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**Examining the impact of microfinance on microenterprises performance  
(Implications for women-owned micro enterprises in Indonesia)**

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## Examining the impact of microfinance on microenterprises performance (Implications for women-owned micro enterprises in Indonesia)

### Abstract:

**Purpose** – This study attempts to examine the impacts of microfinance on women-owned microenterprises' (WMEs) performance in Indonesia. It especially observes how financial, human and social capital influences performance of enterprises.

**Design/methodology/approach** – Data was collected from a survey conducted in Surabaya, Indonesia's second largest city, covering more than one hundred WMEs. The ordered probit technique is applied to estimate the performance vis-à-vis financial, social and human capital relationships.

**Findings** – This study finds a negative relationship between performance and financial capital and a positive relationship between performance and social capital. However, none of the human capital indicators significantly matters for performance.

**Originality/value** – To the best of our knowledge, this study provides the first in-depth understanding of the role of microfinance programmes in in the case of performance of WMEs' in Indonesia, one of the world's most populous economies.

**Keywords** – Microcredit, microenterprise, business performance

**Paper type** – Research Paper

### 1. Introduction

Microfinance has been shown to matter importantly for raising the living standards for the poor and their hopes for breaking out of poverty. Evidence shows that the impact of microfinance is not only at individual and household levels (Littlefield, Morduch and Hashemi, 2003; Morduch, 1999), but also at the country level (Khandker, 2005; Mosley and Hulme, 1998). Essentially, microfinance is designed to provide access to finance to those with few or no valuable assets that can be used as capital or collateral. Relative to formal banking credit, microcredit from microfinance institutions (MFIs) are informal and based mainly on trust, without strict collateral requirements or legally enforceable contracts. Moreover, as opposed to consumption, microcredit is usually offered to the most needy to start up a microenterprise or to expand an existing business.

Given that the main goal of microfinance is poverty reduction via microcredit for business start-up/expansion, it is natural to enquire about the extent of its success in different settings so that relevant policies may be reviewed accordingly, especially since existing literature provides inconclusive evidence. Indeed, while some studies show that microcredit does benefit women's microenterprises performance (Copestake *et al.*, 2001; Leach and

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3 Sitaram, 2002), others question the effectiveness of microcredit *per se* in successfully lifting  
4 people out of poverty and improving welfare (Cull *et al.*, 2009). Some even contend that the  
5 effectiveness is even less for the poorest and those with limited skills, as these groups of  
6 borrowers can seldom use the loans productively (Adams and Von Pischke, 1992). Ironically,  
7 some studies even argue that microfinance may actually be harmful to its recipients (Buckley,  
8 1997; Rahman, 1999).

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13 In the case of a microenterprise — just like any other business venture — finance  
14 (microcredit) *per se* cannot be the sole ingredient for success. Other factors, such as human  
15 and social capital, are equally important (Anthony, 2005; Bradley *et al.*, 2012; Tundui and  
16 Tundui, 2012). A combination of these different forms of capital is essential for enhancing  
17 the performance of a microenterprise. Without an appropriate mix, business success becomes  
18 a real challenge. In turn, an unsuccessful micro-business might have little, if any, positive  
19 implication for poverty alleviation or welfare improvement.

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25 Bearing the above in mind, microfinance appears to have made considerable progress  
26 in making financial resources available to the bottom segments of the society, to women, in  
27 particular, offering them an opportunity to improve their living standards. Microfinance has  
28 a long history in Indonesia and has been active in providing credit for the poor. However, the  
29 role of microfinance and its impact on Indonesian WMEs remains little known, and this is the  
30 primary motivation for this study.

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35 Specifically, this study endeavours to provide an in-depth understanding of the role of  
36 microfinance in WMEs' performance in an urban area of Indonesia with the main research  
37 question being “what are the key determinants of Indonesian WMEs performance?”, focusing  
38 on financial, human, and social capitals. To address the question, a survey of microbusiness  
39 owners in Surabaya, the second largest city in Indonesia, was conducted and the survey data  
40 was analysed using the ordered probit regression technique. This study finds a negative  
41 relationship between performance and financial capital and a positive relationship between  
42 performance and social capital. The findings suggest that microcredit itself does not  
43 necessarily assure a better business performance; however spousal involvement, a part of  
44 social capital, is essential for business success.

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51 The rest of this paper is outlined as follows. Section 2 briefly provides an overview of  
52 Indonesia with focus on socio-economic and financial market conditions as well as on the  
53 microfinance industry. It is then continued with literature review and hypotheses linked to the  
54 research questions in Section 3. Section 4 explains research method followed by empirical  
55 results and discussion in Section 5. Section 6 concludes.

## 2. Country Overview

With a GNI per capita of only US\$ 4,810 in 2012 (World Bank, 2013), poverty remains Indonesia's major national challenge. While the proportion of Indonesians living on less than \$1.25 a day has been reduced significantly in the last two decades (ADB, 2013), around 18% of the total population continue to live below the international poverty line (World Bank, 2013) causing some Human Development Index (HDI) indicators to be very low on an international scale.

HDI, as well as some gender indicators, suggest that women tend to be disadvantaged with respect to a number of socio-economic factors, including employment, education, and participation in parliament and high offices compared to their male counterparts. In addition, a survey of small and medium enterprises (SMEs) conducted by IFC/NORC (2010) reveals that, across 10 Indonesian cities, women-headed firms were generally smaller than men-headed ones, with 82% having a monthly turnover of Rp. 50 million or less, compared to only 56% for men. Further, the survey provides evidence that fewer women-headed firms had a savings or a deposit account (79% female/92% male) and a business loan (6% female/16% male).

The Indonesian government has encouraged formal financial institutions, mostly commercial banks, to reach the unbanked by endorsing the national regulation of non-collateralised loans for microcredit<sup>1</sup>. Yet, this has been confronted with two main constraints. Firstly, the ability of the country's commercial banks to provide credit is limited by the relatively small size of the country's financial sector (World Bank, 2010). Secondly, the 1998 Financial Crisis has caused a traumatic effect which has motivated Indonesian authorities to emphasize the practice of prudential banking, resulting in a prudentially sound, but inefficient, narrow, and homogenized banking oligopoly (Beck and Al-Hussainy, 2010). The constraints contribute to the shallow outreach of the country's formal financial sector. Hamada (2010) reports that the outreach of large commercial banks, excluding *Bank Rakyat Indonesia* (BRI), into the small credit market remains limited. Accordingly, this has become a significant constraint for micro, small and medium enterprises (Rosengard and Prasetyantoko, 2011), outside the country's microfinance industry.

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<sup>1</sup> Central Bank of Indonesia (Bank Indonesia) defines microcredit as a loan below 50 million rupiah (equivalent with USD. 4,280.82, based on current (17/07/2014) exchange rate of USD 1 = Rp. 11,680) provided by financial providers in Indonesia.

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3 The microfinance industry in Indonesia is exceptionally old. It is made of a large  
4 variety of institutions, programs, services, clients, target groups, and is also subject to various  
5 legal, regulatory, and supervisory frameworks (Holloh, 2001). The country's microfinance  
6 industry is also one of the most commercialised in the world in terms of its provision of  
7 sustainable microfinance with wide scale and sustainable outreach (Charitonenko and Afwan,  
8 2003). The commercialization might have two main implications. Firstly, it stimulates MFI to  
9 do credit expansion, widening access to finance. Secondly, however, the commercialization  
10 might cause tighter credit screening, which limits the access to finance. In such cases,  
11 Rosengard and Prasetyantoko (2011) report that there is still an unmet demand for  
12 microfinance services. Additionally, the interest rates charged by MFIs on microloans are  
13 often considerably higher compared with those commonly charged by urban commercial  
14 banks.  
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### 26 **3. Literature review and hypothesis development**

#### 27 *3.1. Financial capital and enterprise performance*

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31 At the earliest stage of an enterprise' life cycle, financial capital is the essential  
32 resource for purchasing fixed assets, for working capital, and for financing initial operations  
33 and the living expenses of the owners. The amount of initial capital invested has a positive  
34 linkage with venture survival and growth (Cooper *et al.*, 1994) because it enables  
35 entrepreneurs to invest in productive activities, to have financial cushion to protect against  
36 slow start-ups, market downturns, or managerial mistakes, as well as to exploit business  
37 opportunities and speed up business growth in the subsequent stages (Bates, 1995; Demirguc-  
38 Kunt *et al.*, 2007).  
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45 Financial capital may come from various sources. In developed countries, start-up  
46 finance is mostly supplied by the entrepreneurs themselves in the form of personal equity.  
47 Meanwhile in developing countries, financial capital is mostly acquired from external  
48 sources, predominantly as debt (Parker, 2009). This is because that the start-up finance often  
49 exceeds the entrepreneurs' valuable possessions. However, those with lower credit scoring  
50 and/or lack of collateral might be excluded from obtaining loans, preventing them to become  
51 entrepreneurs (Evans and Jovanovic, 1989).  
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3 Moreover, the presence of gender bias in financial sector causes unequal treatment of  
4 women when dealing with banks and other mainstream credit institutions, which generally  
5 tend to favour men (IFC, 2012; Parker, 2009). The lenders – banks and other mainstream  
6 credit institutions – argue that men run larger businesses and seize larger control over the  
7 assets that banks seek as collateral (Armendariz de Aghion and Morduch, 2005). Women are  
8 also less likely to have relevant industry-specific experience, hence women-owned firms are  
9 less likely to be successful according to economic measures of business success (GEM, 2010;  
10 Loscocco *et al.*, 1991; Watson and Robinson, 2003). Other explanation is that as women  
11 consider more about risks, they tend to demand relatively small, but more frequent loans; this  
12 increases lending costs (van Staveren, 2001).  
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20 Unlike conventional banks and other mainstream credit institutions, microcredits are  
21 offered by microfinance institutions (MFIs) with minimal credit screening and without, or in  
22 some cases with more flexible, physical collateral. Although the cost of borrowing is  
23 relatively high, the MFIs' credit scheme gives wider access to finance to the unbanked to  
24 cope with household vulnerability and/or for micro entrepreneurship (Copestake *et al.*, 2001;  
25 Garikipati, 2008).  
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30 Notwithstanding the opportunities provided by microfinance to the most needy, for  
31 some MFIs with lending group schemes, credit screening is more often based on the  
32 trustworthiness of the individual and on the number of ties to other group members, and less  
33 attention is given to the business opportunity pursued (Armendariz de Aghion and Morduch,  
34 2005). With the paucity of collateral, these factors result in a higher credit risk that must be  
35 shared by all members in the group.  
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40 Furthermore, without overlooking the important role of financial capital in business  
41 development, Bradley *et al.* (2012) reveal that microcredit does not always have direct effects  
42 on microenterprises' performance, but this relationship is significant when mediated by the  
43 entrepreneurs' abilities to conduct innovation. The easy access to finance brought by MFIs, in  
44 some cases, might lead to a decline in business performance in the medium or long term  
45 caused by the inability of entrepreneurs to innovate. Instead, they are more likely to make  
46 their products slightly different from, or even imitate, the innovators' outputs. While  
47 imitating entrepreneurs may at first be justified as market demand is increasing, their  
48 continuing entry into the market escalates competitive pressure so that entrepreneurial profit  
49 is divided among numerous sellers (Hannan and Freeman, 1984). Accordingly, the first  
50 hypothesis (H1) is as follows:  
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3 Hypothesis 1: The relationship between financial capital and WMEs' business performance  
4 will be ambiguous  
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### 8 9 3.2. Human capital and enterprise performance

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11 Human capital refers to formal education, attitudes, and other human skills and  
12 abilities obtained through on-the-job training or business/industrial experiences. Education, a  
13 fundamental source of human capital, provides general human capital such as general search  
14 skill, foresight, imagination, computational and communication skills, as well as specific  
15 skills and knowledge (Parker, 2009), which are prerequisites to the specific human capital  
16 associated with on-the-job training. A number of studies show that there might be a positive  
17 link between the level of education and business success (Kangasharju and Pekkala, 2002;  
18 Pena, 2002).  
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21 Beside formal education, expertise is another important dimension of human capital.  
22 In a business context, it is shaped by both formal and informal training of skills needed to  
23 exploit opportunity (Shane, 2003). Expertise comes from two main sources – internal and  
24 external.  
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27 With respect to internal sources, family is an important training ground for  
28 entrepreneurs. Exposure to family business allows individuals to learn how to start and  
29 develop a business through an apprenticeship because many of the skills necessary for  
30 decision making are tacitly learned and not codified (Polanyi, 1966). In that way, if  
31 individuals have had the opportunity to acquire some business experience through family or  
32 close friends, their expertise in evaluating a business opportunity could be greater (Amit *et*  
33 *al.*, 1993).  
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37 For instance, Caputo and Dolinsky (1998) report that having a self-employed husband  
38 is the single most important determinant of a woman being self-employed. Husbands are a  
39 source of knowledge and experience, and can also serve as role models for their wives. Other  
40 supporting evidence is given by Gimeno *et al.* (1997) that ventures founded by entrepreneurs  
41 from families with a history of entrepreneurship are less likely to fail because they benefit  
42 from proximity to entrepreneurial role models and emotional support.  
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46 With respect to external sources, prior knowledge from training and working  
47 experience enable entrepreneurs to increase their effectiveness during information gathering,  
48 and offers valuable knowledge about financing and developing their business, and it also  
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3 raises confidence in opportunity exploration (Begley and Tan, 2001; Cooper *et al.*, 1995).  
4 These allow entrepreneurs greater freedom in exploring new combinations and innovating, as  
5 well as equipping them with greater ability to understand and handle business in uncertain  
6 conditions leading to improved outcomes (Karlan and Valdivia, 2010). Studies also find that  
7 expertise from industry-specific experience might be a major determinant of small business  
8 success, noting that women are more likely to be disadvantaged (e.g. Loscocco *et al.*, 1991).  
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11 From a gender perspective, women are likely to have fewer human capital compared  
12 to men. They are usually motivated by necessity and are more likely to enter a business  
13 without having a history of achievement, occupational training, or experience (GEM, 2010).  
14 However, the possession of such experience tends to be a key driver of profitability for  
15 WMEs (Coleman, 2007). Accordingly, the second hypothesis (H2) is as follows:  
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19 Hypothesis 2: Human capital will be positively associated with WMEs' business  
20 performance.  
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### 23 24 25 26 27 28 29 *3.3. Social capital and enterprise performance*

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31 Coleman (1988) defines the concept of social capital as how the social structure of a  
32 group can function as a resource for the individuals of that group, and is embedded in the  
33 structure of relations. In an enterprise context, Granovetter (1985) concurs with the idea of  
34 embeddedness stating that enterprises are explained by structures of personal relations and  
35 networks of relations across and within enterprises. This concept highlights the importance of  
36 concrete personal relationships and networks of relationships in a standard economy system.  
37 These networks provide access to resources, employment, psychological aid, information and  
38 advice (Abell *et al.*, 2001; Hoang and Antoncic, 2003) that can be mobilised to facilitate  
39 entrepreneurial actions (Adler and Kwon, 2002).  
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43 The benefits of social capital are not only in terms of facilitating access to broader  
44 business sources, influences, or to gaining power or controls, but also solidarity that can be  
45 transformed into social support from others (Adler and Kwon, 2002). The social supports  
46 included in the structures of an individual's social life (e.g. group membership and/or family  
47 relationship) and the functions that these structures may serve (e.g. emotional support and  
48 instrumental assistance) can be received through the work domain (Allen, 2001) or the family  
49 domain (King *et al.*, 1995). Both domains can be highly interrelated in an entrepreneurial  
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3 context, since entrepreneurs can more easily transfer or share resources between these  
4 domains compared to organisational employees (Powell and Eddleston, 2013).

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6 *Strong ties.* Coleman (1988) argues that family is an ideal environment for creating  
7 social capital. Indeed, there is a greater likelihood that family and close friends will be  
8 socially involved with one another, forming a higher density network of relational lines  
9 (Granovetter, 1983).

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13 With respect to strong ties, family support might range from spousal emotional  
14 support to employing members of the family. Evidence shows that family support is a key  
15 factor in entrepreneurial success for women entrepreneurs; it has positive effects on business  
16 survival, sales and profit growth (e.g. Powell and Eddleston, 2013).

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20 While entrepreneurs in developed economies often rely on strong ties for establishing  
21 an enterprise, particularly for funding, emotional support, and continuing the formation  
22 activities (Davidsson and Honig, 2003; Gimeno et al., 1997; Shane, 2003), reliance on strong  
23 ties in developing economies has an additional motivation. Greater dependence on family  
24 networks or close trust relationships for a wide range of economic activities are required to  
25 cope with distrust of institutions and lax enforcement of contracts in developing economies  
26 (Humphrey and Schmitz, 1998; Zacharakis *et al.*, 2007). Moreover, material resource  
27 deficiencies commonly occurred in micro enterprises forces entrepreneurs to employ their  
28 own family members. In such cases, Cruz et al. (2012) report that employing family members  
29 would partly improve business performance for women-led firms, although it could also harm  
30 the firm's performance when the firm is the main source of household income. Evidence  
31 from India also shows that microcredit provided to women increase household income but  
32 only if their spouses are involved in the businesses (Leach and Sitaram, 2002).

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36 Nevertheless, family involvement may not always have a direct positive effect on  
37 business performance. In the case of low-asset family firms, family involvement may  
38 increase agency costs, for at least two reasons: an apparent lack of formal monitoring  
39 systems, and family members' conflicting interests re use of business assets (Dyer, 2006;  
40 Tundui and Tundui, 2012).

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*Weak ties.* Weak ties are looser relationships or a lower density of relational networks  
of individuals beyond family and close friends (Granovetter, 1983). Individual's informal  
relations with acquaintances and other types of network ties can create social capital through  
increased communication, information diffusion, and social support (Paxton, 1999). In  
addition to such informal person-to-person relations, individuals can be tied to others through  
formal membership in voluntary associations. Accordingly, being a member of an

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3 association, such as a microfinance lending group, could be beneficial for women  
4 entrepreneurs. In this context, interactions among the group's members provide them with  
5 opportunities to develop new or deepen existing social relationships within the group which  
6 might yield economic gains and/or provide members with valuable information about  
7 opportunities (Anthony, 2005). Accordingly, the third hypothesis (H3) is as follows:  
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13 Hypothesis 3: Social capital will be positively associated with WMEs' business  
14 performance.  
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#### 17 18 19 20 **4. Research method**

##### 21 22 *4.1. The survey*

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25 The data was obtained from a survey, conducted in 2010, of Setya Bhakti Wanita  
26 (SBW), a microfinance cooperatives that operates in the City of Surabaya, Indonesia's second  
27 largest city, and its surroundings. With a multi-cultural population of around 2.8 million in  
28 2010, the city is the capital of East Java Province, the second most populated province (37.48  
29 million). SBW is one of the largest (in terms of membership and total assets) women-  
30 cooperative in the city. The institution provides both savings and co-guaranteed loan  
31 programs and has 379 operating microcredit lending groups with a membership of around  
32 10,900 women. In 2010, it had granted total credit of approximately USD13.4 million (Rp.  
33 133.7 billion) with individual credit of up to USD 2,500 (Rp. 25 million) per member.  
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40 The participated lending groups were randomly selected from the list of lending group  
41 provided by SBW. Subsequently, from each group, two or three members, who owned at  
42 least one business, were identified as prospective respondent. The identified respondents  
43 were then initially contacted by phone by the institution on behalf of the researcher for their  
44 voluntary participation. The interviews were mostly conducted at the respondent's residence  
45 or business place to observe their real-life conditions; occasionally the interviews were  
46 conducted at their group meetings. The interviewers were Petra Christian University's  
47 students. The researcher provided training to the students prior the survey, and supervised  
48 them during the survey. A total of 168 women respondents were interviewed but only 134  
49 were analysed excluding unmarried respondents and incomplete responses.  
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#### 4.2. The variables

*Dependent variables.* To recap, a primary objective of the study is to understand the business performance of women micro enterprises (WMEs) in Indonesia with respect to a number of independent variables. In this study, “profit” is used to proxy business performance, measured by a respondent’s subjective self-reporting of changes in profit across two consecutive years. The reason for settling with the “subjective” response is that micro entrepreneurs in Indonesia tend not to keep proper records their business transactions; quite often they are not properly trained, qualified or otherwise equipped to do so. Subjective self-reported performance as a measure of profit, while not ideal, has been in other studies with reasonable reliability (e.g. Anna et al., 2000; Cruz et al., 2012; Wiklund and Shepherd, 2003).

*Independent variables.* Consistent with the literature and following Bradley et al. (2012), the key covariates include: financial capital (FCap), human capital (HCap), and social capital (SCap). Financial capital is operationally defined as the current amount of microcredit (loan size) owed by the individual respondent. Human capital consists of education level, family business background and prior work experience. Education level is measured by the level of formal education of the respondents ranging from elementary to university/college. Family business background and prior working experience are dummy variables.

Social capital comprises of strong and weak ties and lending group. Strong ties is the extent of family and close friends involvement in a respondent’s business. The terms of the involvement includes participation in discussing business ideas, formal or informal employment or otherwise providing help or support to a business. In addition we include a spousal involvement variable to test if this does, per the literature, have any impact on women micro-entrepreneurs’ business success in the case of Indonesia. Weak ties is measured by the extent of business acquaintance (consumers as well as suppliers) involved in the business. Lending group may include both strong and weak ties; in this study, it is separated from both due to the need to capture its role in respondents’ business performance. Lending group is the extent of group members in a respondent’s lending group.

*Control variables.* The control variables include change in total assets, competition, number of employees, new products and respondents’ age. Change in assets, as a proxy of business expansion, is measured by subjective self-reporting of percentage change in the business assets. Competition measures the respondent’s awareness of any competing firms in the surrounding area. Number of employees is the current number of employees working in a respondent’s business. New product is a respondent’s perception of to what extent she agrees

that the product or service she is offering is new to local market. Finally, age is the age of the respondents. Table 1 explains briefly how the questions were framed to obtain relevant data.

[ INSERT Table 1 about HERE ]

#### 4.3. Model specification

The dependent variable is defined as follows: 1 = 'decrease', 2 = 'about the same' and 3 = 'increase'. Since the variables are limited and ordinal in nature, OLS technique might not be appropriate (e.g. McKelvey and Zavoina, 1975). The Ordered Probit estimation, an extension of the Probit model, is more appropriate for this purposes. The Ordered Probit model recognizes the indexed nature of various response variables; in this application, performance ( $y_i$ ) is the ordered response.

The estimated models can be written as:

$$y_i^* = x_i' \beta + \varepsilon_i \quad (1)$$

$$y_i = 1 \text{ if } y_i^* \leq \alpha_1$$

$$y_i = 2 \text{ if } \alpha_1 < y_i^* \leq \alpha_2$$

$$y_i = 3 \text{ if } \alpha_2 < y_i^*$$

where  $y_i^*$  is the latent variable of  $y_i$ ,  $x_i'$  represents the covariates and the controls, and  $\varepsilon_i$  is the error term; it is assumed that  $\varepsilon_i \sim NID(0,1)$ .

With three possible responses, the implied probabilities can be obtained as:

$$\begin{aligned} P_1(x_i) &= P(y_i = 1|x_i) = \Phi(\alpha_1 - x_i' \beta) \\ P_2(x_i) &= P(y_i = 2|x_i) = \Phi(\alpha_2 - x_i' \beta) - \Phi(\alpha_1 - x_i' \beta) \\ P_3(x_i) &= P(y_i = 3|x_i) = 1 - \Phi(\alpha_2 - x_i' \beta) \end{aligned} \quad (2)$$

where  $\Phi$  is cumulative density function of  $NID(0,1)$ , and  $\alpha_1$  and  $\alpha_2$  are the unknown thresholds estimated jointly with  $\beta$  using a maximum likelihood (ML) approach. When correctly specified, the ML estimation is consistent, asymptotically efficient, and normally distributed (Verbeek, 2012).



## 5. Empirical results and discussion

### 5.1. Empirical results

Appendix 1 provides descriptive statistics of the dataset. Table 2 presents the results of the ordered probit models estimating business performance, measured by changes in profit. Model 1 is the baseline control model, while Model 2 predicts profit in the absence of microfinance assistance. Model 3 estimates profit without social capital variables, while in Model 4, human capital variables are omitted from the estimation. Model 5 is the main model encompassing all covariates and controls used in this study.

[ INSERT Table 2 about HERE]

At the 10% level of significance, Models 4 and 5 highlight a negative relationship between microcredit or loan and profit. However, the relationship becomes insignificant when social capital variables are omitted from the estimation (Model 3). These results are consistent with Hypothesis 1 that the relationship between financial capital and performance is ambiguous.

Re Hypothesis 2, as Table 2 shows, profit does not have any significant relationship with either prior working experience or family business background. Although profit is significantly linked to education in Model 2 and Model 3 (at the 10% level), this positive link does not appear in Model 5.

Re Hypothesis 3, none of strong and weak ties or lending group is significantly associated with profit. However, spousal involvement shows a significantly positive impact on the business performance in Models 2, 4 and 5.

[ INSERT Table 3 about HERE]

Table 3 provides the results of an in-depth analysis of outcome prediction with respect to the two key (significant) covariates, microcredit and spousal involvement. The outcome prediction is obtained based on Model 5, holding all other independent variables at their sample means, microcredit is specified at its 10, 25, 50, 75 and 90 percentiles; and spouse involvement at six different degrees of response from strongly disagree to strongly agree.



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3 The outcome predictions show that, given all other covariates at their means, increase  
4 in amount of loan appears to decrease the probability of profitability. For example, for  
5 microcredit at 25 percentile the chance of increase in profit is 48.56% and it drops to 39.69%  
6 when the credit increases to 75 percentile. On the other hand, for microcredit at 25 percentile  
7 the chance of decrease in profit is 11.87%, and it increases to 16.94% when the credit is at 75  
8 percentile.  
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13 Conversely, concerning spousal involvement, the more the women agree the more  
14 likely that their firms' profits increase. For example, given other covariates at means, the  
15 chance of increase in profit is 25.30% (strongly disagree) versus 55.92% (strongly agree)  
16 while the chance of decrease in profit is 29.02% (strongly disagree) versus 8.59% (strongly  
17 agree).  
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## 22 23 5.2. Discussion 24

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26 Microfinance has been shown to have made key contributions in poverty alleviation  
27 programmes in some developing economies. It particularly helps the poor cope with their  
28 household vulnerability by offering non-collateralised loans that might be used to overcome  
29 income shocks. However, the original design of microfinance was actually not to provide  
30 loans for non-productive or for consumption purposes, but to help the most needy to establish  
31 their own micro business to improve household income. In such cases, previous studies have  
32 found divergent results. Unlike other studies maintaining that microfinance is positively  
33 associated with firm performance, this study finds some contradictory results.  
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39 Our study shows a negative relationship between microcredit (proxy for financial  
40 capital) and WMEs' profits (proxy for performance), indicating that higher levels of  
41 indebtedness are likely to adversely affect performance. Two main reasons, at least, might  
42 explain this result. Firstly, microcredit could improve WMEs' production capacity. However,  
43 as the women are typically less-skilled entrepreneurs, their participation in local market is  
44 mostly motivated by necessity, not opportunity. Moreover, when initiating the business, they  
45 were often pushed into entrepreneurship by circumstances beyond their control and therefore  
46 are forced to choose among whatever opportunities are available at that moment (McMullen  
47 *et al.*, 2008). They must then try to make the best of a bad situation, and in doing so, tend to  
48 exploit opportunities that have already been identified by others resulting in an increase in the  
49 quantity supplied or even over supply of analogous products in the local market. Without any  
50 compensating increase on the demand side, this increases competitive pressure at the market,  
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3 leading to downward pressure on local prices and individual profits of both new and existing  
4 microenterprises (Bateman and Chang, 2012; Davis, 2006)

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6 Furthermore, if individuals are forced into entrepreneurship by lack of other options,  
7 they are less likely to make necessary preparations or to have skills and resources that match  
8 the opportunity that allows growth of a business of scale (Bradley *et al.*, 2011). With regard  
9 to the preparation, our survey indicates that almost 70% of the total respondents had not made  
10 adequate plans before initiating their business, and this could carry undesirable consequences  
11 in subsequent periods.  
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14 The second reason is that there is a strong indication that the entrepreneurs cannot  
15 productively manage the credit to make their business grow and to become profitable  
16 (Dichter, 2006). Thus, the relatively high interest rate imposed on the credit might burden  
17 WMEs especially if the credit cannot be optimally utilised to generate even higher incomes.  
18 In addition, women might also use the credit for other purposes than business due to their  
19 inability to distinctively separate their household consumption and business investment  
20 (Parker, 2009). Hence, as has previously been warned by Morduch (1999), access to more  
21 credit might lead to greater personal and/or household expenditure rather than business  
22 development.  
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25 With regard to human capital, proxied by formal education and business expertise,  
26 results suggest that none of the indicators significantly matter for business performance.  
27 Formal education and prior work experience do not enhance the chance of increasing profits.  
28 Moreover, family business background is not significantly related to the chance of having  
29 better business performance. The later might suggest that the entrepreneur's parents/families  
30 might not have successfully transmitted entrepreneurial skills to their offspring, or that the  
31 parents indeed transferred the skills but the skills are not quite relevant to handle the current  
32 business challenges faced by them.  
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35 Regarding social capital, this study reveals statistically insignificant relationships  
36 between WMEs' performance and both strong and weak ties; however, spousal involvement  
37 is significantly correlated with profit. The size of family networks and the number of business  
38 acquaintances do not seem to have much impact on profit growth, but spouse (husband)  
39 involvement clearly shows strong contribution to business success. This might be because  
40 spousal involvement not only gives women less expensive employees, networking, and  
41 training, but also provides them with emotional support assisting the women who often desire  
42 for synergy between work and family (Bird and Brush, 2002; Brush, 1992).  
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3 A microfinance lending group is commonly expected to enhance harmony among its  
4 membership and help members broaden social networks, which benefit their business.  
5 However, our finding shows that although it has a positive sign, the relationship between  
6 lending group and business performance is not statistically significant. This might be due to  
7 the fact that women's involvement in lending groups is simply and pragmatically motivated  
8 by access to credit. During the interview, when the respondents were asked to rank (from 1 to  
9 5, and 1 being the most) the time typically spent in a group meeting for discussing personal  
10 issues, loan repayment, business ideas, spiritual issues and community news, around 88% of  
11 the respondents positioned loan repayment issues at the top rank (rank 1). This clearly  
12 indicates that conversations among members during the group's meetings are dominated by  
13 loan repayment issues, leaving very little time for members to talk with each other about their  
14 business. Therefore, the chance of exchanging and gaining valuable information about  
15 business opportunities and ideas are rather limited.  
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## 28 **6. Conclusion**

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30 While microfinance has been shown to have made considerable progress in making  
31 financial resources available to the bottom segments of the society, to women, in particular,  
32 offering them an opportunity to improve their living standards, despite a long history in  
33 Indonesia, one of the most populous and poverty challenged economies in the world, the role  
34 of microfinance and its impact on Indonesia's women microenterprises (WMEs) remains  
35 little known. This study fills this huge gap in the literature.  
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40 Specifically, this study provides the first in-depth understanding of the role of  
41 financial, social and human capital in the performance of WMEs. A survey of 168 WMEs in  
42 Surabaya, the second largest city in Indonesia, was conducted and the data was analysed  
43 using the ordered probit regression technique. Result show that financial capital may not  
44 necessarily influence business success—a negative relationship is found between financial  
45 capital and performance. On the other hand, a positive relationship is noted between  
46 performance and spousal involvement, indicating that it might be more important than just  
47 microcredit for successful operation of WMEs in the case of Indonesia.  
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54 Future studies might involve a larger, more heterogeneous sample size, from a  
55 different part of Indonesia. Future research might also involve a deeper explanation of the  
56 relationships noted in this study, for example, why loan size has a negative effect on profit,  
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3 whether applying alternative credit schemes (e.g. individual credit scheme) instead of lending  
4 group credit scheme might affect business performance differently, in what ways do spousal  
5 involvement benefit WMEs' business performance and whether the findings apply also to  
6 male-headed micro businesses. In the meantime, this study provides useful research-based  
7 findings for relevant policy development in Indonesia which might also be relevant for other  
8 developing economies.  
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Table 1: Description of variables

Variables	Questionnaire Questions
Profit	Compared to last year, have your profits (revenues after expenses are paid) in your business (circle one): increased, decreased, or stayed about the same? <u>Answer:</u> decrease = 1 , about the same = 2 , increase =3
Microcredit ( <i>Fcap</i> )	What is your current loan amount (in millions rupiah)?
Education	What is the highest grade/level of school you have attained? <u>Answer:</u> Elementary = 1 , Junior High = 2 , Senior High =3 , University = 4
Prior working experience	Did you have prior working experience with the type of business you started? <u>Answer:</u> (YES = 1 , No = 0)
Family business background	Did your parents ever work for themselves or run their own businesses? <u>Answer:</u> (YES = 1 , No = 0)
Strong ties	Approximately, how many family members or friends have been involved in your business?
Weak ties	Approximately, how many business acquaintances (i.e. consumers and suppliers) have been involved in your business?
Lending Group	How many people are in your lending group?
Spousal involvement	How much do you agree with statement that "I have found ways to get my husband/wife involved with my business"? <u>Answer:</u> (1.Strongly disagree.....7. Strongly agree)
Change in assets	Compared to last year, by how many percentages approximately have the assets (equipment/ materials) used by your business changed?
Competition	Are there any competitors who sell the same product/service in your area? <u>Answer:</u> (YES = 1 , No = 0)
Number of employees	How many people are employed by your business?
New product	How much do you agree with statement that "the product or service I am offering is new to the local market?" <u>Answer:</u> (1.Strongly disagree .....7. Strongly agree)
Age	What is your age?

**Table 2: Ordered probit estimation results**

Variables	Change in PROFIT				
	Model 1	Model 2	Model 3	Model 4	Model 5
<i>Financial capital</i>					
Microcredit			-0.0386 (0.0241)	-0.0531 (0.0238)**	-0.0450 (0.0245)*
<i>Human capital</i>					
Education		0.2313 (0.1288)*	0.2388 (0.1282)*		0.1942 (0.1311)
Prior working experience		-0.2614 (0.2185)	-0.1125 (0.2160)		-0.1330 (0.2292)
Family business background		0.2008 (0.2173)	0.1354 (0.2127)		0.1786 (0.2185)
<i>Social capital</i>					
Strong ties		-0.0264 (0.0515)		-0.0075 (0.0516)	-0.0180 (0.0525)
Weak ties		-0.0100 (0.0104)		-0.0123 (0.0104)	-0.0120 (0.0105)
Lending group				0.0202 (0.0136)	0.0181 (0.0142)
Spousal involvement		0.1420 (0.0685)**		0.1395 (0.0685)**	0.1356 (0.0701)**
<i>Business control</i>					
Change in assets	0.0244 (0.0056)**	0.0234 (0.0058)**	0.0241 (0.0057)**	0.0246 (0.0060)**	0.0244 (0.0060)**
Competition	0.3244 (0.2108)	0.4292 (0.2244)*	0.3616 (0.2155)*	0.5466 (0.2279)**	0.5118 (0.2300)**
Number of employees	0.0352 (0.0303)	0.0300 (0.0304)	0.0415 (0.0311)	0.0375 (0.0310)	0.0345 (0.0314)
New product	-0.0704 (0.1098)	0.0166 (0.1173)	-0.0339 (0.1123)	0.0573 (0.1207)	0.0462 (0.1210)
<i>Individual control</i>					
Age	-0.0078 (0.0117)	0.0034 (0.0126)	0.0021 (0.0124)	0.0027 (0.0123)	0.0076 (0.0128)

Notes: Unstandardized coefficients and standard error (in parentheses) are reported. Number of observation (n) = 134. \*p<0.10; \*\* p<0.05

**Table 3: The analysis of outcome prediction**

Variables	Outcomes		
	Decrease in profit	Relatively no change in profit	Increase in profit
<b>Microcredit :</b>			
(at different quantile)			
10%	0.0798	0.3453	0.5750
25%	0.1187	0.3957	0.4856
50%	0.1279	0.4045	0.4676
75%	0.1694	0.4336	0.3969
90%	0.1932	0.4442	0.3626
<b>Spousal involvement :</b>			
Strongly disagree	0.2902	0.4567	0.2530
Moderately Disagree	0.2456	0.4561	0.2983
Slightly Disagree	0.2050	0.4481	0.3469
Neither Agree nor Disagree	0.1686	0.4332	0.3982
Slightly Agree	0.1367	0.4120	0.4513
Moderately Agree	0.1092	0.3856	0.5053
Strongly Agree	0.0859	0.3550	0.5592



Bukti korespondensi permintaan revisi oleh reviewer  
(19 Desember 2014)

**International Journal of Social Economics - Decision on Manuscript ID IJSE-08-2014-0158**

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Kepada: adwin.atmadja@griffithuni.edu.au <adwin.atmadja@griffithuni.edu.au>  
19-Dec-2014

Dear Mr. Atmadja:

Manuscript ID IJSE-08-2014-0158 entitled "Examining the impact of microfinance on microenterprises performance (Implications for women-owned micro enterprises in Indonesia)" which you submitted to the International Journal of Social Economics, has been reviewed. The comments of the reviewer(s) are included at the bottom of this letter.

The reviewer(s) have recommended publication, but also suggest some revisions to your manuscript. Therefore, I invite you to respond to the reviewer(s)' comments and revise your manuscript.

To revise your manuscript, log into <https://mc.manuscriptcentral.com/ijsec> and enter your Author Centre, where you will find your manuscript title listed under "Manuscripts with Decisions." Under "Actions," click on "Create a Revision." Your manuscript number has been appended to denote a revision.

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. Please also highlight the changes to your manuscript within the document by using the track changes mode in MS Word or by using bold or coloured text. 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).

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Because we are trying to facilitate timely publication of manuscripts submitted to the International Journal of Social Economics, 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 the International Journal of Social Economics and I look forward to receiving your revision.

Sincerely,  
Prof. Colin Tyler  
Editor, International Journal of Social Economics  
C.Tyler@hull.ac.uk

Reviewer(s)' Comments to Author:  
Reviewer: 1

Recommendation: Major Revision

Comments:

This topic has been widely researched and vast amount of literature is available on the subject matter across the world. However, contextual novelty is present in the paper. Methodology has serious issues that need to be addressed before it can be considered for publication.

Additional Questions:

<b>1. Originality: </b> Does the paper contain new and significant information adequate to justify publication?: This topic has been widely researched and vast amount of literature is available on the subject matter in various countries across the world which is also referenced by the author as well. However, in the context of Indonesia and particularly area where this study was carried out can be a contribution. Hence the element of novelty in the context of Indonesia is present which makes it suitable for the publication.

<b>2. Relationship to Literature: </b> Does the paper demonstrate an adequate understanding of the relevant literature in the

field and cite an appropriate range of literature sources? Is any significant work ignored?: The paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources. It seems that the paper has covered all the important literature.

**3. Methodology:** Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: No, there are serious concerns with reference to methodology that reduces the validity of the research. The researchers have collected data from 168 respondents whereas 134 questionnaires were usable. 168/10900 is not representative sample. The larger sample size can increase the validity of results. Since the research is already completed it seems difficult to overcome this issue. Similarly, there are serious concern on the sampling process as well. The author is taking two years' profit as dependent without considering the length of membership with SBW. The length of membership can also have impacts on the results.

**4. Results:** Are results presented clearly and analysed appropriately? Do the conclusions adequately tie together the other elements of the paper?: Yes the results are clearly presented and analysed appropriately. The data has shown some outliers e.g. 21 employees in micro-enterprise is unusual with a mean of approximately 3. An outlier can significantly change the results. Authors need to shed light, were there any outliers? If yes, what actions were taken to correct them.

**5. Implications for research, practice and/or society:** Does the paper identify clearly any implications for research, practice and/or society? Does the paper bridge the gap between theory and practice? How can the research be used in practice (economic and commercial impact), in teaching, to influence public policy, in research (contributing to the body of knowledge)? What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: The The paper does not identify clearly implications for research, practice. Ambiguity in results does not adequately bridge the gap between theory and practice. The research has also limited potential in teaching as major findings already exist in literature. Author need to focus on this area.

**6. Quality of Communication:** Does the paper clearly express its case, measured against the technical language of the field and the expected knowledge of the journal's readership? Has attention been paid to the clarity of expression and readability, such as sentence structure, jargon use, acronyms, etc.: Acceptable

Bukti konfirmasi submit revisi dan artikel yang direvisi  
(3 Pebruari 2015)



**International Journal of Social Economics - Manuscript ID IJSE-08-2014-0158.R1**

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03-Feb-2015

Dear Mr. Atmadja:

Your revised manuscript entitled "Examining the impact of microfinance on microenterprises performance (Implications for women-owned micro enterprises in Indonesia)" has been successfully submitted online and is presently being given full consideration for publication in the International Journal of Social Economics.

Your manuscript ID is IJSE-08-2014-0158.R1.

Please mention the above manuscript ID 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 Manuscript Central at <https://mc.manuscriptcentral.com/ijsec> and edit your user information as appropriate.

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Thank you for submitting your manuscript to the International Journal of Social Economics.

Sincerely,  
International Journal of Social Economics Editorial Office

P.S. Don't forget, you can read the journal online at <http://www.emeraldinsight.com/0306-8293.htm>

**Examining the impact of microfinance on microenterprises performance  
(Implications for women-owned micro enterprises in Indonesia)**

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Manuscript Type:	Research Paper
Keywords:	Microcredit, Microenterprise, Business performance

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Review

# Examining the impact of microfinance on microenterprise performance

## (Implications for women-owned micro enterprises in Indonesia)

### Abstract:

**Purpose** – This study attempts to examine the impacts of microfinance on women-owned microenterprises' (WMEs) performance in Indonesia. It especially observes how financial, human and social capital influences performance of enterprises.

**Design/methodology/approach** – Data was collected from a survey conducted in Surabaya, Indonesia's second largest city, covering more than one hundred WMEs. The ordered probit technique is applied to estimate the performance vis-à-vis financial, social and human capital relationships.

**Findings** – This study finds a negative relationship between performance and financial capital and a positive relationship between performance and social capital. **However, with respect to human capital, the level of education has a marginally significant relationship with performance.**

**Originality/value** – To the best of our knowledge, this study provides the first in-depth understanding of the role of microfinance programmes in the case of performance of WMEs' in Indonesia, one of the world's most populous economies.

**Keywords** – Microcredit, microenterprise, business performance

**Paper type** – Research Paper

### 1. Introduction

Microfinance has been shown to matter importantly for raising the living standards for the poor and their hopes for breaking out of poverty. Evidence shows that the impact of microfinance is not only at individual and household levels (Littlefield, Morduch, & Hashemi, 2003; Morduch, 1999), but also at the country level (Khandker, 2005; Mosley & Hulme, 1998). Essentially, microfinance is designed to provide access to finance to those with few or no valuable assets that can be used as capital or collateral. Relative to formal banking credit, microcredit from microfinance institutions (MFIs) are informal and based mainly on trust, without strict collateral requirements or legally enforceable contracts. Moreover, as opposed to consumption, microcredit is usually offered to the most needy to start up a microenterprise or to expand an existing business.

Given that the main goal of microfinance is poverty reduction via microcredit for business start-up/expansion, it is natural to enquire about the extent of its success in different settings so that relevant policies may be reviewed accordingly, especially since existing literature provides inconclusive evidence. Indeed, while some studies show that microcredit

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3 does benefit women's microenterprises performance (Copestake, Bhalotra, & Johnson, 2001;  
4 Leach & Sitaram, 2002), others question the effectiveness of microcredit *per se* in  
5 successfully lifting people out of poverty and improving welfare (Cull, Demirgüç-Kunt, &  
6 Morduch, 2009). Some even contend that the effectiveness is even less for the poorest and  
7 those with limited skills, as these groups of borrowers can seldom use the loans productively  
8 (Adams & Von Pischke, 1992; Imai, Arun, & Annim, 2010). Ironically, some studies even  
9 argue that microfinance may actually be harmful to its recipients (Buckley, 1997; Rahman,  
10 1999).

11  
12 In the case of a microenterprise — just like any other business venture — finance  
13 (microcredit) *per se* cannot be the sole ingredient for success. Other factors, such as human  
14 and social capital, are equally important (Anthony, 2005; Steven W Bradley, McMullen,  
15 Artz, & Simiyu, 2012; Leach & Sitaram, 2002; Tundui & Tundui, 2012). A combination of  
16 these different forms of capital is essential for enhancing the performance of a  
17 microenterprise. Without an appropriate mix, business success becomes a real challenge. In  
18 turn, an unsuccessful micro-business might have little, if any, positive implication for  
19 poverty alleviation or welfare improvement.

20  
21 Bearing the above in mind, microfinance appears to have made considerable progress  
22 in making financial resources available to the bottom segments of the society, to women, in  
23 particular, offering them an opportunity to improve their living standards. Microfinance has  
24 a long history in Indonesia and has been active in providing credit for the poor. However, the  
25 role of microfinance and its impact on Indonesian WMEs remains little known, and this is the  
26 primary motivation for this study.

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28 Specifically, this study endeavours to provide an in-depth understanding of the role of  
29 microfinance in WMEs' performance in an urban area of Indonesia with the main research  
30 question being "what are the key determinants of Indonesian WMEs performance?", focusing  
31 on financial, human, and social capitals. To address the question, a survey of women-headed  
32 microenterprises in Surabaya, the second largest city in Indonesia, was conducted and the  
33 survey data was analysed using the ordered probit regression technique. This study finds a  
34 negative relationship between performance and financial capital and positive relationship  
35 **between performance and human capital** and performance and social capital. The findings  
36 suggest that microcredit itself does not necessarily assure a better business performance;  
37 however spousal involvement, a part of social capital, and level of education are essential for  
38 business success.

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3 The rest of this paper is outlined as follows. Section 2 briefly provides an overview of  
4 Indonesia with focus on socio-economic and financial market conditions as well as on the  
5 microfinance industry. It is then continued with literature review and hypotheses linked to the  
6 research questions in Section 3. Section 4 explains research method followed by empirical  
7 results and discussion in Section 5. Section 6 concludes.  
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## 11 12 13 14 **2. Country Overview** 15

16 With a GNI per capita of only US\$ 4,810 in 2012 (World Bank, 2013), poverty  
17 remains Indonesia's major national challenge. While the proportion of Indonesians living on  
18 less than \$1.25 a day has been reduced significantly in the last two decades (ADB, 2013),  
19 around 18% of the total population continue to live below the international poverty line  
20 (World Bank, 2013) causing some Human Development Index (HDI) indicators to be very  
21 low on an international scale.  
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26 HDI, as well as some gender indicators, suggest that women tend to be disadvantaged  
27 with respect to a number of socio-economic factors, including employment, education, and  
28 participation in parliament and high offices compared to their male counterparts. In addition,  
29 a survey of small and medium enterprises (SMEs) conducted by IFC/NORC (2010) reveals  
30 that, across 10 Indonesian cities, women-headed firms were generally smaller than men-  
31 headed ones, with 82% having a monthly turnover of Rp. 50 million or less, compared to  
32 only 56% for men. Further, the survey provides evidence that fewer women-headed firms  
33 had a savings or a deposit account (79% female/92% male) and a business loan (6%  
34 female/16% male).  
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41 The Indonesian government has encouraged formal financial institutions, mostly  
42 commercial banks, to reach the unbanked by endorsing the national regulation of non-  
43 collateralised loans for microcredit<sup>1</sup>. Yet, this has been confronted with two main constraints.  
44 Firstly, the ability of the country's commercial banks to provide credit is limited by the  
45 relatively small size of the country's financial sector (World Bank, 2010). Secondly, the 1998  
46 Financial Crisis has caused a traumatic effect which has motivated Indonesian authorities to  
47 emphasis the practice of prudential banking, resulting in a prudentially sound, but inefficient,  
48 narrow, and homogenized banking oligopoly (Beck & Al-Hussainy, 2010). The constraints  
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56 <sup>1</sup> Central Bank of Indonesia (Bank Indonesia) defines microcredit as a loan below 50 million rupiah (equivalent  
57 with USD. 4,280.82, based on current (17/07/2014) exchange rate of USD 1 = Rp. 11,680) provided by  
58 financial providers in Indonesia.  
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3 contribute to the shallow outreach of the country's formal financial sector. Hamada (2010)  
4 reports that the outreach of large commercial banks, excluding *Bank Rakyat Indonesia* (BRI),  
5 into the small credit market remains limited. Accordingly, this has become a significant  
6 constraint for micro, small and medium enterprises (Rosengard & Prasetyantoko, 2011),  
7 outside the country's microfinance industry.  
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11 The microfinance industry in Indonesia is exceptionally old. It is made of a large  
12 variety of institutions, programs, services, clients, target groups, and is also subject to various  
13 legal, regulatory, and supervisory frameworks (Holloh, 2001). The country's microfinance  
14 industry is also one of the most commercialised in the world in terms of its provision of  
15 sustainable microfinance with wide scale and sustainable outreach (Charitonenko & Afwan,  
16 2003). The commercialization might have two main implications. Firstly, it stimulates MFI to  
17 do credit expansion, widening access to finance. Secondly, however, the commercialization  
18 might cause tighter credit screening, which limits the access to finance. In such cases,  
19 Rosengard and Prasetyantoko (2011) report that there is still an unmet demand for  
20 microfinance services. Additionally, the interest rates charged by MFIs on microloans are  
21 often considerably higher compared with those commonly charged by urban commercial  
22 banks.  
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### 34 35 **3. Literature review and hypothesis development**

#### 36 37 *3.1. Financial capital and enterprise performance*

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39 At the earliest stage of an enterprise' life cycle, financial capital is the essential  
40 resource for purchasing fixed assets, for working capital, and for financing initial operations  
41 and the living expenses of the owners. The amount of initial capital invested has a positive  
42 linkage with venture survival and growth (Cooper, Gimeno-Gascon, & Woo, 1994) because it  
43 enables entrepreneurs to invest in productive activities, to have financial cushion to protect  
44 against slow start-ups, market downturns, or managerial mistakes, as well as to exploit  
45 business opportunities and speed up business growth in the subsequent stages (Bates, 1995;  
46 Cooper, Woo, & Dunkelberg, 1988; Demirguc-Kunt, Beck, & Honohan, 2008).  
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53 Financial capital may come from various sources. In developed countries, start-up  
54 finance is mostly supplied by the entrepreneurs themselves in the form of personal equity.  
55 Meanwhile in developing countries, financial capital is mostly acquired from external  
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3 sources, predominantly as debt (Parker, 2009). This is because that the start-up finance often  
4 exceeds the entrepreneurs' valuable possessions. However, those with lower credit scoring  
5 and/or lack of collateral might be excluded from obtaining loans, preventing them to become  
6 entrepreneurs (Evans & Jovanovic, 1989).  
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10 Moreover, the presence of gender bias in financial sector causes unequal treatment of  
11 women when dealing with banks and other mainstream credit institutions, which generally  
12 tend to favour men (IFC, 2012; Parker, 2009; Stevenson, 1986). The lenders – banks and  
13 other mainstream credit institutions – argue that men run larger businesses and seize larger  
14 control over the assets that banks seek as collateral (Armendariz de Aghion & Morduch,  
15 2005). Women are also less likely to have relevant industry-specific experience, hence  
16 women-owned firms are less likely to be successful according to economic measures of  
17 business success (GEM, 2010; Loscocco, Robinson, Hall, & Allen, 1991; Watson &  
18 Robinson, 2003). Other explanation is that as women consider more about risks, they tend to  
19 demand relatively small, but more frequent loans; this increases lending costs (van Staveren,  
20 2001).  
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28 Unlike conventional banks and other mainstream credit institutions, microcredits are  
29 offered by microfinance institutions (MFIs) with minimal credit screening and without, or in  
30 some cases with more flexible, physical collateral. Although the cost of borrowing is  
31 relatively high, the MFIs' credit scheme gives wider access to finance to the unbanked to  
32 cope with household vulnerability and/or for micro entrepreneurship (Copestake et al., 2001;  
33 Garikipati, 2008).  
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38 Notwithstanding the opportunities provided by microfinance to the most needy, for  
39 some MFIs with lending group schemes, credit screening is more often based on the  
40 trustworthiness of the individual and on the number of ties to other group members, and less  
41 attention is given to the business opportunity pursued (Armendariz de Aghion & Morduch,  
42 2005). With the paucity of collateral, these factors result in a higher credit risk that must be  
43 shared by all members in the group.  
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48 Furthermore, without overlooking the important role of financial capital in business  
49 development, Steven W Bradley et al. (2012) reveal that microcredit does not always have  
50 direct effects on microenterprises' performance, but this relationship is significant when  
51 mediated by the entrepreneurs' abilities to conduct innovation. The easy access to finance  
52 brought by MFIs, in some cases, might lead to a decline in business performance in the  
53 medium or long term caused by the inability of entrepreneurs to innovate. Instead, they are  
54 more likely to make their products slightly different from, or even imitate, the innovators'  
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3 outputs. While imitating entrepreneurs may at first be justified as market demand is  
4 increasing, their continuing entry into the market escalates competitive pressure so that  
5 entrepreneurial profit is divided among numerous sellers (Hannan & Freeman, 1984;  
6 Schumpeter, 1912). Accordingly, the first hypothesis (H1) is as follows:  
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11 Hypothesis 1: The relationship between financial capital and WMEs' business performance  
12 will be ambiguous  
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### 17 3.2. *Human capital and enterprise performance*

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19 Human capital refers to formal education, attitudes, and other human skills and  
20 abilities obtained through on-the-job training or business/industrial experiences. Education, a  
21 fundamental source of human capital, provides general human capital such as general search  
22 skill, foresight, imagination, computational and communication skills, as well as specific  
23 skills and knowledge (Parker, 2009), which are prerequisites to the specific human capital  
24 associated with on-the-job training. A number of studies show that there might be a positive  
25 link between the level of education and business success (Kangasharju & Pekkala, 2002;  
26 Pena, 2002).  
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33 Beside formal education, expertise is another important dimension of human capital.  
34 In a business context, it is shaped by both formal and informal training of skills needed to  
35 exploit opportunity (Shane, 2003). Expertise comes from two main sources – internal and  
36 external.  
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40 With respect to internal sources, family is an important training ground for  
41 entrepreneurs. Exposure to family business allows individuals to learn how to start and  
42 develop a business through an apprenticeship because many of the skills necessary for  
43 decision making are tacitly learned and not codified (Polanyi, 1966). In that way, if  
44 individuals have had the opportunity to acquire some business experience through family or  
45 close friends, their expertise in evaluating a business opportunity could be greater (Amit,  
46 Glostén, & Muller, 1993).  
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51 For instance, Caputo and Dolinsky (1998) report that having a self-employed husband  
52 is the single most important determinant of a woman being self-employed. Husbands are a  
53 source of knowledge and experience, and can also serve as role models for their wives. Other  
54 supporting evidence is given by Gimeno, Folta, Cooper, and Woo (1997) that ventures  
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3 founded by entrepreneurs from families with a history of entrepreneurship are less likely to  
4 fail because they benefit from proximity to entrepreneurial role models and emotional  
5 support.  
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8 With respect to external sources, prior knowledge from training and working  
9 experience enable entrepreneurs to increase their effectiveness during information gathering,  
10 and offers valuable knowledge about financing and developing their business, and it also  
11 raises confidence in opportunity exploration (Begley & Tan, 2001; Cooper, Folta, & Woo,  
12 1995). These allow entrepreneurs greater freedom in exploring new combinations and  
13 innovating, as well as equipping them with greater ability to understand and handle business  
14 in uncertain conditions leading to improved outcomes (Karlan and Valdivia (2010). Studies  
15 also find that expertise from industry-specific experience might be a major determinant of  
16 small business success, noting that women are more likely to be disadvantaged (Loscocco et  
17 al., 1991).  
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24 From a gender perspective, women are likely to have fewer human capital compared  
25 to men. They are usually motivated by necessity and are more likely to enter a business  
26 without having a history of achievement, occupational training, or experience (GEM, 2010).  
27 However, the possession of such experience tends to be a key driver of profitability for  
28 WMEs (S. Coleman, 2007). Accordingly, the second hypothesis (H2) is as follows:  
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34 Hypothesis 2: Human capital will be positively associated with WMEs' business  
35 performance.  
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### 40 3.3. *Social capital and enterprise performance*

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43 J. S. Coleman (1988) defines the concept of social capital as how the social structure  
44 of a group can function as a resource for the individuals of that group, and is embedded in the  
45 structure of relations. In an enterprise context, Granovetter (1985) concurs with the idea of  
46 embeddedness stating that enterprises are explained by structures of personal relations and  
47 networks of relations across and within enterprises. This concept highlights the importance of  
48 concrete personal relationships and networks of relationships in a standard economy system.  
49 These networks provide access to resources, employment, psychological aid, information and  
50 advice (Abell, Crouchley, & Mills, 2001; Hoang & Antoncic, 2003) that can be mobilised to  
51 facilitate entrepreneurial actions (Adler & Kwon, 2002).  
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3 The benefits of social capital are not only in terms of facilitating access to broader  
4 business sources, influences, or to gaining power or controls, but also solidarity that can be  
5 transformed into social support from others (Adler & Kwon, 2002). The social supports  
6 included in the structures of an individual's social life (e.g. group membership and/or family  
7 relationship) and the functions that these structures may serve (e.g. emotional support and  
8 instrumental assistance) can be received through the work domain (Allen, 2001) or the family  
9 domain (King, Mattimore, King, and Adams (1995). Both domains can be highly interrelated  
10 in an entrepreneurial context, since entrepreneurs can more easily transfer or share resources  
11 between these domains compared to organisational employees (Powell & Eddleston, 2013).

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18 *Strong ties.* J. S. Coleman (1988) argues that family is an ideal environment for  
19 creating social capital. Indeed, there is a greater likelihood that family and close friends will  
20 be socially involved with one another, forming a higher density network of relational lines  
21 (Granovetter, 1983).

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25 With respect to strong ties, family support might range from spousal emotional  
26 support to employing members of the family. Evidence shows that family support is a key  
27 factor in entrepreneurial success for women entrepreneurs; it has positive effects on business  
28 survival, sales and profit growth (Bruderl & Preisendorfer, 1998; Powell & Eddleston, 2013).

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31 While entrepreneurs in developed economies often rely on strong ties for establishing  
32 an enterprise, particularly for funding, emotional support, and continuing the formation  
33 activities (Davidsson & Honig, 2003; Gimeno et al., 1997; Shane, 2003), reliance on strong  
34 ties in developing economies has an additional motivation. Greater dependence on family  
35 networks or close trust relationships for a wide range of economic activities are required to  
36 cope with distrust of institutions and lax enforcement of contracts in developing economies  
37 (Humphrey & Schmitz, 1998; Zacharakis, McMullen, & Shepherd, 2007). Moreover,  
38 material resource deficiencies commonly occurred in micro enterprises forces entrepreneurs  
39 to employ their own family members. In such cases, Cruz et al. (2012) report that employing  
40 family members would partly improve business performance for women-led firms, although  
41 it could also harm the firm's performance when the firm is the main source of household  
42 income. Evidence from India also shows that microcredit provided to women increase  
43 household income but only if their spouses are involved in the businesses (Leach & Sitaram,  
44 2002).

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Nevertheless, family involvement may not always have a direct positive effect on  
business performance. In the case of low-asset family firms, family involvement may  
increase agency costs, for at least two reasons: an apparent lack of formal monitoring

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3 systems, and family members' conflicting interests re use of business assets (Dyer, 2006;  
4 Tundui & Tundui, 2012).

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6 *Weak ties.* Weak ties are looser relationships or a lower density of relational networks  
7 of individuals beyond family and close friends (Granovetter, 1983). Individual's informal  
8 relations with acquaintances and other types of network ties can create social capital through  
9 increased communication, information diffusion, and social support (Paxton, 1999). In  
10 addition to such informal person-to-person relations, individuals can be tied to others through  
11 formal membership in voluntary associations. Accordingly, being a member of an  
12 association, such as a microfinance lending group, could be beneficial for women  
13 entrepreneurs. In this context, interactions among the group's members provide them with  
14 opportunities to develop new or deepen existing social relationships within the group which  
15 might yield economic gains and/or provide members with valuable information about  
16 opportunities (Anthony (2005). Accordingly, the third hypothesis (H3) is as follows:  
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26 Hypothesis 3: Social capital will be positively associated with WMEs' business  
27 performance.  
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### 33 **4. Research method**

#### 34 *4.1. The survey*

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38 The data was obtained from a survey, conducted in 2010, of Setya Bhakti Wanita  
39 (SBW) microfinance institution (MFI) which operates in the City of Surabaya—Indonesia's  
40 second largest city—and its surroundings. With a multi-cultural population of around 2.8  
41 million in 2010, the city is the capital of East Java Province, Indonesia's second most  
42 populated province (37.48 million). SBW, in turn, is one of the largest (in terms of  
43 membership and total assets) women MFIs in the city. The institution provides both savings  
44 and co-guaranteed microcredits and has 379 operating microcredit lending groups with a  
45 membership of around 10,900 women. In 2010, it had granted total credit of approximately  
46 USD13.4 million (Rp. 133.7 billion) with individual credit of up to USD 2,500 (Rp. 25  
47 million) per member.  
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3 In Indonesian, both registered microbusiness owners as well as non-business owners  
4 may apply for credit from MFIs. Since the number of business owners is far less than the  
5 non-business owners, memberships of MFIs are commonly dominated by non-business  
6 owner members, a situation also prevalent at SBW. Of SBW's total women membership of  
7 10,900, only 2000 met the survey criteria of "owns a microbusiness". The 2000 women  
8 microenterprise owners made up around 80 lending groups. From each of the 80 groups, two  
9 to three members were randomly selected as prospective respondents. The prospective  
10 respondents were then initially contacted by phone by SBW on behalf of the researchers for  
11 their "voluntary" participation. Of the 230 prospective respondents contacted, only 168  
12 agreed to be interviewed, of which only 130 completed responses were found to be valid for  
13 the purposes of the analysis—unmarried respondents, incomplete responses and some outliers  
14 were excluded.

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16 Interviews were mostly conducted at the respondent's residence or business place to  
17 observe their real-life conditions; occasionally the interviews were conducted at group  
18 meetings. The interviewers were local university students, from a final year research methods  
19 class. An announcement was made by the convenor about the opportunity to participate in a  
20 survey as interviewers. Twenty-five students were selected based on their academic  
21 performance and relevant prior experience. The researcher provided training to the students  
22 prior to the survey, and supervised them during the survey.

#### 33 34 35 36 37 4.2. The variables

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40 *Dependent variables.* To recap, a primary objective of the study is to understand the  
41 business performance of women micro enterprises (WMEs) in Indonesia with respect to a  
42 number of independent variables. In this study, "profit" is used to proxy business  
43 performance, measured by a respondent's subjective self-reporting of changes in profit across  
44 two consecutive years. The reason for settling with the "subjective" response is that micro  
45 entrepreneurs in Indonesia tend not to keep proper records their business transactions; quite  
46 often they are not properly trained, qualified or otherwise equipped to do so. Subjective self-  
47 reported performance as a measure of profit, while not ideal, has been in other studies with  
48 reasonable reliability (Anna, Chandler, Jansen, & Mero, 2000; Cruz et al., 2012; Wiklund &  
49 Shepherd, 2003).

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3        *Independent variables.* Consistent with the literature and following Bradley et al.  
4 (2012), the key covariates include: financial capital (FCap), human capital (HCap), and social  
5 capital (SCap). Financial capital is operationally defined as the current amount of microcredit  
6 (loan size) owed by the individual respondent. Human capital consists of education level,  
7 family business background and prior work experience. Education level is measured by the  
8 level of formal education of the respondents ranging from elementary to university/college.  
9 Family business background and prior working experience are dummy variables.

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14        Social capital comprises of strong and weak ties and lending group. Strong ties is the  
15 extent of family and close friends involvement in a respondent's business. The terms of the  
16 involvement includes participation in discussing business ideas, formal or informal  
17 employment or otherwise providing help or support to a business. In addition we include a  
18 spousal involvement variable to test if this does, per the literature, have any impact on  
19 women micro-entrepreneurs' business success in the case of Indonesia. Weak ties is  
20 measured by the extent of business acquaintance (consumers as well as suppliers) involved in  
21 the business. Lending group may include both strong and weak ties; in this study, it is  
22 separated from both due to the need to capture its role in respondents' business performance.  
23 Lending group is the extent of group members in a respondent's lending group.

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25        *Control variables.* The control variables include change in total assets, competition,  
26 number of employees, new products, respondents' age and the length of membership. Change  
27 in assets, as a proxy of business expansion, is measured by subjective self-reporting of  
28 percentage change in the business assets. Competition measures the respondent's awareness  
29 of any competing firms in the surrounding area. Number of employees is the current number  
30 of employees working in a respondent's business. New product is a respondent's perception  
31 of to what extent she agrees that the product or service she is offering is new to local market.  
32 Finally, age is the age of the respondent, **and length of membership is the duration for which**  
33 **a respondent had been a member of the MFI.** Table 1 explains briefly how the questions were  
34 framed to obtain relevant data.

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#### 51 52 53        4.3. Model specification

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55        The dependent variable is defined as follows: 1 = 'decrease', 2 = 'about the same' and  
56 3 = 'increase'. Since the variables are limited and ordinal in nature, OLS technique might not  
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be appropriate (McKelvey & Zavoina, 1975). The Ordered Probit estimation, an extension of the Probit model, is more appropriate for this purposes. The Ordered Probit model recognizes the indexed nature of various response variables; in this application, performance ( $y_i$ ) is the ordered response.

The estimated models can be written as:

$$y_i^* = x_i' \beta + \varepsilon_i \quad (1)$$

$$y_i = 1 \text{ if } y_i^* \leq \alpha_1$$

$$y_i = 2 \text{ if } \alpha_1 < y_i^* < \alpha_2$$

$$y_i = 3 \text{ if } \alpha_2 < y_i^*$$

where  $y_i^*$  is the latent variable of  $y_i$ ,  $x_i'$  represents the covariates and the controls, and  $\varepsilon_i$  is the error term; it is assumed that  $\varepsilon_i \sim NID(0,1)$ .

With three possible responses, the implied probabilities can be obtained as:

$$\begin{aligned} P_1(x_i) &= P(y_i = 1|x_i) = \Phi(\alpha_1 - x_i' \beta) \\ P_2(x_i) &= P(y_i = 2|x_i) = \Phi(\alpha_2 - x_i' \beta) - \Phi(\alpha_1 - x_i' \beta) \\ P_3(x_i) &= P(y_i = 3|x_i) = 1 - \Phi(\alpha_2 - x_i' \beta) \end{aligned} \quad (2)$$

where  $\Phi$  is cumulative density function of  $NID(0,1)$ , and  $\alpha_1$  and  $\alpha_2$  are the unknown thresholds estimated jointly with  $\beta$  using a maximum likelihood (ML) approach. When correctly specified, the ML estimation is consistent, asymptotically efficient, and normally distributed (Verbeek, 2012).

## 5. Empirical results and discussion

### 5.1. Empirical results

Appendix 1 provides descriptive statistics of the dataset. Table 2 presents the results of the ordered probit models estimating business performance, measured by changes in profit. Model 1 is the baseline control model, while Model 2 predicts profit in the absence of

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3 microfinance assistance. Model 3 estimates profit without social capital variables, while in  
4 Model 4, human capital variables are omitted from the estimation. Model 5 is the main model  
5 encompassing all covariates and controls used in this study.  
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10 [ INSERT Table 2 about HERE ]  
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13 At the 5% level of significance, Models 3, 4 and 5 highlight a negative relationship  
14 between microcredit or loan and profit. Re Hypothesis 2, as Table 2 shows, profit does not  
15 have any significant relationship with either prior working experience or family business  
16 background. However, it is significantly linked to education in Model 2 (at the 10% level),  
17 Model 3 (at the 5% level) and Model 5 (marginally significant at the 10% level).  
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21 Re Hypothesis 3, none of strong and weak ties or lending group is significantly  
22 associated with profit. However, spousal involvement shows a significant positive impact on  
23 the business performance in Models 2, 4 (at the 5% level) and 5 (at the 10% level).  
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28 [ INSERT Table 3 about HERE ]  
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31 Table 3 provides the results of an in-depth analysis of outcome prediction with respect  
32 to the three key (significant) covariates, microcredit, education, and spousal involvement.  
33 The outcome prediction is obtained based on Model 5, holding all other independent  
34 variables at their sample means, microcredit is specified at its 10, 25, 50, 75 and 90  
35 percentiles; and spouse involvement at six different degrees of response from strongly  
36 disagree to strongly agree.  
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40 The outcome predictions show that, given all other covariates at their means, increase  
41 in amount of loan appears to decrease the probability of profitability. For example, for  
42 microcredit at 25 percentile the chance of increase in profit is 50.27% and it drops to 37.62%  
43 when the credit increases to 75 percentile. On the other hand, for microcredit at 25 percentile  
44 the chance of decrease in profit is 10.71%, and it increases to 17.88% when the credit is at 75  
45 percentile.  
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49 Conversely, concerning the respondents' education, a higher level of education  
50 apparently increases the possibility of increase in profit. Assuming the other covariates at  
51 mean, the chance of increase in profit is higher for university educated (54.41%) compared to  
52 that of Junior High (37.07%) and Senior High (45.63%) educated.  
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3 Regarding spousal involvement, the more the women agree the more likely that their  
4 firms' profits increase. For example, given other covariates at means, the chance of increase  
5 in profit is 26.20% (strongly disagree) versus 56.43% (strongly agree) while the chance of  
6 decrease in profit is 27.49% (strongly disagree) versus 8.12% (strongly agree).  
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## 10 11 12 5.2. Discussion

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14 Microfinance has been shown to have made key contributions in poverty alleviation  
15 programmes in a number of developing economies. It particularly helps the poor cope with  
16 their household vulnerability by offering non-collateralised loans that might be used to  
17 overcome income shocks. However, the original design of microfinance was actually not to  
18 provide loans for non-productive or for consumption purposes, but to help the most needy to  
19 establish their own micro business to improve household income. In such cases, previous  
20 studies have found conflicting results. Previous studies maintain that microfinance is  
21 positively associated with firm performance; our study finds the case to be otherwise.  
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24 Our study shows a negative relationship between microcredit (proxy for financial  
25 capital) and WMEs' profits (proxy for performance), indicating that higher levels of  
26 indebtedness are likely to adversely affect performance. Two main reasons, at least, might  
27 explain this result. Firstly, microcredit could improve WMEs' production capacity. However,  
28 as women are shown to be typically less-skilled entrepreneurs, their participation in local  
29 market is mostly motivated by necessity, not opportunity. Moreover, when initiating a  
30 business venture, they were often pushed into entrepreneurship by circumstances beyond  
31 their control and therefore are forced to choose from whatever opportunities might be  
32 available at that moment (McMullen, Bagby, & Palich, 2008). They must then try to make  
33 the best of a given situation and in doing so, often tend to replicate existing products and  
34 services, resulting in an increase in the quantity supplied or even over supply of analogous  
35 products in the local market. Without any compensating increase on the demand side, this  
36 increases competitive pressure in the market, leading to a downward pressure on local prices  
37 and individual profits of both new and existing microenterprises (Bateman & Chang, 2012;  
38 Davis, 2006)  
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52 Furthermore, if individuals are forced into entrepreneurship by lack of other options,  
53 they are less likely to make necessary preparations or to have skills and resources that match  
54 the opportunity that allows growth of business (Steve W Bradley, McMullen, Atmadja,  
55 Simiyu, & Artz, 2011). With regard to preparation, our survey indicates that almost 70% of  
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3 the total respondents had not made adequate plans before initiating their business, and this  
4 could imply undesirable consequences in subsequent periods.

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6 The second reason is that there is a strong indication that the entrepreneurs cannot  
7 productively manage credit for business growth and to enhance profitability (Dichter, 2006).  
8 Thus, the relatively high interest rate imposed on the credit might burden WMEs especially if  
9 the credit cannot be optimally utilised to generate even higher incomes. In addition, women  
10 might also use credit for other purposes than business due to their inability to distinctively  
11 separate their household consumption and business investment (Parker, 2009). Hence, as has  
12 previously been warned by Morduch (1999), access to more credit might lead to greater  
13 personal and/or household expenditure rather than business development.

14  
15 An implication of the above is that microcredit for the purposes of enhancing  
16 business performance might not necessarily be a good idea, especially if it is unable to  
17 generate higher business returns to cover the relatively higher rate of interest. Thus, it might  
18 appear that as a business matures and develops, the volume of microcredit should ideally be  
19 reduced, not increased, and replaced by owners' own savings and retained profits, although in  
20 the case of microbusiness, Parker (2009) reminds us that entrepreneurs are often unable to  
21 distinguish consumption and business investment from their financing decision which makes  
22 them prone to risk.

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24 Moving on and more specifically to the implications of this study, with regard to  
25 human capital, our study finds that only education level matters for business performance.  
26 This finding is consistent with previous findings that firms run by the highly educated  
27 individuals are more likely to perform better than those run by the less educated individuals  
28 (Kangasharju & Pekkala, 2002; Pena, 2002). On the other hand, the insignificant impact of  
29 family business background on business performance suggests that an entrepreneur's  
30 parents/families might not have successfully transmitted entrepreneurial skills to their  
31 offspring, or that the transferred skills have not been relevant.

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33 Regarding social capital, this study reveals statistically insignificant relationships  
34 between WMEs' performance and both strong and weak ties; however, spousal involvement  
35 is significantly correlated with profit. The size of family networks and the number of business  
36 acquaintances do not seem to have much impact on profit growth, but spouse (husband)  
37 involvement clearly shows strong contribution to business success. This might be because  
38 spousal involvement not only gives women less expensive employee, networking, and  
39 training, but also provides them with emotional support assisting the women who often desire  
40 for synergy between work and family (Bird & Brush, 2002; Brush, 1992).

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3 This finding is consistent with previous findings by Leach and Sitaram (2002), who  
4 report that spousal involvement has a positive contribution to women's microbusiness in  
5 India. In light of this, although there is always a risk of increase in agency costs (Dyer, 2006;  
6 Tundui & Tundui, 2012), it might be useful for policy makers to contemplate providing  
7 incentives for spouse involvement in microenterprises run by women.  
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11 Moreover, non financial factors such as spousal involvement and women's level of  
12 education might also become useful indicators for microfinance institutions to predict the  
13 chance that the credit will be productively utilised by the borrowers to improve their business  
14 performance. These factors could be considered particularly in designing credit policies,  
15 which is able to deliver the credit effectively and minimise the credit risk.  
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19 Finally, a microfinance lending group is commonly expected to enhance harmony  
20 among its membership and help members broaden social networks, which benefit their  
21 business. However, our findings show that although positive, the relationship between  
22 lending group and business performance is not statistically significant. This might be due to  
23 the fact that women's involvement in lending groups is simply and pragmatically motivated  
24 by access to credit. During the interview, when the respondents were asked to rank (from 1 to  
25 5, and 1 being the most) the time typically spent in a group meeting for discussing personal  
26 issues, loan repayment, business ideas, spiritual issues and community news, around 88% of  
27 the respondents positioned loan repayment issues at the top rank (rank 1). This indicates that  
28 conversations among members during the group's meetings are dominated by loan repayment  
29 issues, leaving very little time for members to talk with about their business, the chance of  
30 exchanging and gaining valuable information about business opportunities and ideas are  
31 rather limited.  
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35 Literature suggest that, as a manifestation of weak ties, a lending group could provide  
36 alternative sources of information that might not be directly available to a particular  
37 individual. Access to this additional information can be combined with current knowledge to  
38 discover or create non-obvious opportunities in the market (Shepherd, McMullen, &  
39 Jennings, 2007). Consequently, activities in the group meetings should not be limited by loan  
40 repayment discussion only, but should be extended to facilitate members to engage in  
41 business-related conversations and to develop new or deepen existing social relationships  
42 within the group. The ability of loan officers, as the representatives of microfinance  
43 institutions, and group leaders to facilitate such conversations appears important.  
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## 6. Conclusion

While microfinance has been shown to have made considerable progress in making financial resources available to the bottom segments of the society, to women, in particular, offering them an opportunity to improve their living standards, despite a long history in Indonesia, one of the most populous and poverty challenged economies in the world, the role of microfinance and its impact on Indonesia's women microenterprises (WMEs) remains little known. This study apparently fills this huge gap in the literature.

Specifically, this study provides the first in-depth understanding of the role of financial, social and human capital in the performance of WMEs. A survey of 168 WMEs in Surabaya, the second largest city in Indonesia, was conducted and the data was analysed using the ordered probit regression technique. Results show that financial capital may not necessarily influence business success—a negative relationship is found between financial capital and performance. On the other hand, a positive relationship is noted between performance and levels of education, and between performance and spousal involvement indicating that these variables might be more important than just microcredit for successful operation of WMEs in the case of Indonesia.

Future studies might involve a larger, more heterogeneous sample size, from a different part of Indonesia. It might also involve a deeper explanation of the relationships noted in this study, for example, why loan size has a negative effect on profit, whether applying alternative credit schemes (e.g. individual credit scheme) instead of lending group credit scheme might affect business performance differently, in what ways do spousal involvement benefit WMEs' business performance and whether the findings apply also to male-headed micro businesses. In the meantime, this study provides useful research-based findings for relevant policy development in Indonesia which might also be relevant for other developing economies.

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**Table 1: Description of variables**

Variables	Questionnaire Questions
Profit	Compared to last year, have your profits (revenues after expenses are paid) in your business (circle one): increased, decreased, or stayed about the same? <u>Answer:</u> decrease = 1 , about the same = 2 , increase =3
Microcredit ( <i>Fcap</i> )	What is your current loan amount (in millions rupiah)?
Education	What is the highest grade/level of school you have attained? <u>Answer:</u> Elementary = 1 , Junior High = 2 , Senior High =3 , University = 4
Prior working experience	Did you have prior working experience with the type of business you started? <u>Answer:</u> (YES = 1 , No = 0)
Family business background	Did your parents ever work for themselves or run their own businesses? <u>Answer:</u> (YES = 1 , No = 0)
Strong ties	Approximately, how many family members or friends have been involved in your business?
Weak ties	Approximately, how many business acquaintances (i.e. consumers and suppliers) have been involved in your business?
Lending Group	How many people are in your lending group?
Spousal involvement	How much do you agree with statement that “I have found ways to get my husband/wife involved with my business”? <u>Answer:</u> (1.Strongly disagree.....7. Strongly agree)
Change in assets	Compared to last year, by how many percentages approximately have the assets (equipment/ materials) used by your business changed?
Competition	Are there any competitors who sell the same product/service in your area? <u>Answer:</u> (YES = 1 , No = 0)
Number of employees	How many people are employed by your business?
New product	How much do you agree with statement that “the product or service I am offering is new to the local market?” <u>Answer:</u> (1.Strongly disagree .....7. Strongly agree)
Age	What is your age?
Length of membership	When (in what year) did you become a member of the microfinance institution?



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**Table 2: Ordered probit estimation results**

Variables	Change in PROFIT									
	Model 1		Model 2		Model 3		Model 4		Model 5	
	Coef	SE	Coef	SE	Coef	SE	Coef	SE	Coef	SE
<i>Financial capital</i>										
Microcredit					-0.0634	0.0271**	-0.0707	0.0270**	-0.0645	0.0275**
<i>Human capital</i>										
Education			0.2489	0.1329*	0.2770	0.1309**			0.2204	0.1344*
Prior working experience			-0.2391	0.2225	-0.0711	0.2205			-0.1043	0.2333
Family business background			0.1397	0.2247	0.0088	0.2197			0.0755	0.2274
<i>Social capital</i>										
Strong ties			-0.0300	0.0520			-0.0091	0.0525	-0.0138	0.0536
Weak ties			-0.0101	0.0107			-0.0131	0.0107	-0.0118	0.0108
Lending group							0.0193	0.0140	0.0171	0.0146
Spousal involvement			0.1485	0.0702**			0.1419	0.0696**	0.1332	0.0719*
<i>Business control</i>										
Change in assets	0.0250	0.0059**	0.0244	0.0061**	0.0253	0.0060**	0.0256	0.0062**	0.0254	0.0062**
Competition	0.2836	0.2150	0.4032	0.2305*	0.3549	0.2213	0.5284	0.2341**	0.4968	0.2369**
Number of employees	0.0576	0.0481	0.0297	0.0500	0.0622	0.0491	0.0436	0.0502	0.0391	0.0506
New product	-0.0472	0.1080	0.0335	0.1166	-0.0055	0.1113	0.0832	0.1185	0.0706	0.1197
<i>Individual control</i>										
Age	-0.0136	0.0129	-0.0031	0.0138	-0.0052	0.0135	-0.0024	0.0133	0.0011	0.0139
Length of membership	0.0139	0.0162	0.0166	0.0170	0.0349	0.0182*	0.0260	0.0185	0.0294	0.0189

Notes: Unstandardized coefficients and standard error are presented. Number of observation (n) = 130. \*p<0.10; \*\* p<0.05

**Table 3: The analysis of outcome prediction**

Variables	Outcomes		
	Decrease in profit	Relatively no change in profit	Increase in profit
<b>Microcredit :</b>			
(at different quantile)			
10%	0.0589	0.3122	0.6289
25%	0.1071	0.3902	0.5027
50%	0.1195	0.4035	0.4770
75%	0.1788	0.4450	0.3762
90%	0.2145	0.4571	0.3284
<b>Level of education:</b>			
Elementary	0.2467	0.4623	0.2910
Junior High	0.1827	0.4467	0.3707
Senior High	0.1302	0.4135	0.4563
University	0.0891	0.3668	0.5441
<b>Spousal involvement :</b>			
Strongly disagree	0.2749	0.4631	0.2620
Moderately Disagree	0.2323	0.4606	0.3071
Slightly Disagree	0.1937	0.4510	0.3554
Neither Agree nor Disagree	0.1592	0.4347	0.4061
Slightly Agree	0.1291	0.4125	0.4584
Moderately Agree	0.1031	0.3854	0.5115
Strongly Agree	0.0812	0.3545	0.5643

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**Appendix 1: Statistic description of variables**

	Loan	Education	Prior working experience	Family business background	Strong ties	Weak ties	Lending group	Spousal involvement	Change in assets	Competition	Number of employees	New product	Age	Length of membership	Profit
Mean	11.28	3.15	0.40	0.53	1.99	7.64	31.67	5.22	5.31	0.63	2.48	2.00	47.95	10.25	2.30
Standard deviation	4.43	0.84	0.49	0.50	2.10	9.52	8.07	1.68	20.50	0.48	2.28	0.99	8.60	6.92	0.75
Max	30	4	1	1	10	50	50	7	60	1	10	7	66	29	3
Min	0.75	1	0	0	0	0	16	1	-75	0	0	1	30	1	1
Observations	130	130	130	130	130	130	130	130	130	130	130	130	130	130	130

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14-Apr-2015

Dear Mr. Atmadja:

It is a pleasure to accept your manuscript entitled "Examining the impact of microfinance on microenterprises performance (Implications for women-owned micro enterprises in Indonesia)" in its current form for publication in International Journal of Social Economics. The comments of the reviewer who reviewed your manuscript are included at the foot of this letter.

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Sincerely,  
Prof. Colin Tyler  
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Reviewer(s)' Comments to Author:

Reviewer: 1

Recommendation: Accept

Comments:

Over all the paper is well written and make sense to the reader. The logical flow of argument is also clear that makes the paper suitable for publications.

Additional Questions:

<b>1. Originality: </b> Does the paper contain new and significant information adequate to justify publication?: Yes

<b>2. Relationship to Literature: </b> Does the paper demonstrate an adequate understanding of the relevant literature in the field and cite an appropriate range of literature sources? Is any significant work ignored?: There is good amount of literature. however many references are quite old while there is plenty of research over period of time. No Significant amount of work is ignored.

<b>3. Methodology: </b>Is the paper's argument built on an appropriate base of theory, concepts, or other ideas? Has the research or equivalent intellectual work on which the paper is based been well designed? Are the methods employed appropriate?: Paper meets the methodological requirements.

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What is the impact upon society (influencing public attitudes, affecting quality of life)? Are these implications consistent with the findings and conclusions of the paper?: Does the paper identify clearly any implications for research, practice and/or society? Yes

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