiple choice responses. Respondents were asked for information, for instance on the following: personal background, socio-economic status, business performance and control over resources—both at the personal level and within the family—pre- and post-microcredit experience (Appendix 1 explains briefly how the questions were

[7] In the microfinance industry, the individual and joint-liability/group lending schemes are the most common types available to the borrowers. Under the former, the size of the loan is determined primarily on the basis of the pledged collateral, which might be repossessed in the event of default. Under the group-lending scheme, microcredit is offered to individuals only via a lending groups. The participating lending group, assisted by an officer appointed by the microfinance provider, decides the amount to be approved and subsequently becomes liable for repayment in the event of default. To ensure timely repayment of the loans, the group lending scheme involves frequent repayment meetings and peer pressure.

[8] In Indonesia, both business owners and non-business owners may apply for credit from MFIs.

framed to obtain relevant data). The questionnaire was pre- and pilot-tested. Pre-testing involved feedback from two senior researchers/academics and pilot-testing involved 30 randomly selected respondents from the pre-determined sample.

Interviews were conducted by undergraduate economics students undertaking final year research methods class at a local Surabaya university. The university's formal approval was sought and obtained for this, so an announcement was made by the researcher's colleagues at the university about the opportunity to participate in the survey. The interviewers were selected based on their academic performance and relevant prior experience. The researcher took a full-day training session with the students prior to the survey, and closely supervised the interviews during the data collection process to minimise any potential interviewer bias.

Face-to face interviews were conducted mostly at the respondent's residence or business place to observe their real-life conditions; occasionally, interviews were conducted at scheduled group meetings. At the end of each day, completed questionnaires were returned to the researcher to check for validity and reliability. Of the 556 interviews, 483 complete responses (92 men and 391 women) were determined to be valid and reliable for the purposes of analysis—incomplete responses and outliers were excluded.

3.3. The data

This section provides a brief description of the data collected, including on demographics of respondents. For example, the age of respondents ranged from 23 to 66, and around 94% were married. Most of them were senior high school graduates (51.97%), some were university graduates (20.29%); the rest had only primary education. The length of membership varied from 1 to 37 years. On average, a respondent had obtained 8.61 million rupiahs (USD 606.33) of microcredit from the participating providers during the sample period. More than 70% of the respondents were lending group members from three microcredit providers (Assakinah, SBW, and BKM Merisi), with the group sizes ranging from 3 to 51 members (on average, 23 members per group); the rest took their loans via individual lending scheme offered by four providers (excluding BKM Merisi).

Regarding control over resources, the survey revealed that majority (about 70%) respondents were able to take control over their business resource and loans. However, only 48% of the total respondents had ability to control their household resources or assets. The data also show that of the 483 respondents, 419 held their own incomes, and 353 also held

majority of household incomes. Interestingly, the proportion of women controlling their own and households' incomes were greater than men, and more women (82.61%) than men (66.30%) had personal savings; however, the proportion of male respondents who contributed to more than 50% of household expenses were more than twice the female number (59.78% versus 25.83%).

With regard to business performance, 65.84% of the respondents reported an increase in annual profit over the sample period, while others experienced no change (19.46%) or a decrease (14.70%). In terms of sales, with average monthly sales revenues ranging from Rp. 400,000 to Rp. 25,000,000 (equivalent to around USD 30 to USD 1,888), the proportion of respondents experiencing an increase, no change, or a decrease in annual sales were respectively, 66.46%, 18.43% and 15.11%. Most respondents reported no change in annual total assets and number of employees (57.35% and 88.20%, respectively); most did not employ anyone. The main business activities included manufacturing (38.65%), trading (40.99%), and providing services such as hair salon, car/motorcycle mechanics, laundry, boarding houses, computer or electronic devices repair (22.36%).

4. Models and empirical results

This study develops two models to investigate the answers to the research questions. Model 1 is a baseline model without our mediating variable (business performance) and directly links all covariates to the dependent variables. Model 2 involves business performance as the mediating variable in the microcredit—empowerment relationship. In Model 2, some control variables, such as human capital (i.e. *h1* and *h3*), respondent age (*a*) and the squared of age (*a2*), lending schemes (*g*), gender (*g1*) and the length of microcredit membership (*lm*) are also expected to have indirect relationships with economic empowerment through business performance.

Structural equation model (SEM) analysis framework was used to estimate the relationships. There are two main reasons for choosing SEM. Firstly, SEM has the ability to represent constructs as unobservable or latent variables in dependent relationships. Secondly, SEM can estimate multiple and interrelated dependent relationships incorporated in an integrated model by examining the structure of interrelationships expressed in a series of structural equations depicting all the relationships among the variables in the analysis (Hair Jr et al., 2010).

As this study involves categorical or ordinal dependent factor indicators, which are commonly not normally distributed, the most commonly used SEM estimator (the maximum likelihood-SEM) might not be implemented appropriately. Instead, the weighted least squares mean and variance adjusted (WLSMV) estimator is applied for estimating both models. The estimator provides more accurate parameter and model fit compared to the maximum likelihood-SEM in such conditions (Bandalos, 2008; Brown, 2006; Flora & Curran, 2004; Lei, 2009)[9].

Descriptive statistics presented in Table 1 provides a basic understanding of the data. The table shows that the inter-correlation with the control over resources (*con*) factor indicators are all below 0.80, meaning that the construct does not seem to have inter-correlational problems—see O'Rourke, Psych, and Hatcher (2013). However, in the case of business performance (*bp*), the inter-correlation between change in sales (*b1*) and change in profits (*b4*) is 0.91; hence, one of these variables should be eliminated based on suggestions of Tabachnick and Fidell (2012) and Ullman (2013). This extreme inter-correlation might be due to the majority (63.35%) of respondents' businesses included trading and providing services, which are more likely to have relatively stable costs of production. Accordingly, the changes in profit might directly reflect the changes in sales revenue[10]. Considering the analysis, change in sales (*b1*) is then removed. The pairwise correlation analysis for the rest of variables appear to be relatively small (all smaller than 0.80), implying that multi-collinearity[11] might not be too much of a concern—see Grapentine (2000), Grewal et al. (2004).

[9] Treating categorical/ordinal scale as continuous scale might lead to biased (either in positive or negative direction) parameter estimates, incorrect standard errors and model test statistics (Green, Akey, Fleming, Hershberger, & Marquis, 1997; Muthe´n, du Toit, & Spisic, 1997; Muthe´n & Kaplan, 1992), because the standard continuous measurement model is fundamentally misspecified, with high levels of skewness, kurtosis, or both—evidence when the assumption of multivariate normality is violated—(Muthe´n, 1993). Thus, an appropriate solution is to treat a categorical/ordinal variable directly as it is (Muthe´n, 1984, 1993; Muthe´n et al., 1997).

[10] As profit equals sales revenue minus costs, changes in profit might be caused by changes in sales, but not vice versa. Thus, changes in sales affect sales revenue, and changes in sales revenue lead to changes in profit, assuming that the costs of production remain unchanged.

[11] The effect of multicollinearity in SEM is still arguable in literature. Some notice that multicollinearity can lead to model's parameter estimates deviate from the true parameter with large standard errors (Grapentine, 2000; Grewal, Cote, & Baumgartner, 2004), while some others claim that SEM can help deal with or event robust against multicollinearity, particularly if highly correlated variables can be regarded as indicators of an underlying construct (N. K. Malhotra, Peterson, & Kleiser, 1999; Maruyama, 1998)

Table 1. Statistical summary and pairwise correlation

No	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Control over business resource (c1)	1.00																		
2	Control over household resources (c2)	0.53	1.00																	
3	Control over loan (c3)	0.72	0.63	1.00																
4	Change in sales (b1)	0.06	0.16	0.02	1.00															
5	Change in assets (b2)	0.13	0.25	0.14	0.49	1.00														
6	Change in employees (b3)	0.20	0.17	0.21	0.26	0.29	1.00													
7	Change in profit (b4)	0.07	0.14	0.03	0.91	0.47	0.25	1.00												
8	Microcredit (l)*	0.02	-0.04	0.09	-0.06	-0.04	-0.01	-0.04	1.00											
9	Education level (h1)	-0.05	0.06	0.04	-0.06	0.02	-0.01	-0.04	0.18	1.00										
10	Working experience(h3)	-0.09	0.02	-0.06	0.19	0.23	0.18	0.20	-0.13	-0.04	1.00									
11	Respondent age (a)	0.09	0.05	0.03	0.01	-0.08	-0.04	0.02	0.09	-0.08	-0.17	1.00								
12	Lending schemes (g)	0.07	-0.10	0.01	-0.08	-0.05	-0.09	-0.05	0.01	0.05	-0.09	0.31	1.00							
13	Gender (g1)	-0.07	-0.20	0.00	-0.10	-0.17	-0.15	-0.09	0.44	0.14	-0.20	0.07	0.20	1.00						
14	Marital status (md)	0.16	0.22	0.17	0.03	0.00	-0.01	0.03	0.01	-0.06	-0.03	0.13	0.00	0.05	1.00					
15	Length of membership (lm)	-0.03	-0.10	-0.02	-0.04	-0.10	-0.04	-0.02	0.39	0.06	-0.09	0.38	0.34	0.29	0.02	1.00				
16	Media exposure (ep1)	-0.12	-0.02	-0.13	0.17	0.02	-0.05	0.18	0.05	-0.06	0.06	0.04	-0.01	0.08	0.07	0.16	1.00			
17	Age gap (ep2)	0.00	-0.04	-0.03	0.00	-0.02	-0.01	0.02	-0.05	0.15	-0.08	-0.03	0.00	-0.02	-0.10	0.00	0.04	1.00		
18	Education gap (ep3)	-0.10	0.10	-0.12	0.16	0.03	-0.07	0.16	-0.02	0.11	-0.02	0.04	-0.10	-0.12	0.01	0.05	0.21	0.15	1.00	
19	Health gap (ep4)	0.03	0.07	-0.01	0.13	-0.04	-0.02	0.11	0.02	-0.03	-0.04	0.18	0.01	0.04	0.27	0.10	0.26	0.04	0.22	1.00
	Mean	5.14	4.20	5.00	2.51	2.36	2.06	2.51	15.6	0.20	0.24	45.4	0.75	0.81	2.15	8.44	2.94	-4.78	2.02	2.08
	Standard deviation	1.80	1.87	1.79	0.74	0.55	0.34	0.74	0.85	0.40	0.43	7.77	0.44	0.39	0.53	6.81	1.78	4.31	0.59	0.39
	Max	7.00	7.00	7.00	3.00	3.00	3.00	3.00	18.0	1.00	1.00	66.0	1.00	1.00	5.00	37.0	9.00	7.00	3.00	3.00
	Min	1.00	1.00	1.00	1.00	1.00	1.00	1.00	13.0	0.00	0.00	23.0	0.00	0.00	2.00	1.0	0.00	-25.0	1.00	1.00

Note : * The values are in natural logarithm

The measurement model analysis

The SEM estimation procedure requires a two-steps analysis. First, to analyse the measurement part of the model, carried out by the confirmatory factor analysis (CFA); second is to analyse the structural part of the model. The CFA in SEM requires that a measurement model must be 'identified'. To address this, the first factor loadings that link the observed indicators to their underlying latent construct are fixed to 1.00 (Wang & Wang, 2012). The results show that the standardised factor loadings of *con*'s indicators are above the minimum requirement of 0.40 in both models (Ford, MacCallum, & Tait, 1986), suggesting that the indicators are viable for the subsequent analysis.

The measurement part of Model 1 is 'just-identified' according to the three-indicator rule of O'Brien (1994). With the degrees of freedom equal to zero, the model is a perfect fit by definition (Hair Jr et al., 2010; Kline, 2005)[12]. The model's construct/composite reliability (CR = 0.896) is above the cut-off point of 0.70 and the average variance extracted (AVE = 0.744) score shows that more than 50% variance captured by the latent construct is shared among its observed indicators indicating that the construct reliability and validity are established (Hair Jr et al., 2010).

For Model 2, although the chi-square test rejects the null hypothesis that the model's estimated variance/covariance and the observed sample variance/covariance are statistically indifferent is not held[13]. The other fit indices (i.e. RMSEA=0.070, CFI=0.995, and TLI=0.991) and construct validity indicators (i.e. CR, AVE and discriminant validity) indicate that the model's measurement part is viable for the subsequent analysis—e.g. Fornell and Larcker (1981), Gefen et al. (2000), Hu and Bentler (1999).

[12] In such case, the goodness of fit test results are not meaningful (Hair Jr et al., 2010; Kline, 2005).

[13] Merely relying on the model χ^2 as the sole fit statistic could lead to several problems. Firstly, its power—the ability to reject the null hypothesis when it is false—is unknown (Bielby & Hauser, 1977) leading to the acceptance of a false theory. Secondly, the χ^2 is associated with the impact of the sample size on the statistic (Jöreskog, 1969). As the sample increases, generally above 200 (Schumacker & Lomax, 2010), the value of χ^2 tends to reject the null hypothesis, although the differences between estimated and observed covariance are actually small (Kline, 2005).

TABLE 2. The CFA results of the microcredit – economic empowerment models

Latent constructs	Observed indicators	Model 1		Model 2	
		Loading	S.E.	Loading	S.E.
Control over resource (con)	business resources (c1)	0.831**	0.020	0.834**	0.020
	household resources (c2)	0.779**	0.019	0.785**	0.019
	microcredit (c3)	0.966**	0.017	0.960**	0.018
Business performance (bp)	change in assets (b2)			0.883**	0.056
	change in number of employees (b3)			0.641**	0.070
	change in profit			0.759**	0.055
Covary					
bp-con				0.304**	0.050
Chi-square		0.000*		27.080**	
Degree of freedom		0		8	
RMSEA		0.000		0.070	
CFI		1.000		0.995	
TLI		1.000		0.991	
CR (con)		0.896		0.897	
CR (bp)				0.809	
AVE (con)		0.744		0.744	
AVE (bp)				0.589	
Inter-construct correlations bp-con				0.304	
Number of observation		483		483	

Note: ** significant at 5%.

All estimated factor loadings and standard errors (SE) reported are in standardised values.

RMSEA, CFI and LTI are to assess the goodness of fit of the models. RMSEA (Root Mean Square Error of Approximation) is an absolute fit index, while CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) are relative fit indexes—see Hu and Bentler (1999). Root Mean Square Error of Approximation (RMSEA) is an absolute fit index applied in this study to assess the goodness of fit of the models. A zero value of the RMSEA indicates the best fit; the higher value indicates worse fit (Wang & Wang, 2012). Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) are relative fit indexes. The CFI and TLI values range from 0 (worst fit) to 1 (best fit).

The CFA-based composite reliability (CR), developed by Raykov (2004), is used for assessing construct reliability that is the degree to which a set of indicators of a latent construct is internally consistent based on the degree of interrelation of the indicators with each other (Hair Jr et al., 2010).

Convergent validity, assessed by Average Variance Extracted (AVE), refers to the extent to which a measure is related to other measures that are designed to assess the same construct. Discriminant validity, by contrast, is to test whether concepts or measurements that are supposedly unrelated are, in fact, unrelated. Discriminant validity is said to be established if the construct's AVE is larger than the squared inter-construct correlations (Fornell & Larcker, 1981; Gefen et al., 2000). Convergent and discriminant validity are the two subtypes of validity for construct validity, defined as the extent to which a set of observed indicators reflects the theoretical latent construct those indicators are designed to measure (Hair Jr et al., 2010).

The structural model analysis

Following the measurement model analysis, the path diagrams of the structural models are constructed, and the standardised path coefficients, standardised standard errors and statistic tests results are presented in Table 3. The table shows that both models are over-identified—the number of unique elements (136 and 190) exceeds the number of free parameters (34 and 52). The structural model evaluation results also show that, although the models' χ^2 rejects the null hypothesis (at 5% level), the fit indices (RMSEA, CFI and TLI) suggest that the models are good fit, confirmed by the construct reliability and validity indicators (CR, AVE and the squared of inter-construct correlations).

As shown in table 3, in both models, microcredit has direct and significant relationships with control over resources ($\beta = 0.140$, SE = 0.058 for Model 1, and $\beta = 0.111$, SE = 0.054 for Model 2). The results indicate that larger loans significantly increase the likelihood of having a higher degree of control over resources; thus, confirming our hypothesis 1.

Table 3. The WLSMV-SEM estimation results of the microcredit – economic empowerment model with business performance as a mediating variable

Variables	Model 1		Model 2			
	Control over resource (con)		Business performance (bp)		Control over resource (con)	
	β	S.E.	β	S.E.	β	S.E.
Independent variables						
Microcredit (l)	0.140**	0.058	0.083	0.067	0.111**	0.054
Mediating variable:						
Business performance (bp)					0.349**	0.047
Control variables:						
Education level (h1)	0.021	0.048	0.02	0.056	0.014	0.048
Prior work experience (h3)	-0.044	0.046	0.308**	0.055	-0.152**	0.049
Age (a)	0.712	0.474	-0.201	0.523	0.783*	0.474
Age squared (a2)	-0.633	0.470	0.222	0.526	-0.713	0.466
Lending schemes (g)	-0.004	0.052	0.008	0.062	-0.007	0.051
Gender (g1)	-0.180**	0.056	-0.179**	0.063	-0.118**	0.054
Marital status (md)	0.246**	0.058			0.246**	0.058
Length of membership (lm)	-0.085	0.060	-0.083	0.073	-0.056	0.059
Media exposure (ep1)	0.086*	0.051			0.086*	0.051
Age gap (ep2)	0.016	0.047			0.016	0.047
Education gap (ep3)	-0.041	0.050			-0.041	0.050
Health gap (ep4)	0.017	0.052			0.017	0.052
con R-square	0.116		0.220			
bp R-square			0.147			
Number of unique elements	136		190			
Number of free parameters	34		52			
The model chi-square value	68.432**		103.976**			
Degree of freedom (df)	26		65			
RMSEA	0.058		0.035			
CFI	0.986		0.989			
TLI	0.978		0.985			
WRMR	0.617		0.771			
CR con	0.906		0.907			
CR bp			0.828			
AVE con	0.765		0.765			
AVE bp			0.618			
Inter-construct correlations bp-con			0.313			
Number of observation	483		483			

Note: ** significant at 5%, * significant at 10%. All estimated path coefficients (βs) and standard errors (SE) reported are in standardised values.

Model 2 (Table 3) shows that business performance is significantly and positively associated with empowerment (β = 0.349, SE = 0.047). However, the tests for mediating effect (Table 4)[14] indicate that an indirect relationship may not exist as the total indirect effect of microcredit – empowerment via business performance is not statistically significant (β = 0.029, SE = 0.023)[15]. Therefore, hypothesis 2 is rejected. In summary, while our empirical result in Indonesia shows a positive effect of business performance on empowerment, it does not support the notion that business success might act as an important mediator for the microcredit – empowerment relationship.

Turning now to the control variables, in both models, marital status appears to matter for empowerment. Compared to married couples, unmarried, widowed and divorced individuals, on average, tend to have a higher degree of empowerment. Media exposure appears to positively influence empowerment, and women on average tend to feel less empowered than men. Education and health levels do not seem to have much influence on empowerment levels nor does the type of lending scheme—group or individual.

Regarding gender, estimation results in Table 3 and Table 4 indicate that the relationship between gender and empowerment is partially mediated by business performance. This is confirmed by the VAF (variance accounted for) score of 34.81%[16].

[14] Based on the Sobel test (Sobel, 1982) with standard error calculated using the multivariate delta method (MacKinnon, 2008).

[15] Since there is no significant indirect effect of microcredit on empowerment via business performance, we analysed an alternative model by treating business performance as a latent exogenous variable. This model is aimed to examine whether business performance still has a significant role in economic empowerment if it is treated as an exogenous variable. The estimation results confirm that business performance has a significant direct links to control over resource. The results of this model are available up on request.

[16] The VAF equals the total indirect effect (or mediated effect) divided by the total effect; the rule of thumb is that if the VAF score between 0.20 – 0.80 can be characterised as partial mediation (Hair Jr, Hult, Ringle, & Sarstedt, 2014).

Table 4. The tests for mediating effect of business performance on the microcredit – economic empowerment relationship

Variables	Total indirect effect		Direct effect		Total effect	Mediation
	coef	S.E.[a]	coef	S.E.		
l→bp→con	0.029	0.023	0.111**	0.054	0.140	No
h1→bp →con	0.007	0.023	0.014	0.048	0.021	No
h3→bp→con	0.108**	0.026	-0.152**	0.049	-0.044	No
a→bp→con	-0.070	0.183	0.783*	0.474	0.713	No
a2 → bp →con	0.077	0.184	-0.713	0.466	-0.636	No
g→bp→con	0.003	0.022	-0.007	0.051	-0.004	No
g1→bp→con	-0.063**	0.024	-0.118**	0.054	-0.181	partial
lm→bp→con	-0.029	0.026	-0.056	0.059	-0.085	No

Note: All estimated coefficients and standard errors (SE) reported are in standardised values.
** Significant at 5%, * significant at 10%.
[a] Calculated by using bootstrap approach.

5. Discussion and policy implications

5.1. Microcredit and economic empowerment

The impact of microcredit on the economic empowerment of recipients remains an issue of debate. Proponents believe that microcredit programmes can promote economic empowerment of the poor, particularly women (Karlan & Zinman, 2009; Khandker, 2003; Lakwo, 2006; Pitt & Khandker, 1998; Pitt et al., 2006), while opponents argue that the effectiveness of microcredit programmes for empowerment is far from reality (Garikipati, 2008; Goetz & Gupta, 1996; Mayoux, 1999). This study finds that in the case of Indonesia, microcredit might positively and significantly influence empowerment levels of micro entrepreneurs.

The microcredit – empowerment relationship might be explained as follows: the unobservable or latent variable of control over resources, the proxy of empowerment, is a combination of the three observed indicators—control over business resources (*c1*) and control over microcredit (*c3*), which are more related to business, and control over household resources (*c2*), which is less related to business. While a positive direct effect of microcredit on business-related resource controls is more obvious, it is less clear whether microcredit might have a spill-over effect on non-business-related control.

To test the existence of this spill-over effect, a further analysis was conducted by decomposing the latent variable (i.e. *con*) back to its observed indicators (i.e. *c1*, *c2* and *c3*), and then regressing these indicators on the covariates and the mediating variable. Results show that microcredit has significant direct effects on the business-related controls (*c1* and *c3*), but not on non-business-related controls (*c2*)—see Appendix 2 for the decomposition analysis results. This indicates that, in Indonesia, microcredit had improved the borrowers' ability to control loan and own business; however, its benefits had not had a significant spill-over effect on their ability to control household resource or assets.

This study also shows that business performance appears to be strongly associated with control over resources. The empirical finding suggests that the business success of microenterprise has promoted control over resources. A better business performance is more likely to increase the earnings capacity of entrepreneurs, which might then improve their capability of increasing their economic status within household. This enhances the entrepreneurs' confidence to take significant positions in their households, which may eventually lead to a higher degree of ability to control over resources at household level—see for example, Hashemi et al. (1996) and Mahmud et al. (2012).

Nevertheless, as no significant relationship was found between business performance and microcredit, the indirect relationship between microcredit and control over resources via business performance did not exist. This provides an indication that business advancement was associated with control over resources, but did not significantly mediate the relationship between microcredit and control over resources of Indonesian micro-entrepreneurs.

Findings also show that some other factors should be considered as important contributors for the economic empowerment of micro-entrepreneurs in Indonesia. For example, knowledge acquired from media is significant for control over resources. Media might become a potential source for empowerment, providing individuals with empowerment-related information (Kishor & Kamla, 2004), which might improve individual self-confidence in taking responsibility and control over resources at household level.

Prior studies suggest that microcredit lending schemes, and group-lending schemes in particular, might have advantageous effects on economic empowerment (Gobezie & Garber, 2007; Holvoet, 2005; Pitt & Khandker, 1998). A lending group's regular meetings can facilitate members to establish and strengthen networks outside their kinship groups (Larance, 1998), which might yield not only access to finance, but also new forms of bridging and linking social capital that emerge from participation in the groups (Servon, 1998).

This study, however, finds that microcredit lending schemes did not have a significant relationship with empowerment. On average, respondents participating in lending groups did not seem to have significantly higher levels of control over resources compared to those who were not. The fact that the conversations during the group meetings were dominated by loan repayment issues, rather than business and other issues [17], might explain this finding.

Lastly, gender might potentially become a key factor of control over resources. The study finds that, compared to women, men averaged higher abilities for control over resource, confirming some previous studies (Garikipati, 2008; Goetz & Gupta, 1996; Kabeer, 2001, 2005; Leach & Sitaram, 2002). Moreover, results also show that the relationship between gender and control over resources is partly mediated by business performance. Thus, it might be argued that having better business performance than women helped men to have a higher level of control over resources at household level.

[17] Of the 360 respondents, 277 (76.94%) respondents placed loan repayment issues as high priority, followed by business ideas (16.39%), community news (3.33%), and spiritual issues (2.78%); none discussed personal/family issues.

5.2. Policy implications

Three main policy implications might be drawn from these findings. Firstly, microcredit play a substantial role in enhancing individuals' abilities for control over resources at the household level. Increases in earnings capacity resulting from microcredit programme have not only helped micro-entrepreneurs to cope with household vulnerability, but have also strengthened their economic status, leading to more power in control over resources.

Secondly, although microcredit might help micro-entrepreneurs increase their abilities for control over resource via purchasing more private properties, it tends to cause entrepreneurs more dependent on the loans for maintaining such abilities—especially if the properties purchased are non-productive items. In the end, this might build up a financial burden for entrepreneurs as the loans will eventually have to be repaid. Nevertheless, business performance might be strongly related to control over resource, and is positively but not significant associated with microcredit. Thus, supposing micro-entrepreneurs can make effective use of the loan for productive purposes (i.e. purchasing goods or working capital), it would bring significant improvement in business performance and deliver a stronger impact on their empowerment level. This is because higher incomes generated from the business might increase not only their economic status, but also self-confidence, and enable them to take more control over household resources. In view of that, improving micro-entrepreneurs' abilities in financial management and business skills appears essential for business success and empowerment as well.

Thirdly, the study finds that gender plays a crucial role in empowerment. Besides, the relationship between gender and control over resources is partially mediated by business performance, highlighting the important role of business success in economic empowerment. The study also finds that men, on average, have higher ability for control over resources than women. One possible reason might be that men tend to have better economic status than women, as illustrated by business success. Accordingly, encouraging women to have better business performance by providing more business-related support would be useful in promoting economic empowerment and gender equality.

The study's results show that microcredit programmes and microenterprise business success might become alternative pathways for enhancing micro-entrepreneurs' level of empowerment. However, human empowerment issues in Indonesia need not only to be addressed by strengthening individuals' capabilities through microcredit programme, but

should also be reinforced by pro-gender equality norms and institutional reforms. While Indonesia is known as a country where women possess relatively high status and where female autonomy has long been recognized (Frankenberg & Thomas, 2001; Panjaitan-Drioadisuryo & Cloud, 1999), the patriarchal norms, which give men a dominant role in their families, to some extent still remain in the society. Thus, further reforms in legal and policy structures, economic systems, marriage, inheritance, education system (Golla et al., 2011), social systems, pattern behaviour (Narayan, 2002), private property ownership, and health care systems might also be considered to accelerate gender equality and human empowerment. In such cases, government interventions might be necessary.

6. Conclusion

Some previous studies find that microcredit enhances economic empowerment of micro entrepreneurs. Other studies disagree. Moreover, the case of Indonesia is not known in the literature. This study fills the gap via a survey of 556 microenterprises in Surabaya, the second largest city in Indonesia, using microcredit and control over resources as a proxy for empowerment. Structural equation modelling with weighted least square mean and variance adjusted structural equation modelling estimator was used to analyse the data.

Results show that microcredit has a positive and significant relationship on control over resources, but business performance does not significantly mediate the microcredit – empowerment relationship. Thus, this study confirms previous findings of a positive microcredit – empowerment relationship, suggesting that if empowerment is a goal then at least in the case of Indonesia, a developing economy, the microcredit programme strategy might be working and the actions of policymakers and donors might be justified. However, the findings may not always apply to other developing economies—more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microcredit programme at the cost of other competing alternative strategies.

Some limitations noted in this study might offer motivation for future research. Firstly, this study involves only one developing country, Indonesia. The sample was obtained from one region, Surabaya and its surroundings, and was unbalanced in gender. A large number of potential male respondents who were mostly individual scheme borrowers refused to be interviewed. As a consequence, the heterogeneity of the sample might not be adequate to precisely represent the entire population. Secondly, the cross-sectional data of this study

limits inferences of causality in the analyses. It also prohibits this study from assessing longitudinal effects and from examining non-recursive models of the business performance – economic empowerment and the microcredit – business performance relationships. Therefore, future research involving a larger, more heterogeneous and longitudinal sample gathered from other regions, with more balanced gender composition might be useful to obtain a more representative sample. Thirdly, this study involves a limited number of explanatory variables. Thus, its ability to explain reasons behind the findings is also limited. In the future, it might be necessary to include more explanatory variables to provide further explanations of the relationships noted in this study: first, why loan size does not matter to MEs business performance; how to create social networks within a lending group that might benefits MEs and economic empowerment, and whether there are any other factors that contribute to economic empowerment. Although some limitations are noted, in the meantime, this study provides useful research-based findings that might be useful for relevant policy development in Indonesia.

References

Ackerly, B. A. (1995). Testing the Tools of Development: Credit Programmes, Loan Involvement, and Women's Empowerment. *IDS Bulletin, 26*(3), 56-68.

ADB. (2015). ADB and Microfinance. Retrieved May 8th, 2015, from Asian Development Bank http://www.adb.org/sectors/finance/microfinance

Alsop, R., & Heinsohn, N. (2005). Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators. *World Bank Policy Research Working Paper 3510*.

Anna, A. L., Chandler, G. N., Jansen, E., & Mero, N. P. (2000). Women Business Owners in Traditional and non-Traditional Industries. *Journal of Business Venturing, 15*(3), 279-303.

Ardishvili, A., Cardozo, S., Harmon, S., & Vadakath, S. (1998, 21-23 May 1998). *Towards a Theory of New Venture Growth.* Paper presented at the The 1998 Babson Entrepreneurship Research Conference, Ghent, Belgium.

Armendariz de Aghion, B., & Morduch, J. (2005). *The Economics of Microfinance*. Cambridge, MA: The MIT Press.

Bandalos, D. L. (2008). Is Parceling Really Necessary? A Comparison of Results From Item Parceling and Categorical Variable Methodology. *Structural Equation Modeling: A Multidisciplinary Journal, 15*(2), 211-240.

Bates, T. (1995). Self-employment Entry Across Industry Groups. *Journal of Business Venturing, 10*(2), 143-156.

Batliwala, S. (1994). *Women's empowerment in South Asia: Concepts and practices*: Asian South Pacific Bureau of Adult Education.

Bielby, W. T., & Hauser, R. M. (1977). Structural Equation Models. *Annual Review of Sociology, 3*, 137-161.

Bosma, N., van Praag, M., Thurik, R., & de Wit, G. (2004). The Value of Human and Social Capital Investments for the Business Performance of Startups. *Small Business Economics, 23*(3), 227-236.

Bradley, S. W., McMullen, J. S., Artz, K., & Simiyu, E. M. (2012). Capital Is Not Enough: Innovation in Developing Economies. *Journal of Management Studies, 49*(4), 684-717.

Brown, T. A. (2006). *Confirmatory Factor Analysis for Applied Research*. New York: Guilford Publications.

Chioda, L. (2013). *Work and Family: Latin American and Caribbean Women in Search of a New Balance*. Washington DC: World Bank.

Cooper, A. C., Gimeno-Gascon, F. J., & Woo, C. Y. (1994). Initial Human and Financial Capital as Predictors of New Venture Performance. *Journal of Business Venturing, 9*(5), 371-395.

Cooper, A. C., Woo, C. Y., & Dunkelberg, W. C. (1988). Entrepreneurs' Perceived Chances for Success. *Journal of Business Venturing, 3*(2), 97-108.

Crépon, B., Devoto, F., Duflo, E., & Parienté, W. (2011). Impact of Microcredit in Rural Areas of Morocco: Evidence from a Randomized Evaluation *MIT Working Paper*. Cambridge, MA: MIT.

Cruz, C., Justo, R., & De Castro, J. O. (2012). Does Family Employment Enhance MSEs Performance? Integrating Socioemotional Wealth and Family Embeddedness Perspectives. *Journal of Business Venturing, 27*(1), 62-76.

Delmar, F. (2006). Measuring Growth: Methodological Considerations and Empirical Results. In P. Davidsson, F. Delmar & J. Wiklund (Eds.), *Entrepreneurship and the growth of firms* (pp. 62-86). Glos, UK: Edward Elgar Publishing Ltd.

Demirguc-Kunt, A., Beck, T., & Honohan, P. (2008). *Finance for All? Policies and Pitfalls in Expanding Access*. New York: World Bank Publications.

DeVellis, R. (1991). *Scale Development: Theories and Application*. Thousand Oaks, CA: Sage.

Eyben, R., Kabeer, N., & Cornwall, A. (2008). Conceptualising Empowerment and the Implications for Pro-poor Growth: Institute of Development Studies.

Flora, D. B., & Curran, P. J. (2004). An Empirical Evaluation of Alternative Methods of Estimation for Confirmatory Factor Analysis With Ordinal Data. *Psychological Methods, 9*(4), 466-491.

Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The Application of Factor Analysis in Applied Psychology: A Critical Review and Analysis. *Personnel Psychology, 39*(2), 291-314.

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1), 39-50.

Frankenberg, E., & Thomas, D. (2001). *Measuring Power*. Food Consumption and Nutrition Division Discussion Paper No. 113. International Food Policy Research Institute. Washinton DC.

Garikipati, S. (2008). The Impact of Lending to Women on Household Vulnerability and Women's Empowerment: Evidence from India. *World Development, 36*(12), 2620-2642.

Gefen, D., Straub, D., & Boudreau, M.-C. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the association for information systems, 4*(1), 7.

Gobezie, G., & Garber, C. (2007). *Impact Assessment of Microfinance in Amhara Region of Northern Ethiopia.* Paper presented at the International Conference on Rural Finance Research: Moving Results into Policies, Rome, Italy.

Goetz, A. M., & Gupta, R. S. (1996). Who Takes the Credit? Gender, Power, and Control over Loan Use in Rural Credit Programs in Bangladesh. *World Development, 24*(1), 45-63.

Golla, A., Malhotra, A., Nanda, P., & Mehra, R. (2011). Understanding and Measuring Women's Economic Empowerment: Definition, Framework and Indicators. *International Center for Research on Women (ICRW)*.

Govindasamy, P., & Malhotra, A. (1996). Women's Position and Family Planning in Egypt. *Studies in Family Planning, 27*(6), 328-340.

Grapentine, T. (2000). Path Analysis vs Structural Equation Modeling. *Marketing Research, 12*(3).

Green, S. B., Akey, T. M., Fleming, K. K., Hershberger, S. L., & Marquis, J. G. (1997). Effect of the Number of Scale Points on Chi-square Fit Indices in Confirmatory Factor Analysis. *Structural Equation Modeling: A Multidisciplinary Journal, 4*(2), 108-120.

Grewal, R., Cote, J. A., & Baumgartner, H. (2004). Multicollinearity and Measurement Error in Structural Equation Models: Implications for Theory Testing. *Marketing Science, 23*(4), 519-529.

Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Mutivariate Data Analysis: A Global Perspective 7th Edition*. London: Pearson.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Los Angeles: SAGE Publications.

Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural Credit Programs and Women's Empowerment in Bangladesh. *World Development, 24*(4), 635-653.

Holvoet, N. (2005). The Impact of Microfinance on Decision Making Agency: Evidence of South India. *Development and Change, 36*(1), 75-102.

Hu, L. T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling, 6*(1), 1-55.

IBRD. (2012). Wowen's Economic Empowerment *Policy Lessons from the World Bank Gender Plan*. Washington DC: International Bank for Reconstruction and Development / The World Bank.

IFC. (2015). Financial Institutions: Microfinance. Retrieved May 8th, 2015, from International Finance Corporation http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Financial+Markets/MSME+Finance/Microfinance/

Imai, K. S., Arun, T., & Annim, S. K. (2010). Microfinance and Household Poverty Reduction: New Evidence from India. *World Development, 38*(12), 1760–1774.

Johnston, D. J., & Morduch, J. (2008). The Unbanked: Evidence from Indonesia. *The World Bank Economic Review, 22*(3), 517-537.

Jöreskog, K. G. (1969). A General Approach to Confirmatory Maximum Likelihood Factor Analysis. *Psychometrika, 34*(2), 183-202.

Kabeer, N. (1999). Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and Change, 30*(3), 435-464.

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

Kabeer, N. (2005). Is Microfinance a 'Magic Bullet' for Women's Empowerment? Analysis of Findings from South Asia. *Economic and Political Weekly, 40*(44/45), 4709-4718. doi: 10.2307/4417357

Kaboski, J. P., & Townsend, R. M. (2012). The Impact of Credit on Village Economies. *American Economic Journal Applied economics, 4*(2), 98-133.

Karlan, D., & Valdivia, M. (2010). Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions. *Review of Economics and Statistics, 93*(2), 510-527.

Karlan, D., & Zinman, J. (2009). Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts. *Review of Financial Studies*.

Khandker, S. R. (2003) Microfinance and Poverty: Evidence Using Panel Data from Bangladesh. *World Bank Policy Research Working Paper 2945*. Washington, DC: World Bank.

Khandker, S. R. (2005). Microfinance and Poverty: Evidence using Panel Data from Bangladesh. *World Bank Economic Review, 19*(2), 263-286.

Kishor, S. (2000). Empowerment of Women in Egypt and Links to the Survival and Health of Their Infants. In H. Presser & G. Sen (Eds.), *Women's Empowerment and Demographic Processes: Moving Beyond Cairo*. New York: Oxford University Press.

Kishor, S., & Kamla, G. (2004). Women's Empowerment in India and Its States: Evidence from the NFHS. *Economic and Political Weekly, 39*(7), 694-712.

Kline, R. B. (2005). *Principle and Practice of Structural Equation Modeling Second Edition* (2 ed.). New York: The Guilford Press.

Kondo, T., Orbeta, A., Dingcong, C., & Infantado, C. (2008). Impact of Microfinance on Rural Households in the Philippines. *IDS Bulletin, 39*(1), 51-70.

Lakwo, A. (2006). *Microfinance, Rural Livelihoods, and Women's Empowerment in Uganda*. Leiden African Studies Centre, Leiden University.

Larance, L. Y. (1998). *Building Social Capital from the Center: A Village-level Investigation of Bangladesh's Grameen Bank*. Working Paper. George Warren Brown School of Social Work. Washington University. St. Louis, Missouri.

Leach, F., & Sitaram, S. (2002). Microfinance and Women's Empowerment: A Lesson from India. *Development in Practice, 12*(5), 575-588.

Lei, P. W. (2009). Evaluating Estimation Methods for Ordinal Data in Structural Equation Modeling. *Quality and Quantity, 43*(3), 495-507.

MacKinnon, D. P. (2008). *Introduction to Statistical Mediation Analysis*. New York: Erlbaum.

Mahmud, S., Shah, N. M., & Becker, S. (2012). Measurement of Women's Empowerment in Rural Bangladesh. *World Development, 40*(3), 610-619.

Malhotra, A. (2003). *Conceptualising and Measuring Women's Empowermentas A Variable in International Development*. Paper presented at the Workshop on Measuring Empowerment: Cross-Disciplinary Perspective, Washinton DC

Malhotra, A., Schuler, S. R., & Boender, C. (2002). *Measuring Women's Empowerment as a Variable in International Development*. Paper presented at the The World Bank Workshop on Poverty and Gender: New Perspectives Report retrieved from http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf

Malhotra, N. K., Peterson, M., & Kleiser, S. B. (1999). Marketing Research: A State-of-the-Art Review and Directions for the Twenty-First Century. *Journal of the Academy of Marketing Science, 27*(2), 160-183.

Maruyama, G. M. (1998). *Basics of Structural Equation Modeling*. Thousand Oaks, CA Sage.

Mason, K. O. (1995). Gender and Demographic Change: What Do We Know? Liege: IUSSP.

Mason, K. O., & Smith, H. L. (2000). Husbands' versus Wives' Fertility Goals and Use of Contraception: The Influence of Gender Context in Five Asian Countries. *Demography, 37*(3), 299-311.

Mayoux, L. (1999). Questioning Virtuous Spirals: Microfinance and Women's Empowerment in Africa. *Journal of International Development*(11), 63-84.

Muthe´n, B. O. (1984). A General Structural Equation Model with Dichotomous, Ordered Categorical, and Continuous Latent Variable Indicators. *Psychometrika, 49*(1), 115–132.

Muthe´n, B. O. (1993). Goodness of Fit with Categorical and Other Nonnormal Variables. In K. A. Bollen & J. Scott Long (Eds.), *Testing Structural Equation Models* (pp. 205–234). Newbury Park, CA: Sage.

Muthe´n, B. O., du Toit, S. H. C., & Spisic, D. (1997). *Robust Inference using Weighted Least Squares and Quadratic Estimating Equations in Latent Variable Modeling with Categorical and Continuous Outcomes*. Unpublished manuscript. Unpublished manuscript. Retrieved from http://www.statmodel.com/wlscv.shtml

Muthe´n, B. O., & Kaplan, D. (1992). A Comparison of Some Methodologies for the Factor Analysis of Non-normal Likert Variables: A Note on the Size of the Model. *British Journal of Mathematical and Statistical Psychology, 45*(1), 19-30.

Narayan, D. (Ed.). (2002). *Empowerment and Poverty Reduction: A Sourcebook*. Washinton DC: World Bank Publications.

Nussbaum, M. (2001). *Women and Human Development: The Capabilities Approach*. Cambridge, UK Cambridge University Press.

O'Brien, R. M. (1994). Identification of Simple Measurement Models with Multiple Latent Variables and Correlated Errors. In P. V. Marsden (Ed.), *Sociological methodology* (pp. 137-170). Blackwell.

O'Rourke, N., Psych, R., & Hatcher, L. (2013). *A Step-by-step Approach to Using SAS for Factor Analysis and Structural Equation Modeling, Second Edition* (2nd ed.). Carrt, NC: Sas Institute.

Panda, K. (2009). Participation in the Group Based Microfinance and its Impact on Rural Households: A Quasi-experimental Evidence from an Indian State. *Global Journal of Finance and Management, 1*(2), 171-183.

Panjaitan-Drioadisuryo, R. D. M., & Cloud, K. (1999). Gender, Self-employment and Microcredit Programs: An Indonesian Case Study. *The Quarterly Review of Economics and Finance, 39*(5), 769-779.

Pitt, M. M., & Khandker, S. R. (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. doi: 10.1086/250037

Pitt, M. M., Khandker, S. R., & Cartwright, J. (2006). Empowering Women with Micro Finance: Evidence from Bangladesh. *Economic Development and Cultural Change, 54*(4), 791-831.

Raykov, T. (2004). Behavioral Scale Reliability and Measurement Invariance Evaluation using Latent Variable Modeling. *Behavior Therapy, 35*(2), 299-331.

Schumacker, R. E., & Lomax, R. G. (2010). *A Beginner's Guide to Structural Equation Modelling Third Edition* (3 ed.). New York: Routledge.

Servon, L. J. (1998). Credit and Social Capital: The Community Development Potential of US Microenterprise Programs. *Housing Policy Debate, 9*(1), 115-149.

Sobel, M. E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. *Sociological methodology, 13*(1982), 290-312.

Ssendi, L., & Anderson, A. R. (2009). Tanzanian Micro Enterprises and Micro Finance: The Role and Impact for Poor Rural Women. *Journal of Entrepreneurship, 18*(1), 1-19.

Tabachnick, B. G., & Fidell, L. S. (2012). *Using Multivariate Statistics 6th Edition* (6th ed.). New York: Pearson.

Ullman, J. B. (2013). Structural Equation Modeling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using Multivariate Statistics 6th Edition* (6th ed., pp. 681-777). Boston: Pearson.

Wang, J., & Wang, X. (2012). *Structural Equation Modeling: Application Using Mplus*. Sussex UK: John Wiley& Sons.

Weinzimmer, L. G., Nystrom, P. C., & Freeman, S. J. (1998). Measuring Organizational Growth: Issues, Consequences and Guidelines. *Journal of Management, 24*(2), 235-262.

Wiklund, J., & Shepherd, D. (2003). Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities. *Journal of Management Studies, 40*(8), 1919-1941.

Appendix 1

The selected survey's questions

No.	Variables	Questions	Responses
1	c1	I fully control my own business resources	strongly disagree to strongly agree (1-7 Likert scale)
2	c2	I fully control all household's resources/assets	
3	c3	I fully control my loans	
4	b1	Compared to last year, have your sales? (choose one)	Decrease = 1 About the same = 2 Increase = 3
5	b2	Compared to last year, have your assets (equipment/ materials) used by your business? (choose one)	
6	b3	Compared to last year, have your profits (revenues after expenses are paid) in your business? (choose one)	
7	b4	Compared to last year, has the number of employees in your business? (choose one)	
8	l	How much additional loan amount did you receive from your MFI during this year (January 2013 – January 2014) only?	in millions of local currency (Indonesian Rupiah/IDR)
9	h1	What is the highest grade/level of school you have attained?	University level = 1 Below university = 0
10	h3	Did you have prior working experience with the type of business you started?	Yes = 1 No = 0
16	ep1	On average, how many hours per day do you spend your time on television or reading newspaper/magazine?	in hours per day
17	ep2	In comparison with your spouse, please indicate your position in the following conditions: age	Lower = 1 About the same = 2 Higher = 3
18	ep3	In comparison with your spouse, please indicate your position in the following conditions: education	
19	ep4	In comparison with your spouse, please indicate your position in the following conditions: health	

Appendix 2

Summary of the decomposition analysis for control over resources

Variable	control over business resources (c1)		control over household resources/assets (c2)		control over loan (c3)	
	β	*SE*	*β*	*SE*	*β*	*SE*
Independent variables						
Microcredit (l)	0.104*	0.055	0.064	0.053	0.119**	0.052
Mediating variable:						
Business performance (bp)	0.311**	0.049	0.288**	0.050	0.313**	0.050
Control variables:						
Education level (h1)	-0.054	0.050	0.076	0.049	0.016	0.051
Prior work experience (h3)	-0.177**	0.049	-0.103**	0.047	-0.120**	0.048
Age (a)	1.104**	0.462	0.312	0.478	0.612	0.469
Age squared (a2)	-1.056**	0.444	-0.232	0.469	-0.600	0.463
Lending schemes (g)	0.055	0.052	-0.057	0.048	-0.009	0.051
Gender (g1)	-0.104**	0.052	-0.181**	0.053	-0.046	0.051
Marital status (md)	0.196**	0.054	0.237**	0.057	0.216**	0.055
Length of membership (lm)	-0.051	0.054	-0.057	0.061	-0.040	0.058
Media exposure (ep1)	-0.081*	0.048	-0.032	0.049	-0.104**	0.049
Age gap (ep2)	0.052	0.048	-0.020	0.045	0.012	0.047
Education gap (ep3)	-0.072	0.051	0.068	0.048	-0.091*	0.048
Health gap (ep4)	0.036	0.052	-0.010	0.049	0.019	0.049

Note: ** significant at 5%, * significant at 10%. All estimated path coefficients (*β*s) and standard errors (SE) reported are in standardised values.
Analysed based on Model 2 by using the WLSMV estimator.

Dear Editor,

Thank you for the decision.
We have made substantial changes to the manuscript.
We thank to the reviewer for his constructive feedback, which has helped us to improve the quality of the paper.

Kind Regards,

Below are our responses :

Possible suggestions from the reviewer:

1 There is much about this paper to welcome but I would encourage the author to be a little more sensitive to the audience of SB. The paper dominantly sees the world through a very narrow economic lens that not all readers will share and which can alienate readers and get in the way of both implicit inferences and possible interpretations. Furthermore, I was inclined to the view that the paper was not trying to reflect on the complexity of microfinance for a generalised audience (Social Business has not had many papers published on microfinance and cannot be assumed to have an especial expertise in the field). I think there is a major contribution to be made here within the paper.

Our response : We have made significant changes to the introduction to address this—thank you for the suggestion.

2 Early in your introduction I would suggest that it would make more persuasive sense to examine the relationships of microfinance and thereby provide a basis from which you might be able to deduce the importance of a (carefully defined) notion of empowerment. This would prevent, what I found to be a difficulty namely, constantly questioning “why empowerment?” “what empowerment?”

Our response : Endeavored as suggested. Please see page 2-3

3 I would encourage a greater reflection upon your data and your method and methodology. See especially on page 11 where, for example, you give no information on what the students did and did not cover in the interviews or how the data was recorded. You only seem to report the quantitative data. The importance of interviews typically lies in the richness that they elicit. I could not help but think that a more interpretative approach would have yielded richer and more useful data on pages 11 and 12. I tend to the view that descriptive data helps the reader follow the issues more clearly and helps show how and why you draw such inferences as you do. Instead you plough almost directly into 10 pages of (at times) somewhat obscure statistical analysis based on data we are rather asked to take on trust. A strange balance.

Our response : Thank you also for this suggestion—we've endeavored to provide more information on the issues raised here.
We developed a questionnaire using closed-ended questions to gather the data. We have also added the selected survey questions in the Appendix 1 of the paper. Please see page 8-10.

A Selection of detailed observations of varying substance:

1 Abstract, Findings: It might be clearer if rather than "empowerment" you said "perceptions of empowerment"?

Our response : We have attempted to better explain the concept of "empowerment" starting with the introduction section and elsewhere in the paper. We hope this will now make things clearer. Please see page 1.

2 Gender seems to make a brief appearance as a substantive issue on Page 12 but I was left wanting more…..

Our response : We have paid more attention to this and further discussion on gender may be found in Section 5 (discussion and policy implication) on page 21-23

3 "To date" and "they" .

Our response : We have revised this as follows:
"The evidence so far has been mixed. Some studies show that microcredit increases income and consumption, enhances empowerment, fosters a feeling of community and establishes creditworthiness and financial self-sufficiency. Other studies show that microcredit may lead to over-indebtedness resulting in perpetual poverty and crowds out other anti-poverty interventions." (page 2)

4 Page 2 et seq: the detail about Indonesia comes earlier in the paper than I think is appropriate. This is not major but might be more useful as the context for your method and data. I would certainly find an introduction to what you really mean by empowerment and why it matters would be more appropriate this early in the paper.

Our response : The relatively lengthy discussion on Indonesia re context has now been summarized and is much briefer. As well, as suggested, there's more discussion on the notion of "empowerment" in the introduction. Please see page 2-3

6 Page 5:
I would be astonished to really discover that the excellent Amartya Sen was the first person to introduce the notion of agency in 1999… be more careful!

Our response : Our apologies—as pointed out, this may not be correct and we've made the relevant changes. On page 2

7 Page 5:
The definition of empowerment here talks of inner transformation – very properly. The link between that and economic control over resources is not completely obvious – they are poor proxies I would have thought.

Our response : We've endeavored to explain the concepts and relationships a bit better in the introduction. Please see page 2-3

8 Page 6/7: the paragraph from "Using the livelihood method…" seems oddly out of place and very unhelpfully speculative.

Our response : We deleted the paragraph.

9 Page 7: Lakwo's (2006) findings are not a surprise are they? …… and they relate to the potential tautology I mentioned earlier.

Our response : We deleted the sentence.

10 Page 7: The sentence "An experimental study… " is bizarrely and irrelevantly detailed… surely? What has consumer credit got to do with it?

Our response : We deleted the paragraph.

11 Page 9: I was surprised by the distinction between independent, mediating and control variables and the absence of other factors like inherited wealth, status and employment. IN addition, the assertion about the reliability of proxies is self-serving and self-destructive…. How could one know this to be true?

Our response : Unfortunately, we could not obtain data about inherited wealth. Asking about inherited wealth in Indonesian society is considered inappropriate. All respondents were microenterprises owners, thus self-employed. We did include marital status (md) as a control variable. On page 8

12 Page 10: you might re-define MFI. As far as I can see it only appears in full in an earlier footnote.

Our response : The comment has been addressed on page 4.

13 Page 12: I apologise if I missed it but I couldn't find where you explain why "multivariate normality is severely violated"

Our response: It is provided in footnote 9 on page 12.

14 Page 13: You'll have to pardon my apparent ignorance but I would have thought that an autocorrelation of 80% was very high. Your statements here are surprising – I don't say wrong, but it

seems to me that your cross tab Figure 1 has more interest in it than you derive and I would be interested to see a little more reflection upon what I would have thought was obvious multi-collinearity? (I doubt I will be the only reader of SB who might struggle with this).

Our response : Multicollinearity is not autocorrelation, but is a state of very high linear inter-correlations or inter-associations among the independent variables. We have added a footnote (11) regarding multicollinearity in SEM on page 12.

15 Page 15:
..... In such circumstances it makes sense to try and explain to your intended readership what you are doing and why and leave the technical detail in (say) footnotes.

Our response : We have added some notes to explain some of the technical details at the end of TABLE 2 on page 15.

16 The point being that page 20 contains some really interesting and potentially important claims – I'd love to be able to see these more clearly in the data without the intervening variables of advanced statistical language. Is this possible? I don't know if this makes any sense - but I found the exposition on pages 22-23 perfectly clear and helpful.

Our response : The direct (without intervening variable) relationship between microcredit – control over resource has been presented in Table 3 Model 1 on page 17.

Bukti korespondensi permintaan revisi 2 oleh reviewer

(6 Juli 2018)

UNIVERSITAS KRISTEN PETRA

Adwin Surja A. <aplin@petra.ac.id>

Social Business - Decision on Manuscript ID SB-2017-0032.R1

Social Business <onbehalfof@manuscriptcentral.com> 6 July 2018 at 16:33
Reply-To: mjb@westburn.co.uk
To: aplin@petra.ac.id

06-Jul-2018

Dear Dr. Atmadja:

Manuscript ID SB-2017-0032.R1 entitled "Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia" which you submitted to Social Business, has been reviewed. The comments of the reviewer are included at the bottom of this letter.

As you will see, the reviewer is impressed with the changes you have made but is still concerned about issues of relability and suggested that further revisions might be made.Both of us appreciate that as the research has been completed there are limitations to the changes that can be made. However, if limitations are recognised and solutions suggested for addressing them made explicit, then the contribution may be enhanced. Therefore, I invite you to respond to the reviewer(s)' comments and revise your manuscript.

When resubmitting your revised paper, please upload three copies as follows:
- The complete paper containing all author details and with the changes marked (for the Editor's use)
- The complete version of the paper containing all author details but without the changes marked (this will be the one that is used by the copyeditor should your paper be accepted)
- The main document without the author information and without the changes marked (this will be sent to the referees for re-review).

You may also click the below link to start the revision process (or continue the process if you have already started your revision) for your manuscript. If you use the below link you will not be required to login to ScholarOne Manuscripts .

*** PLEASE NOTE: This is a two-step process. After clicking on the link, you will be directed to a webpage to confirm. ***

https://mc.manuscriptcentral.com/wpsb?URL_MASK=ea3a99cc455649f586eddeaeffa95334

You will be unable to make your revisions on the originally submitted version of the manuscript. Instead, revise your manuscript using a word processing program and save it on your computer. Once the revised manuscript is prepared, you can upload it and submit it through your Author Centre.

When submitting your revised manuscript, you will be able to respond to the comments made by the reviewer(s) in the space provided. You can use this space to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the reviewer(s). Please also take care not to identify the author(s) in the response to reviewer(s).

IMPORTANT: Your original files are available to you when you upload your revised manuscript. Please delete any redundant files before completing the submission.

Because we are trying to facilitate timely publication of manuscripts submitted to Social Business, your revised manuscript should be uploaded as soon as possible. If it is not possible for you to submit your revision in a reasonable amount of time, we may have to consider your paper as a new submission.

Once again, thank you for submitting your manuscript to Social Business and I look forward to receiving your revision.

Sincerely,
Professor Michael Baker
Editor, Social Business

Reviewer(s)' Comments to Author:

Reviewer: 1

Comments to the Author
Reviewer's Comments
This is a very substantially revised version of a paper previously submitted to SB and is very much improved as a consequence. I want to start by congratulating the author for the extent of the revision and the extent of the improvement. Thank you, also, for the detailed response to my comments: that is always helpful and gives me the chance to apologise: I have no idea what I was thinking on comment 14, I am perfectly aware that multicollinearity and autocorrelation are very different things but my note makes no sense! Sorry.
However, rusty as I am on statistical analysis I am more confident on the philosophy of science and research design and on these two issues you have largely ignored my comments. This places me in a dilemma.
There were three things I was especially exercised by:
1. Given the proxies you were using there was an element of tautology about your test. You have dealt with this to a degree by introducing the component of control over domestic resources but that only goes part of the way? (Page 3, line 22 first raised this question in my mind but it is there thereafter).
2. The form of the questions and the choice of the methods are crucial to the paper, but neither are discussed and the limitations they each impose on your analysis and inferences is not considered.
3. Field work offers great opportunities for richness and you even say on page 10, line 22 about observing real life conditions. These observations do not appear in the paper.
4. The value of statistical method lies in a number of directions, but it is essentially a positive (i.e. it claims to avoid normative) method and it allows a very specific statement of the reliability of what is or what is not discovered. You end up speculating towards the end of the paper and there is a lot of "might"….. without a more theoretically nuanced approach this is not really helpful and rather undermines your method.
I do not consider any of these matters fatal in and of themselves, but it is the failure to address them and to recognise how conditional they are and how conditional that makes your work that is a disappointment. (The fallacy of misplaced concreteness for example). Can you honestly (and perhaps even briefly) reflect on these matters?

Specific Issues
- Page 2 and 3: a much nicer introduction, thank you

- Page 4, line 5: why 2012?; why USD 3,521?
- Page 4, line 14: Given your audience I am of the view that changing the first sentence to read “An approach called “structural….SEM) estimator” was used…” ….. who will know what you are doing, why you are doing it or why this is better than a simpler series of regression or a version of factor analysis?
- Page 4, line 24: Are you interested in the positive results? They are not a surprise are they?
- Page 4-5: much nicer!
- Page 5, line 19: I presume you mean Mayoux not yourself? The tradition is that “the author” refers to the person who wrote the present paper.
- Page 5, lines 23 and 24… “their” is puzzling to me
- Page 4 line 38: are these first few lines actually a sentence?
- Page 6 line 25: “factor” should be “factors”
- Page 6 line 45: this first section about method rather misses the point. Proxies versus bad proxies is not an either/or: it is about either choosing reliable proxies or using some other method like self-reporting (as you do later). I cannot help but worry that the lack of reflection upon the inevitable limitations in the approach weakens the argument. This is clearly a VERY difficult issue but your audience needs to know how reliably they are being informed… you don’t have to “sell it” to us.
- Page 7, line3: interestingly you do not say why you chose a positivist method; why you are using statistics as your first pass and why you are not, perhaps, using non-parametric statistics.
- Page 7: this would be stronger if you thought carefully about communication: self-reporting and measurement error? Natural logs? Similarly on page 8: why these control variables? Why squared respondents age? Why only university education and why only a dummy? Why age and education gaps? Think about your audience please.
- Page 7, line 42: it should read “the literature”
- Page 8 line 48 I think the word “institution” is missing after the word “microcredit”
- Page 9, line 39: why Closed questions (I think I can guess but it is important to say so).
- Page 10, line 22: this exposes the contradictions I have been trying to tease out “observe their real life conditions”… as far as I can tell nobody does this in this paper and any observations are not shared. Interviewing is exactly about this sort of thing but there is nothing in this paper about it.
- Page 10, line37 “senior high school”.. does this suggest a bias within the population perhaps? This could be quite interesting if the more educated are more likely to apply for loans.
- Page 11, first paragraph… I am sure you could make more use of this interesting data?
- Thank you for the explanation on Page 11, lines 43-53: this is much more like it
- Table 1: I liked this but surely some of it is a bit surprising? What priors should we have here?
- Page 14, line 32; there is something wrong with this sentence.
- Page 18, line 10: was Ho2 a theoretically weak hypothesis in the first place? (The absence of theory is bothersome isn’t it?)
- Page 20, line 14: can you really say this from this data?
- Page 20, line 30 et seq: much nicer explanation.
- Page 22 et seq: I would strongly recommend that the conclusions be re-thought. As I have said “might”,. “should” and the potentially circular reasoning let the paper down. Equally, the emphasis on a non-statistically significant result undermines your whole methodology so be much more thoughtful about it. Equally, you might like to consider the extent to which your choice of method, sample and means of interpretation are potential weaknesses that have affected the study.

Bukti konfirmasi submit revisi 2 dan artikel yang direvisi

(9 September 2018)

UNIVERSITAS KRISTEN PETRA

Adwin Surja A. <aplin@petra.ac.id>

Social Business - Manuscript ID SB-2017-0032.R2

Social Business <onbehalfof@manuscriptcentral.com> 9 September 2018 at 23:15
Reply-To: sbeditorial@westburn.co.uk
To: aplin@petra.ac.id

09-Sep-2018

Dear Dr. Atmadja:

Reference No.: SB-2017-0032.R2.

Thank you submitting your revised paper "Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia" and response to reviewers. Your paper will be sent back to the original reviewers for further comment. You can track the status and view details of all your manuscripts by logging in and clicking the Author Centre link and going to 'My Manuscripts'.

Sincerely,
Anne Foy;Fiona Lees
Social Business Editorial Office

Please mention the above reference number in all future correspondence or when calling the office for questions. If there are any changes in your street address or e-mail address, please log in to ScholarOne Manuscripts at https://mc.manuscriptcentral.com/wpsb and edit your user information as appropriate.

Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia

Journal:	*Social Business*
Manuscript ID	SB-2017-0032.R2
Manuscript Type:	Original Article
Keywords:	microcredit, micro-entrepreneurs, empowerment, Indonesia

Does Microcredit Empower Micro-entrepreneurs? Empirical Evidence from Indonesia

Abstract

Purpose : This study provides fresh survey-based evidence from Indonesia on the impact of microcredit on empowerment of micro-entrepreneurs.

Methodology : Data was collected from a survey of microcredit-funded microenterprises in Surabaya and its surroundings—556 microenterprises participated voluntarily in the survey. Weighted least square mean and variance adjusted structural equation modelling (WLSMV-SEM) estimator was used to analyse the data.

Findings : Results show that microcredit has a positive and significant relationship on control over resources, but business performance does not significantly mediate the microcredit – empowerment relationship.

Limitations : Some limitations noted in this study are that the sample was obtained from one region of Indonesia, and was unbalanced in gender. The cross-sectional data of this study limits inferences of causality in the analyses, and prohibits it from assessing longitudinal effects and from examining non-recursive models.

Contribution : At least in the case of Indonesia, the microcredit programme is working and the actions of policymakers and donors can be justified. However, more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest in microcredit programme at the cost of other competing alternative strategies.

Keywords: microcredit, micro-entrepreneurs, empowerment, Indonesia.

1. Introduction

Over the last several years, microcredit[1],—the act of providing small amounts of credit at no or low interest rates to unemployed, low-income, and/or financially excluded individuals or groups—has increasingly become a common financial policy tool for supporting and enhancing formation and expansion of microenterprises worldwide, particularly in developing and emerging markets. Microcredit is also believed to help alleviate poverty and empower the foregoing disadvantaged segments of society. Predictably, this widespread policy action has prompted an explosion of empirical research, particularly over the last decade, testing the microcredit vis-à-vis business formation, poverty alleviation and empowerment relationships.

The evidence so far has been mixed. Some studies show that microcredit increases income and consumption, enhances empowerment, fosters a feeling of community and establishes creditworthiness and financial self-sufficiency. Other studies show that microcredit may lead to over-indebtedness resulting in perpetual poverty and crowds out other anti-poverty interventions[2]. Nevertheless, millions of dollars continue to be dispensed into microcredit related activities[3], suggesting that more country-specific and broader empirical evidence is required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microcredit at the cost of other competing alternative strategies.

And, that is precisely the objective of the present study. The study takes a fresh look at the microcredit – empowerment relationship in the case of Indonesia. Empowerment is defined variously in the literature, including expansion of physical and financial assets, ability of individuals and groups to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives (Narayan (2002). Studies have also linked empowerment to the concept of human agency focusing on the importance of inner

[1] A major component of "microfinance", which encompasses other basic banking and insurance services and products as well.

[2] For example, see (Crépon, Devoto, Duflo, and Parienté (2011); Garikipati (2008); Imai, Arun, and Annim (2010); Johnston and Morduch (2008); Kaboski and Townsend (2012); Karlan and Zinman (2009); Khandker (2003); Kondo, Orbeta, Dingcong, and Infantado (2008); Panda (2009); Pitt, Khandker, and Cartwright (2006); Ssendi and Anderson (2009)).

[3] For example, in the fiscal year 2014, the IFC committed US$ 519 million to 47 projects with microfinance institutions (MFIs). The IFC cumulative investment portfolio in microfinance exceeded US$ 3.5 billion, with outstanding commitments of $1.68 billion (IFC, 2015). ADB allocated US$46.125 million to only microfinance institutional development projects in the Asia–Pacific region during 2011–2013 (ADB, 2015).

transformation of individuals as an essential factor in the formulation of choices (Kabeer, 1999; A. Malhotra, Schuler, & Boender, 2002; Nussbaum, 2001).

Kabeer (1999), in particular, defines empowerment as the process of change by which those who have been previously denied the ability to make strategic life choices acquire such ability. There is thus a logical inverse association between poverty and empowerment because resource deficiency for meeting basic needs often impedes the ability in exercising meaningful choice, which can be viewed in terms of three inter-related dimensions: resources, agency, and achievement.

While resources[4] are enabling factors of empowerment, agency is the essence of empowerment. Agency is defined as the ability to express individual goals or meaningful choices and to act upon them, which includes the ability to formulate strategic choices that affect their lives, and to have control over resources (A. Malhotra, 2003). In this study, empowerment is defined as agency, proxied by control over decisions to spend, save, use, purchase or sell material resources, including, business resources and household resources plus control over borrowed funds such as microcredit.

Having defined empowerment as control over resources, the study then endeavours to investigate if microcredit might enhance empowerment. The microcredit-empowerment evidence so far is mixed but also, empirical evidence from Indonesia—world's fourth most populous and tenth largest economy, Southeast Asia's largest economy and a member of the G-20 is scarce, if any. And, in Indonesia, microcredit is widespread, amounting to millions of dollars per annum. Thus, while contributing to the microcredit-empowerment debate, this study provides first comprehensive empirical evidence from Indonesia.

A related question we ask, on the basis of literature is does business performance mediate the microcredit – empowerment relationship? Microcredit or financial capital is critical not only for start-up stage, but is equally important for survival and growth (Bates, 1995; Cooper, Gimeno-Gascon, & Woo, 1994; Cooper, Woo, & Dunkelberg, 1988; Demirguc-Kunt, Beck, & Honohan, 2008). A thriving business is likely to enhance owners' earning capabilities which, in turn, is likely to enhance their economic status and thereby empowerment via greater control over resources.

To address these questions, we conducted a survey of microcredit-funded microenterprises in Surabaya, the second largest city in Indonesia. The eligible respondents

[4] Resources consist of material resources (non-financial and financial), human capital, and social capital.

needed to be at least 18 years old, have at least one microenterprise at the time of the survey, be a member of a microfinance institution (MFI) since at least 2012[5], and have a current outstanding balance of no more than 50 million rupiahs[6] (about USD 3,521, assumed USD 1 = Rp. 14,200). Of the fourteen MFIs approached, five provided formal consent for voluntary participation by their members. Of the 800 prospective respondents, 556 agreed to be interviewed. Of these, 483 complete responses (92 men and 391 women) were valid and reliable for the purposes of analysis.

Structural equation modelling with weighted least square mean and variance adjusted structural equation modelling (WLSMV-SEM) estimator was used to analyse the data. The estimator can accurately estimate multiple and interrelated dependent relationships incorporated in integrated models, which contain some latent or unobservable variables (i.e. business performance and control over resourses) that need to be measured by using some categorical observable indicators.

Results show that microcredit has a positive and significant relationship on control over resources, but business performance does not significantly mediate the microcredit – empowerment relationship. Thus, this study confirms previous findings of a positive microcredit – empowerment relationship, suggesting that if empowerment is a goal then at least in the case of Indonesia, a populous, developing economy, the microcredit strategy is working and the actions of policymakers and donors can be justified. However, these findings may not apply to other developing economies—more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microcredit at the cost of competing alternative strategies.

The rest of this paper is outlined as follows. Section 2 outlines relevant literature review and hypothesis development linked to the main research question, followed by the research method in section 3. Section 4 analyses the data and explains the empirical results. Section 5 discusses the findings and policy implication. Section 6 concludes.

---

[5] The survey was conducted in early 2014, so 2012 was set as the cut-off date because there was a lagged effect of credit on the respondents' business and subsequently on empowerment levels. It is also considered the possibility that the social interaction during a respondent's participation in the credit programme often have a delayed effect on the respondents' empowerment level.

[6] The Central Bank of Indonesia (Bank Indonesia) defines microcredit as a loan below 50 million rupiah (equivalent USD 3,521) provided by formal and semi-formal financial providers in Indonesia.

2. Literature review and hypothesis development

2.1. Microcredit and economic empowerment

Providing microcredit to the poor may deliver stronger economic and social impacts (Armendariz de Aghion & Morduch, 2005; Khandker, 2005), and may improve human empowerment level (Kabeer, 2001; Mahmud, Shah, & Becker, 2012; Pitt & Khandker, 1998; Pitt et al., 2006). This might be due to the design of the credit (e.g. collateral requirement, modes of payment, loan size and timing, types of savings product) that may encourage empowerment processes to occur (Eyben, Kabeer, & Cornwall, 2008). Evidence shows that microcredit links to human empowerment, because it assists the recipients to have access to finance (Alsop & Heinsohn, 2005; Kabeer, 1999; A. Malhotra et al., 2002), and then enables them to gain economic advancement and to exercise power and agency (Golla, Malhotra, Nanda, & Mehra, 2011).

Mayoux (1999), on the other hand, provides a strong critique of the naive belief that the credit by itself creates a 'virtuous spiral' of economic, social, and political empowerment, without it being considered necessary to develop explicit strategies to address other dimensions of poverty or gender subordination. Mayoux (1999) considers as highly simplistic the view that mere participation in such a scheme is sufficient for empowerment. In conjunction with the critique, Garikipati (2008) emphasises that access to credit does not affect empowerment especially given the borrowers' lack of co-ownership of family's productive assets, which means that even when their loans are used for productive purposes they are unable to divert any of the incomes from loan-sponsored activities into repayments. Most women, in particular, are apparently unable to take full control over the use of money they borrow from MFIs, instead their spouses take more power to decide what the money is spent for[7]. The loan may easily diverge into enhancing household assets and incomes. In such a situation, the household may benefit and generally help the households strengthen their ability to deal with the household vulnerability indicators, however the woman herself is likely to see further deepening of the resource division between her and her husband.

Other studies report that higher income and private property ownership resulting from microcredit programs which strengthened individuals' positions—in decision making, access to economic resources, and control over resources—within their households (Khandker,

[7] This finding somewhat confirms the conclusion of previous studies done by Goetz and Gupta (1996) and Leach and Sitaram (2002) who found that loans made to women are usually controlled by their husbands, leading to women's heavily dependence on them for loan repayments.

2003; Pitt & Khandker, 1998; Pitt et al., 2006). Using a Bangladeshi survey, Hashemi, Schuler, and Riley (1996) examined the effect on empowerment of a microcredit programme. The study showed that joining a microcredit programme was likely to increase the level of empowerment (i.e. an index constructed by several indicators such as mobility, economic security, ability to make small purchases, ability to make larger purchases, etc.). When decomposing the index, the study also found that microcredit programmes positively affected some individuals' aspects, such as economic security (i.e. owning house, having productive assets, having savings) and control over the use of money or assets earned.

Thus, in light of the foregoing,

Hypothesis 1: microcredit enhances empowerment of micro-entrepreneurs in Indonesia.

2.2. Business performance as a mediating variable in the microcredit–economic empowerment relationship

The literature suggests that the relationship between microcredit and economic empowerment might be indirect through business success. For example, Golla et al. (2011) suggest that business success or economic advancement can promote power and agency of micro-entrepreneurs. To be able to advance economically, individuals need resources. Resources, such as financial capital (e.g. microcredit, savings), human capital (e.g., education, skills), physical capital (e.g. land, machinery) and social capital (e.g. ties, networks), are the enabling factors that can improve the ability of individuals to advance economically.

Thus, where business is performing well, revenues generated from the business increase the entrepreneurs' earning capabilities and their ability to accumulate autonomous assets (IBRD, 2012). An increase in earning capabilities and assets might in turn enhance economic status of the entrepreneurs, leading to greater power in control over resources within their household (Mahmud et al., 2012).

In light of the foregoing,

Hypothesis 2: business success mediates the relationship between microcredit and empowerment in Indonesia.

3. Research method

3.1. The variables

The literature proposes different approaches for measuring empowerment using various frameworks, dimensions, and indicators depending on their goals and contexts. There have been increasing moves to capture empowerment through direct measures of decision-making and control or choice; these are seen as the most effective representations of the process of empowerment, as they are closest to the measuring agency (Batliwala, 1994; Garikipati, 2008; Mahmud et al., 2012; A. Malhotra et al., 2002; Mason & Smith, 2000).

Dependent variable. The ability to control resources (*con*) is used as a proxy for agency—the essence of empowerment. Control over resources or incomes is one of commonly used dimensions of empowerment in household level (A. Malhotra, 2003). *Con* is a latent or unobservable dependent variable measured by respondents' self-reported ability to control business resources (*c1*), household resources (*c2*), and borrowed money—loan (*c3*). The use of multiple measures to represent control over resources is better than a single measure (DeVellis, 1991), since it can reduce the measurement error of the concept, and can improve the statistical estimation of the relationship between concepts by accounting for measurement error in the concepts (Hair Jr, Black, Babin, & Anderson, 2010). In this study, the term 'control' includes the respondents' ability to spend, save, use, purchase or sell material resources (either financial or non-financial) in their own business and household as well as control over loans.

Independent variable. Microcredit (*l*), the independent variable, is operationally defined as the amount of credit received by the individual respondent during a one-year time period (January 2013 – January 2014). The amount is then transformed into a natural logarithm.

Mediating variable. Business performance (*bp*)—a proxy of business success—is the mediating variable. The variable is measured by a respondent's self-reporting of changes (i.e. decrease/about the same/increase) in sales (*b1*), assets (*b2*), number of employees (*b3*) and profits (*b4*) across two consecutive years (2013 – 2014). These four observed indicators of performance are most commonly suggested measures in the literature (Ardishvili, Cardozo, Harmon, & Vadakath, 1998; Delmar, 2006; Weinzimmer, Nystrom, & Freeman, 1998). The subjective self-reported performance as a measure of business performance, while not ideal, has been used in other studies with reasonable reliability (Anna, Chandler, Jansen, & Mero, 2000; Cruz, Justo, & De Castro, 2012; Wiklund & Shepherd, 2003). Self-reported measures

are reasonable proxies when, as is common in most developing countries including Indonesia, micro entrepreneurs tend not to keep proper records of their business transactions—quite often they are not properly trained, qualified or otherwise equipped to do so.

Control variables. The control variables include human capital (i.e. level of education and prior work experience), respondent's age and the squared of respondent age, lending schemes, gender, marital status, length of microcredit membership, media exposure, age gap, education and health gaps. Some researchers have suggested that economic empowerment might be influenced by human capital—the level of education and prior work experience. Higher education gives individuals, especially women, more egalitarian and progressive views of their role within the household (Chioda, 2013), while prior work experience equips them with a greater ability to understand and handle business, which might also be applicable for households' matters (Bosma, van Praag, Thurik, & de Wit, 2004; Karlan & Valdivia, 2010). The level of education (*h1*) is measured as a dummy variable—1 for university graduate, 0 otherwise. Prior work experience (*h3*) is also a dummy variable—1 for 'yes', 0 otherwise.

Age (*a*) is the age of respondent measured in years. Gender (*g1*) is 1 for female, 0 otherwise. Marital status (*md*), is 1 for unmarried, widowed, and divorced, and 0 for married couple. Lending schemes (*g*), the lending scheme applied to microcredit, is 1 for group lending scheme, 0 otherwise. Length of microcredit membership (*lm*) is the duration for which a respondent had been a member of the microcredit programme counted from the year when the first loan was taken out[8]. Media exposure (*ep1*) is measured by the time spent for watching television or reading newspapers/magazines. Age gap (*ep2*) is the gap between the ages of the respondents and their spouse[9]. Education gap (*ep3*) is the gap between the respondents' level of education and their spouses'[10], while health gap (*ep4*) is the gap between the respondents' health condition and their spouses'.

3.2. The survey

The data was obtained from a survey conducted in Surabaya, the second largest city in Indonesia, and its surroundings in 2014. Five of the fourteen MFIs agreed to participate in the

[8] For individual credit schemes, membership commences when a borrower obtains their first loan. For group lending credit schemes, the first loan is usually granted to a member within their first year of membership.

[9] Frankenberg and Thomas (2001) note that the older of the partners are more likely to have a more significant role in empowerment.

[10] Holding spouse education constant, an increase in individuals' level of education is likely to increase the authority of decision-making meaning empowerment (Frankenberg & Thomas, 2001).

survey, including two cooperatives (Assakinah and Setya Bhakti Wanita), two Islamic-style microcredit institutions registered as cooperatives (BMT ABU and BMT Madani) and a government-sponsored microcredit institution (BKM Merisi). Prior to the interviews, the respondents received complete information by phone and in writing regarding the nature and purpose of the interview; their rights as a respondent were clearly outlined.

The sample provides a reasonable mix of microcredit providers. For example, the sample includes small (205 members, BKM Merisi) to large (12,470 members, SWB) MFIs, as well as relatively new (2010, BKM Merisi) to relatively well established (1978, SWB), covering different types—Islamic, cooperatives and others. The sample also covered different combinations of lending group versus individual credit schemes[11] and different make up in terms of men and women memberships.

At the time of the survey, the five lenders had a total membership of 17,553, of which 5,531 (i.e. BKM Merisi = 205, SBW = 3164, Assakinah = 738, BMT ABU = 575, and BMT Madani = 849) satisfied the key survey criteria of owns at least a microenterprise[12] and a current outstanding balance of no more than 50 million rupiahs. Of those 5,531 borrowers, 1,424 (or 26%) were with individual lending schemes and the rest (74%) had borrowed via group lending schemes.

Of the eligible respondents, those with the group lending schemes belonged to around 178 lending groups (i.e. Assakinah = 41, SBW = 108, BKM Merisi = 29). From each of these groups, two to three members were randomly selected as prospective respondents—a total of 530. For respondents using the individual lending scheme, around 270 were randomly selected as prospective respondents. Thus, a total of 800 prospective respondents were identified and initially contacted by the providers, on behalf of the researchers, for their voluntary participation. Of these, 556 (405 group lending and 151 individual scheme) agreed to be interviewed.

A structured questionnaire was designed, on the basis of extant literature—e.g. Bradley, McMullen, Artz, and Simiyu (2012), Golla et al. (2011), A. Malhotra et al. (2002)—to address the research questions of this study. The questionnaire contained closed-ended

[11] In the microfinance industry, the individual and joint-liability/group lending schemes are the most common types available to the borrowers. Under the former, the size of the loan is determined primarily on the basis of the pledged collateral, which might be repossessed in the event of default. Under the group-lending scheme, microcredit is offered to individuals only via a lending groups. The participating lending group, assisted by an officer appointed by the microfinance provider, decides the amount to be approved and subsequently becomes liable for repayment in the event of default. To ensure timely repayment of the loans, the group lending scheme involves frequent repayment meetings and peer pressure.

[12] In Indonesia, both business owners and non-business owners may apply for credit from MFIs.

questions with mostly multiple choice responses. Closed-ended questions are quicker and easier for respondents to answer compared to open-ended questions. The response choices can clarify the questions text for respondents, easy to compare, and improves consistency of the responses. Nevertheless, closed-ended questions may not have the exact answer respondent wants to give, and respondents with no opinion may answer anyway. In closed-ended questions, misinterpretation of a question can go unnoticed, and the respondent are not allowed to express an opinion without being influenced by the researcher.

In this survey, respondents were asked for information, for instance on the following: personal background, socio-economic status, business performance and control over resources—both at the personal level and within the family—pre- and post-microcredit experience (Appendix 1 explains briefly how the questions were framed to obtain relevant data). The questionnaire was pre- and pilot-tested. Pre-testing involved feedback from two senior researchers/academics and pilot-testing involved 30 randomly selected respondents from the pre-determined sample.

Interviews were conducted by undergraduate economics students undertaking final year research methods class at a local Surabaya university. The university's formal approval was sought and obtained for this, so an announcement was made by the researcher's colleagues at the university about the opportunity to participate in the survey. The interviewers were selected based on their academic performance and relevant prior experience. The researcher took a full-day training session with the students prior to the survey, and closely supervised the interviews during the data collection process to minimise any potential interviewer bias.

Face-to face interviews were conducted mostly at the respondent's residence or business place to reflect their real-life conditions; occasionally, interviews were conducted at scheduled group meetings. At the end of each day, completed questionnaires were returned to the researcher to check for validity and reliability. Of the 556 interviews, 483 complete responses (92 men and 391 women) were determined to be valid and reliable for the purposes of analysis—incomplete responses and outliers were excluded.

3.3. The data

This section provides a brief description of the data collected, including on demographics of respondents. For example, the age of respondents ranged from 23 to 66, and around 94% were married. Most of them were senior high school graduates (51.97%), some

were university graduates (20.29%); the rest had a lower level of education. The length of membership varied from 1 to 37 years. On average, a respondent had obtained 8.61 million rupiahs (USD 606.33) of microcredit from the participating providers during the sample period. More than 70% of the respondents were lending group members from three microcredit providers (Assakinah, SBW, and BKM Merisi), with the group sizes ranging from 3 to 51 members (on average, 23 members per group); the rest took their loans via individual lending scheme offered by four providers (excluding BKM Merisi).

Regarding control over resources, the survey revealed that majority (about 70%) respondents were able to take control over their business resource and loans. However, only 48% of the total respondents had ability to control their household resources or assets. The data also show that of the 483 respondents, 419 held their own incomes, and 353 also held majority of household incomes. Interestingly, the proportion of women controlling their own and households' incomes were greater than men, and more women (82.61%) than men (66.30%) had personal savings; however, the proportion of male respondents who contributed to more than 50% of household expenses were more than twice the female number (59.78% versus 25.83%). These data indicate that the majority of respondents' household expenses still relied on men incomes; however, women mostly became the more trusted ones to manage household budgets. Women's incomes were deemed as an extra income for families; hence they could control and keep the incomes as personal saving.

With regard to business performance, 65.84% of the respondents reported an increase in annual profit over the sample period, while others experienced no change (19.46%) or a decrease (14.70%). In terms of sales, with average monthly sales revenues ranging from Rp. 400,000 to Rp. 25,000,000 (equivalent to around USD 30 to USD 1,888), the proportion of respondents experiencing an increase, no change, or a decrease in annual sales were respectively, 66.46%, 18.43% and 15.11%. Most respondents reported no change in annual total assets and number of employees (57.35% and 88.20%, respectively); most did not employ anyone. The main business activities included manufacturing (38.65%), trading (40.99%), and providing services such as hair salon, car/motorcycle mechanics, laundry, boarding houses, computer or electronic devices repair (22.36%).

4. Models and empirical results

This study develops two models to investigate the answers to the research questions. Model 1 is a baseline model without our mediating variable (business performance) and

directly links all covariates to the dependent variables. Model 2 involves business performance as the mediating variable in the microcredit—empowerment relationship. In Model 2, some control variables, such as human capital (i.e. *h1* and *h3*), respondent age (*a*) and the squared of age (*a2*)[13], lending schemes (*g*), gender (*g1*) and the length of microcredit membership (*lm*) are also expected to have indirect relationships with economic empowerment through business performance.

Structural equation model (SEM) analysis framework was used to estimate the relationships. There are two main reasons for choosing SEM. Firstly, SEM has the ability to represent constructs as unobservable or latent variables in dependent relationships. Secondly, SEM can estimate multiple and interrelated dependent relationships incorporated in an integrated model by examining the structure of interrelationships expressed in a series of structural equations depicting all the relationships among the variables in the analysis (Hair Jr et al., 2010).

As this study involves categorical or ordinal dependent factor indicators, which are commonly not normally distributed, the most commonly used SEM estimator (the maximum likelihood-SEM) cannot be implemented appropriately. Instead, the weighted least squares mean and variance adjusted (WLSMV) estimator is applied for estimating both models. The estimator provides more accurate parameter and model fit compared to the maximum likelihood-SEM in such conditions (Bandalos, 2008; Brown, 2006; Flora & Curran, 2004; Lei, 2009)[14].

Descriptive statistics presented in Table 1 provides a basic understanding of the data. The table shows that the inter-correlation with the control over resources (*con*) factor indicators are all below 0.80, meaning that the construct does not seem to have inter-correlational problems—see O'Rourke, Psych, and Hatcher (2013). However, in the case of business performance (*bp*), the inter-correlation between change in sales (*b1*) and change in profits (*b4*) is 0.91; hence, one of these variables should be eliminated based on suggestions

[13] Older persons are deemed to be more independent and empowered than younger ones because they have more experience with life, a better understanding of how to get what they want or need, a closer relationship with the spouse, etc. (Mason & Smith, 2003). However, as people age, they are likely to become more dependent on their families.

[14] Treating categorical/ordinal scale as continuous scale might lead to biased (either in positive or negative direction) parameter estimates, incorrect standard errors and model test statistics (Green, Akey, Fleming, Hershberger, & Marquis, 1997; Muthe´n, du Toit, & Spisic, 1997; Muthe´n & Kaplan, 1992), because the standard continuous measurement model is fundamentally misspecified, with high levels of skewness, kurtosis, or both—evidence when the assumption of multivariate normality is violated—(Muthe´n, 1993). Thus, an appropriate solution is to treat a categorical/ordinal variable directly as it is (Muthe´n, 1984, 1993; Muthe´n et al., 1997).

of Tabachnick and Fidell (2012) and Ullman (2013). This extreme inter-correlation might be due to the majority (63.35%) of respondents' businesses included trading and providing services, which are more likely to have relatively stable costs of production. Accordingly, the changes in profit might directly reflect the changes in sales revenue[15]. Considering the analysis, change in sales (*b1*) is then removed. The pairwise correlation analysis for the rest of variables appear to be relatively small (all smaller than 0.80), implying that multi-collinearity[16] might not be too much of a concern—see Grapentine (2000), Grewal et al. (2004).

[15] As profit equals sales revenue minus costs, changes in profit might be caused by changes in sales, but not vice versa. Thus, changes in sales affect sales revenue, and changes in sales revenue lead to changes in profit, assuming that the costs of production remain unchanged.

[16] The effect of multicollinearity in SEM is still arguable in literature. Some notice that multicollinearity can lead to model's parameter estimates deviate from the true parameter with large standard errors (Grapentine, 2000; Grewal, Cote, & Baumgartner, 2004), while some others claim that SEM can help deal with or event robust against multicollinearity, particularly if highly correlated variables can be regarded as indicators of an underlying construct (N. K. Malhotra, Peterson, & Kleiser, 1999; Maruyama, 1998)

Table 1. Statistical summary and pairwise correlation

No	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1	Control over business resource (c1)	1.00																		
2	Control over household resources (c2)	0.53	1.00																	
3	Control over loan (c3)	0.72	0.63	1.00																
4	Change in sales (b1)	0.06	0.16	0.02	1.00															
5	Change in assets (b2)	0.13	0.25	0.14	0.49	1.00														
6	Change in employees (b3)	0.20	0.17	0.21	0.26	0.29	1.00													
7	Change in profit (b4)	0.07	0.14	0.03	0.91	0.47	0.25	1.00												
8	Microcredit (l)*	0.02	-0.04	0.09	-0.06	-0.04	-0.01	-0.04	1.00											
9	Education level (h1)	-0.05	0.06	0.04	-0.06	0.02	-0.01	-0.04	0.18	1.00										
10	Working experience(h3)	-0.09	0.02	-0.06	0.19	0.23	0.18	0.20	-0.13	-0.04	1.00									
11	Respondent age (a)	0.09	0.05	0.03	0.01	-0.08	-0.04	0.02	0.09	-0.08	-0.17	1.00								
12	Lending schemes (g)	0.07	-0.10	0.01	-0.08	-0.05	-0.09	-0.05	0.01	0.05	-0.09	0.31	1.00							
13	Gender (g1)	-0.07	-0.20	0.00	-0.10	-0.17	-0.15	-0.09	0.44	0.14	-0.20	0.07	0.20	1.00						
14	Marital status (md)	0.16	0.22	0.17	0.03	0.00	-0.01	0.03	0.01	-0.06	-0.03	0.13	0.00	0.05	1.00					
15	Length of membership (lm)	-0.03	-0.10	-0.02	-0.04	-0.10	-0.04	-0.02	0.39	0.06	-0.09	0.38	0.34	0.29	0.02	1.00				
16	Media exposure (ep1)	-0.12	-0.02	-0.13	0.17	0.02	-0.05	0.18	0.05	-0.06	0.06	0.04	-0.01	0.08	0.07	0.16	1.00			
17	Age gap (ep2)	0.00	-0.04	-0.03	0.00	-0.02	-0.01	0.02	-0.05	0.15	-0.08	-0.03	0.00	-0.02	-0.10	0.00	0.04	1.00		
18	Education gap (ep3)	-0.10	0.10	-0.12	0.16	0.03	-0.07	0.16	-0.02	0.11	-0.02	0.04	-0.10	-0.12	0.01	0.05	0.21	0.15	1.00	
19	Health gap (ep4)	0.03	0.07	-0.01	0.13	-0.04	-0.02	0.11	0.02	-0.03	-0.04	0.18	0.01	0.04	0.27	0.10	0.26	0.04	0.22	1.00
	Mean	5.14	4.20	5.00	2.51	2.36	2.06	2.51	15.6	0.20	0.24	45.4	0.75	0.81	2.15	8.44	2.94	-4.78	2.02	2.08
	Standard deviation	1.80	1.87	1.79	0.74	0.55	0.34	0.74	0.85	0.40	0.43	7.77	0.44	0.39	0.53	6.81	1.78	4.31	0.59	0.39
	Max	7.00	7.00	7.00	3.00	3.00	3.00	3.00	18.0	1.00	1.00	66.0	1.00	1.00	5.00	37.0	9.00	7.00	3.00	3.00
	Min	1.00	1.00	1.00	1.00	1.00	1.00	1.00	13.0	0.00	0.00	23.0	0.00	0.00	2.00	1.0	0.00	-25.0	1.00	1.00

Note : * The values are in natural logarithm

The measurement model analysis

The SEM estimation procedure requires a two-steps analysis. First, to analyse the measurement part of the model, carried out by the confirmatory factor analysis (CFA); second is to analyse the structural part of the model. The CFA in SEM requires that a measurement model must be 'identified'. To address this, the first factor loadings that link the observed indicators to their underlying latent construct are fixed to 1.00 (Wang & Wang, 2012). The results show that the standardised factor loadings of *con*'s indicators are above the minimum requirement of 0.40 in both models (Ford, MacCallum, & Tait, 1986), suggesting that the indicators are viable for the subsequent analysis.

The measurement part of Model 1 is 'just-identified' according to the three-indicator rule of O'Brien (1994). With the degrees of freedom equal to zero, the model is a perfect fit by definition (Hair Jr et al., 2010; Kline, 2005)[17]. The model's construct/composite reliability (CR = 0.896) is above the cut-off point of 0.70 and the average variance extracted (AVE = 0.744) score shows that more than 50% variance captured by the latent construct is shared among its observed indicators indicating that the construct reliability and validity are established (Hair Jr et al., 2010).

For Model 2, the chi-square test rejects the null hypothesis that the model's estimated variance/covariance and the observed sample variance/covariance are statistically indifferent is not held[18]. Nevertheless, the other fit indices (i.e. RMSEA=0.070, CFI=0.995, and TLI=0.991) and construct validity indicators (i.e. CR, AVE and discriminant validity) indicate that the model's measurement part is viable for the subsequent analysis—e.g. Fornell and Larcker (1981), Gefen et al. (2000), Hu and Bentler (1999).

[17] In such case, the goodness of fit test results are not meaningful (Hair Jr et al., 2010; Kline, 2005).

[18] Merely relying on the model χ^2 as the sole fit statistic could lead to several problems. Firstly, its power—the ability to reject the null hypothesis when it is false—is unknown (Bielby & Hauser, 1977) leading to the acceptance of a false theory. Secondly, the χ^2 is associated with the impact of the sample size on the statistic (Jöreskog, 1969). As the sample increases, generally above 200 (Schumacker & Lomax, 2010), the value of χ^2 tends to reject the null hypothesis, although the differences between estimated and observed covariance are actually small (Kline, 2005).

TABLE 2. The CFA results of the microcredit – economic empowerment models

Latent constructs	Observed indicators	Model 1		Model 2	
		Loading	S.E.	Loading	S.E.
Control over resource (con)	business resources (c1)	0.831**	0.020	0.834**	0.020
	household resources (c2)	0.779**	0.019	0.785**	0.019
	microcredit (c3)	0.966**	0.017	0.960**	0.018
Business performance (bp)	change in assets (b2)			0.883**	0.056
	change in number of employees (b3)			0.641**	0.070
	change in profit			0.759**	0.055
Covary					
bp-con				0.304**	0.050
Chi-square		0.000*		27.080**	
Degree of freedom		0		8	
RMSEA		0.000		0.070	
CFI		1.000		0.995	
TLI		1.000		0.991	
CR (con)		0.896		0.897	
CR (bp)				0.809	
AVE (con)		0.744		0.744	
AVE (bp)				0.589	
Inter-construct correlations bp-con				0.304	
Number of observation		483		483	

Note: ** significant at 5%.

All estimated factor loadings and standard errors (SE) reported are in standardised values.

RMSEA, CFI and LTI are to assess the goodness of fit of the models. RMSEA (Root Mean Square Error of Approximation) is an absolute fit index, while CFI (Comparative Fit Index) and TLI (Tucker-Lewis Index) are relative fit indexes—see Hu and Bentler (1999). Root Mean Square Error of Approximation (RMSEA) is an absolute fit index applied in this study to assess the goodness of fit of the models. A zero value of the RMSEA indicates the best fit; the higher value indicates worse fit (Wang & Wang, 2012). Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI) are relative fit indexes. The CFI and TLI values range from 0 (worst fit) to 1 (best fit).

The CFA-based composite reliability (CR), developed by Raykov (2004), is used for assessing construct reliability that is the degree to which a set of indicators of a latent construct is internally consistent based on the degree of interrelation of the indicators with each other (Hair Jr et al., 2010).

Convergent validity, assessed by Average Variance Extracted (AVE), refers to the extent to which a measure is related to other measures that are designed to assess the same construct. Discriminant validity, by contrast, is to test whether concepts or measurements that are supposedly unrelated are, in fact, unrelated. Discriminant validity is said to be established if the construct's AVE is larger than the squared inter-construct correlations (Fornell & Larcker, 1981; Gefen et al., 2000). Convergent and discriminant validity are the two subtypes of validity for construct validity, defined as the extent to which a set of observed indicators reflects the theoretical latent construct those indicators are designed to measure (Hair Jr et al., 2010).

The structural model analysis

Following the measurement model analysis, the path diagrams of the structural models are constructed, and the standardised path coefficients, standardised standard errors and statistic tests results are presented in Table 3. The table shows that both models are over-identified—the number of unique elements (136 and 190) exceeds the number of free parameters (34 and 52). The structural model evaluation results also show that, although the models' χ^2 rejects the null hypothesis (at 5% level), the fit indices (RMSEA, CFI and TLI) suggest that the models are good fit, confirmed by the construct reliability and validity indicators (CR, AVE and the squared of inter-construct correlations).

As shown in table 3, in both models, microcredit has direct and significant relationships with control over resources ($\beta = 0.140$, SE = 0.058 for Model 1, and $\beta = 0.111$, SE = 0.054 for Model 2). The results indicate that larger loans significantly increase the likelihood of having a higher degree of control over resources; thus, confirming our hypothesis 1.

Table 3. The WLSMV-SEM estimation results of the microcredit – economic empowerment model with business performance as a mediating variable

Variables	Model 1		Model 2			
	Control over resource (con)		Business performance (bp)		Control over resource (con)	
	β	S.E.	β	S.E.	β	S.E.
Independent variables						
Microcredit (l)	0.140**	0.058	0.083	0.067	0.111**	0.054
Mediating variable:						
Business performance (bp)					0.349**	0.047
Control variables:						
Education level (h1)	0.021	0.048	0.02	0.056	0.014	0.048
Prior work experience (h3)	-0.044	0.046	0.308**	0.055	-0.152**	0.049
Age (a)	0.712	0.474	-0.201	0.523	0.783*	0.474
Age squared (a2)	-0.633	0.470	0.222	0.526	-0.713	0.466
Lending schemes (g)	-0.004	0.052	0.008	0.062	-0.007	0.051
Gender (g1)	-0.180**	0.056	-0.179**	0.063	-0.118**	0.054
Marital status (md)	0.246**	0.058			0.246**	0.058
Length of membership (lm)	-0.085	0.060	-0.083	0.073	-0.056	0.059
Media exposure (ep1)	0.086*	0.051			0.086*	0.051
Age gap (ep2)	0.016	0.047			0.016	0.047
Education gap (ep3)	-0.041	0.050			-0.041	0.050
Health gap (ep4)	0.017	0.052			0.017	0.052
con R-square	0.116		0.220			
bp R-square			0.147			
Number of unique elements	136		190			
Number of free parameters	34		52			
The model chi-square value	68.432**		103.976**			
Degree of freedom (df)	26		65			
RMSEA	0.058		0.035			
CFI	0.986		0.989			
TLI	0.978		0.985			
WRMR	0.617		0.771			
CR con	0.906		0.907			
CR bp			0.828			
AVE con	0.765		0.765			
AVE bp			0.618			
Inter-construct correlations bp-con			0.313			
Number of observation	483		483			

Note: ** significant at 5%, * significant at 10%. All estimated path coefficients (βs) and standard errors (SE) reported are in standardised values.

Model 2 (Table 3) shows that business performance is significantly and positively associated with empowerment (β = 0.349, SE = 0.047). However, the tests for mediating effect (Table 4)[19] indicate that an indirect relationship may not exist as the total indirect effect of microcredit – empowerment via business performance is not statistically significant (β = 0.029, SE = 0.023)[20]. Therefore, hypothesis 2 is rejected. In summary, while our empirical result in Indonesia shows a positive effect of business performance on empowerment, it does not support the notion that business success might act as an important mediator for the microcredit – empowerment relationship.

Turning now to the control variables, in both models, marital status appears to matter for empowerment. Compared to married couples, unmarried, widowed and divorced individuals, on average, tend to have a higher degree of empowerment. Media exposure appears to positively influence empowerment, and women on average tend to feel less empowered than men. Education and health levels do not seem to have much influence on empowerment levels nor does the type of lending scheme—group or individual.

Regarding gender, estimation results in Table 3 and Table 4 indicate that the relationship between gender and empowerment is partially mediated by business performance. This is confirmed by the VAF (variance accounted for) score of 34.81%[21].

[19] Based on the Sobel test (Sobel, 1982) with standard error calculated using the multivariate delta method (MacKinnon, 2008).

[20] Since there is no significant indirect effect of microcredit on empowerment via business performance, we analysed an alternative model by treating business performance as a latent exogenous variable. This model is aimed to examine whether business performance still has a significant role in economic empowerment if it is treated as an exogenous variable. The estimation results confirm that business performance has a significant direct links to control over resource. The results of this model are available up on request.

[21] The VAF equals the total indirect effect (or mediated effect) divided by the total effect; the rule of thumb is that if the VAF score between 0.20 – 0.80 can be characterised as partial mediation (Hair Jr, Hult, Ringle, & Sarstedt, 2014).

Table 4. The tests for mediating effect of business performance on the microcredit – economic empowerment relationship

Variables	Total indirect effect		Direct effect		Total effect	Mediation
	coef	S.E.[a]	coef	S.E.		
l→bp→con	0.029	0.023	0.111**	0.054	0.140	No
h1→bp →con	0.007	0.023	0.014	0.048	0.021	No
h3→bp→con	0.108**	0.026	-0.152**	0.049	-0.044	No
a→bp→con	-0.070	0.183	0.783*	0.474	0.713	No
a2 → bp →con	0.077	0.184	-0.713	0.466	-0.636	No
g→bp→con	0.003	0.022	-0.007	0.051	-0.004	No
g1→bp→con	-0.063**	0.024	-0.118**	0.054	-0.181	partial
lm→bp→con	-0.029	0.026	-0.056	0.059	-0.085	No

Note: All estimated coefficients and standard errors (SE) reported are in standardised values.
** Significant at 5%, * significant at 10%.
[a] Calculated by using bootstrap approach.

5. Discussion and policy implications

5.1. Microcredit and economic empowerment

The impact of microcredit on the economic empowerment of recipients remains an issue of debate. Proponents believe that microcredit programmes can promote economic empowerment of the poor, particularly women (Karlan & Zinman, 2009; Khandker, 2003; Lakwo, 2006; Pitt & Khandker, 1998; Pitt et al., 2006), while opponents argue that the effectiveness of microcredit programmes for empowerment is far from reality (Garikipati, 2008; Goetz & Gupta, 1996; Mayoux, 1999). This study finds that in the case of Indonesia, microcredit significantly influence empowerment levels of micro entrepreneurs.

The microcredit – empowerment relationship can be explained as follows: the unobservable or latent variable of control over resources, the proxy of empowerment, is a combination of the three observed indicators—control over business resources (*c1*) and control over microcredit (*c3*), which are more related to business, and control over household resources (*c2*), which is less related to business. While a positive direct effect of microcredit on business-related resource controls is more obvious, it is less clear whether microcredit might have a spill-over effect on non-business-related control.

To test the existence of this spill-over effect, a further analysis was conducted by decomposing the latent variable (i.e. *con*) back to its observed indicators (i.e. *c1*, *c2* and *c3*), and then regressing these indicators on the covariates and the mediating variable. Results show that microcredit has significant direct effects on the business-related controls (*c1* and *c3*), but not on non-business-related controls (*c2*)—see Appendix 2 for the decomposition analysis results. This indicates that, in Indonesia, microcredit had improved the borrowers'

ability to control loan and own business; however, its benefits had not had a significant spill-over effect on their ability to control household resource or assets.

This study also shows that business performance appears to be strongly associated with control over resources. The empirical finding suggests that the business success of microenterprise has promoted control over resources. A better business performance is more likely to increase the earnings capacity of entrepreneurs, which can improve their capability of increasing their economic status within household. This enhances the entrepreneurs' confidence to take significant positions in their households, which eventually lead to a higher degree of ability to control over resources at household level—see for example, Hashemi et al. (1996) and Mahmud et al. (2012).

Nevertheless, as no significant relationship was found between business performance and microcredit, the indirect relationship between microcredit and control over resources via business performance did not exist. This provides an indication that business advancement was associated with control over resources, but did not significantly mediate the relationship between microcredit and control over resources of Indonesian micro-entrepreneurs.

Findings also show that some other factors should be considered as significant contributors for the economic empowerment of micro-entrepreneurs in Indonesia. For example, knowledge acquired from media is significant for control over resources. Media becomes a potential source for empowerment, providing individuals with empowerment-related information (Kishor & Kamla, 2004), which can improve individual self-confidence in taking responsibility and control over resources at household level.

Prior studies suggest that microcredit lending schemes, and group-lending schemes in particular, have advantageous effects on economic empowerment (Gobezie & Garber, 2007; Holvoet, 2005; Pitt & Khandker, 1998). A lending group's regular meetings can facilitate members to establish and strengthen networks outside their kinship groups (Larance, 1998), which can yield not only access to finance, but also new forms of bridging and linking social capital that emerge from participation in the groups (Servon, 1998).

This study, however, finds that microcredit lending schemes did not have a significant relationship with empowerment. On average, respondents participating in lending groups did not seem to have significantly higher levels of control over resources compared to those who were not. The fact that the conversations during the group meetings were dominated by loan

repayment issues, rather than business and personal or family issues[22], contributed to this finding.

Lastly, gender also become a significant factor of control over resources. The study finds that, compared to women, men averaged higher abilities for control over resource, confirming some previous studies (Garikipati, 2008; Goetz & Gupta, 1996; Kabeer, 2001, 2005; Leach & Sitaram, 2002). Moreover, results also show that the relationship between gender and control over resources was partly through business success. Thus, it can be argued that having better business performance than women helped men to have a higher level of control over resources at household level.

5.2. Policy implications

Three main policy implications can be drawn from these findings. Firstly, microcredit play a substantial role in enhancing individuals' abilities for control over resources at the household level. Increases in earnings capacity resulting from microcredit programme have not only helped micro-entrepreneurs to cope with household vulnerability, but have also strengthened their economic status, leading to more power in control over resources.

Secondly, although microcredit is expected to help micro-entrepreneurs increase their abilities for control over resource via purchasing more private properties, it tends to cause entrepreneurs more dependent on the loans for maintaining such abilities—especially if the properties purchased are non-productive items. In the end, this potentially build up a financial burden for entrepreneurs as the loans will eventually have to be repaid. Nevertheless, given a significant relationship between business performance and control over resource, if micro-entrepreneurs can make effective use of the loan for productive purposes (i.e. purchasing goods or working capital), it would bring significant improvement in business performance and deliver a stronger impact on their empowerment level. This is because higher incomes generated from the business can increase not only their economic status, but also their self-confidence and ability to take more control over household resources. In view of that, improving micro-entrepreneurs' abilities in financial management and business skills appears essential for business success and empowerment as well.

[22] Of the 360 respondents, 277 (76.94%) respondents placed loan repayment issues as high priority, followed by business ideas (16.39%), community news (3.33%), and spiritual issues (2.78%); none discussed personal/family issues.

Thirdly, the study finds that gender plays a crucial role in empowerment, and the relationship between gender and control over resources is partially mediated by business performance. This means that men, on average, have higher ability for control over resources than women, as men tend to be more successful in business than women. Accordingly, encouraging women to have better business performance by providing more business-related support would be useful in promoting economic empowerment and gender equality.

The study's results show that microcredit programmes and microenterprise business success might become alternative pathways for enhancing micro-entrepreneurs' level of empowerment. However, human empowerment issues in Indonesia need not only to be addressed by strengthening individuals' capabilities through microcredit programme, but should also be reinforced by pro-gender equality norms and institutional reforms. While Indonesia is known as a country where women possess relatively high status and where female autonomy has long been recognized (Frankenberg & Thomas, 2001; Panjaitan-Drioadisuryo & Cloud, 1999), the patriarchal norms, which give men a dominant role in their families, to some extent still remain in the society. Thus, further reforms in legal and policy structures, economic systems, marriage, inheritance, education system (Golla et al., 2011), social systems, pattern behaviour (Narayan, 2002), private property ownership, and health care systems might also be considered to accelerate gender equality and human empowerment. In such cases, government interventions are necessary.

6. Conclusion

Some previous studies find that microcredit enhances economic empowerment of micro entrepreneurs. Other studies disagree. Moreover, the case of Indonesia is not known in the literature. This study fills the gap via a survey of 556 microenterprises in Surabaya, the second largest city in Indonesia, using microcredit and control over resources, a proxy for empowerment. Structural equation modelling with weighted least square mean and variance adjusted structural equation modelling estimator was used to analyse the data—quantitative analysis was more appropriate for the purpose and the data collected via closed-ended questionnaires.

This study confirms previous findings of a positive microcredit – empowerment relationship, suggesting that if empowerment is a goal then at least in the case of Indonesia, a developing economy, the microcredit programme strategy can work and the actions of policymakers and donors can be justified. However, the findings may not always apply to

other developing economies—more and deeper in- and cross-country investigations are required to help donors and policy-makers take a more informed approach in continuing to invest heavily in microcredit programme at the cost of other competing alternative strategies.

Some limitations noted in this study might offer motivation for future research. Firstly, this study involves only one developing country, Indonesia. The sample was obtained from one region, Surabaya and its surroundings, and was unbalanced in gender. A large number of potential male respondents who were mostly individual scheme borrowers refused to be interviewed. As a consequence, the heterogeneity of the sample might not be adequate to precisely represent the entire population. Secondly, the cross-sectional data of this study limits inferences of causality in the analyses. It also prohibits this study from assessing longitudinal effects and from examining non-recursive models of the business performance – economic empowerment and the microcredit – business performance relationships.

Therefore, future research involving a larger, more heterogeneous and longitudinal sample gathered from other regions, with more balanced gender composition might be useful to obtain a more representative sample. Thirdly, this study involves a limited number of explanatory variables. Thus, its ability to explain reasons behind the findings is also limited. In the future, it might be necessary to include more explanatory variables to provide further explanations of the relationships noted in this study: first, why loan size does not matter to MEs business performance; how to create social networks within a lending group that might benefits MEs and economic empowerment, and whether there are any other factors that contribute to economic empowerment. Although some limitations are noted, in the meantime, this study provides useful research-based findings that might be useful for relevant policy development in Indonesia.

References

ADB. (2015). ADB and Microfinance. Retrieved May 8th, 2015, from Asian Development Bank http://www.adb.org/sectors/finance/microfinance

Alsop, R., & Heinsohn, N. (2005). Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators. *World Bank Policy Research Working Paper 3510*.

Anna, A. L., Chandler, G. N., Jansen, E., & Mero, N. P. (2000). Women Business Owners in Traditional and non-Traditional Industries. *Journal of Business Venturing, 15*(3), 279-303.

Ardishvili, A., Cardozo, S., Harmon, S., & Vadakath, S. (1998, 21-23 May 1998). *Towards a Theory of New Venture Growth.* Paper presented at the The 1998 Babson Entrepreneurship Research Conference, Ghent, Belgium.

Armendariz de Aghion, B., & Morduch, J. (2005). *The Economics of Microfinance*. Cambridge, MA: The MIT Press.

Bandalos, D. L. (2008). Is Parceling Really Necessary? A Comparison of Results From Item Parceling and Categorical Variable Methodology. *Structural Equation Modeling: A Multidisciplinary Journal, 15*(2), 211-240.

Bates, T. (1995). Self-employment Entry Across Industry Groups. *Journal of Business Venturing, 10*(2), 143-156.

Batliwala, S. (1994). *Women's empowerment in South Asia: Concepts and practices*: Asian South Pacific Bureau of Adult Education.

Bielby, W. T., & Hauser, R. M. (1977). Structural Equation Models. *Annual Review of Sociology, 3*, 137-161.

Bosma, N., van Praag, M., Thurik, R., & de Wit, G. (2004). The Value of Human and Social Capital Investments for the Business Performance of Startups. *Small Business Economics, 23*(3), 227-236.

Bradley, S. W., McMullen, J. S., Artz, K., & Simiyu, E. M. (2012). Capital Is Not Enough: Innovation in Developing Economies. *Journal of Management Studies, 49*(4), 684-717.

Brown, T. A. (2006). *Confirmatory Factor Analysis for Applied Research*. New York: Guilford Publications.

Chioda, L. (2013). *Work and Family: Latin American and Caribbean Women in Search of a New Balance*. Washington DC: World Bank.

Cooper, A. C., Gimeno-Gascon, F. J., & Woo, C. Y. (1994). Initial Human and Financial Capital as Predictors of New Venture Performance. *Journal of Business Venturing, 9*(5), 371-395.

Cooper, A. C., Woo, C. Y., & Dunkelberg, W. C. (1988). Entrepreneurs' Perceived Chances for Success. *Journal of Business Venturing, 3*(2), 97-108.

Crépon, B., Devoto, F., Duflo, E., & Parienté, W. (2011). Impact of Microcredit in Rural Areas of Morocco: Evidence from a Randomized Evaluation *MIT Working Paper*. Cambridge, MA: MIT.

Cruz, C., Justo, R., & De Castro, J. O. (2012). Does Family Employment Enhance MSEs Performance? Integrating Socioemotional Wealth and Family Embeddedness Perspectives. *Journal of Business Venturing, 27*(1), 62-76.

Delmar, F. (2006). Measuring Growth: Methodological Considerations and Empirical Results. In P. Davidsson, F. Delmar & J. Wiklund (Eds.), *Entrepreneurship and the growth of firms* (pp. 62-86). Glos, UK: Edward Elgar Publishing Ltd.

Demirguc-Kunt, A., Beck, T., & Honohan, P. (2008). *Finance for All? Policies and Pitfalls in Expanding Access*. New York: World Bank Publications.

DeVellis, R. (1991). *Scale Development: Theories and Application*. Thousand Oaks, CA: Sage.

Eyben, R., Kabeer, N., & Cornwall, A. (2008). Conceptualising Empowerment and the Implications for Pro-poor Growth: Institute of Development Studies.

Flora, D. B., & Curran, P. J. (2004). An Empirical Evaluation of Alternative Methods of Estimation for Confirmatory Factor Analysis With Ordinal Data. *Psychological Methods, 9*(4), 466-491.

Ford, J. K., MacCallum, R. C., & Tait, M. (1986). The Application of Factor Analysis in Applied Psychology: A Critical Review and Analysis. *Personnel Psychology, 39*(2), 291-314.

Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1), 39-50.

Frankenberg, E., & Thomas, D. (2001). *Measuring Power*. Food Consumption and Nutrition Division Discussion Paper No. 113. International Food Policy Research Institute. Washinton DC.

Garikipati, S. (2008). The Impact of Lending to Women on Household Vulnerability and Women's Empowerment: Evidence from India. *World Development, 36*(12), 2620-2642.

Gefen, D., Straub, D., & Boudreau, M.-C. (2000). Structural Equation Modeling and Regression: Guidelines for Research Practice. *Communications of the association for information systems, 4*(1), 7.

Gobezie, G., & Garber, C. (2007). *Impact Assessment of Microfinance in Amhara Region of Northern Ethiopia.* Paper presented at the International Conference on Rural Finance Research: Moving Results into Policies, Rome, Italy.

Goetz, A. M., & Gupta, R. S. (1996). Who Takes the Credit? Gender, Power, and Control over Loan Use in Rural Credit Programs in Bangladesh. *World Development, 24*(1), 45-63.

Golla, A., Malhotra, A., Nanda, P., & Mehra, R. (2011). Understanding and Measuring Women's Economic Empowerment: Definition, Framework and Indicators. *International Center for Research on Women (ICRW)*.

Grapentine, T. (2000). Path Analysis vs Structural Equation Modeling. *Marketing Research, 12*(3).

Green, S. B., Akey, T. M., Fleming, K. K., Hershberger, S. L., & Marquis, J. G. (1997). Effect of the Number of Scale Points on Chi-square Fit Indices in Confirmatory Factor Analysis. *Structural Equation Modeling: A Multidisciplinary Journal, 4*(2), 108-120.

Grewal, R., Cote, J. A., & Baumgartner, H. (2004). Multicollinearity and Measurement Error in Structural Equation Models: Implications for Theory Testing. *Marketing Science, 23*(4), 519-529.

Hair Jr, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Mutivariate Data Analysis: A Global Perspective 7th Edition*. London: Pearson.

Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2014). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. Los Angeles: SAGE Publications.

Hashemi, S. M., Schuler, S. R., & Riley, A. P. (1996). Rural Credit Programs and Women's Empowerment in Bangladesh. *World Development, 24*(4), 635-653.

Holvoet, N. (2005). The Impact of Microfinance on Decision Making Agency: Evidence of South India. *Development and Change, 36*(1), 75-102.
Hu, L. T., & Bentler, P. M. (1999). Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria versus New Alternatives. *Structural Equation Modeling, 6*(1), 1-55.
IBRD. (2012). Wowen's Economic Empowerment *Policy Lessons from the World Bank Gender Plan*. Washington DC: International Bank for Reconstruction and Development / The World Bank.
IFC. (2015). Financial Institutions: Microfinance. Retrieved May 8th, 2015, from International Finance Corporation http://www.ifc.org/wps/wcm/connect/Industry_EXT_Content/IFC_External_Corporate_Site/Industries/Financial+Markets/MSME+Finance/Microfinance/
Imai, K. S., Arun, T., & Annim, S. K. (2010). Microfinance and Household Poverty Reduction: New Evidence from India. *World Development, 38*(12), 1760–1774.
Johnston, D. J., & Morduch, J. (2008). The Unbanked: Evidence from Indonesia. *The World Bank Economic Review, 22*(3), 517-537.
Jöreskog, K. G. (1969). A General Approach to Confirmatory Maximum Likelihood Factor Analysis. *Psychometrika, 34*(2), 183-202.
Kabeer, N. (1999). Resources, Agency, Achievements: Reflections on the Measurement of Women's Empowerment. *Development and Change, 30*(3), 435-464.
Kabeer, N. (2001). Conflicts Over Credit: Re-Evaluating the Empowerment Potential of Loans to Women in Rural Bangladesh. *World Development, 29*(1), 63-84.
Kabeer, N. (2005). Is Microfinance a 'Magic Bullet' for Women's Empowerment? Analysis of Findings from South Asia. *Economic and Political Weekly, 40*(44/45), 4709-4718. doi: 10.2307/4417357
Kaboski, J. P., & Townsend, R. M. (2012). The Impact of Credit on Village Economies. *American Economic Journal Applied economics, 4*(2), 98-133.
Karlan, D., & Valdivia, M. (2010). Teaching Entrepreneurship: Impact of Business Training on Microfinance Clients and Institutions. *Review of Economics and Statistics, 93*(2), 510-527.
Karlan, D., & Zinman, J. (2009). Expanding Credit Access: Using Randomized Supply Decisions to Estimate the Impacts. *Review of Financial Studies*.
Khandker, S. R. (2003) Microfinance and Poverty: Evidence Using Panel Data from Bangladesh. *World Bank Policy Research Working Paper 2945*. Washington, DC: World Bank.
Khandker, S. R. (2005). Microfinance and Poverty: Evidence using Panel Data from Bangladesh. *World Bank Economic Review, 19*(2), 263-286.
Kishor, S., & Kamla, G. (2004). Women's Empowerment in India and Its States: Evidence from the NFHS. *Economic and Political Weekly, 39*(7), 694-712.
Kline, R. B. (2005). *Principle and Practice of Structural Equation Modeling Second Edition* (2 ed.). New York: The Guilford Press.
Kondo, T., Orbeta, A., Dingcong, C., & Infantado, C. (2008). Impact of Microfinance on Rural Households in the Philippines. *IDS Bulletin, 39*(1), 51-70.
Lakwo, A. (2006). *Microfinance, Rural Livelihoods, and Women's Empowerment in Uganda*. Leiden African Studies Centre, Leiden University.
Larance, L. Y. (1998). *Building Social Capital from the Center: A Village-level Investigation of Bangladesh's Grameen Bank*. Working Paper. George Warren Brown School of Social Work. Washington University. St. Louis, Missouri.

Leach, F., & Sitaram, S. (2002). Microfinance and Women's Empowerment: A Lesson from India. *Development in Practice, 12*(5), 575-588.

Lei, P. W. (2009). Evaluating Estimation Methods for Ordinal Data in Structural Equation Modeling. *Quality and Quantity, 43*(3), 495-507.

MacKinnon, D. P. (2008). *Introduction to Statistical Mediation Analysis*. New York: Erlbaum.

Mahmud, S., Shah, N. M., & Becker, S. (2012). Measurement of Women's Empowerment in Rural Bangladesh. *World Development, 40*(3), 610-619.

Malhotra, A. (2003). *Conceptualising and Measuring Women's Empowermentas A Variable in International Development*. Paper presented at the Workshop on Measuring Empowerment: Cross-Disciplinary Perspective, Washinton DC

Malhotra, A., Schuler, S. R., & Boender, C. (2002). *Measuring Women's Empowerment as a Variable in International Development*. Paper presented at the The World Bank Workshop on Poverty and Gender: New Perspectives Report retrieved from http://siteresources.worldbank.org/INTGENDER/Resources/MalhotraSchulerBoender.pdf

Malhotra, N. K., Peterson, M., & Kleiser, S. B. (1999). Marketing Research: A State-of-the-Art Review and Directions for the Twenty-First Century. *Journal of the Academy of Marketing Science, 27*(2), 160-183.

Maruyama, G. M. (1998). *Basics of Structural Equation Modeling*. Thousand Oaks, CA Sage.

Mason, K. O., & Smith, H. L. (2000). Husbands' versus Wives' Fertility Goals and Use of Contraception: The Influence of Gender Context in Five Asian Countries. *Demography, 37*(3), 299-311.

Mason, K. O., & Smith, H. L. (2003). Women's Empowerment and Social Context: Results from Five Asian Countries.

Mayoux, L. (1999). Questioning Virtuous Spirals: Microfinance and Women's Empowerment in Africa. *Journal of International Development*(11), 63-84.

Muthe´n, B. O. (1984). A General Structural Equation Model with Dichotomous, Ordered Categorical, and Continuous Latent Variable Indicators. *Psychometrika, 49*(1), 115–132.

Muthe´n, B. O. (1993). Goodness of Fit with Categorical and Other Nonnormal Variables. In K. A. Bollen & J. Scott Long (Eds.), *Testing Structural Equation Models* (pp. 205–234). Newbury Park, CA: Sage.

Muthe´n, B. O., du Toit, S. H. C., & Spisic, D. (1997). *Robust Inference using Weighted Least Squares and Quadratic Estimating Equations in Latent Variable Modeling with Categorical and Continuous Outcomes*. Unpublished manuscript. Unpublished manuscript. Retrieved from http://www.statmodel.com/wlscv.shtml

Muthe´n, B. O., & Kaplan, D. (1992). A Comparison of Some Methodologies for the Factor Analysis of Non-normal Likert Variables: A Note on the Size of the Model. *British Journal of Mathematical and Statistical Psychology, 45*(1), 19-30.

Narayan, D. (Ed.). (2002). *Empowerment and Poverty Reduction: A Sourcebook*. Washinton DC: World Bank Publications.

Nussbaum, M. (2001). *Women and Human Development: The Capabilities Approach*. Cambridge, UK Cambridge University Press.

O'Brien, R. M. (1994). Identification of Simple Measurement Models with Multiple Latent Variables and Correlated Errors. In P. V. Marsden (Ed.), *Sociological methodology* (pp. 137-170). Blackwell.

O'Rourke, N., Psych, R., & Hatcher, L. (2013). *A Step-by-step Approach to Using SAS for Factor Analysis and Structural Equation Modeling, Second Edition* (2nd ed.). Carrt, NC: Sas Institute.

Panda, K. (2009). Participation in the Group Based Microfinance and its Impact on Rural Households: A Quasi-experimental Evidence from an Indian State. *Global Journal of Finance and Management, 1*(2), 171-183.

Panjaitan-Drioadisuryo, R. D. M., & Cloud, K. (1999). Gender, Self-employment and Microcredit Programs: An Indonesian Case Study. *The Quarterly Review of Economics and Finance, 39*(5), 769-779.

Pitt, M. M., & Khandker, S. R. (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. doi: 10.1086/250037

Pitt, M. M., Khandker, S. R., & Cartwright, J. (2006). Empowering Women with Micro Finance: Evidence from Bangladesh. *Economic Development and Cultural Change, 54*(4), 791-831.

Raykov, T. (2004). Behavioral Scale Reliability and Measurement Invariance Evaluation using Latent Variable Modeling. *Behavior Therapy, 35*(2), 299-331.

Schumacker, R. E., & Lomax, R. G. (2010). *A Beginner's Guide to Structural Equation Modelling Third Edition* (3 ed.). New York: Routledge.

Servon, L. J. (1998). Credit and Social Capital: The Community Development Potential of US Microenterprise Programs. *Housing Policy Debate, 9*(1), 115-149.

Sobel, M. E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equation Models. *Sociological methodology, 13*(1982), 290-312.

Ssendi, L., & Anderson, A. R. (2009). Tanzanian Micro Enterprises and Micro Finance: The Role and Impact for Poor Rural Women. *Journal of Entrepreneurship, 18*(1), 1-19.

Tabachnick, B. G., & Fidell, L. S. (2012). *Using Multivariate Statistics 6th Edition* (6th ed.). New York: Pearson.

Ullman, J. B. (2013). Structural Equation Modeling. In B. G. Tabachnick & L. S. Fidell (Eds.), *Using Multivariate Statistics 6th Edition* (6th ed., pp. 681-777). Boston: Pearson.

Wang, J., & Wang, X. (2012). *Structural Equation Modeling: Application Using Mplus*. Sussex UK: John Wiley& Sons.

Weinzimmer, L. G., Nystrom, P. C., & Freeman, S. J. (1998). Measuring Organizational Growth: Issues, Consequences and Guidelines. *Journal of Management, 24*(2), 235-262.

Wiklund, J., & Shepherd, D. (2003). Aspiring for, and Achieving Growth: The Moderating Role of Resources and Opportunities. *Journal of Management Studies, 40*(8), 1919-1941.

Appendix 1

The selected survey's questions

No.	Variables	Questions	Responses
1	c1	I fully control my own business resources	strongly disagree to strongly agree (1-7 Likert scale)
2	c2	I fully control all household's resources/assets	
3	c3	I fully control my loans	
4	b1	Compared to last year, have your sales? (choose one)	Decrease = 1 About the same = 2 Increase = 3
5	b2	Compared to last year, have your assets (equipment/ materials) used by your business? (choose one)	
6	b3	Compared to last year, have your profits (revenues after expenses are paid) in your business? (choose one)	
7	b4	Compared to last year, has the number of employees in your business? (choose one)	
8	l	How much additional loan amount did you receive from your MFI during this year (January 2013 – January 2014) only?	in millions of local currency (Indonesian Rupiah/IDR)
9	h1	What is the highest grade/level of school you have attained?	University level = 1 Below university = 0
10	h3	Did you have prior working experience with the type of business you started?	Yes = 1 No = 0
16	ep1	On average, how many hours per day do you spend your time on television or reading newspaper/magazine?	in hours per day
17	ep2	In comparison with your spouse, please indicate your position in the following conditions: age	Lower = 1 About the same = 2 Higher = 3
18	ep3	In comparison with your spouse, please indicate your position in the following conditions: education	
19	ep4	In comparison with your spouse, please indicate your position in the following conditions: health	

Appendix 2

Summary of the decomposition analysis for control over resources

Variable	control over business resources (c1)		control over household resources/assets (c2)		control over loan (c3)	
	β	*SE*	*β*	*SE*	*β*	*SE*
Independent variables						
Microcredit (l)	0.104*	0.055	0.064	0.053	0.119**	0.052
Mediating variable:						
Business performance (bp)	0.311**	0.049	0.288**	0.050	0.313**	0.050
Control variables:						
Education level (h1)	-0.054	0.050	0.076	0.049	0.016	0.051
Prior work experience (h3)	-0.177**	0.049	-0.103**	0.047	-0.120**	0.048
Age (a)	1.104**	0.462	0.312	0.478	0.612	0.469
Age squared (a2)	-1.056**	0.444	-0.232	0.469	-0.600	0.463
Lending schemes (g)	0.055	0.052	-0.057	0.048	-0.009	0.051
Gender (g1)	-0.104**	0.052	-0.181**	0.053	-0.046	0.051
Marital status (md)	0.196**	0.054	0.237**	0.057	0.216**	0.055
Length of membership (lm)	-0.051	0.054	-0.057	0.061	-0.040	0.058
Media exposure (ep1)	-0.081*	0.048	-0.032	0.049	-0.104**	0.049
Age gap (ep2)	0.052	0.048	-0.020	0.045	0.012	0.047
Education gap (ep3)	-0.072	0.051	0.068	0.048	-0.091*	0.048
Health gap (ep4)	0.036	0.052	-0.010	0.049	0.019	0.049

Note: ** significant at 5%, * significant at 10%. All estimated path coefficients (*β*s) and standard errors (SE) reported are in standardised values.
Analysed based on Model 2 by using the WLSMV estimator.

Reviewer #1: Further comments

This is a very substantially revised version of a paper previously submitted to SB and is very much improved as a consequence. I want to start by congratulating the author for the extent of the revision and the extent of the improvement. Thank you, also, for the detailed response to my comments: that is always helpful and gives me the chance to apologise: I have no idea what I was thinking on comment 14, I am perfectly aware that multicollinearity and autocorrelation are very different things but my note makes no sense! Sorry.

However, rusty as I am on statistical analysis I am more confident on the philosophy of science and research design and on these two issues you have largely ignored my comments. This places me in a dilemma.

We'd like to begin by thanking the reviewer very much for yet another comprehensive and meticulous review—we are indeed very grateful and believe that the paper has improved further. We've endeavored to address comments/questions as much as possible; if a response is unintentionally lacking or incomplete, we intend to take these up in future studies.

There were three things I was especially exercised by:

1. Given the proxies you were using there was an element of tautology about your test. You have dealt with this to a degree by introducing the component of control over domestic resources but that only goes part of the way? (Page 3, line 22 first raised this question in my mind but it is there thereafter).

Our response:

We have defined control over business resources, household resources and borrowed funds (page 3and on) to measure three components control over resources & they are employed in the model.

2. The form of the questions and the choice of the methods are crucial to the paper, but neither are discussed and the limitations they each impose on your analysis and inferences is not considered.

Our response:

Given the quantitative nature of the study and the expected large number of respondents, a closed-ended Q, despite its limitations, was most appropriate. We have added some explanation regarding this issue on page 10.

Regarding the choice of statistical method, more explanation has been included at the end of page 12

The study's limitations have also noted in the Conclusion.

3. Field work offers great opportunities for richness and you even say on page 10, line 22 about observing real life conditions. These observations do not appear in the paper.

Our response:

"Real life condition" means that we simply wanted to ensure that the respondents business and residence are located within the survey area, and that the businesses can be classified as microbusiness according to the relevant Government Regulation. The intention was not really to investigate details of respondent's real life conditions or even conduct of business—the large number of survey respondents would not have allowed us to do that in any case. However, we take this point and will endeavor to do so in future studies.

Perhaps, the use of "observe" is not really accurate in this case, we have changed it to "reflect" in the paper.

4. The value of statistical method lies in a number of directions, but it is essentially a positive (i.e. it claims to avoid normative) method and it allows a very specific statement of the reliability of what is or what is not discovered. You end up speculating towards the end of the paper and there is a lot of "might"….. without a more theoretically nuanced approach this is not really helpful and rather undermines your method. I do not consider any of these matters fatal in and of themselves, but it is the failure to address them and to recognise how conditional they are and how conditional that makes your work that is a disappointment. (The fallacy of misplaced concreteness for example). Can you honestly (and perhaps even briefly) reflect on these matters?
Our response:
Please see Discussion and Policy Implication section

Specific Issues

• Page 4, line 5: why 2012?; why USD 3,521?
Our response:
Our survey was conducted in early 2014, so we set 2012 as the cut-off date because there was an expected lagged effect of credit on the respondents' business and subsequently on empowerment levels. We also considered the possibility that the social interaction during a respondent's participation in the credit programme often have a delayed effect on the respondents' empowerment level. (footnote #5)
The Central Bank of Indonesia (Bank Indonesia) defines microcredit as a loan below 50 million rupiah (equivalent USD 3,521) provided by formal and semi-formal financial providers in Indonesia.(Footnote#6)

• Page 4, line 14: Given your audience I am of the view that changing the first sentence to read "An approach called "structural….SEM) estimator" was used…" ….. who will know what you are doing, why you are doing it or why this is better than a simpler series of regression or a version of factor analysis?
Our response:
Please see Section 4 (Models and Empirical Results) paragraph 2, for explanation.
• Page 4, line 24: Are you interested in the positive results? They are not a surprise are they?
Our response:
Yes, they are not a surprise.

• Page 5, line 19: I presume you mean Mayoux not yourself? The tradition is that "the author" refers to the person who wrote the present paper.
Our response:
Yes, we mean Mayoux.

• Page 5, lines 23 and 24… "their" is puzzling to me
Our response:
"their" = female microcredit borrowers

• Page 4 line 38: are these first few lines actually a sentence?

Our response:
Yes they are actually a sentence.

• Page 6 line 25: “factor” should be “factors”
Our response:
Yes , should be factors. Apologies for the oversight.

• Page 6 line 45: this first section about method rather misses the point. Proxies versus bad proxies is not an either/or: it is about either choosing reliable proxies or using some other method like self-reporting (as you do later). I cannot help but worry that the lack of reflection upon the inevitable limitations in the approach weakens the argument. This is clearly a VERY difficult issue but your audience needs to know how reliably they are being informed… you don’t have to “sell it” to us.
Our response:
We have modified the paragraph by deleting the following sentences:
Some authors agree that, as a process, empowerment cannot be measured directly, but only through proxies (Ackerly, 1995; Kishor, 2000), while others argue that commonly used proxies (e.g. education, health, employment) might be misleading (Govindasamy & Malhotra, 1996; Mason, 1995).

• Page 7, line3: interestingly you do not say why you chose a positivist method; why you are using statistics as your first pass and why you are not, perhaps, using non-parametric statistics.
Our response:
We thank the reviewer for the comments—for now, we’d like to follow the literature on this; we’re happy to consider the suggested approach in future studies.

• Page 7: this would be stronger if you thought carefully about communication: self-reporting and measurement error? Natural logs? Similarly on page 8: why these control variables? Why squared respondents age? Why only university education and why only a dummy? Why age and education gaps? Think about your audience please.
Our response:
We use natural log because the data has divergent standard deviations across groups. This approach is useful for better interpretation of the data and for satisfying the assumptions of inferential statistics.
Control variables are variables that we are not particularly interested in but might be related to the dependent variable. Control variables might influence estimation results; hence, they are kept constant so the relationship of the dependent and independent variables can be observed more easily. The inclusion of such variables would also increase the explanation power (shown by coefficient determination / R-square) of the estimation results.
Older persons are deemed to be more independent and empowered than younger ones because they have more life experiences, a better understanding of how to get what they want or need, a closer relationship with the spouse, etc. (Mason & Smith, 2003). However, as people age, they are also likely to become more dependent on their families. (Footnote #13)
Frankenberg and Thomas (2001) note that the older of the partners are more likely to have a more significant role in empowerment. (Footnote # 9)
Holding spouse education constant, an increase in individuals’ level of education is likely to increase

the authority of decision-making meaning empowerment (Frankenberg & Thomas, 2001). (Footnote#10)

• Page 7, line 42: it should read “the literature”
Our response:
Yes, we’ve changed it.

• Page 8 line 48 I think the word “institution” is missing after the word “microcredit”
Our response:
We have added the word.

• Page 9, line 39: why Closed questions (I think I can guess but it is important to say so).
Our response:
We added the following explanation:
Closed-ended questions are quicker and easier for respondents to answer compared to open-ended questions. The response choices can clarify the questions text for respondents, easy to compare, and improves consistency of the responses. However, closed-ended questions may not have the exact answer the respondent wants to give, and rrespondents with no opinion may answer anyway. In closed-ended questions, misinterpretation of a question can go unnoticed, and the respondent are not allowed to express an opinion without being influenced by the researcher. (page 10).

• Page 10, line 22: this exposes the contradictions I have been trying to tease out “observe their real life conditions”… as far as I can tell nobody does this in this paper and any observations are not shared. Interviewing is exactly about this sort of thing but there is nothing in this paper about it.
Our response:
Please see our relevant response above.

• Page 11, first paragraph… I am sure you could make more use of this interesting data?
Our response:
We added the following explanation on page 11:
These data indicate that the majority of respondents’ household expenses still relied on men incomes; however, women mostly became the more trusted ones to manage household budgets. Women’s incomes were deemed as an extra income for families; hence they could control and keep the incomes as personal saving.

• Page 14, line 32; there is something wrong with this sentence.
Our response:
We’ve revised the sentences.

• Page 18, line 10: was Ho2 a theoretically weak hypothesis in the first place? (The absence of theory is bothersome isn’t it?)
Our response:
Not really; we believe that the analysis has benefitted from this.

• Page 22 et seq: I would strongly recommend that the conclusions be re-thought. As I have said

"might",. "should" and the potentially circular reasoning let the paper down. Equally, the emphasis on a non-statistically significant result undermines your whole methodology so be much more thoughtful about it. Equally, you might like to consider the extent to which your choice of method, sample and means of interpretation are potential weaknesses that have affected the study.

Our response:

Conclusion has been revised as suggested.

Bukti konfirmasi artikel accepted

(19 September 2018)

UNIVERSITAS KRISTEN PETRA

Adwin Surja A. <aplin@petra.ac.id>

Social Business - Decision on Manuscript ID SB-2017-0032.R2

Social Business <onbehalfof@manuscriptcentral.com> 19 September 2018 at 16:27
Reply-To: mjb@westburn.co.uk
To: aplin@petra.ac.id

19-Sep-2018

Dear Dr. Atmadja:

Ref: SB-2017-0032.R2

Thank you for sending me your paper "Does microcredit empower micro-entrepreneurs? Empirical evidence from Indonesia".
Thank you for sending me the second revision of your paper in which you have made substantial changes in response to the reviewers comments. The dilemma I am faced with is that while the paper is now significantly improved on its original form, the reviewer feels that although it is interesting and could be published it is still 'flawed' so that, if it were to be published, some comment should be made about this.
As Editor this leaves me with two basic options. I commission and publish a Commentary with your paper indicating what these flaws/weaknesses might be OR I include a comment myself explaining my decision to publish your paper. After careful reflection I have decided on the latter course of action.
Blind peer review by experts plays a very important role in academic publishing, especially in terms of quality control. However, it is not an infallible process and the Editor's role is not to censor material but to facilitate its wider dissemination. Accordingly, it is my policy always to give the benefit of the doubt to an author and publish their work so that it may be commented on by very much larger audience, favourably or unfavourably, and, provided that such comment is evidence-based, I am prepared to publish this too. On this basis I shall make some reference, probably in my Editorial, to my policy and include your paper in a forthcoming issue of the Journal.

I would like to thank you for staying with the review process. The Editorial Office will be in touch with you in due course regarding the final formatting required for publication.

The copyright assignment form is attached - please complete and return the copyright assignment as soon as possible. This can be returned by post, fax or scan. Fields on the form highlighted in blue can be filled in electronically using Adobe Reader software, but the signature field must be physically signed as we are unable to accept digital signatures. All authors need to sign a copy of the agreement – you can email the form to them and get them to sign a separate copy and return it to us directly if this is easier.

Thank you for your contribution to Social Business and we look forward to receiving further submissions from you.

Sincerely,
Professor Michael Baker
Editor, Social Business

Reviewer(s)' Comments to Author:

*** SB-author-copyright-form.pdf**
60K