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Female Entrepreneurship in Africa: Strength of Weak Ties in Mitigating Principal-Agent Problems

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Abstract

Purpose: The purpose of this paper is to develop a conceptual framework which combines the Strength of Weak Ties (SWT) concept with an innovative taxonomy for mitigating Principal-Agent conflicts. The taxonomy highlights the mechanisms through which African women can overcome the obstacles faced when setting up businesses.

Design/Methodology/Approach: The paper discusses the role of ‘weak ties’ networks in entrepreneurial activities and integrates the concept with the key parameters of the Principal-Agent paradigm. The aim is to develop a taxonomy (or scorecard) for mitigating the challenges faced by women entrepreneurs in Africa from a Principal-Agent perspective. Six Principal-Agent parameters are analysed namely: attitudes towards risk; behaviour-based versus targets based contracts; asymmetric information; risk sharing; transaction costs; and verification and monitoring costs.

Findings: With the aid of the taxonomy developed in the paper the authors analyse the channels through which ‘strength of weak ties’ networks may impact in mitigating the problems arising from the Principal-Agent paradigm. Some implications for women entrepreneurs in Africa are highlighted

Research Implications: The current conceptual study suggests that the ‘strength of weak ties’ concept can be used by African women entrepreneurs to mitigate Principal-Agent problems. The authors argue that the original Principal-Agent taxonomy developed in the paper fills a conceptual research gap in the existing literature. Embedding the SWT concept within a Principal-Agent framework will facilitate further research not only to understand African women entrepreneurs’ attitudes (and responses) towards risk and uncertainty. This will also facilitate greater understanding of the importance women attach to the role of incentives within their businesses.

Practical Implications: The taxonomy presents new insights for understanding the most serious constraints that hinder women entrepreneurs in Africa. The taxonomy will be the basis for a follow-up empirical paper on selected African countries.

Originality/Value: The originality of this study lies in the development of an innovative taxonomy which highlights the role of Strength of Weak Ties (SWT) social networks towards mitigating the Principal-Agent problem among African women entrepreneurs. The paper makes a significant contribution to the literature from a conceptual perspective.

Keywords: Women entrepreneurship, Principal-Agent, Strength of Weak Ties, Africa.

Type of paper: Conceptual

1. Introduction: Women entrepreneurs in an African context

Within developing countries, particularly in Africa, there is an emerging literature which highlights the unique obstacles faced by women entrepreneurs who start and develop their own businesses. There is also an expanding literature which focuses on the role of social networks in facilitating female entrepreneurship. Networks are groups of actors with a relationship or tie that connects them (Hoang and Antoncic,2003).The relevance of networks for an entrepreneur lies in the presence of other entrepreneurs who may work in customer and supplier companies, business services providers, or as finance professionals. They may also involve legal and governmental institutions. The information and ideas circulating within these networks can influence a person's attitude towards business start-up. They can also be a key resource for starting, growing and sustaining the business.

The economic development of an efficient private sector in Sub-Saharan Africa (SSA) is of critical importance in delivering sustainable economic growth as well as for raising the living standards of people in the region. Entrepreneurship is a major driver of the economy in developed and developing countries alike (Ramadani, 2013; Nziku, 2016). The World Bank's 2012 World Development Report on Gender Equality and Development suggests that Sub-Saharan Africa had approximately 61% of women participating in the labour force compared with 26% in the Middle East and North Africa, and 64% in East Asia and the Pacific (World Bank, 2012) Moreover, the literature suggests that within African countries there are more females than males who become involved in entrepreneurial activities (GEM, 2017; Nziku, 2016; Brush *et al*, 2010). Yet, there are a variety of unfavourable factors within local regulatory, normative, and cognitive systems which place additional burdens on women entrepreneurs in their attempts to start-up and expand their businesses (Nziku, 2013, 2016; Brixiová and Kangoye,2016; Halkias *et al*, 2011; Amine and Staub, 2009; Naude and Havenga, 2005).

The Global Entrepreneurship Monitor (GEM, 2017) has highlighted the challenges facing African women entrepreneurs. Although at the societal level private sector entrepreneurship in Sub-Saharan Africa exceeds that in developed countries, the main challenge lies in raising the level range, and depth of women entrepreneurship. There is also a perceived need to conduct

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3 more empirical studies on female entrepreneurship within Africa as existing studies tend to
4 cover a small number of countries on the continent (GEM, 2017). Richardson *et al*, (2004)
5 suggest that unless data on the level of entrepreneurship among African women entrepreneurs
6 is improved, it is likely that those women who are actually in entrepreneurial activities will
7 tend to be overlooked by official statistics. This is due to the fact that many African business
8 women often tend not to be considered or even regard themselves as owning businesses.
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14 This paper has been structured into 8 sections: Section 1 contains the introduction and the
15 context for the study; Section 2 highlights some of the major barriers that women entrepreneurs
16 face in African countries; Section 3 reviews literature on the role of social networks in
17 facilitating women entrepreneurship; Section 4 discusses the concept of ‘strength of weak ties’
18 proposed by Granovetter (1973, 1983); Section 5 identifies a research gap by embedding the
19 SWT concept within the Principal-Agent framework through an innovative taxonomy; Section
20 6 analyses the channels through which the SWT concept can mitigate Principal-Agent
21 problems when applied by women entrepreneurs in Africa; Section 7 suggests an area of future
22 empirical research based on the taxonomy, some tentative conclusions, and policy implications.
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30 **2. Barriers facing African women entrepreneurs**

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33 Women entrepreneurs in developing countries often face many barriers. According to Nziku
34 (2012, 2016) in studies of women entrepreneurs in Tanzania, the most common barriers were
35 inter alia: personal, cultural, stereotypes and discrimination, access to capital, lack of networks,
36 access to information technology, access to market, and poor education. Such obstacles are
37 common across sub-Saharan African countries as well as in other developing countries (Minniti
38 and Naude, 2010; Jamali, 2009). Though many developing countries have high levels of female
39 participation in self-employment, insufficient recognition is given to their contribution and many
40 of the challenges they face are overlooked (Davidson and Burke, 2004; Diaz-Garcia *et al*, 2016).
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47 Halkias *et al* (2011), in a study of Nigerian female small business owners highlighted the many
48 challenges they face including: difficulty in securing adequate finance/capital, low labour force
49 participation generally, as well as low levels of productivity. Similarly, Nziku (2013) found that
50 apart from personal and family problems, 47% of women entrepreneurs had difficulty in
51 accessing capital and acquiring appropriate information during the early stages of starting up.
52 Only 16% of Tanzanian women entrepreneurs living in the major cities were aware of
53 government support that was available to them. This was possibly due to the fact that 33% of the
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3 women who had established businesses lacked both formal education as well as previous
4 business experience.
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7 Jamali (2009) found that similar constraints were encountered by female entrepreneurs in other
8 developing countries. Problems such as work-family conflicts, difficulty in accessing
9 finance/capital as well as entrepreneurial education were found to be the most common
10 challenges among women entrepreneurs. This was especially true in the service and retail
11 business sectors. Nziku (2016), in a study of Tanzania identified lack of training opportunities,
12 legal and cultural constraints, along with having to carry out too many household chores as some
13 of the major challenges facing women entrepreneurs. Such findings were also confirmed in a
14 study of women entrepreneurs in a particular municipality in South Africa (Agholor *et al*, 2015).
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18 To sum up, the extant literature highlights the many challenges and obstacles that women
19 entrepreneurs in Africa and in other developing countries face. In order to set the context for this
20 paper the authors highlight two: access to capital, and access to information.
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23 24 25 26 27 **2.1 Access to capital** 28

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30 In many developing countries women entrepreneurs face particular difficulties during the start-
31 up and initial growth phase of their businesses. Banks tend to charge women higher interest rates
32 due to their lack of fixed and variable assets for use as collateral. In some countries such as
33 Tanzania, the only potential sources of capital available to women entrepreneurs are from their
34 personal savings, extended family networks, community savings (or credit systems), or informal
35 social network groups (Nziku, 2016). This has been well documented by other researchers who
36 have conducted empirical studies on these aspects within other developing countries (Ramadani,
37 2009; 2013). These studies suggest that networks are very important to women entrepreneurs, not
38 least because they provide a good source of financial capital for start-ups. Networks also
39 enhance potential access to information about markets, customers, suppliers and creditors
40 (Weiler and Bernasek, 2001; Bird and Brush, 2002). Nziku (2013) found that Tanzanian females
41 were capable of creating their own networks, which were both unique and advantageous to them
42 in the creation of sub-networks within the larger eco-system. These networks stem from high
43 levels of empathy between members and their underlying support systems, (Weiler and
44 Bernasek, 2001).
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56 Halkais *et al* (2011) in a study of women entrepreneurs across three regions in Nigeria,
57 discovered that among the many contextual factors that motivated women in their enterprises
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3 were: access to microfinance; and family dynamics. The latter is related to kinship, which plays
4 a significant role in African societies. Khavul *et al*, (2009), Khayesi and George (2011), Khayesi
5 *et al* (2014), and Kiggundu, (2002) also confirm the role of family ties across a number of
6 African countries, especially within rural communities. Brixiova and Kangoye (2016), in a study
7 of women entrepreneurs in Swaziland confirmed that women tend to have lower levels of start-
8 up capital and are more likely to fund their businesses from the informal sector rather than the
9 formal sector compared with males. Similarly, in a study of female entrepreneurs in Malaysia,
10 Mazlina and Punitha (2016), found support from family members and informal social networks
11 were as important as internal motivation and creativity, especially in ensuring sustainability of
12 enterprises.
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20 **2.2 Access to information**

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23 The availability of business information is important in the early stages of initiating a new
24 business. Singh and Krishna (1994), in studies of entrepreneurship in India, suggest that a
25 willingness to become involved in information seeking is a major entrepreneurial requirement.
26 'Information seeking' refers to the frequency of contact that an individual has with various
27 sources of information, the result of which is often dependent on information accessibility,
28 either through individual effort, or as part of social capital and networking (Greve and Salaff,
29 2003). Access to new information is indispensable for the initiation, survival and growth of
30 businesses and this has been found in the African context, (Kristiansen, 2004; Mead, and
31 Liedholm, 1998). Relevant business information is needed to engender a clear perception of an
32 individual's ability to succeed in business. From these studies, access to information on:
33 markets and sources of social and intellectual capital, technological solutions, design,
34 government rules and regulations, were found to be the most important factors involved in
35 starting up and growing a business .
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46 To some extent this will also depend on other factors relating to the personal characteristics of
47 an individual women entrepreneur such as; her level of education, initiative, and expertise and
48 not just to external factors such as infrastructural aspects that determine access to information
49 (for example, media coverage and telecommunication system, Kristiansen, (2004)).In these
50 domains, women entrepreneurs often lag behind their male counterparts. In Tanzania, women
51 were constrained by lack of education and training, low levels of business experience,
52 discrimination, poor levels of socialisation (or networking), all of which can contribute to an
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3 unwillingness to take risks (Nchimbi, 2002). It is in this context that social networks can play a
4 vital role in stimulating entrepreneurship among women.
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7 **3. Role of social networks among women entrepreneurs**

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9 Networking is described as a set of interrelated relationships with a mutual benefit to all
10 involved, through the sharing and giving of information and data, resources and personal
11 referrals. This makes it possible to leverage additional capital once the initial capital has been
12 raised. The entrepreneurship literature often refers to such forms of capital as: social capital,
13 institutional capital, or network capital (Greve and Salaff, 2003; Johannisson and Monsted,
14 1997).
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20 A social network consists of a series of formal and informal ties between the central actor and
21 other actors in a circle of connections, and represents channels through which entrepreneurs
22 gain access to the necessary resources for business start-up, growth and success (Kristiansen,
23 2004; Birley, 1985). In a study of Tanzanian businesses within small-scale garment and
24 carpentry industries, Kristiansen *et al* (2005) found that social networks had significant impact
25 on business adaptability. Nziku (2012, 2013) also suggests that, apart from the significant
26 impact on business adaptabilities, social networks have a strong impact in influencing the
27 entrepreneurial start-up of businesses for the majority of women entrepreneurs.
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34 Drakopoulou Dodd, (2012) classifies networks into three different types. Firstly, personal
35 networks are those which develop from contacts between people based on either family or
36 sympathy (friends and contacts), mutual support and exchange of information. Such networks
37 are typically based on social support which is characterised by high levels of closeness and
38 trust. Secondly, instrumental networks are based on instrumental relations such as supply and
39 sales contacts and public relations. Thirdly, symbolic networks are a typology based on
40 members having common aims or attitudes towards a specific goal; for example, religious,
41 political, ethnic, mentor and moral. Symbolic networks can evolve over time and then become
42 a type of mutual insurance.
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50 Meanwhile social capital is an economic construct that refers to the connections between
51 individuals and entities that can be economically valuable. Social capital is based on
52 social networks that include people who trust and assist each other and this trust is itself a
53 powerful asset. The focus of research on social capital relates to issues such as: governance,
54 trust, family and business identity, communication, family councils, and work-family balance.
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3 Portes, (2000) defines social capital as the capability of securing resources or benefits from
4 social networks or other social structures. It also encapsulates the ways in which women
5 entrepreneurs, especially in developing countries, need to make the most of using
6 advisors/business mentors and continuing education in order to build and embed social capital.
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8 In this context, the use of networks has been proven by many researchers to be central in the
9 starting-up of a business, as well as for growing and developing businesses. Pivotal to such
10 networks, is the role of trust which goes hand in hand with the practical support needed for
11 starting-up new businesses (Amoako and Matlay, 2015).
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17 Several studies confirm that networks within African communities are essential ingredients for
18 the survival of small businesses. Women entrepreneurs tend to use their networks in very
19 different ways from their male counterparts. This applies to not only starting a new business,
20 but also expanding and developing it (Khaseyi *et al*, 2014). In a case study of Kenyan women
21 entrepreneurs, Kyalo and Kiganane (2014) found that the building of social networks for
22 women entrepreneurs in order to develop their self-confidence was as important as access to
23 finance. The most common measure of social capital used in such studies tends to be the
24 number of formal and informal networks an entrepreneur has. This encompasses the number of
25 people involved in those networks as well as access to resources the network provides,
26 (Cattell, 2001)
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34 **4. The 'strength of weak ties'**

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36 Granovetter (1973, 1983) considers acquaintances (weak ties) as those individuals who have
37 less social interaction with each other compared with close friends (strong ties). In Figure 1
38 below this is depicted as relationships between individuals and their acquaintances who form a
39 'low-density network'. In the diagram this occurs when many of the possible lines of contact
40 ('relational lines') are missing. By contrast, when the network is formed between an individual
41 and his/her close friends, they will tend to be 'densely knit'. Many of the possible lines of
42 contact are in evidence in Figure 1. The self-esteem or individuality of the person is central. An
43 individual with self-esteem will be able to bring together close friends who are often in touch
44 with each other. They are then able to create a tightly woven social structure. The network can
45 be expanded further because these close friends will have other acquaintances who can also
46 join the network. Therefore, the social structure which arises from the complete chain will be
47 very different from the original social structure which the individual with self-esteem started
48 with.
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3 Granovetter (1973, 1983) noted that within certain social structures acquaintances never
4 become inconsequential ties. Rather they become an important 'bridge' between the individual
5 with self-esteem (the network initiator) and his or her close friends. Blau (1974) noted that
6 close friends are more likely to move in different circles than those of just acquaintances. Such
7 close friends are more likely to overlap with contacts that the individual with self-esteem
8 already has. Moreover, the information that the additional individual has is likely to be similar
9 to that of the original self-esteemed individual. In other words, the networks among close
10 friends might be self-limiting. They may involve just similar or homogenous groups of people
11 and may even become 'cliques'

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21 ➤ Here, the A-B edge is not the only path that connects its two end points. Though they
22 may not realize it, A and B are also connected by a longer path through F, G, and H.

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25 From Figure 1 above, each edge of the social network labelled as strong tie (S) or weak tie (W)
26 reflects the strength of the relationship. The local bridges, especially those with reasonably
27 large spans, can play almost the same role that the main bridges do, though in a less direct way.
28 They will provide their end points with access to parts of the network, and therefore sources of
29 information that they would otherwise not be able to access. The 'strength of weak ties' ,
30 though it may seem counter-intuitive, stems from the possibility that weak ties become
31 'bridges' between heterogeneous individuals who then have the potential to expand the original
32 network even further.

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39 Due to poverty and the need to provide for children, women entrepreneurs in many developing
40 countries need to embed themselves into quite unique, often bespoke, social networks. While
41 much is known about women entrepreneurs in developed countries, less is known about their
42 equivalents in developing countries. Compared to their male counterparts, women do not place
43 as much emphasis on 'strong-ties networks' which can have an impact on their fledgling
44 businesses when they seek out loans from banks (Carter *et al*, 2003). Essers and Benschop
45 (2009), found that women tend to form strong relationships that concentrate on personal and
46 symbolic networks as opposed to institutional networks. This can hinder them when trying to
47 obtain business support, either financial or non-financial.

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55 Such networks are typically characterised by emotional intensity, mutual confiding and
56 intimacy (Carter *et al*, 2003). A possible handicap arising from this is the undue pressure that
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3 family members may have on the success of their businesses. This can be due to the impact of
4 kin ties, which in themselves are less likely to provide financial resources, or informational
5 advantages compared to those arising from non-kin ties. Moore and Buttner, (1997), and Carter
6 *et al.*, (2003) have suggested that weak-tie networks disadvantage women entrepreneurs when
7 they seek the support of banks because many banks often may not even know the (potential)
8 women entrepreneur personally. This can seriously impair women's loan applications.
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16 **4.1 The impact of weak ties**

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19 Apart from the potential for weak ties to link different social groups, another benefit of weak
20 ties is an increase in specialisation and interdependency (Blau, 1980; Jack 2005). Although the
21 bridging role created by weak ties might not be immediately discernible, Granovetter (1973,
22 1983) suggested that social systems lacking in weak ties can become fragmented, disjointed
23 and incoherent. Innovations and new ideas will tend to be diffused slowly because groups that
24 are differentiated by race, ethnicity or geography (or in our study gender) will not have the
25 same access to information. Rather, the diffusion and spread of innovations or new ideas is
26 facilitated by small cohesive groups who despite sharing a "culture" are not so tightly woven
27 that they block non-members from benefiting. It could be assumed that weak ties social
28 networking would be more prevalent among lower socio-economic groups. Yet, Ericksen and
29 Yancey (1977, 1980) found that less well educated (and poorer) individuals were more likely
30 to use strong ties than educated individuals especially within the labour market in their search
31 for job opportunities. This is due to the fact, as shown in the research of Nziku (2012, 2016) in
32 the context of sub-Saharan Africa, that the more educated is the individual, the less
33 entrepreneurial he/she tends to be. In fact, the majority of entrepreneurs have lower levels of
34 formal education.
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46 Whether individuals are part of weak ties or strong ties networks, the main purpose in using
47 these ties is to provide a minimum level of economic security for their members (Ericksen and
48 Yancey, 1977, 1980). In the context of this paper, such ties are similar to the channels through
49 which kinship and family enhance economic security within developing African countries, not
50 least because of their inherent reciprocity. Nonetheless, the pervasive use of weak ties by the
51 poor is often a response to economic pressures and insecurity (Marlow, 2006). They believe
52 themselves to be without alternatives, and they may depend too much on the adaptive nature of
53 these reciprocity networks.
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The above discussion is not to deny that strong ties are useful in terms of information flows. As Granovetter (1983, p218), argues... 'the speed of flow, credibility, and especially influence are all greater through strong ties...' and... 'most of the influence is carried through strong ties...' (Wellman, 1980, p12). Moreover, according to Wellman (1980), though weak ties create the bridges over which new innovations and new ideas can overcome the barriers of social groups, the decision making process will still tend to be influenced predominantly by the strong-ties networks within groups.

4.2 Weak and strong ties in relation to gender

The literature suggests that men are often better at establishing and maintaining professional relations across several (usually other male) networks, both formally and informally. This applies particularly in relation to access to financial institutions and funding generally (Carter *et al*, 2003). In contrast, Moore and Buttner (1997), point out that although there can be many effective women networks, due to the fact that there are few female leaders or business starters especially in developing countries, their networks are often less conspicuous.

Normative constraints and societal attitudes, arising perhaps from cultural or religious beliefs, are sometimes not conducive towards women even being employed or becoming entrepreneurs (Jamali, 2009). Few women are able to base their working lives on networks as much as men can, which keeps them in a disadvantaged position in terms of back up and support, especially at the start-up stage (Carter *et al*, 2003; Carter *et al*, 2007). For example, in the case of Tanzania the majority of women entrepreneurs were found to be less successful in accessing the assistance offered by corporate or governmental institutions responsible for encouraging small business development (Nziku, 2013; Nchimbi, 2002).

This study will now embed this ‘strength of weak ties’ concept within a well-known economics framework which places attitudes towards risk, incentives, and issues of performance and reward at its core: the Principal-Agent framework. In this study the ‘strength of weak ties’ may not only provide a social network for women entrepreneurs in Africa with relevant and useful new information. The existence of these strengths may also mitigate against some of the Principal-Agent problems identified below.

5. Embedding ‘strength of weak ties’ networks within a Principal-Agent framework: a possible taxonomy

The Principal-Agent (henceforth P-A) paradigm has a long pedigree in economic analysis with different applications across many different contexts. Originally applied to contract theory, especially labour contracts, the P-A problem relates to the possibility that within any business, structure or organisation, there can be a conflict of interests (objectives) between the Principal (for example, the owner of a business) and the Agent (the manager of the business). Jensen and Meckling (1976) were perhaps the first to set out a formal theory of the P-A paradigm and it has since been applied in many different contexts including labour markets, banking, and

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3 industrial economics. There are five main dimensions to this paradigm and from these
4 dimensions the authors identify six measurable indicators to enable the design of the taxonomy.
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7 The first dimension is the monitoring and verification problem. This will depend on the type of
8 contract in force, ie; whether it is a behaviour-type contract which tends to be non-specific,
9 generic and targets-free, or a targets (outcomes) based) contract. The type of contract will
10 determine the extent of monitoring or verification required and who actually carries out the
11 monitoring. Such monitoring and verification is required because behaviour-based contracts
12 may lead to opportunistic behaviour on the part of agents. Task measurability is much easier
13 when contracts are targets or outcomes based. Such contracts also tend to reduce the agent's
14 level of risk-aversion. In the standard P-A paradigm, monitoring and verifying is aimed at
15 reducing the risk of agents engaging in shirking or 'satisficing' behaviour. It is also designed to
16 reduce excessive rent seeking behaviour.
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24 The second dimension is the asymmetric information problem and the need to minimise moral
25 hazard and adverse selection effects. These effects stem from the potential that may exist for
26 goal conflict (or incentives misalignment) within a contract. The third dimension is the
27 tendency for agents to engage in excessive risk aversion beyond what is considered to be
28 normal, reasonable, and necessary. The fourth dimension is the scope to develop incentives to
29 engage in risk-sharing. This is often a function of the ownership and property rights within a
30 contract. These aspects will be dependent on the type of business. For example, social
31 businesses will be different in this regard from private businesses. Finally, the fifth dimension
32 is the risk- within a P-A framework- for actors to conceal their true intentions from each other.
33 This, in turn, is related to the issue of trust within an economic context. Once again, the
34 creation of appropriate networks to maximise trust can play a crucial role.
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44 We summarise these five dimensions of the P-A paradigm in Table 1. The Table contains an
45 innovative taxonomy of possible outcomes using the six measurable indicators. This taxonomy
46 (or scorecard) sets out potential differences between male and female entrepreneurs in terms of
47 the trade-offs they face when establishing and developing their businesses. The key question to
48 be addressed in this study is whether the 'strength of weak ties', when applied to women
49 entrepreneurs, can lead to greater mitigation of these underlying P-A trade-offs, compared with
50 male entrepreneurs. The existing literature covering different types of networks in which
51 women entrepreneurs are involved confirms this anyway. ⁱⁱ At this stage of the research, the
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3 conclusions reached will be purely conceptual, though the authors intend to apply the
4 taxonomy in a future empirical study of African women entrepreneurs
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7 ***Insert Table 1 : Here***
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10 The above taxonomy may serve as a useful research framework to more fully understand the
11 different ways in which women use their networks compared with men. The taxonomy may
12 also assist researchers to analyse the barriers that women entrepreneurs face in a more
13 systematic and measurable way in terms of the trade-offs that lie at the heart of Principal-Agent
14 paradigm. The authors plan to test this taxonomy empirically in a future study using an
15 experimental/behavioural economics approach focusing on aspects such as: prospect theory,
16 framing and loss aversion.ⁱⁱⁱ The future study will be based on field work in three African
17 countries.
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24 **Indicator 1: Attitudes towards risk**
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26 There is some evidence from the empirical literature that gender differences exist with regard
27 to attitudes towards risk. Studies by Kamal *et al* (2009) in relation to women entrepreneurs in
28 the UAE, and Nziku (2012) on Tanzania, suggest that women are generally more risk-averse
29 than men and also have lower personal interest compared with men. The OECD (2016), in a
30 major study of the gender gap and entrepreneurial risk across 38 countries (South Africa being
31 the only Sub-Saharan African country in the sample) reached the same conclusion. A different
32 conclusion is reached by Humbert and Brindley (2015) in a study of Irish women business
33 owners. They challenge the conventional view that women are more risk-averse than males,
34 particularly if the definition of risk is extended beyond the financial domain. Other
35 contributory factors were: socio-economic position, locational and cultural aspects. Tagg and
36 Wilson (2012) also challenge the traditional view that women are so different in their approach
37 to business compared with men. Whatever position is correct, the question is whether this
38 means that women are more or less likely to be entrepreneurial compared with men. This
39 ultimately is an empirical matter which will be analysed in the future paper.
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50 **Indicator 2: Contracts: behaviour-based or targets (output) based**
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52 This is a crucial aspect of P-A theory, in which one might expect there to be differences
53 between men and women. According to Essers, and Benschop (2009) in a study of women
54 entrepreneurs of Moroccan and Tunisian origin in the Netherlands, women prefer behaviour-
55 based contracts to targets based contracts (Carter, *et al* 2003). This preference may be based on
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3 a reliance on weak ties social networks rather than strong-tie networks, As previously
4 highlighted, the former may be traced to an over-reliance on networks that are personal or
5 symbolic, rather than instrumental (Nziku and Struthers, 2016).
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8 **Indicator 3: Potential for goal conflict (asymmetric information)**

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11 This issue lies at the heart of the P-A framework and relates to the key concepts of moral
12 hazard and adverse selection (Akerlof, 1970; Spence, 1973; Stigler, 1961; and Stiglitz, 1983).It
13 is difficult to argue intuitively that there will be intrinsic differences between men and women
14 on this aspect. However, it can be argued that within the domain of social business, in which
15 women tend to be heavily engaged especially in African countries, the asymmetric information
16 problem may be less pronounced (Struthers, 2011).The reason why social businesses may have
17 lower asymmetric information problems is because, on the whole, participants in such
18 businesses tend to have common goals, or at the very least, common aspirations. This also
19 needs to be tested empirically.
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26 **Indicator 4: Risk-sharing**

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29 On the aspect of risk-sharing there appear to be clear differences in terms of gender. Within
30 developing countries there is evidence that women entrepreneurs prefer to combine and share
31 risks (and rewards) in their entrepreneurial activities (Yunus, 2010, 2011).Why this should be
32 the case is an issue of some import. Are women entrepreneurs more inclined to prefer risk-
33 sharing in their business activities, not through choice, but out of necessity (Humbert and
34 Brindley, 2015)? Are there cultural reasons why women prefer a risk-sharing approach? Do
35 institutional factors in some societies contribute to a more risk-sharing approach?^{iv} Do women
36 avoid competition while men embrace competition, as argued by Niederle and Vesterlund,
37 (2007)?For men, the preference is to operate in more formal (strong ties) networks. Whereas
38 for women, the preference is for informal networks (weak ties). In such networks, risk-sharing
39 and risk-pooling are more prevalent (Cetin *et al*, 2016; Khayesi *et al*, 2014; Drakopoulou
40 Dodd, 2012; Bardasi and Sabarwal, 2009; Weiler and Bernasek, 2001; Blau, 1974, 1980).
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50 **Indicator 5: Transaction costs**

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52 Transaction costs is an aspect where the authors expect to identify clear gender differences.
53 Panzar and Willig, (1977, 1981) have argued that men enjoy major advantages when it comes
54 to minimising transactions costs. These costs include: brokers fees, loan terms, and other fees
55 such as the legal costs involved in the setting up and expanding of businesses. Not only do men
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3 enjoy economies of scale and (scope) related to size, and prior experience. They also benefit
4 from the potential for joint products and the bundling of business activities, compared with
5 women, all of which reduces transactions costs. Due to the higher value of their initial assets,
6 they are more able to secure preferential loan terms compared with women, Nziku (2012,
7 2013) found this was the case in her study of women entrepreneurs in Tanzania. That said, how
8 do women entrepreneurs build up that success in the first place, apart from niche or gender-
9 bespoke areas of entrepreneurial activity (Halkias *et al*, 2011; Bruhn *et al*, 2010; Bardasi, and
10 Sabarwal, 2009; Jack, 2005)? This issue is related to the scalability of businesses which is an
11 aspect of some relevance to women entrepreneurs in an African context.^v
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19 **Indicator 6: Verification and monitoring costs**

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21 This is concerned with the types of contracts already discussed above. Since men have a
22 preference for targets (or output) based contracts compared with women, this makes for easier
23 and less expensive verification and monitoring costs on the part of those agencies who will be
24 providing credit to their businesses (Baumol, 1982; Baumol *et al*, 1982) This not only impacts
25 on the likelihood of women getting access to credit in the first place. It can also impact
26 negatively on their ability to secure new or repeat loans that are vital for ensuring growth and
27 expansion of their businesses. The literature suggests that length of initial contract, renewal
28 terms, and the formality associated with a targets based approach to contracts, will reduce the
29 verification and monitoring costs in providing credit facilities for business start-ups initiated by
30 men compared to those established by women (Jamali, 2009; Carter *et al*, 2003; Baumol, 1982,
31 Baumol *et al*, 1982)
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40 **6. The ‘strength of weak ties’ networks in mitigating Principal Agent problems**

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42 In this section the authors summarise the key implications of the taxonomy outlined in Table
43 1. In doing so the aim is to produce a scorecard to compare the outcomes for male and female
44 entrepreneurs in terms of the six main P-A indicators highlighted in Section 5. The main
45 contention in this study is that women entrepreneurs, especially in Africa, face certain barriers
46 that are not usually encountered by male entrepreneurs (see Section 2). The insights offered by
47 presenting the obstacles faced by African women entrepreneurs in the context of the P-A
48 paradigm are outlined in Table 1. When combined with ‘strength of weak ties’ networks within
49 a P-A framework this leads to several tentative conclusions.
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3 Following Granovetter, (1973, 1983) we suggest that women entrepreneurs may after all
4 benefit from their use of such networks in terms of mitigating some of the P-A trade-offs. As
5 far as the first P-A indicator is concerned (attitudes towards risk), male entrepreneurs will tend
6 to have the upper hand. This is supported by the extant literature, as reported in Table 1.
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8 Similarly when it comes to Indicator 2 (contract types), men tend to score better than women.
9 However, the role of 'strength of weak ties' may play a part here. This is because if it is true
10 that weak ties actually manifest strength, this may offset the apparent disadvantages facing
11 women entrepreneurs. This is possible due to the potential that exists in weak ties networks to
12 create more bridging relationships, as seen in Figure 1.
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19 In essence, although behaviour based contracts may superficially appear to be less satisfactory
20 in terms of mitigating P-A problems, compared with targets based contracts, this may not be
21 the case when we consider the potential extent and reach of the networks that can be achieved
22 through these bridging effects. There may be greater scope to enhance the effectiveness of the
23 wide range of business relationships that can develop through these weak ties than might
24 initially be assumed. Similarly in terms of Indicator 3 (potential for goal conflict), because
25 women tend to value social impact more in their businesses compared with men, a priori they
26 can be expected to be less affected by goal conflict (incentives-misalignment), moral hazard or
27 adverse selection effects.^{vi}
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34 In relation to the three other P-A indicators from our taxonomy, the message is more mixed.
35 Theory and empirical evidence suggest that women are more open to risk-sharing than men
36 (Indicator 4). The experience of the Grameen Bank model developed in Bangladesh, and which
37 assisted many women in that country to become entrepreneurs, exemplifies this point. (Yunus,
38 2010, 2011).^{vii} However, a word of caution is appropriate here. Whilst risk-sharing is obviously
39 good for raising extra capital, the very need for such risk-sharing on the part of women
40 entrepreneurs may arise from the inherent obstacles that they face in terms of raising finance,
41 especially at the developmental stages of their businesses. Certainly in the context of social
42 businesses, risk-sharing can be highly beneficial. However, to counter this, once the
43 disadvantages that women entrepreneurs face in terms of Indicator 5 (transaction costs) are
44 considered, the benefits from risk-sharing may be greatly outweighed by these costs. The
45 future empirical analysis using the Principal-Agent taxonomy developed in this study will
46 quantify these trade-offs.
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3 Finally in terms of Indicator 6 (verification and monitoring costs), it appears that women
4 entrepreneurs may be at a disadvantage compared with their male counterparts. This is partly
5 linked again to the types of contracts favoured by women which can lead to higher verification
6 and monitoring costs. It is also due to the fact that male entrepreneurs will usually have strong
7 track records of setting up and operating successful businesses which in itself may lead to
8 lower verification and monitoring costs. In terms of whether weak ties networks can be
9 expected to minimise these costs, intuitively it could be argued that the opposite is more likely.
10 This is because of the potential for additional links in the network chain- which stems from the
11 extra bridges created in such networks- to lead to higher incremental verification and
12 monitoring costs.

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21 The main aim of the next paper will be to calibrate these six possible trade-offs using the P-A
22 taxonomy developed in this conceptual study. This will enable the authors to embed the
23 'strength of weak ties' concept within the taxonomy and ascertain whether, as suggested in the
24 present study, the 'strength of weak ties' may be advantageous for women entrepreneurs, at
25 least in terms of some of the P-A indicators. At a conceptual level, it is possible to suggest how
26 the various trade-offs within the taxonomy could be manifested. The empirical paper will
27 measure the effects and highlight possible outcomes. The channels though which this might
28 occur are discussed in the next section.

33 34 35 **7. Future research, policy implications and conclusions**

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37 The next stage of the research will involve empirical work on women entrepreneurship in
38 selected African countries. The aim will be to examine whether the 'strength of weak ties'
39 concept can help to mitigate at least some of the P-A problems identified in the taxonomy. To
40 this end, the design of the empirical tools (questionnaires and interviews) that will be used to
41 elicit responses from a sample of women entrepreneurs, will be based on a methodological
42 framework derived from experimental/behavioural economics. The pioneering work of
43 Kahneman and Tversky (1979), which adopted a completely new approach to decision making
44 under uncertainty from the traditional expected utility approach, will be used. This 'new'
45 approach with its emphasis on concepts such as, prospect theory, framing, and loss aversion,
46 will determine the design of the empirical approach including the types of questions asked to
47 respondents in the sample.

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56 Some of the possible questions to be asked in the empirical paper are: Do women entrepreneurs
57 engage in loss-aversion rather than risk-aversion in their business activities? When 'framing'
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3 alternative outcomes, do women entrepreneurs face different 'binding constraints' (boundary
4 conditions) compared with male entrepreneurs (for example, a higher level of guaranteed return
5 on the initial investment)? What role does 'prospecting' play among women entrepreneurs
6 compared with male entrepreneurs?
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10 In a recent study of entrepreneurship among households in rural Kenya, George *et al* (2015)
11 adopted a similar methodology. That study had a different objective to the present study, since
12 it was concerned with examining how individuals (men and women) respond to breakdown in
13 social structure and imminent poverty in terms of their entrepreneurial decision making.
14 However, the research used the key argument of prospect theory which states that decisions by
15 individuals to undertake risky entrepreneurial ventures will be based not just on expected
16 return (as in expected utility theory). It will also be based on where they might end up in the
17 event of failure, compared to a given or predetermined reference point. More technically, the
18 potential entrepreneur will compare a 'likely loss' against a 'potential gain'. These opposing
19 outcomes are not symmetrical but asymmetrical. The individual's decision to undertake a risky
20 investment will be based on 'loss aversion' not 'risk aversion'. The future empirical study,
21 which will follow the present paper will test whether this is more applicable for women than
22 male entrepreneurs.
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33 In the somewhat extreme scenario of the study by George *et al* (2015), the individual investor
34 has to weigh up 'affordable loss against 'reasonable gain'. This is 'framed' in the context of
35 investors who might 'plunge' into risky investments, often out of desperation (Dew *et al*, 2009;
36 Sarasvathy, 2001. Though the future empirical study will not be based on such an extreme
37 scenario, the aim will be to ascertain whether these concepts of 'affordable loss' and
38 'reasonable gain' have a strong gender element among entrepreneurs within an African context.
39 For example, do male and women entrepreneurs operate at different survival or 'acceptable
40 thresholds' when making their business decisions? By using this methodology, can it be
41 concluded, as suggested in this paper from a conceptual perspective, that a key insight of the
42 'strength of weak ties' concept is that it can help to mitigate some of the Principal-Agent trade-
43 offs identified in our taxonomy, and which are ubiquitous in all contracts?
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52 In this paper the authors have been concerned with developing a conceptual framework
53 (taxonomy) using the Principal-Agent paradigm in order to facilitate better understanding of
54 the obstacles that women entrepreneurs face, particularly within African countries. However,
55 even at this stage of the research some useful policy implications emerge. One implication is
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3 the need to develop appropriate forums or networks that will enable women entrepreneurs to be
4 able to

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7 benefit from the expertise that already exists within women entrepreneurship initiatives around
8 the world (Gibb, 1993).

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11 Some examples highlight the benefits of such networks which already operate in practice.
12 Firstly, there is UNCTAD's EMPRETEC network which for a number of years has been
13 operating in more than 30 countries and has a proven track record in stimulating women's
14 entrepreneurship, especially in African countries. There is also the long-established Global
15 Entrepreneurship Monitor (GEM) which originated from Babson College in the US. Though
16 the numbers can vary from year to year, a growing number of African countries have been
17 included in this important barometer of entrepreneurial activity around the world.

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20 Within these networks, women entrepreneurs play an increasingly vital role though more work
21 is required to ensure that this expands. Furthermore, within individual developing countries,
22 including many in Africa, governments have been prioritising this aspect of their economic
23 development process, not least because improving the level of female entrepreneurship is one
24 of the key objectives to help these countries to meet the UN's Sustainable Development Goals
25 (SDGs). The challenge is to harness these international and national efforts to ensure the spread
26 of best practice around the world. This is desirable for its own sake. It is also desirable from a
27 human capital and economic growth perspective, given the vital roles that women play in all
28 aspects of the modern economy (Smith-Hunter, 2006). This is especially true of women in
29 African countries who often face particular obstacles for a variety of cultural, historical or
30 societal reasons. Public policy, whether at the national, international, or at the supranational
31 level, should be geared to addressing these issues through training and mentoring as well as
32 other capacity building activities.

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35 Policy measures that enable emerging entrepreneurs to acquire skills, access resources and be
36 able to penetrate markets can have a strongly positive impact on the ability of entrepreneurs to
37 learn the necessary business practices in their country. In so doing, over time they will be able
38 to start-up, develop and expand their businesses. A related issue is the need for such policies to
39 narrow the wide disparities in the level of entrepreneurial activity among different communities
40 within the same country. Such disparities might be geographical, regional and even ethnic and
41 are not just based on gender. According to the ILO (2008), these disparities are manifested in
42 the many different challenges that potential entrepreneurs face in accessing resources, skills,
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3 markets, information and business networks, all of which are vital to the formation and growth
4 of new businesses.
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7 In terms of the present paper, the authors contend that there may be circumstances in which the
8 'strength of weak ties' may mitigate some of the problems embedded within the Principal-
9 Agent paradigm. This can be advantageous to women entrepreneurs in Africa. Viewed through
10 the lens of our taxonomy this is likely, though perhaps not in all of the P-A parameters
11 identified in the paper. The policy implications of this insight will also be highlighted in the
12 future paper. To the extent that 'strength of weak ties' networks can mitigate some of the
13 Principal-Agent problems identified in the taxonomy, this can be expected to influence public
14 policy particularly within those African countries that have prioritised women
15 entrepreneurship. This might be best achieved through active government promotion of those
16 social networks that benefit from the 'strength of weak ties'.
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24 **Endnotes**

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27 ⁱThese differences between the motivations of male entrepreneurs compared with female
28 entrepreneurs have also been reported in studies of European countries. For example, Cetin *et*
29 *al* (2016) in a large study across 27 European counties using the European and World Values
30 Surveys, discovered that social capital that arose from formal networks tended to be the
31 domain of men; while social capital that stemmed from informal networks (for example, strong
32 interpersonal contacts) tended to be the dominant factor for women entrepreneurs.
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38 ⁱⁱSee Dzisi (2008, 2012) for studies of the role of these networks in relation to women
39 entrepreneurs in Ghana.

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41 ⁱⁱⁱThis experimental/behavioural economics methodology will inform the
42 questionnaire/interview based quantitative study the authors will carry out.

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44 ^{iv}The institutional dimension to this topic has a strong pedigree within the economics literature.
45 Since the early work of North (1990), there has been a vast amount of theoretical and empirical
46 work focusing on the institutional dimension of economic decision making. The main
47 conclusion from this literature is that no form of economic decision making can be fully
48 understood or analysed in an institutional vacuum. This study incorporates these 'institutional'
49 aspects which can be expected to determine the reasons why women may need to use social
50 networks based on weak ties. Such social networks are the types of networks that women
51 entrepreneurs tend to inhabit, especially in an African context.
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3 ^vEconomies of scope relate to the potential of businesses and organisations to achieve greater
4 efficiency by combining related activities rather than separating them (Baumol *et al*, 1982;
5 Panzar and Willig, 1981). This concept applies particularly in production; for example, joint
6 products. Technically it refers to a situation where: cost of activity a plus activity b < cost of
7 activity and cost of activity b separately. How is this relevant to businesses established by
8 women? For example, it may be possible to benefit from specialised labour, technology and
9 even knowledge and information which have already been used in one activity but is now
10 being used in a different (though related) activity. The combined costs of doing so may be
11 lower 'proportionately' compared to carrying out the activities separately. Similarly, when a
12 company produces multi-products, say in one factory or plant, rather than being spread over
13 several factories and plants. We can argue that networks formed by women, referred to in this
14 paper as 'weak ties', may also facilitate the achievement of significant economies of scope due
15 to the 'bridging effects' of such weak ties. The 'exploitation' of these economies of scope,
16 through the use of weak ties social networks, may also ensure better scalability (and
17 sustainability) of the businesses that result from these processes.

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29 ^{vi}Of course, there is also a danger that networks based on weak ties might become too diffused
30 and lacking in focus which is an important caveat to make.

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33 ^{vii}The pooling and sharing of risks lies at the very core of the Grameen Bank model and is one
34 reason why women entrepreneurs were major beneficiaries of the model across a large number
35 of developing countries, including some in Africa (Yunus, 2010, 2011).
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Table 1: A possible principal-agent taxonomy

Principal-Agent Indicators	Men	Women	Differences
<p>1) Attitudes towards risk: (Assumptions: personal interest, rationality, risk aversion)</p> <p>➤ Gender balance and performance</p>	<p>High-personal interest, (Tagg and Wilson, 2012)</p> <p>Rationality:</p> <p>Risk aversion-low</p>	<p>Low-personal interest (Kamal et al, 2009; Gibb, 1993)</p> <p>Rationality:</p> <p>High-risk aversion (Nziku, 2016; Nchimbi, 2002; Khayesi et al, 2014; Mazlina and Punitha, 2016)</p>	<p>Men - Low risk aversion (+)</p> <p>Women- High risk aversion(-)</p>
<p>2) Contracts: behavioural based v targets (outcomes) based</p>	<p>Aversion to behaviour based contracts (Jensen and Meckling, 1976; Mead and Liedholm, 1998)</p> <p>Men prefer targets based contracts</p>	<p>Women prefer behaviour based contracts (Essers and Benschop, 2009; Carter, et al., 2003; Carter et al, 2007; Ramadani, 2013)</p> <p>Aversion to targets based contracts</p>	<p>Based on different use of networks:</p> <p>➤ Women use weak-ties networks (behaviour based) (-)</p> <p>➤ Men use strong-ties networks (targets based)(+)</p>

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<p>3) Potential for Goal conflict:</p> <p>Incentives misalignment</p> <p>Asymmetric Information, moral hazard, adverse selection</p> <ul style="list-style-type: none"> ➤ Influence and motive 	<p>Asymmetric information:(Akerlof, 1970; Spence, 1973; Stigler, 1961, Stiglitz, 1983)</p> <p>For men, moral hazard and adverse selection will be higher (targets based contract/ strong ties). Emphasis on competition not cooperation between agents</p>	<p>Asymmetric information:</p> <p>For women, moral hazard and adverse selection lower (social objectives, impact of trust and role of symbolic networks/ weak ties; Dzisi, 2008, 2012; Kristiansen, 2004, Kristiansen et al, 2005)</p>	<p>Influence and motive:</p> <ul style="list-style-type: none"> ➤ Women emphasise social impact in businesses (eg: Grameen Bank model) (+) ➤ Men motivated by high achieving/maintaining status quo (-)
<p>4) Risk-sharing:</p> <ul style="list-style-type: none"> ➤ Use of networks 	<p>For men, networks formal, structured, and interconnected (strong ties; Erickson and Yancey, 1977,1980)</p>	<p>For women, networks looser, informal; based on a social construct (“weak ties”) (Cetin et al, 2016;Humbert and Brindley, 2015 Khayesi et al., 2014; Drakopoulou Dodd, 2012 ; Bardasi and Sabarwal, 2009; Niederle and Vesterlund, 2007;Weiler and Bernasek, 2001 Blau, 1980, 1974)</p>	<p>Differences in use of networks:</p> <ul style="list-style-type: none"> ➤ Women use social/ informal networks to minimise risk/loss; risk-sharing/ pooling (Grameen Bank)(+) ➤ Men use formalised networks to minimise risks(-)

<p>5)Transaction costs: (Search costs; brokers fees); economies of scale/scope</p>	<p>Maximise economies of scale/scope (combining loans across different projects, scaleability, Panzar and Willig, 1977;1981)</p>	<p>Higher transaction costs compared with males (Halkias et al, 2011; Bruhn et al, 2010; Bardasi, and Sabarwal, 2009; Jack, 2005)</p>	<p>Unequal transaction costs:</p> <ul style="list-style-type: none"> ➤ Women lack high value assets as collateral (-). ➤ Men have high value assets(+) <p>(Outcome depends on size and frequency of loans)</p>
<p>6)Verification and monitoring costs:(Relates to contracts:(type, formality/ informality, contract length, renewal terms)</p>	<p>Men, have lower verification and monitoring costs compared with women due to their strong track records (Baumol, 1982; Baumol et al, 1982)</p>	<p>Women have higher verification and monitoring costs as no track records/reliance on weak ties (Jamali, 2009; Carter et al, 2003)</p>	<p>Depends on contract type: (targets v behaviour based)</p> <ul style="list-style-type: none"> ➤ Women prefer behaviour based contracts; causes higher verification/ monitoring costs for Principal (-) ➤ Men prefer targets based contracts; lower verification/ monitoring costs for Principal (+)

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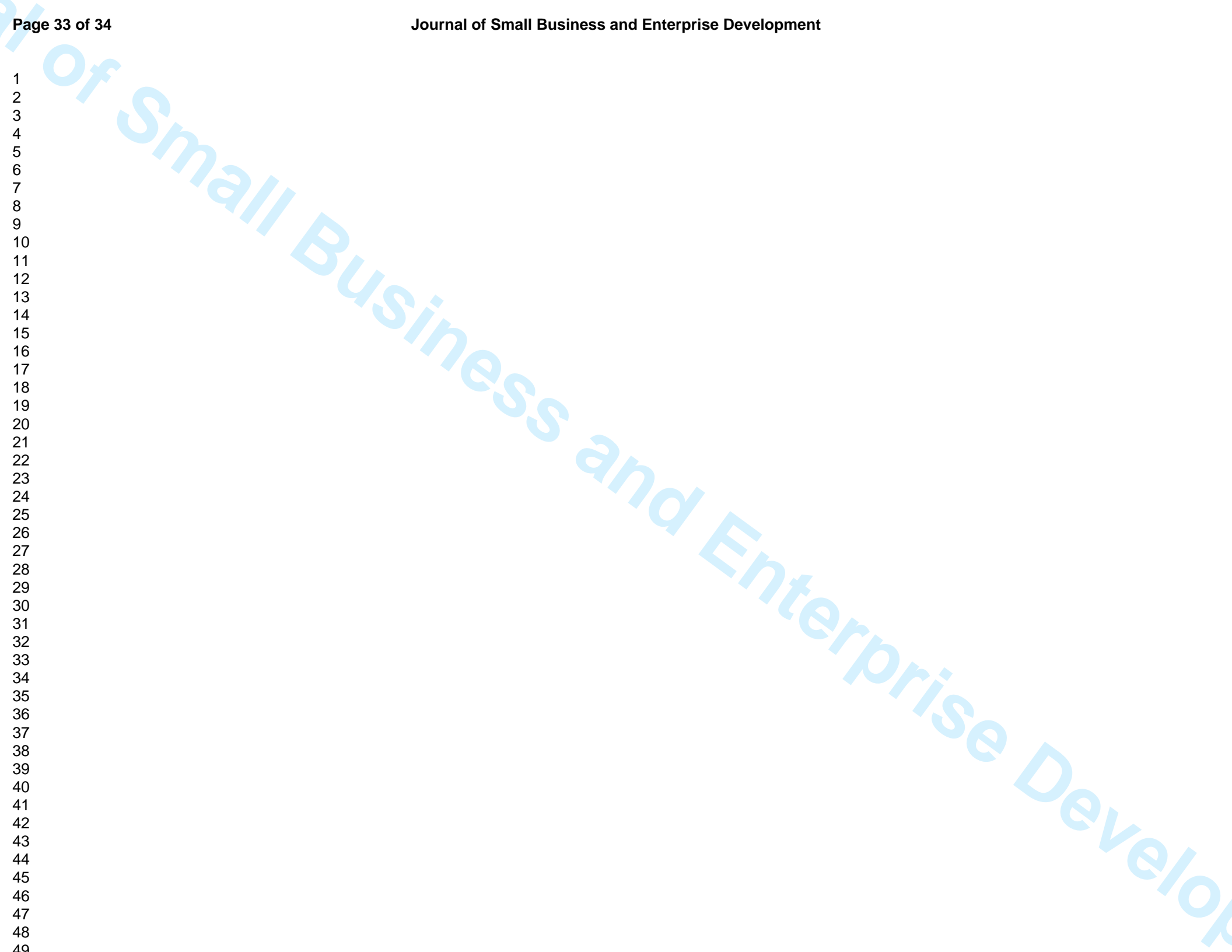
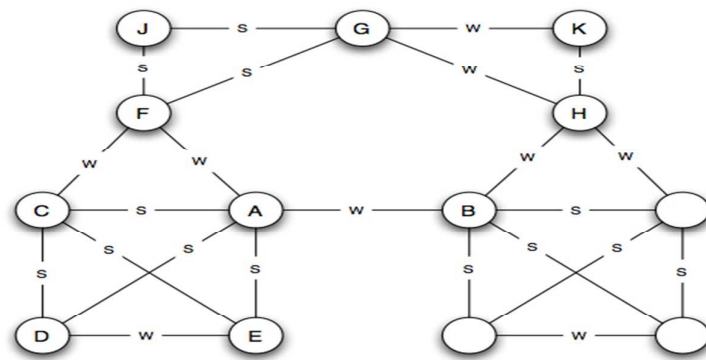


Figure 1: The Strength of Weak Ties (SWT)



Source: Granovetter (1973)