8 Examining the Influence of Network Ties on Self-Efficacy and Entrepreneurial Performance in the Informal Sector in Sri Lanka

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8.1 Introduction

Scholarly attention to entrepreneurship occurring in the informal sector has produced a considerable amount of research (De Castro et al. 2014; Light and Dana 2013; Siqueira et al. 2016; Sutter et al. 2017; Williams and Shahid 2016; Webb et al. 2013). This is not surprising given the critical role informal sector activity plays in increasing economic and social benefits (Viswanathan et al. 2014), particularly for those in poverty at the "bottom of the pyramid." The informal sector, characterized by activities occurring outside of formal regulations and infrastructures (Sutter et al. 2017), accounts for 40–60% of the world's GDP (Schneider and Williams 2013). In particular, in emerging economies, around 70% of all entrepreneurs run sole-trading enterprises (ILO 2014), half of which are unregistered (Acs et al. 2013; Williams et al. 2017), and largely operate at subsistence levels, being "hidden" from formal institutional structures and ignored by government (Muñoz and Dimov 2014). Yet these businesses represent legitimate economic activities such as small-scale household manufacturing and trading (Siqueira et al. 2016), with micro-entrepreneurs often pushed into entrepreneurship in order to provide a survival income for their families. Thus entrepreneurship in the informal sector is an important resource for

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emerging countries to attain socioeconomic development (Schneider and Enste 2013; Siqueira et al. 2016). However, despite the significant contribution made by the informal sector to economic activity in emerging economies, limited research has examined the factors which contribute to micro-enterprise performance.

In light of growing evidence of the importance of network ties to micro-entrepreneurship in the informal sector (Assudani 2009; Light and Dana 2013; Viswanathan et al. 2014), given the difficulties they face in acquiring resources necessary to operate their firms (Khayesi et al. 2014), the present study posits that network ties can foster micro-enterprise performance through enhancing the entrepreneurial self-efficacy (ESE) of microentrepreneurs. More specifically, we examine whether, contrary to research findings on larger small- and medium-sized enterprises in the formal sector of emerging economies (Stam et al. 2014), micro-entrepreneurs' weak network ties (contacts with individuals outside their immediate network of friends and family) have a stronger influence on the performance of their micro-enterprises than strong ties (their close family and friendship networks) through the mediating mechanism of ESE. In doing so we draw on prior research which shows that although micro-entrepreneurs in the informal sector tend to depend heavily on their close family and friends (i.e., strong ties) for support, such ties may not always have a positive influence on the performance of their businesses as "the obligations to extended families run deep" which commonly includes having to pay back the support received (Khavul et al. 2009, p. 1223). In particular, we draw on research which suggests the cost of maintaining strong ties may sometimes outweigh the benefits it brings in the informal context where dependence on strong ties for firm survival and performance is high (Khavul et al. 2009; Khayesi et al. 2014; Stewart 2003). In contrast to findings on small- and medium-sized enterprises, we argue that weak ties are likely to have a stronger influence on the performance of micro-enterprises as they provide access to alternative sources of vicarious learning, support, and encouragement that can aid micro-entrepreneurs, and are not as burdensome in nature as strong ties (Santarelli and Tran 2013).

In explaining the effects of network ties on micro-enterprise performance, we focus on ESE as a key "entrepreneurial cognition" or "psychological resource" which helps micro-entrepreneurs maintain high levels of performance. We argue that ESE is especially important to business success in the informal sector as micro-entrepreneurs typically lack the human, financial, and social capital needed to succeed in business and are driven to entrepreneurship through necessity rather than opportunity, given limited opportunity to access higher education or formal employment (McMullen et al. 2008; Bradley et al. 2012). Due to these factors, micro-entrepreneurs in the informal sector are typically less confident to overcome challenges in their working lives and deal with those operating in the formal sector and are therefore less likely to seek out entrepreneurial opportunities and ways of exploiting such opportunities (Bullough et al. 2014). ESE therefore acts as an important psychological resource from which micro-entrepreneurs can draw upon when operating in an informal sector characterized by high levels of risk and uncertainty (Welter and Smallbone 2011). In examining ESE as the underlying psychological mechanism linking network ties to firm performance, we follow the calls of

researchers (Shane and Venkataraman 2000) to examine the role of entrepreneurial cognitions in the entrepreneurial process. ESE is a key entrepreneurial cognition which has been found to explain significant variance in the performance of entrepreneurial firms above and beyond more material resources such as adequate financing and human resources (Baum et al. 2001; Baum and Locke 2004; Bullough et al. 2014; Chen et al. 2009; Hmieleski and Baron 2008; Hmieleski and Corbett 2008; McGee and Peterson 2017; Miao et al. 2017), especially in collectivistic cultures such as Sri Lanka (Miao et al. 2017). Despite this there has been limited investigation as to the sources of micro-entrepreneurs' ESE. Drawing on the key tenets of Bandura's (1986) social learning theory, we therefore highlight how network ties, through providing micro-entrepreneurs opportunities for vicarious learning and access to sources of support and encouragement (social persuasion), enhance micro-enterprise performance through the mediating mechanism of ESE (Prodan and Drnovsek 2010). In examining these issues, we draw on data from "the 2016 Survey on Informal Sector Micro Entrepreneurs in Sri Lanka," conducted by the researchers as part of a larger study on micro-enterprises in the informal sector. This yielded a database of 635 micro-entrepreneurs in the informal sector which was matched with performance data provided by their case officers. Data from this survey were analyzed to test the hypothesized relationships between micro-entrepreneurs' network ties, ESE, and firm performance.

In examining the effects of network ties on micro-enterprise performance, we seek to make the following contributions to the literature. First, we make an important empirical contribution by examining the relative influence of weak and strong network ties on the performance of micro-enterprises, in an under-researched context, the informal sector of an emerging economy. While a growing body of work has examined the influence of weak and strong ties on the performance of small- and medium-sized enterprises operating in the formal sector in developed and emerging economies (Stam et al. 2014), little attention has been paid to examining the relative effects of such ties on micro-enterprise performance in the informal sector of emerging economies. As such, our understanding of how network ties influence the performance of micro-enterprises operating in the highly unregulated and volatile informal sector in emerging economies is limited. This is a great concern as more than a billion entrepreneurs worldwide operate within this context (Venugopal et al. 2015). In order to address such concerns, the conceptual model built and tested in this study enhances our empirical knowledge about this largely under-researched, yet highly important cohort, of the world's entrepreneurs. It allows us to determine whether there are differences in the effects of strong and weak ties on micro-enterprise performance in the informal sector compared to small- and medium-sized enterprises operating in more formal contexts.

Second, as well as examining the relative importance of strong and weak ties to the performance of micro-enterprises in the informal sector, we make an important theoretical contribution by highlighting a key psychological mechanism which may explain the effects of network ties on micro-enterprise performance. In particular, we examine whether strong and weak network ties influence micro-enterprise performance through fostering the ESE of micro-entrepreneurs in line with the

vicarious learning and social persuasion pathways alluded to by Bandura's social cognitive theory (Bandura 1986).

Third, we make an important contribution to policy development. Understanding whether and how network ties influence ESE can assist policy makers to develop appropriate support mechanisms to enhance micro-enterprise performance through the development of ESE. This is especially important in light of previous work which shows how weak profitability resulting from low levels of performance creates barriers for micro-enterprises to grow in scale (Azmat and Samaratunge 2013), thereby trapping them at the "bottom of the pyramid" within the informal sector (Viswanathan et al. 2014).

Overall, we believe our study lays the initial foundation for a larger, evidence-based approach to assisting micro-entrepreneurs in the informal sector of emerging countries. The remainder of the paper is organized as follows. First, we provide an overview of research on micro-enterprises in developing countries and outline the research context: the informal sector in Sri Lanka. We then review the literature on network ties, ESE, and firm performance and develop hypotheses for relationships between these constructs. The methods used to test the hypotheses and the results of the empirical analyses are then presented. Following this, the findings and their implications for entrepreneurship theory are then discussed and policy implications highlighted. We conclude by highlighting some limitations of the study and directions for future research.

8.2 Theoretical Background and Hypothesis Development

8.2.1 Micro-Entrepreneurs in the Informal Sector of Developing Countries

The informal sector, defined as an economic activity that is unregistered yet produces legal products (Hart 1973; Nichter and Goldmark 2009), contributes a significant proportion of GDP in both developed and emerging economies (Schneider et al. 2010). More than half of the world's population, and the overwhelming majority of the poor, are part of the informal economy or are dependent on it (Jütting and Laiglesia 2009). Individuals operating in the informal sector are typically micro-entrepreneurs (Carree and Thurik 2010), and their entrepreneurial activities provide a significant complement to the GDP of the formal economy. Micro-entrepreneurship in the informal sector accounts for "39.8% of the GDP in Brazil, 46.1% in Russia, 23.1% in India, and 57.9% in Nigeria" (Webb et al. 2013, p. 599), and the majority of employment across emerging economies. Despite the importance of their economic contribution, there is a dearth of data on micro-enterprises especially in countries such as Sri Lanka (Arunatilake and Jayawardena 2010).

There is also a lack of agreement between countries on what constitutes a micro-enterprise operating in the informal sector (Arunatilake and Jayawardena 2010). However, there is a general agreement that micro-enterprises have few formal procedures, do not engage in bookkeeping and maintenance of accounts, recruit

employees on noncontractual arrangements terminable at will, and are not registered with the government (ILO 2013; 2014). They are predominantly small (Prahalad 2005; Weidner et al. 2010), either run by a sole-trader without employing others or employ up to a maximum of five employees (Azmat and Samaratunge 2009; IPS and Oxfam 2014; Moore and Spence 2006; OECD 2014) and generally engage in agriculture, fishing, livestock rearing, and petty trading (Rodrigo 2001). They typically work without any brand capital and experience low public visibility. Having highlighted the key characteristics of micro-enterprises in the informal sector, we now highlight the context in which the present study is conducted.

8.2.2 Research Context: Sri Lanka

Sri Lanka, with a population of 21.2 million and an annual economic growth rate of 4.4% in 2016, has met most of its Millennium Development Goal targets in health, education, and gender equality, outperforming other South Asian countries (Abeygunawardana and Van Doorn 2017). Despite its 30-year long ethnic conflict which consumed significant human and physical resources (Pradhan 2001), Sri Lanka has been able to maintain an adult literacy rate of nearly 91% and life expectancy above 70 years (Central Bank of Sri Lanka 2014). In spite of these remarkable achievements for an emerging country, serious socioeconomic disparities across different regions prevail in Sri Lanka (IPS 2012).

A spectacular expansion of the informal sector was evident in Sri Lanka after its economic liberalization in 1977, creating a challenging even volatile environment for micro-entrepreneurs (see Sanderatne 2002). According to the government's estimation, more than 63% of the labor force in Sri Lanka is employed in the informal sector, the majority being women (ILO 2012), and as such is vulnerable to economic shocks that may cause individuals to fall back into extreme poverty (Department of Census and Statistics 2013).

While unregistered enterprises may be deemed unlawful in developed countries, unregistered micro-enterprises in Sri Lanka are sanctioned and supported by the government. This is partly due to the large proportion of entrepreneurial activity accounted for by micro-enterprises in the informal sector of the economy (Sanderatne 2014) and partly because such enterprises support the formal economy by being suppliers and customers to larger regulated businesses. The general consensus is that developing the informal economy fosters regional development and employment creation in Sri Lanka (Sanderatne 2001). Despite the direct linkage between these sectors, the data on micro-entrepreneurial activity in the informal sector are limited (Senanayake et al. 2012; Sanderatne 2002, 2014), and the characteristics and contribution of micro-entrepreneurs in the informal sector have yet to be explored (Sanderatne 2014). Therefore, under the Sri Lankan post-conflict agenda, there is a pressing need to explore the factors which determine the performance of micro-enterprises in the informal sector. In light of the fact that the Sri Lankan government has recently begun to focus on the promotion of micro-enterprises as a key development strategy to address regional disparities, eradicate poverty, and foster

inclusive growth (De Alwis 2009; Government of Sri Lanka 2014; IPS 2012; NEDA 2013), the findings of the present study will be useful in informing policy development aimed at fostering entrepreneurship in the informal sector in Sri Lanka.

8.2.3 Micro-Entrepreneurs' Network Ties and Firm Performance

Granovetter's (1973) seminal work on network ties portrays social networks as a tool linking the micro and macro levels of sociological theory and postulates that "the degree of overlap of two individuals' friendship networks varies directly with the strength of their tie to one another" (p. 1360). Granovetter argued that social ties lead to the dissemination of influence and information, mobility opportunity, and community organization. He defined the strength of a tie as the "combination of the amount of time, the emotional intensity, the intimacy (mutual confiding), and the reciprocal services which characterize the tie" (Granovetter 1973, p. 1361). Under this definition, strong ties involve greater time commitment, a similarity between the persons involved and reciprocity of services (Arregle et al. 2015; Granovetter 1973), and trust (McEvily et al. 2003). Strong ties typically refer to relationships with family or close friends, while weak ties include those with acquaintances and business affiliates (Patel and Terjesen 2011).

The extant literature has extensively debated the relative importance of entrepreneurs' strong and weak ties (Lamine et al. 2015), and entrepreneurs' embeddedness in social networks (Arregle et al. 2015), to entrepreneurial outcomes. While some studies conclude that strong ties are more beneficial than weak ones as tie strength increases the willingness of network contacts to furnish support and resources (e.g., Jack 2005; Steier and Greenwood 2000) and reduce the cost of exchange as they are built on "repeat interactions with known individuals" (Khavul et al. 2009, p. 1223), others point to the importance of having a mix of strong and weak ties for entrepreneurial success (e.g., Elfring and Hulsink 2003), as weak ties provide access to novel information, diverse knowledge, and experiences from which entrepreneurs can learn from and obtain support (Arregle et al. 2015). In addition, it has also been shown that strong ties may not be as useful as weak ties as the information from them becomes redundant over time and that the ties do not let novel information and opportunities filter through (Arregle et al. 2015; Santarelli and Tran 2013). This suggests that entrepreneurs should not become overreliant on strong ties and should cultivate weak ties, especially when they are looking to grow their business and innovate (Santarelli and Tran 2013).

Extant research on entrepreneurial firms has established that both strong and weak network ties have a significant influence on firm performance (Gronum et al. 2012). For example, in a meta-analysis of 59 primary studies on the relationship between network ties and small- and medium-sized enterprise performance, Stam et al. (2014) found both strong and weak network ties to have a positive and significant relationship on performance outcomes. On average, they found weak ties had a significantly stronger influence on firm performance than strong ties. However, they also found that in the case of emerging economies, strong ties had a significantly

stronger influence on the performance of small- and medium-sized enterprises than weak ties. This finding was put down to the fact that in emerging economies, the absence of a reliable government and established rule of law makes market transactions relatively difficult, fostering a reliance on personal relationships with known individuals to obtain resources, and protects one's business from exploitation. As such they argue that strong ties act as a mechanism through which entrepreneurs in emerging economies navigate weak institutional environments with poor information availability.

Although Stam et al. (2014) found that strong ties exert a stronger influence on enterprise performance in emerging economies, most studies included in their meta-analytical work focused on more established small- and medium-sized enterprises operating in the formal sector of such economies, bringing into question the generalizability of their findings to micro-enterprises in the informal sector. We argue that although we might expect both strong and weak ties to exert a significant influence on the performance of micro-enterprises in the informal sector of emerging economies, as both sets of ties provide access to sources of vicarious learning, encouragement, and support, weak ties are more likely to have stronger effects on performance, given the costs associated for micro-entrepreneurs in maintaining strong ties in the informal sector of emerging economies are significant and in some cases might neutralize or outweigh the benefits that they bring. There is growing evidence that although micro-entrepreneurs in the informal context can obtain material resources at relatively low-cost from their strong network ties, such ties may also result in "excessive expectations of obligatory behavior and possibly result in problems of free riding and unwillingness to experiment beyond the network" (Inkpen and Tsang 2005, p. 153). This is especially the case for micro-enterprises headed by women, whose strong ties are primarily limited to their immediate family members and close relatives who are predominantly male (Darley and Blankson 2008). For example, in examining the importance of network ties to entrepreneurial performance in the informal sector in Africa, Khayesi et al. (2014) found that entrepreneurs are often faced with demands for money, resources, and business assets by kin relations, enhancing costs to the firm, and negatively influencing their performance. Based on their findings, they argue that entrepreneurs should include weaker nonfamily ties in their social networks in order to reduce the costs of raising resources. Similarly, Khavul et al. (2009) find that strong network ties also constrain the performance of micro-enterprises in the informal sector. They argued that although strong ties with family members create an opportunity to mobilize resources, such an opportunity is subject to the costs of opportunism and agency that result from obligation to family members. Such ties, they argue, play a constraining role on the performance of enterprises operating in the informal sector.

In contrast, weak ties provide micro-entrepreneurs access to resources that cannot be obtained from strong ties with family and close friends (Khavul et al. 2009; Khayesi et al. 2014). For example, weak ties provide access to role models from outside their immediate network with dissimilar experiences and knowledge. Such role models act as important sources of vicarious learning for the micro-entrepreneur and also act as an important source of encouragement and emotional support. As we

explain later, the new knowledge and emotional support (vicarious learning and social persuasion pathways as specified in social cognitive theory) provided by weak ties should enhance micro-enterprise performance. In support of such assertions, there is growing evidence that highlights strong effects of weak network ties on the performance of enterprises in emerging economies with large informal sectors such as Africa and South Asia (where the present study is located) that have predominantly collectivistic values (Acquaah 2007; Boso et al. 2013; Viswanathan et al. 2010), where reciprocity of goodwill within community members is promoted and valued (Williams and Shahid 2016). This leads us to the following hypotheses:

Hypothesis 1(a). Strong ties of micro-entrepreneurs in the informal sector are positively related to micro-enterprise performance.

Hypothesis 1(b). Weak ties of micro-entrepreneurs in the informal sector are positively related to micro-enterprise performance.

Hypothesis 1(c). The weak ties of micro-entrepreneurs in the informal sector are more strongly related to firm performance than their strong ties.

8.2.4 Micro-Entrepreneurs' Network Ties and Entrepreneurial Self-Efficacy

Shane and Venkataraman (2000) highlight two main factors which explain why some entrepreneurs are better able to identify and exploit entrepreneurial opportunities than others. The first relates to the ability of the entrepreneur to obtain the necessary information to identify business opportunities and scarce resources, an outcome influenced by his/her network ties. Second, it is necessary for an entrepreneur to possess the appropriate cognitions to exploit such opportunities. Therefore, when examining phenomena related to entrepreneurship, it is critical to not only identify sources from which information is acquired by an entrepreneur but also factors which influence entrepreneurial cognitions (Mitchell et al. 2002). In the present study, we draw on Bandura's social cognitive theory (SCT) (Bandura 1986, 2006), to highlight the role played by micro-entrepreneurs' network ties in the development of their ESE. Central to SCT is the idea that human functioning is influenced by "people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances" (Bandura 1986, p. 391). Bandura (1986) termed such cognitive judgments "self-efficacy." In the entrepreneurship literature, the concept of ESE has been the subject of much attention from scholars (Bullough et al. 2014; Chen et al. 1998; Wennberg et al. 2013). It captures the degree to which the entrepreneur feels they are capable of performing the tasks associated with running an entrepreneurial venture (Chen et al. 1998). When an entrepreneur has high levels of ESE, i.e., is confident in his/her entrepreneurial abilities, he/she will be more likely to attempt entrepreneurial tasks and persist when faced with challenges in the entrepreneurial process.

Prior research suggests that self-efficacy beliefs develop as the individual interprets information from four specific sources: previous performance outcomes (mastery experiences), witnessing the behavior and performance outcomes of others

(vicarious learning), obtaining feedback from others on one's behavior and performance outcomes (social persuasion), and emotional arousal experienced while carrying out a certain task (affective states) (Bandura 1997). Building on SCT we argue that network ties, especially weak ties with those from outside the micro-entrepreneur's immediate network, will cultivate ESE through providing the micro-entrepreneur with opportunities for vicarious learning and social persuasion. For example, by interacting with others from outside their immediate social network, especially with business contacts from the wider community, who have different experiences from themselves, micro-entrepreneurs will be able to observe how others navigate challenges they face in the entrepreneurial process and role model their own behaviors on such individuals (i.e., act as a source of vicarious learning) (Shane 2000). In addition, weak ties act as a source of emotional support and encouragement from individuals who have faced and overcome difficulties in the entrepreneurial process and understand how the micro-entrepreneur is feeling (i.e., act as an effective source of social persuasion) (Davidsson and Honig 2003). As such weak ties enhance the micro-entrepreneur's self-efficacy in generating and implementing new courses of action in their business, especially when the other person being observed is from a similar background to the observer (i.e., is also an entrepreneur) and has a track record of success, because such individuals will be perceived as being credible and legitimate role models (Bandura 1997). In line with the tenets of SCT, a growing number of studies have confirmed a significant relationship between the network ties possessed by an entrepreneur, especially their weak ties and their ESE (Baron et al. 2005; Ozgen and Baron 2007). Although some work has shown that strong network ties with family members also exert significant effects on the ESE of entrepreneurs (Chen and He 2011), we argue that in the informal context, strong ties with close friends and family are often a weaker source of vicarious learning and social persuasion as they bring fewer unique insights from those already possessed by the micro-entrepreneur and impose significant emotional burdens through excessive expectations of obligatory behavior (Khavul et al. 2009; Khayesi et al. 2014). Such burdens we argue lessen the benefits that strong ties bring as sources of vicarious learning and social persuasion.

There is growing evidence which suggests that network ties, especially weak ties, exert a significant influence on the self-efficacy of micro-entrepreneurs operating in the informal sector of developing economies (Viswanathan et al. 2010). For example, Venugopal et al. (2015) found educational interventions aimed at enhancing self-efficacy to positively influence entrepreneurial intentions of those living under subsistence conditions (i.e., similar to our study's sample). In particular, they found a positive relationship between the weak ties of micro-entrepreneurs' in the informal sector (e.g., those with government agencies, nonprofit organizations, and other businesses) and ESE. Similarly, in a study of micro-enterprises in India, Viswanathan et al. (2010) found that micro-entrepreneurs reported higher levels of self-efficacy when they actively sought market information beneficial to their firm from sources close (i.e., strong ties) as well as distant (i.e., weak ties). In conclusion, although we expect both weak and strong ties to influence micro-entrepreneurs' ESE in the informal sector, we expect the relationship between weak ties and ESE

to be more significant than the relationship between strong ties and ESE, because weak ties are more likely to provide entrepreneurs with greater access to opportunities for vicarious learning and social persuasion, which in turn will enhance their self-belief that they will be able to succeed in their entrepreneurial endeavors (Davidsson and Honig 2003). This leads us to:

Hypothesis 2(a). Strong ties of micro-entrepreneurs in the informal sector are positively related to their entrepreneurial self-efficacy.

Hypothesis 2(b). Weak ties of micro-entrepreneurs in the informal sector are positively related to their entrepreneurial self-efficacy.

Hypothesis 2(c). The weak ties of micro-entrepreneurs in the informal sector are more strongly related to their entrepreneurial self-efficacy than their strong ties.

8.2.5 Mediating Impact of Entrepreneurial Self-Efficacy on Firm Performance

As well as explaining the effects of network ties on ESE, SCT also provides an explanation as to why entrepreneurs high in ESE are able to maintain higher levels of firm performance than those low in ESE (Drnovšek et al. 2010). Scholars have argued this may result from the fact that those high in ESE exert greater effort over a longer length of time, persist through setbacks in the entrepreneurial process, and view failure as an opportunity to learn (Krueger and Brazeal 1994). In this study we argue that ESE enables informal sector micro-entrepreneurs to combine and process seemingly unconnected information to improve the performance of their enterprises (Mitchell et al. 2002). In line with SCT theory, there is growing evidence of a positive link between ESE and the performance of entrepreneurial ventures (Anna et al. 2000; Baum et al. 2001; Baum and Locke 2004; Forbes 2005; Hmieleski and Corbett 2008; Miao et al. 2017). For example, meta-analytical work by Miao et al. (2017) demonstrated a strong relationship between ESE and firm performance, especially in collectivistic cultures such as Sri Lanka. Similarly, Hmieleski and Corbett (2008) found that improvisational behavior had a positive influence on the performance of new ventures for entrepreneurs with high levels of entrepreneurial self-efficacy and a negative relationship for entrepreneurs low in self-efficacy. This pattern is likely to be even more pronounced in micro-enterprises operating in the informal sector of developing economies as those with confidence in their skills and abilities as entrepreneurs (i.e., ESE) would be in a better position to overcome the constant instability and volatility that characterize the marketplace of micro-enterprises in the informal sector (Viswanathan et al. 2010). This leads us to:

Hypothesis 3. Entrepreneurial self-efficacy of micro-entrepreneurs in the informal sector is positively related to micro-enterprise performance.

In line with the above hypotheses, we also expect ESE to partially mediate the effects of network ties on micro-enterprise performance. This is consistent with prior research which has found a positive relationship between network ties and ESE (Ozgen and Baron 2007) and between ESE and firm performance (Hmieleski

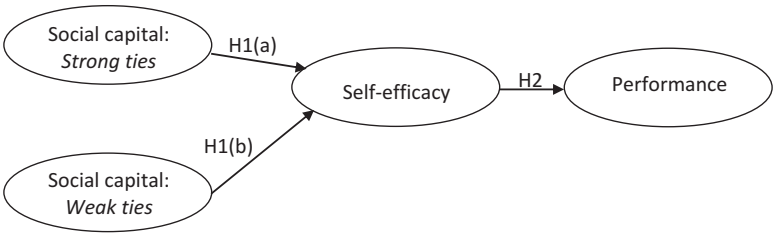

Fig. 8.1 Conceptual model to examine direct and indirect effects

and Corbett 2008; Miao et al. 2017). Although network ties might theoretically enhance micro-enterprise performance through providing micro-entrepreneurs with other benefits (e.g., access to material resources) meta-analytical work suggests that ESE is a key "psychological resource" which explains variance in entrepreneurial success, above and beyond other key materials and psychological resources (Rauch and Frese 2007). In other words, we argue that the relationship between the network ties of micro-entrepreneurs in the informal sector and micro-enterprise performance will be partially explained by the mediating mechanism of ESE. This leads us to:

Hypothesis 4(a). Entrepreneurial self-efficacy of micro-entrepreneurs in the informal sector partially mediates the relationship between their strong ties and micro-enterprise performance.

Hypothesis 4(b). Entrepreneurial self-efficacy of micro-entrepreneurs in the informal sector partially mediates the relationship between their weak ties and micro-enterprise performance.

As depicted in Fig. 8.1, hypotheses 1(a), 1(b), 2(a), 2(b), and 3 are directly tested using structural equation modelling, while comparative [i.e., hypotheses 1(c) and 2(c)] and mediational hypotheses [i.e., hypotheses 4(a), and 4(b)] are tested using the results of the main hypotheses from hypotheses 1(a) to 3. For example, comparative hypothesis 1(c) is tested by the results of hypotheses 1(a) and 1(b).

8.3 Methodology and Data Collection

8.3.1 Survey Design and Administration

Data were collected from multiple sources, using two sets of survey questionnaires, one for entrepreneurs operating micro-enterprises in the informal sector and another for government officials in charge of supporting micro-enterprise development (i.e., case officers from the divisional secretariat). Both surveys were initially written in English and subsequently translated into Sinhala and Tamil, two regional languages in Sri Lanka. An experienced translator registered with the Department of Official Languages Sri Lanka was used to translate both surveys. Next, following the recommendations made by Hui and Triandis (1985), the Sinhala and Tamil versions of both surveys were back-translated into English to ensure that items used carried the same meaning in all three languages. This procedure is consistent with previous

research utilizing survey questionnaires initially designed in English and subsequently translated into other languages prior to administration (Kautonen et al. 2015).

While researchers in developed countries can often rely on formal business registries to build a representative sample, the lack of business registries of micro-enterprises means such an approach was impossible for the present study conducted in the informal sector of an emerging economy (Bullough et al. 2014). Instead, we sourced a list of entrepreneurs from 15 divisional secretariats (i.e., divisional-level government agents in Sri Lanka), covering the northern, eastern, southern, and western parts of Sri Lanka who acted as a liaison between the entrepreneurs and the research team. The divisional secretariats possess significant inside knowledge about micro-entrepreneurs residing within the divisions given that entrepreneurs were reliant on the divisional secretariat to help them obtain financing and other forms of support. They were thus able to act as a liaison between the researchers and micro-entrepreneurs. We asked each divisional secretariat to randomly select 50 entrepreneurs from the list they provided (a total of 750 across the 15 divisions). The entrepreneurs were then invited to attend their respective divisional secretariat on a nominated day to complete the survey. Of those invited, 635 entrepreneurs participated. Although the literacy rate of our participants was consistent with the high literacy rate found in Sri Lanka (Central Bank of Sri Lanka 2014), to reduce errors associated with respondent comprehension of items, we trained local graduates employed within each divisional secretariat to assist entrepreneurs in completing the survey. Furthermore, two experienced researchers from the research team supervised the administration of surveys in each divisional secretariat. This approach is consistent with previous research undertaken on informal entrepreneurship in a developing country context (Bullough et al. 2014). After eliminating participants with missing responses on our key variables, we used 615 complete cases for this study, amounting to a response rate of 82.4%.

Each divisional secretariat assisted the researchers to locate case officers who oversaw the activities of each entrepreneur surveyed. The case officer questionnaire was sent to them by post for completion. In total, surveys were distributed to 321 case officers, as some officials oversaw the business activities of more than one entrepreneur in their division. These surveys were then matched with the surveys completed by the corresponding entrepreneurs. Both entrepreneurs and case officers who participated in the study were assured anonymity and guaranteed that their responses to the survey questionnaires would be kept confidential.

8.3.2 Method of Data Analysis

We applied structural equation modeling (SEM) to test our hypotheses. When applying SEM as the technique for data analysis, a two-step approach is generally used (see Anderson and Gerbing 1988; Yieh et al. 2007). In the first step, confirmatory factor analysis (CFA) was conducted to assess the measurement model through assessing the goodness of fit of the variables in our study. In line with recent work, we also used composite reliability estimates to determine the reliability of the

variables (Peterson and Kim 2013). After estimating the measurement model, in the second step of the analysis, the structural model was estimated to test the proposed hypotheses.

8.3.3 Measures

Table 8.1 presents the standardized factor loadings of all variables in the CFA and their respective t-values.

Strong and weak ties were measured using the scales developed by Perry-Smith (2006), which capture the strength of such ties by assessing the closeness, duration of the relationship, and frequency of contact. We asked entrepreneurs to list the people who acted as sources of support and advice for their business. In doing so, we asked them to consider a fixed number of possible contact persons, including spouses, children, parents, grandparents, other family members, very close friends, good friends, acquaintances, members of community development organizations, and members of business associations. We separated these contacts into strong and weak ties, depending on the relationship between the two parties. Strong ties included those with one's spouse, children, parents, grandparents, other family members, and very close friends, whereas weak ties refer to those with acquaintances, members of community development organizations, and members of business associations (Sullivan and Ford 2014). We then proceeded to measure the social capital generated from both sets of ties by measuring both the duration of the ties as a source of business support and advice (not the actual length they had had a relationship as that person) in period of years (1 = less than 2 years; 2 = 2 to 5 years; 3 = 5 to 10 years; 4 = more than 10 years) and the frequency of contact (1 = not often, 2 = several times a year, 3 = once a month, 4 = several times a month, 5 = several times a week, 6 = daily). We then created a composite measure of both strong and weak ties by combining the number, frequency, closeness, and duration of ties possessed by each entrepreneur. As shown in Table 8.1, standardized factor loadings were greater than 0.70 and composite reliability greater than 0.79 for both strong and weak ties. Consequently we combined closeness, frequency, and duration of network relationship to generate two separate composite factors representing strong and weak ties. The empirical data was consistent with our conceptualization of strong and weak ties, in that strong ties as a source of business advice were longer in duration, closer, and more frequently consulted than weak ties.

Entrepreneurial self-efficacy was measured using the 15-item scale developed by Forbes (2005). Each item represents a particular entrepreneurial task, and entrepreneurs were asked to indicate their level of confidence in their ability to perform the task described, e.g., "develop new ideas," "develop new markets," "develop new products and services," and "develop new methods of production, marketing, and management." Each item was measured using a five-point Likert scale ranging from 1 (completely unsure) to 5 (completely sure). The scale had a composite reliability of 0.93.

Table 8.1 Results of the measurement model

Variable and item	Source	Factor loading (standardized)	t-value	CR
Social capital: strong ties (SCSTP)	Perry-Smith (2006)			0.79
Strong ties closeness		0.81	29.86	
Strong ties frequency		0.72	25.16	
Strong ties duration		0.71	24.97	
Social capital: weak ties (SCWT)	Perry-Smith (2006)			0.95
Weak ties closeness		0.94	135.29	
Weak ties frequency		0.93	129.40	
Weak ties duration		0.91	106.57	
Entrepreneurial self-efficacy (SEFF)	Forbes (2005)			0.93
SEFF 01		0.61	22.64	
SEFF 02		0.66	26.65	
SEFF 03		0.66	26.64	
SEFF 04		0.70	30.43	
SEFF 05		0.73	34.24	
SEFF 06		0.71	32.44	
SEFF 07		0.67	27.62	
SEFF 08		0.77	39.99	
SEFF 09		0.78	41.82	
SEFF 10		0.71	33.26	
SEFF 11		0.72	34.00	
SEFF 12		0.58	20.73	
SEFF 13		0.71	33.47	
SEFF 14		0.59	21.62	
SEFF 15		0.70	31.15	
Entrepreneurial performance (PERF)	Subjective measure			0.83
PERF 01		0.68	24.58	
PERF 02		0.77	33.94	
PERF 03		0.82	41.77	
PERF 04		0.65	23.43	
PERF 05		0.57	17.80	
Model fit indices				
$\chi^2(df) = 1302.621$, $\chi^2/df = 2.77$ RMSEA = 0.053, CFI = 0.924, SRMR = 0.041, CD = 1.00				

Note: All of the items are significant at $p < 0.001$ error level, N = 615 after listwise deletion, *AVE*: average-variance extracted, *CR*: composite reliability, *RMSEA*: root mean square error of approximation, *SRMR*: standardized root mean square residual, *CFI*: comparative fit index, *CD*: coefficient of determination

Following the approach of recent research, we used a subjective measure of micro-enterprise performance (e.g., Wiklund and Shepherd 2005), comprising five items (Model 1). Case officers were asked to compare the performance of the focal enterprise with that of similar enterprises in terms of net profit, sales revenue, sales growth, capacity to succeed in the long run, and innovativeness. A sample item included "In comparison to similar businesses this business has higher net profits." Items were measured on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The composite reliability of this scale was 0.83. In order to check the robustness of our findings, we estimated a second model (Model 2) by including self-reported income as an alternative measure of micro-enterprise performance.

In line with previous research, we controlled for variables that may influence entrepreneurial outcomes: age, gender, level of education, and the location of the microbusiness (Ahlin et al. 2014; Davidsson and Honig 2003; Fedderke et al. 1999; Khedhaouria et al. 2015; Ottósson and Klyver 2010; Perry-Smith 2006). Also, we controlled for firm age, length of the link with case officers (to rule out the fact that case officers who had longer relationships with entrepreneurs might rate their performance more positively), ownership type, and number of paid employees when estimating Model 1. In Model 2, we controlled for all the aforementioned variables except for the variable of length of the link with case officers as self-reported income was taken as the dependent variable in that model.

8.4 Analysis and Results

8.4.1 Sample Profile

The majority of entrepreneurs in our sample were between 31 and 50 years (68%). The sample comprised predominantly of entrepreneurs who were women (75%) and married (79%) and had completed at least 11 years of education (73%). Seventy percent of the participants resided outside Colombo, the main commercial city of Sri Lanka, and 73% operated a sole proprietorship. These characteristics are representative of micro-entrepreneurs in Sri Lanka more generally (Table 8.2).

The significantly greater number of female than male entrepreneurs can be attributed to cultural norms in Sri Lanka (Gunawardana 2013), where females are encouraged to become entrepreneurs in the informal sector to earn supplementary income for their families. Female entrepreneurs have been designated by the Sri Lankan government as the "new engines of growth" that are vital to increase economic prosperity (OECD 2014; IPS and Oxfam 2014). Combining the financial responsibilities of the family with rigid household work can impose greater stress on women but can nonetheless provide women with opportunities for being independent and supporting their family income (UN 2011). Promoting entrepreneurship amongst women is a top priority for the Sri Lankan government to reduce poverty (IPS and Oxfam 2014) and increase women's empowerment (Government of Sri Lanka 2014). This has resulted in female-owned enterprises becoming the fastest-growing segment of small-to-medium enterprises (SMEs) in Sri Lanka (Government of Sri Lanka 2014).

Table 8.2 Sample profile

	N	Frequency (%)
Gender		
Male	152	24.8
Female	463	75.2
Age (in years)		
< 30	46	7.4
31–40	194	31.4
41–50	225	36.7
> 50	150	24.5
Marital status		
Single	55	8.9
Married	485	79.2
Widowed	40	6.6
Other	35	5.3
Highest educational attainment		
Primary	156	25.4
Ordinary level	292	47.4
Advanced level	151	24.6
Above advanced level	16	2.6
Self-reported income (in LKR; 1 USD = 145.77 LKR on average in July and August 2016 during which the survey was conducted)		
< 10,000	241	39.2
10,001–30,000	270	43.9
30,001–50,000	76	12.4
50,001–100,000	24	3.8
> 100,000	4	0.7
Ownership of the business		
Sole	446	72.5
Family	142	23.1
Partnership	27	4.4
Location of the business		
Colombo	182	29.6
Outside Colombo	433	70.4
Number of paid employees		
< 5	581	94.5
5–10	21	3.4
> 10	13	2.1

The case officers who participated in the study consisted primarily of women (76%), aged between 30 and 50 years (88%), who had completed a minimum of an undergraduate degree (63%), and on average had close contact with the entrepreneur to whom their responses were matched for at least 4 years (SD = 4.1). The means, standard deviations, and correlation coefficients of study variables are reported in Table 8.3.

Table 8.3 Descriptive statistics and correlation coefficients

Variables	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Age	2.78	0.90	1	4	1													
2. Gender	0.25	0.43	0	1	0.01	1												
3. Education	0.27	0.44	0	1	−0.16**	0.05	1											
4. Living in Colombo	0.29	0.45	0	1	0.07	−0.13**	−0.04	1										
5. Firm age (in years)	8.04	8.40	<1	48	0.35**	0.14**	−0.12**	0.01	1									
6. Case officer's link (duration)	3.95	3.99	<1	40	0.04	−0.03	−0.06	0.18**	0.06	1								
7. Sole owner	0.71	0.46	0	1	0.03	0.05	−0.01	0.15**	0.05	0.01	1							
8. Family-own	0.23	0.42	0	1	−0.04	−0.01	−0.01	−0.14**	−0.02	−0.02	−0.85***	1						
9. Number of paid employees	1.08	0.33	1	3	−0.02	0.11**	−0.01	0.01	0.05	0.09*	−0.03	−0.06	1					
10. Social capital: strong ties	1.24	1.90	0	5.33	−0.22**	0.08	0.12**	−0.02	−0.45**	−0.04	0.01	−0.03	−0.02	1				
11. Social capital: weak ties	0.34	0.91	0	4.67	−0.15**	0.02	0.09*	0.08*	−0.25**	−0.06	−0.03	−0.04	0.02	−0.04	1			
12. Self-efficacy	3.85	0.64	1	5	−0.09*	0.16***	0.20***	−0.12**	−0.04	−0.04	0.01	−0.03	0.07	0.04	0.17***	1		
13. Performance	3.59	0.66	1	5	−0.09	0.12**	0.14**	−0.18***	0.03	−0.03	−0.03	0.02	0.09**	0.07	0.02	0.30***	1	
14. Income strata	1.84	0.84	1	5	−0.03	0.25**	0.22**	0.15**	0.06	0.09**	0.04	−0.01	0.12**	−0.09**	−0.03	0.18**	0.27**	1

Note: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$

8.4.2 Measurement Model

The standardized factor loading obtained from the confirmatory factor analysis (CFA) for each item under their respective latent constructs is presented in Table 8.1. Each of the standardized factor loadings for items is greater than 0.56, which is above the recommended minimum value for standardized factor loading of 0.50. The composite reliability (CR) of all latent constructs is greater than 0.7, indicating good internal consistency (Hair et al. 2010).

The proposed measurement model provides a good fit to the data with relative chi-square (χ^2/df) = 2.77, comparative fit index (CFI) = 0.924, standard root mean square error of approximation (RMSEA) = 0.053, standard root mean square residual (SRMR) = 0.041, and coefficient of determination (CD) = 1.00. These statistics are better than the recommended cutoffs of a relative chi-square less than 3 (Kline 2011), a CFI beyond 0.9 (Kline 2011), an RMSEA less than 0.07 (Steiger 2007), an SRMR less than 0.05 (Byrne 1998; Diamantopoulos and Siguaw 2000; Kline 2011), and a CD closer to one (1.00).

8.4.3 Structural Model (Hypothesis Testing)

After analyzing the measurement model, we estimated the structural models (Model 1 and Model 2) to test the hypotheses. Model 1 exhibited a good fit to the data with a relative chi-square of 2.52, RMSEA of 0.050, SRMR of 0. 052, CFI of 0.91, and a CD of 0.991. Model 2 also demonstrated a good fit with approximately similar statistics (relative chi-square = 2.66, RMSEA = 0.050, CFI = 0.910, SRMR = 0.054, CD = 0.992). The standardized path coefficients were calculated using the maximum likelihood method and reported in Table 8.4 along with their t-values and the indices for the model's goodness of fit for Models 1 and 2.

As can be seen in Table 8.4, Model 1, micro-entrepreneurs' strong ties and weak ties were not directly related to micro-enterprise performance as reported by the case officers [path coefficients = 0.05($p > 0.05$) and − 0.02 ($p > 0.05$), respectively]. However, the results of Model 2, which used an alternative measure of performance (self-reported income), highlight a positive relationship between micro-entrepreneurs' weak ties and micro-enterprise performance (path coefficient = 0.05 ($P < 0.05$) Therefore, although the results across both models do not support hypothesis 1(a), hypotheses 1(b) and 1(c) were supported by the results of Model 2 suggesting that weak ties are more strongly related to micro-enterprise performance than strong ties.

For hypotheses 2(a), 2(b), and 2(c), we examined the direct relationship between entrepreneurs' network ties and their ESE. The results in Table 8.4 show that entrepreneurs' weak ties are positively related to their ESE [in Model 1: path coefficient = 0.17 ($p < 0.001$)], supporting hypothesis 2(b). However, contrary to hypothesis 2(a) strong ties were not positively related to their ESE [path coefficient = 0.06 ($p > 0.05$)]. Collectively the findings for hypotheses 2(a) and 2(b) provide support for hypothesis 2(c).

Table 8.4 SEM results of hypotheses testing

		Model 01 (other-rated performance)			Model 02 (self-rated performance proxied by firm income)		
Hypotheses	Path analysis and model fit	Standardized coefficient	t-value	Result	Standardized coefficient	t-value	Result
Relationships							
H1(a)	SCWT → PERF	−0.02	−0.50	Not supported	0.08*	2.08	Supported
H1(b)	SCST → PERF	0.05	1.08	Not supported	0.08	1.80	Not supported
H2(a)	SCWT → SEFF	0.17***	4.01	Supported	0.17***	4.01	Supported
H2(b)	SCST → SEFF	0.06	1.22	Not supported	0.06	1.22	Not supported
H3	SEFF → PERF	0.26***	5.90	Supported	0.13***	3.33	Supported
Comparative hypotheses							
H1(c)	Collectively from H1(a) and H1(b)			Not supported			Supported
H2(c)	Collectively from H2(a) and H2(b)			Supported			Supported
H4(a)	Collectively from H2(a) and H3			Supported			Supported
H4(b)	Collectively from H2(b) and H3			Not supported			Not supported
Indices of goodness of fit							
	$\chi^2(df)$	1303.89 (518)			1048.32 (394)		
	χ^2/df	2.52			2.66		
	RMSEA	0.050			0.050		
	CFI	0.910			0.910		
	SRMR	0.052			0.054		
	CD	0.991			0.992		

Note: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, N = 615

The impact on entrepreneurial self-efficacy is controlled for age, gender, education, and living area. The impact on firm performance is additionally controlled for firm age, nature of ownership, the length of the entrepreneurs' official link with the case officer, and number of paid employees in Model 1. In Model 2, we use the same controls except the entrepreneurs' official link with the case officer

We next tested the direct influence of ESE on micro-enterprise performance in line with hypothesis 3. The results in Table 8.4 show that ESE is positively related to micro-enterprise performance as reported by case officers [Model 1: path coefficient = 0.26 ($p < 0.001$)], supporting hypothesis 3. Our findings were also robust across an alternative measure of micro-enterprise performance (self-reported income) [Model 2: path coefficient = 0.13 ($p < 0.001$)].

We computed the direct effects, indirect effects, and total effects of the independent, mediator, and control variables on micro-enterprise performance (presented in Table 8.5). The delta method is applied to compute t-values and standard errors of direct, indirect, and total effects of each covariate (Sobel 1987). Also, when computing those effects in Model 2 where we need to deal with an observed endogenous variable (self-reported performance), normalization constraints are imposed automatically by the *teffects* command in STATA. Accordingly, the direct effect of weak ties (a latent construct) on self-reported performance (an observed endogenous variable) and the direct effect of ESE (a latent construct) on self-reported performance were normalized to unity (1) to avoid routine iteration of the model without reaching to a solution (Acock 2013).

The results in Table 8.5 provide further confirmation of the previous results in Table 8.4 with regard to hypotheses testing. For instance, the results of Model 1 indicate that micro-enterprise performance is not directly affected by either strong or weak ties. It also confirms that only weak ties exert a significant indirect influence on micro-enterprise performance via ESE. Together these results provide support for the mediated hypothesis 4(b) but not hypothesis 4(a). In Model 2, subject to the constraints imposed on the direct effects of weak ties and ESE, a significant positive total effect was found between weak ties and micro-enterprise performance. However, the direct, indirect, and total effects of strong ties on micro-enterprise performance were statistically insignificant even after imposing normalizations. This also confirms that hypothesis 4(a) is not supported whereas hypothesis 4(b) is supported.

Collectively these results indicate that micro-entrepreneurs' weak ties positively influence their level of ESE, which subsequently leads to enhanced micro-enterprise performance. Therefore, in the case of micro-entrepreneurship, ESE plays a significant and pivotal role as a mediating factor between entrepreneurs' weak ties and the performance of the micro-enterprises they operate. The significant paths are presented in Fig. 8.2.

Regarding control variables, we found some similarities and some differences across Models 1 and 2. In both models micro-enterprises based in Colombo (the commercial capital of Sri Lanka) were rated as having lower levels of performance than those based outside Colombo. In addition, those micro-enterprises with more paid employees had significantly higher levels of performance across both models. Finally, firm age and ownership type did not predict micro-enterprise performance across both models. In Model 1, the length of a micro-entrepreneurs relationship with case officers (not entered as control in Model 2) also did not predict case officers' performance ratings.

Table 8.5 Effects on firm performance

	Model 01			Model 02		
	Direct effect	Indirect effect	Total effect	Direct effect	Indirect effect	Total effect
Variables of interest						
Social capital: strong ties	0.02 (1.07)	0.006 (1.19)	0.026 (1.34)	0.04 (1.80)	0.004 (1.14)	0.044 (1.96)
Social capital: weak ties	−0.01 (−0.48)	0.02*** (3.21)	0.01 (0.51)	1.00 (constrained)	0.27 (1.52)	1.27*** (7.04)
Self-efficacy	0.32*** (5.28)	No path	0.32*** (5.28)	1.00 (constrained)	No path	1.00 (constrained)
Control variables						
Age	−0.07* (−2.30)	No path	−0.07* (−2.30)	−0.03 (−0.84)	No path	−0.03 (−0.84)
Gender (male = 1, female = 0)	0.07 (1.23)	No path	0.07 (1.23)	0.51*** (7.02)	No path	0.51*** (7.02)
Education	0.09 (1.58)	No path	0.09 (1.58)	0.31*** (4.40)	No path	0.31*** (4.40)
Living in Colombo	−0.19*** (−3.35)	No path	−0.19*** (−3.35)	−0.35*** (−5.11)	No path	−0.35*** (−5.11)
Firm age	−0.0001 (−0.05)	No path	−0.0001 (−0.05)	−0.003 (−0.85)	No path	−0.003 (−0.85)
Case officer's link (duration)	0.01 (1.52)	No path	0.01 (1.52)	Not controlled		
Sole owner	−0.04 (−0.32)	No path	−0.04 (−0.32)	0.18 (1.16)	No path	0.18 (1.16)
Family-own	−0.06 (−0.49)	No path	−0.06 (−0.49)	0.23 (1.43)	No path	0.23 (1.43)
Number of paid employees	0.19** (2.50)	No path	0.19** (2.50)	0.18* (1.92)	No path	0.18* (1.92)

Note: ***$p < 0.001$, **$p < 0.01$, *$p < 0.05$, t-values are in parentheses, N = 615

Regarding differences across models, we found that micro-entrepreneurs self-reported performance was significantly higher for male than female employees (Model 2), whereas case officers' ratings of performance were not different between male or female entrepreneurs. In Model 2 entrepreneurs with greater levels of formal education also reported higher levels of performance. In contrast, in Model 1, there was no significant difference in the performance ratings provided by case officers between less and more educated micro-entrepreneurs.

8.5 Discussion

Despite growing work examining the effects of network ties on entrepreneurial outcomes, limited work has been done on the relative importance of strong and weak ties in predicting the performance of micro-enterprises operating in the informal

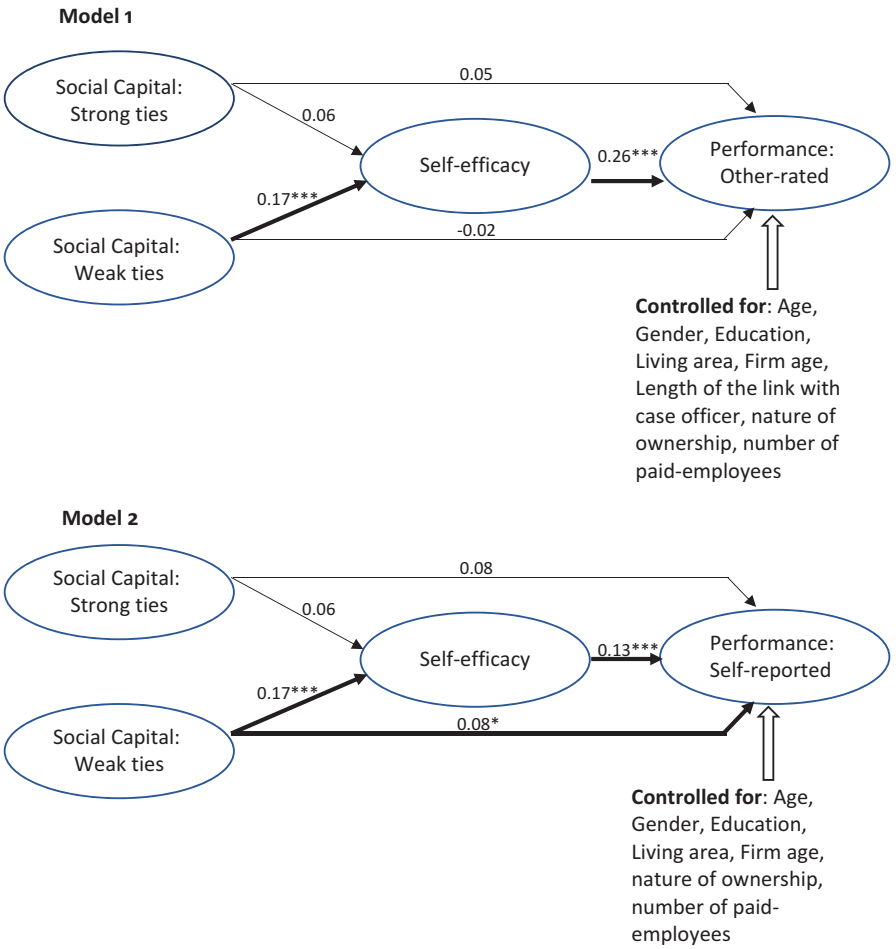

Fig. 8.2 Empirical results of the full model

sector and how this influences their performance. To help address such issues, the present study examined whether the strong and weak network ties of micro-entrepreneurs in the informal sector of a developing economy positively influenced micro-enterprise performance and whether ESE acted as a mediating mechanism linking network ties to micro-enterprise performance. In contrast to the findings of previous work on small- and medium-sized enterprises in developing economies (Stam et al. 2014), we found that weak ties had stronger effects on micro-enterprise performance than strong ties. More specifically, we found that while strong ties did not influence micro-enterprise performance, weak ties positively influenced micro-enterprise performance through enhancing the ESE of micro-entrepreneurs.

In examining these issues, the present study makes a number of key contributions. First, our findings make an important contribution to the entrepreneurship

literature by showing that in the informal sector, weak ties rather than strong positively impact micro-enterprise performance through enhancing the entrepreneurial self-efficacy of micro-entrepreneurs. More specifically, in line with SCT (Bandura 1986, 2006), our findings suggest that the weak ties of entrepreneurs act as an important source of ESE. As highlighted earlier, weak ties provide entrepreneurs with access to vicarious learning opportunities, support, and encouragement, which in turn lead entrepreneurs to feel more confident in developing new ideas and persevere in the entrepreneurial process when faced with challenges (Ozgen and Baron 2007). Ties with business people outside their immediate network (as opposed to family or close friends) are likely to be a stronger source of vicarious learning and social persuasion for the entrepreneur, as such individuals are more likely to be seen by the entrepreneur as credible and legitimate role models due to their having a track record of success in business. Weak ties are also likely to have more diverse experiences and sources of information than strong ties and therefore act as a more important source of vicarious learning. Past research undertaken in developed economies (Ozgen and Baron 2007) has found that the entrepreneur's weak ties outside their family and close friends not only provide access to material resources but also foster an entrepreneur's psychological resources such as their self-efficacy. The findings from our study both confirm and extend this knowledge by empirically validating the positive relationship found between weak ties and ESE of micro-entrepreneurs operating in the informal context of a developing economy.

Second, by providing evidence that weak ties are more strongly associated to micro-enterprise performance than strong ties (albeit indirectly) for micro-enterprises in the informal sector of a developing economy, our study challenges the widely held notion that social network ties universally facilitate entrepreneurship (Light and Dana 2013). The findings from the present study are also interesting in that they contradict the findings of recent meta-analytical work, which suggests that while weak ties are generally more important to entrepreneurial performance in established economies, strong ties are more important in developing economies (Stam et al. 2014). Our findings may reflect the context in which the present study was conducted, the informal sector of a developing country, where entrepreneurs are overly dependent on strong ties with their immediate circle of friends and family (Arregle et al. 2015). Prior research also suggests that there are significant costs associated with maintaining strong ties in the informal context which may neutralize or outweigh the benefits that they bring (Khavul et al. 2009; Khayesi et al. 2014), such as expectations of obligatory behavior from the entrepreneur (Khavul et al. 2009). For example, Khayesi et al. (2014) found that the performance of enterprises is constrained in the informal sector, as entrepreneurs are faced with demands for money, resources, and business assets from close friends and family.

The findings from the present study lead to a number of implications for both entrepreneurs and policy makers. As we found that weak ties were indirectly related to the performance of micro-enterprises, entrepreneurs operating in informal sectors of developing economies should seek opportunities to build connections with those outside their immediate circle of family and friends. To do this, they may consider joining business or community development associations where they can learn from

other entrepreneurs with greater experience and knowledge. This will assist them to build their confidence to experiment with new ideas and persevere in the entrepreneurial process (Arregle et al. 2015; Ozgen and Baron 2007). In contrast, because we found that strong ties do not lead to improved micro-enterprise performance, entrepreneurs should be careful not to spend too much time seeking business advice from those in their immediate network, such as family members and close friends, since such ties do not act as strong sources of vicarious learning and social persuasion that foster entrepreneurial self-efficacy. Although we did not find that an entrepreneur's strong network ties negatively influenced micro-enterprise performance, past research (Baker and Nelson 2005; Khavul et al. 2009) has found strong network ties to constrain an entrepreneur's ability to grow their business. This is especially true for female entrepreneurs operating micro-enterprises in the informal sector of developing economies (Khavul et al. 2009) – the majority of our study's sample. Therefore, to increase the performance and growth of their enterprises, micro-entrepreneurs, in particular female micro-entrepreneurs, should seek to obtain and utilize information sourced from those outside their immediate family and close friends (i.e., from weak ties).

Our findings also provide important implications for policy makers. In order to foster higher levels of performance amongst micro-entrepreneurs operating in the informal sector, case officers in government tasked with supporting entrepreneurship should consider building forums with which entrepreneurs can build weak ties with one another. For instance, they may support the establishment of local business associations and community development organizations and encourage entrepreneurs to seek membership of such entities. They might also organize regular networking events where entrepreneurs interact with others or develop formal mentoring schemes where experienced entrepreneurs are paired with novice entrepreneurs.

8.6 Limitations and Future Research

This study should be viewed in the context of its limitations. First, as the study utilized data from Sri Lanka, the findings may not be generalizable to other developing economies or to the developed world. To gain a deeper understanding and confirm the generalizability of the findings, future research should extend the present research to other developing economies and developed economies. Second, the study examined only the role played by ESE in mediating the relationship between network ties and firm performance. Future work should examine the relative importance of ESE vis-a-vis other possible mechanisms (e.g., entrepreneurial alertness and resilience) that may explain the effects of network ties on firm performance, as well as control for the access to material resources that network ties provide. Finally, the use of cross-sectional data is a major weakness of our study, as it does not allow us to measure causal relationships between our variables. Researchers should consider adopting a longitudinal study design to capture the dynamic process by which network ties influence firm performance over time.

8.7 Conclusion

The present study found a positive relationship between an entrepreneur's weak ties and the performance of the micro-enterprises they operate through the mediating mechanism of ESE in the informal sector of an emerging economy, Sri Lanka. In contrast, the relationship between the entrepreneur's strong ties and micro-enterprise performance was not significant. Our findings are consistent with SCT, in that they suggest that weak ties act as an important source of vicarious learning and social persuasion for micro-entrepreneurs, which fosters their ESE, leading them to perform at a higher level. We hope the present study will serve as a basis for additional research to provide greater clarity around the cognitive mechanisms by which social networks foster improved performance for entrepreneurs operating in the informal sector of developing economies.

Chapter Takeaways

1. Social cognitive theory provides an accurate framework to examine the influence of network ties on entrepreneurial self-efficacy and performance of micro-entrepreneurs operating in the informal sector of an emerging economy.
2. The findings of this study challenge the popularly held notion that network ties, both strong and weak, universally facilitate self-efficacy and firm performance with only weak ties found to be influential.
3. The weak network ties of micro-entrepreneurs act as an important source in developing their self-efficacy, an important psychological resource for all entrepreneurs, in particular, those operating in an unstable subsistence marketplace.
4. Given the importance of weak network ties in positively influencing self-efficacy and, through it, firm performance, it is important for micro-entrepreneurs operating in the informal sector of emerging economies to actively seek to establish connections with those outside their immediate family and friends.
5. From a policy development point of view, it is important for government agents tasked with facilitating entrepreneurship in the informal sector to develop community-based forums such as local business associations and community development organizations which encourage and provide a platform for micro-entrepreneurs to expand their weak network ties.

Questions for Reflection

1. Why do strong ties not influence micro-entrepreneurs' self-efficacy or firm performance?
2. Is the dominant influence of weak ties on self-efficacy and firm performance unique to micro-entrepreneurs?
3. Is self-efficacy of greater importance to micro-entrepreneurs operating in the informal sector of emerging economies compared to opportunity-driven entrepreneurs operating small or medium enterprises in the formal sector of developed economies? Why?

4. What mechanisms are used by micro-entrepreneurs to expand their network, especially in establishing and maintaining connections with those other than close family and friends?
5. How can government agents charged with the facilitation of micro-entrepreneurship in the informal sector of emerging economies positively influence a micro-entrepreneur's network (i.e., weak ties), self-efficacy, and firm performance?

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