*Full Length Research Paper*

# Networking in the Kenyan informal sector: An attempt to manage the market failures

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This paper examines the role of informal personal networks in determining micro small enterprises (MSE's) success in Kenya. It adopts the network perspective theoretical approach. Empirically, the paper finds that MSE's in Kenya get around market failures and lack of formal institutions through entrepreneurial personal network as a copying strategy in the process of global transformation to bridge the entrepreneurial global divide. General hypothesis predicting the 'likelihood of MSE's with better network performing better' is supported by performance models though pro-poor growth is evident with an average business performance. Network strategies to promote small enterprises are recommended to policy makers, donors and actors in the field against those of the failed traditional strategies. However, there are few empirical studies available in this area particularly in less developed countries; therefore, further research is necessary in this direction.

**Key words:** Kenya, networks, MSE's performance, environment.

## INTRODUCTION

It is no doubt that the role of entrepreneurship in the emerging economies such like Kenya can not be undermined as a number of research in this field has pointed out (Gok, 1999; McCormick, 2009; McPherson, 1996). In Kenya, MSE's plays a crucial role in the process of development as findings from the 1999 National MSE Baseline Survey show that MSE's activities are contributing to at least 18.4% of country's gross domestic product (GDP) and 25% of non-agricultural GDP; employing approximately 17% of the total labour force from which 64% were in the urban employment in 2002 (Karekezi and Majoro, 2002). In terms of income contribution, workers in the MSE sector earn an average income per month, which is two and a half times more than the minimum statutory wages in the formal sector. Employment creation in the formal private sector decelerated by 67.7% (from 74.0 thousand new jobs in 2007 to 23.8 thousand new jobs in 2008) but employment in the informal private sector is estimated to have expanded from 7.5 million in 2007 to 7.9 million in 2008.

New jobs created generally in the whole country declined from 485.5 thousand in 2007 to 467.3 thousand in 2008 (GoK, 2008). Given the importance of this sector in areas of employment creation, growth and poverty alleviation, it is important that it is efficiently managed for effective results within the broader over all objectives. Efficient management has been lacking also due to external factors that are beyond the owner-manager's control. These factors are inherent in the institutional environment of Kenya which favours larger firms.

In addition, ongoing changes in the business environment with regard to globalization of markets act as a further challenge to firms' growth prospects in Kenya. In addition, liberalization of markets has made competition real among firms and only those with a competitive edge can survive. Policy recommendations of the government of Kenya as contained in its 7th National Development Plan on Divestiture and subsequently in Sectional paper No. 2 of 2005, advocates for the government to take the leading role by providing an enabling environment for MSE's market operations. This will require the establishment of infrastructure for access to markets, provision of work site structures, dissemination of market information through networks

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and innovation amongst other well-known strategies.

With all the above in mind, MSE's are expected to add value to their owners and to the society in general but this has not been the case in Kenya. This is further proved by considering the number of MSE's that manage to grow in terms of sales, profit and assets as well as the number of people it employs. The MSEs' churning rate has been worrying for this sector and as such needs a quick redress by all the stakeholders both in government and private sector (McPherson, 1996). While these challenges and drawbacks are real, MSE's owner-managers need not to sit back in the short run as these problems persist but should network and come up with various strategic options to address unfavorable conditions so as to secure a more conducive, stable working economic environment within this sector in Kenya.

Empirical research has shown that the economic success of MSE's in many countries depends on informal personal networks. Long term business relationships emerge as a result of failures in both market and institutional settings which is characteristic of least developed countries (LDC) countries. MSE's in Kenya get around such market failures and lack of formal institutions by developing relations with the outsiders through a support mechanism provided either by friends, family members, relatives or neighbours. In other cases cooperative relations among groups of MSE's organized in business networks and in associations or local community organizations perform these functions. Prominent examples of such private orderings have been found in the support networks and informal relationships in Europe, America and Asia (Birley, 1985; Bryson et al., 1993; Burt, 2009; Curran et al., 1993, Goodman and Bamford, 1990; Rabelloti, 1995; Steier and Greenwood, 2000; Uzzi, 2004).

The evidence that private institutional arrangements among the MSE's facilitate their performance in many countries fits a theory of the firm that views the enterprise as a collection of contracts and relationships between the firm and various stakeholders from the external environment (Coarse, 1937, 1988; Alchian and Demsetz, 1972; Williamson, 1985). Institutional gap left by the government of Kenya has proactively made the MSE's to circumvent the risks involved through informal institutional settings of social networks. Risks are as well inherent in such arrangements but it is the ideal Mechanisms through which the MSE's can operate under such environment (Birley et al., 1991).

In the next section a theoretical concept is developed which features the choice of network variables as drawn from the dynamic network perspective theories or literature on marketing, organizational and sociological economics to shed light on how exceptionally high level of poverty can be overcome in Kenya. This recapitulates into the description of the hypothesis then methodology. Lastly the results are discussed on how the network structure impact on MSE's business performance and sustainability and their policy implications.

## THEORETICAL CONCEPT

To understand network requires a deep understanding of dynamic pattern of networks given that they do not evolve overnight (Venkataraman, 1989). With respect to the instrumental role of social capital, the study adopt a Marketing Network Model developed by Hakansson and Johanson (1988), which reconciles both social network perspective (Aldrich Zimmer, 1986; Birley, 1985, 1990; Birley Cromie, 1988; Granovetter, 1976, 1985; Johannisson, 1986, 1987a, 1988, 1995b; Uzzi 1996, 1999; Veciana Clarke, 1999) and Resource Dependency Theory (Butler and Sohod, 1995; Pfeffer and Salancik, 1978, 2003). The marketing network model is an amalgamation of these two distinct theoretical perspectives. The study uses the integrated network theoretical approaches of marketing network model on the argument that, small firms cannot perform better without direct or indirect network relationships hence the hypotheses is formulated on this basis. Researchers have used different types of theoretical approaches in order to analyze and understand networking and small business performance as there is no single general theory of small business networks.

Economic functions can be performed either within the boundaries of hierarchical firms (within the organization) or by market processes that cut across these hierarchical boundaries; either hierarchies or markets. For small firms, the economic functions and transactions within the boundaries of hierarchical firms are either impossible or extremely difficult because small firms, being small and alone, are inherently lacking in resources thereby causing higher production costs.

Market mechanism is also not a better solution because perfect competition is far from reality especially in developing countries like Kenya. Perfect competition causes higher transaction costs. Hence, it is clear those small firms find it difficult to perform their economic activities either at the level of hierarchical firm (or bureaucracy) or market. Given this, small firms in developing countries need support to compete and survive in their businesses. Networking is one of the best solutions given in the literature for the development of small firms in LDCs because networking lies between the hierarchy (or bureaucracy) and the market (Borg, 1991; Jarillo, 1988; Thorelli, 1986). Hierarchies and markets are regarded as being the polar ends of a variety of governance options (Butler, 1991; Williamson, 1985).

In the network, the logic of exchange differs from the economic logic of market and hierarchy. The logic of exchange of networks considered in this study is that of 'social embeddedness' because ongoing social ties shape actors expectations and opportunities in ways that

differ from the economic logic of market behavior (Granovetter, 1985; Uzzi, 1996). A small firm without networking with its external actors is bound to fail. Networking is the best solution for small firm development (Borg, 1991; Donckels and Lambrecht, 1995; Gibb, 1993; Johannisson, 1990b; Szarka, 1990). At one hand of firm's hierarchy level, firms are too small and thus growth may be hindered by lack of resources. At the market level, on the other hand, transaction costs to obtain necessary resources are extremely high. Therefore, small firms have to obtain resources and support from 'outsiders' or external actors. Thus, small firms are dependent on other external actor, which is called 'interdependence'. Hence, to study small firms and entrepreneurship, this research views focal firms within their external environment. Within this integrated model, resource dependency approach examines the behavior of a firm within its environment on the basis of resource dependence meanwhile social network approach looks at how network relationships influence small business performance and its application to the economic phenomena.

In addition, Social network approach views entrepreneurship as an act of creation and small business as a way of life that is different from the rational economic behavior. As with social network approach, actors and their exchange relationships are very important for small firm development. In this framework, entrepreneurship is seen as an ongoing process of venturing forth through personal networking in which actors, resources, exchange relations and activities are the major network elements. On the whole, there are two major arguments behind the concept of networking. Firstly, since market transactions tend to become costly, firms attempt to overcome transaction costs by networking.

Secondly, in order to perform, firms need various kinds of resources. Small firms, in particular, do not have all these resources fully at their disposal. Firms gather these resources from 'outsiders' or, in other words 'external actors'. As most resources are controlled by external actors, a small firm always depends on its outside actors.

Therefore, in order to perform economic activities, firms have to enter into relationships with these external or outside actors thereby forming entrepreneurial networks. Firms being heterogeneous in nature, they face different problems and requirements in different phases of their development. Therefore, the firms need different resources and support in different stages of business growth.

At the start –up phase the business needs resources but an entrepreneur does not have all the necessary resources needed to start the business. This he can acquire through personal networks (Birley and Cromie, 1988; Curran et al., 1993; Ostgaard and Birley, 1996). Networks are not static; they are dynamic (Birley and Cromie, 1988, Butler and Hansen, 1991) as relations are

continuously constructed and reconstructed during interactions (Grabher, 1993). It is very common for small entrepreneurs in Kenya to follow evolutionary network model to meet different needs of different phases of entrepreneurship as other writers suggest. At the entrepreneurial stage or phase, the entrepreneurs discuss with friends, relatives and formal co-workers before they practically start their businesses. Besides, these networks also encourage new entrepreneurs. This is the stage where businesses are developed and social support is sought (Butler and Hansen, 1991; Bridge et al., 1998; Larson and Starr, 1993). Professional and organizational actors play a very small role in the case of Kenya's MSE's when compared to other phases as at the second stage they never engage professionals but make use of friends and relatives to do the professional work for them if any.

## Development of the hypothesis

The study brings forth its three major hypotheses out of which eight sub-hypothesis are developed to help us understand fully the impact of networks on micro small enterprises in Kenya. The study seeks to test the following hypotheses:

**H$_1$:** Small firms engage in local, homogeneous networks among themselves to cope with uncertainty and risk.
**H$_2$:** Heterogeneous networks which include non-local partners stabilize performance outcomes.

In this second hypothesis the study deal with how the entrepreneur having acquired the resource moves up the hierarchy and his/her problem now is extending his/her market through network thereby he/she gets into by subcontracting with outsiders in the second phase of the businesses. He makes use of the elements of network to carry on his activities by extending his network. Dependent variable here is performance and sustainability measured in terms of the market expansion or as well profit and sale can be used. But the independent variables to be measured here is the network density of activities of business focused network with regard to money, information and nonmaterial support.

**H$_3$:** Networking with interest groups influences their agenda and actions and therefore benefits small businesses. In this hypothesis it is assumed that an enterprise with more networks relations benefits more than the one with low network density through resource support from outside actors which ultimately help improve their business performance.

Eight sub-hypothesis is set for their analysis and as drawn from the 3 main hypotheses by linking them to the dependent variable of performance measurements. The dependent variable growth is dichotomous (growth, no

growth). Growth is used here as a performance indicator given that performance is a relative term.

Sub-hypothesis (a): Owners' membership in various support groups or clubs and societies has a   positive impact on the business' performances;
Sub-hypothesis (b): Consultation with family members has a positive impact on the performance of the business;
Sub-hypothesis (c): Consultation with friends has a positive impact on the performance of the business;
Sub-hypothesis (d):  Use of external consultants is positively related to the performance of the business;
Sub-hypothesis (e): Attendance at seminars' has a positive impact on the business performance;
Sub-hypothesis (f): Participation in trade fairs is positively related to business performance;
Sub-hypothesis (g): Trade, exhibition and fare are positively associated with growth of the firm;
Sub-hypothesis (h): Advertisement has appositive impact on the business performance;

At the same time, the study also expect; hypothesis: The relations with other entrepreneurs (no contact/ immediate neighbourhood, local surroundings for example village/small town/wards/quarter, district, regional, Kenya wide, International) are boosted by other network elements (memberships in various support groups, clubs and societies, consultation with relative, consultation with friends, external consultation, attending seminars, and participating trade fairs/exhibition; Advertisement); (i and j).

## Dependent variable

Performance and sustainability measured in terms of profits terms, sales made and expansion of the market. Note that these financial indicators are used for growth of the small firms and by extension satisfy the 'if' condition for performance in the small business case. The firm sustainability is achieved when correlation between performance and networks is positive and significant at a given level of significance. Whereby from the good performance an entrepreneur can climb the hierarchy of net works and back forth in a circular manner.

## Independent variables

The independent variables are: Social networks, supporting networks, and inter-firm networks. For the correlation measures, the study used network densities for social, support, and inter-firm networks. In the case of probability analysis, the study used networks as dummy variables; dummy (social): 1 = if the entrepreneur had social network relations (yes), 0 = otherwise (no); dummy (supporting):1 = if the entrepreneur had  support  network

relations (yes), 0 = otherwise (no); and dummy (inter-firm): 1 = if the entrepreneur had inter-firm network relations (yes), 0 = otherwise (no).

## Control variable

Before testing the hypotheses, it was important to ensure that the potential effect of the other factors was minimized. Several other enterprise related factors (such as firm and market locations, number of employees, and types of businesses) and entrepreneurial related factors (such as gender, age, place of birth, education, and work experience) were therefore statistically controlled for in the estimations.

## METHODOLOGY

### The population and sample

The population of this study is micro small enterprises in Kenya estimated to be 1.3 Million based on the MSEs Baseline Survey carried out by the government of Kenya in 1999 once and has not been carried out again (CBS, K-Rep/ICEG 1999 pp. 17,105). The population frame which targets those small enterprises in the big towns, peri-urban, urban and rural areas was selected on the basis of this research framework and comprised the micro small enterprises in four districts of Kenya based on their location, size and region. Then the research sample was selected from the population frame by using a standard sampling method.

### The sampling method

A total of 400 firms were sampled through a multi-stage cluster sampling method. Four strata were chosen from eight clusters covering areas; for example, cities; of which  Nairobi was chosen to be representative of all the major cities in Kenya, towns; of which Kisumu town was chosen to be representative of all the major town in Kenya having a population above 10,000 people, urban; of which Eldoret was chosen to be representative of all urban areas in Kenya with a population  of between 2000 people to 10,000 people, and lastly rural; of which Kakamega was chosen to be representative of all the rural areas in Kenya and the choice of Kakamega was made as informed by the BIOTA4C project and the other geographical activities taking place in Kakamega.

From these stratified clusters, 400 MSE's were chosen based on their demographic and economic characteristics with each stratum producing 100 MSE's. A bigger percentage of the total MSE populations of the small enterprises (61%) are concentrated in the rural areas and the type of industry in which most of them are involved in are service industry (40%) followed by manufacturing (23.2%). The response rate of the MSE's owner or managers was impressive with 99% response rate (Table 1). Due to practical difficulties (money, time, and transport), the study were restricted to this particular number of the sample size despite the immense cooperation received among the entrepreneurs.

### Variables and variable measurement

Determining the variables to use for such kind of a study is an upheaval task because most of the variables are social relationships. The measurement of social relationships has always been a nagging and unresolved problem (Hall et al., 1977). For this

**Table 1.** Type of enterprise and sampling area (Clusters).

| Type of enterprise/ sampling area | Sampling area of the respondents | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Town | | Urban | | Peri-urban | | Rural | | Total | |
| | n | % | N | % | n | % | n | % | n | % |
| Manufacturing | 45 | 11.2 | 10 | 2.5 | 23 | 5.8 | 15 | 3.8 | 93 | 23.2 |
| Service (Incl. Repair, health and Beauty ,I.T) | 32 | 8.0 | 58 | 14.5 | 41 | 10.2 | 29 | 7.2 | 160 | 40.0 |
| Trade | 9 | 2.2 | 16 | 4.0 | 16 | 4.0 | 18 | 4.5 | 59 | 14.8 |
| Agricultural Processing | 3 | 0.8 | 1 | 0.2 | 2 | 0.5 | 4 | 1.0 | 10 | 2.5 |
| Handicraft | 10 | 2.5 | 8 | 2.0 | 3 | 0.8 | 25 | 6.2 | 46 | 11.5 |
| Food and beverage/Restaurant. | 1 | 0.2 | 7 | 1.8 | 15 | 3.8 | 9 | 2.2 | 32 | 8.0 |
| Total | 100 | 25 | 100 | 25 | 100 | 25 | 100 | 25 | 400 | 100 |

Source: Survey Data (2008-2009).

study purpose the following general questions were asked to the entrepreneurs about their networking activities; for instance- how many business partners do you have? Where they are mostly situated? For how long have you been cooperating with your partner firms? For which purpose do you cooperate with other firms? Are you a member of any support group? Who is your main source of input? Who is your main customer? Do you have any subcontracting arrangements for inputs or orders received from clients? How do you set your prices? What are the main methods of advertisement of your product and services? Have you sought and received any formal assistance for any of the above problems for your business in the last 2 years? In order to obtain a better and deep understanding about the external actors and their roles, respondents were given five choices of answers; not important, fairly important, average, important, and very important. Besides, they were also given a choice of two sets of six persons to whom they could turn to most likely for business related advice or any other help. The main aim of this questionnaire was to collect information on the relationships between respondents and these two set of persons.

## Dependent variables of the study

### Performance and sustainability

Based on a review of the literature (Donckels and Lambrecht, 1995; Hansen, 1995; Ostgaard and Birley, 1996) pertinent to the measurement of performance, two objectives of measures of growth were included; sales growth and increase in profitability over a given time period. In addition, market expansion (Local, regional and national) is used as a business performance measure. Studies (Johanson and Mattson, 1993) in the field of marketing and international business have identified a positive relationship between network formation and market expansion of small businesses.

Growth of sale = [{(sale in current season – sale in previous season)/sale in previous season}/2]* 100 ……………… ……………… (i)

Growth of profit = [{(profit in current season – profit in previous season)/profit in previous Season}/2]* 100 ……… ……………... (ii)

However, the big challenge facing many MSE's is that the entrepreneurs do not properly keep business records related to their daily business operations due to ignorance, therefore, obtaining financial details for sales and profit is foolhardy. To overcome this agony for the MSE's in Kenya, the study tried to get the relevant data on sales and profits by asking respondents their perception with respect to last year business performance to that of the current one as expected for next year. To capture this categorically the respondents were asked about whether their sales or profits vary over time on a seasonal or monthly basis. The figures got were compared to the performance and sustainability parameters for those particular firms who provided the required information.

## Independent variables of the study

### Network density

Network density is a very important indicator measure in evaluating entrepreneurial networks in the firms three different phases. It is generally measured as the proportion of ties present out of all-possible ties (Burt, 1992; Greve, 1995; Duysters, 1995). Network densities also can be obtained by dividing the number of existing alliances among actors in the network by the total number of possible links between those actors. For all the practical reasons, network density is very difficult to exhaustively measure due to ego-centricism of human beings (Greve, 1995) where only relations that are directly connected to ego are visible as networks are defined from a focal person's perspective.

### Network size

The larger the network, the greater is the number of network members who provide emotional support, goods and services. Entrepreneurs with large networks may win both ways; not only do they have more potential providers of support in their networks, but also each number of their network is more likely to be supportive (Wellman and Gulia 1993). Network size was obtained by asking respondents to estimate the number of people or organization with whom they dealt with in business activities, resource support and discussions of their business, information on market, technology and group membership. Therefore, the size of entrepreneurial networks may be one of the most important variables to explain the success of a small enterprise (Aldrich et al., 1987; Hansen, 1995; Johannisson, 1986; Greve, 1995). Entrepreneurs identify product or service ideas, access to markets, information, money and other resources in their environments, and they also gain access to these resources through various members of their networks.

The importance of size is recognized by almost all writers, but there have been significant shifts recently in how the term is used.

**Table 2**. Performance of small enterprises.

|  | in profitability term % | in sales term % | Major market location % | |
|---|---|---|---|---|
| Growth | 58.75 | 57.00 | National | 20.75 |
| Neutral | 31.50 | 40.50 | Local | 45.75 |
| Decline | 9.75 | 2.50 | Regional | 33.50 |

Source: Survey Data (2008-2009). The firms were divided into three groups (growth, neutral, and decline firms) on the basis of the respondents' answers and data availability.

One usage of size focuses upon the number of ties or links between an organization and outside contacts. These approaches converge on the basic idea that what matters is the number of links between an organization and its context is that; the greater the number of links, that is the more extensive the network, the better for the organization, irrespective of whether the links are direct or indirect (Larson, 1992).

### Control variables of the study

Control variables help us to minimize the potential effect of the other factor that may be considered to affect the outcome of the other variables in a relationship therefore, they should be controlled in the estimation. Previous researches (Donckels and Lambrecht, 1997; Sarder et al., 1997) have suggested several enterprise- and entrepreneurial –related factors that affect growth. Based on the same, the following enterprise-related factors were included as control variables in this study:

1. Service sector are known to be growth oriented and solid in network therefore it was found prudent to include them (Donckels, 1995; Lambrecht, 1997) than Manufacturing and trade.
2. Firm's size is used as a control variable because previous network studies have found that the larger small enterprises to be more in the growth league (Donckels and Lambrecht, 1995; Mohan-Neill, 1995). It is therefore, important to ensure that the potential effect of the size of a firm is minimized before testing our hypotheses.
3. Firms' location is important for network formation and business performances. Pervious studies found that firms that are inside industrial estates are more in the growth league. Those firms have a better potential for networking (Grabher, 1993b; Lomi and Grandi, 1997).
4. When one analyses the performance of small enterprises and network formation, one can not overlook the possible impact of family workers in the business. Family influence is very strong in small Businesses (Chu, 1996; Johannisson, 1990a). Mostly they are used during peak and off seasons as unpaid in cash to ease the work pressure. Therefore, the impact of family worker has also to be minimized before testing our hypotheses.
5. The mentioned entrepreneur -related factors have an impact on the growth orientation of a small enterprise and network formation (Donckels and Lambrecht, 1995, 1997). The quality of the network is highly dependent upon given personal skills and attributes (Johannisson 1988).
6. Entrepreneurs who have lower education and highly trained are more likely to be in the growth league (Donckels and Lambrecht, 1995) .The same research on network formation points out that there is a causal relationship between network formation, growth, and level of education.
7. Gender composition of networks is significantly different for men and women (Singh and Reynolds, 2001). The present study uses these variables as control factors since it is necessary to make sure that the potentially moderating effect of those factors is minimized.

### Model specification

Given the nature of the data which is, qualitative, binary and categorical, a logit or regression techniques was used to analyze the data. Drawn from logit, an empirical model used to test the effects of network strategies on firm performance and sustainability as we control for other firm and entrepreneurial characteristics is stated as:

$$\Delta Y_{is} = \left(Y_{is_2}\right) - \left(Y_{is_1}\right) = \alpha_1 + \varepsilon Y_{is_1} + \gamma Y_{is_2} + \delta \sum_{j=1}^{3} D\_Strat_{.j} + X_i \beta + \mu_i$$

Where $\Delta Y_{is}$ is the growth (yes=1) or no growth (No= 0) of firm $i^{th}$ as measured by the financial performance indicators of $\left(Y_{is_2}\right) \; and \; \left(Y_{is_1}\right)$ denoting sales made by firm $i^{th}$ and profit made by firm $i^{th}$ respectively between the high and low seasons. While D_Strat.j are the network relationship dummy variables of strategies adopted with j=1, 2 and 3 to represent social network, support networks and business networks respectively and $X_i$ 's representing the explanatory variables of the network elements and the $\mu_i$ is the error term to capture for all the unobserved and control variables and $\alpha_1$ is the network intercept with $\varepsilon$, $\gamma$, $\delta$, $\beta$ being the network coefficients.

### RESULTS AND ANALYSES

The empirical results of the regression models for the dependant, independent and control variables are presented here as empirical evidence. Their relationships are traced on how they relate with each other on building the networks for MSE's in Kenya. This is followed by a detailed discussion and conclusions of these findings as to whether the relations exhibited consequently has an impact on the performance, growth and sustainability of the MSE's in Kenya under the given institutional environment. As mentioned before, the dependent variable of the first hypotheses was identified as firm growth and performance (in terms of profitability and in terms of sales) and market expansion (National, regional and local). The firms were divided into three groups (growth, neutral and decline firms) on the basis of the respondents' answers and data availability as seen in Table 2. From Table 2, 58.8% of firms report growth category, while 9.8% of them are reported 'not growth'. 31.5% of them are in neutral. In sales term, 40.5% are in the neutral growth category as sales increase in 57.0 % of firms. 2.5% recorded sales declining during the two

**Table 3.** Ordered logit regression analysis of business performance.

| Independent variable \ Dependent variable | Growth models[†] (Ordered Logit) Financial | | Market expansion[‡] Model 3 (Logit) | | |
|---|---|---|---|---|---|
| **(a)Network Elements:** | **Profit Model 1** | **Sale Model 2** | **Local** | **Regional** | **National** |
| (i) Membership of a support group (Memb.) | -0.5391474 | -0.412117 | -0.6257845 | 1.127626 | -4.306764* |
| (ii) Consult with Relatives (RltvC.) | 0.1768815 | 0.3213644 | -0.0035988 | 0.2077015 | 4.688457 |
| (iii) Consult with friends (FrndC.) | 0.4204207 | 0.5413413 | -0.7643241* | -2.67127*** | 2.188995* |
| (iv) Sponsor (Spo.) | -0.6301558* | 0.4360656 | -0.7658631* | 1.562125 | 3.946916 |
| (v) External Consultancy (Excon.) | -0.2912984 | 0.2297336 | 0.6087752** | -1.048016* | -0.620859* |
| (vi)Training attendance (Trainat.) | 1.062539*** | -0.8131616** | 0.900166** | -1.385168** | -4.237001*** |
| (vii)Trade Fairs/exhibitions (Exhb.) | -0.8757981* | 0.1488198 | -0.5060612 | 0.7765897 | -4.314818*** |
| (viii) Advertisement linkages (Advert.) | 0.876145** | -0.4422695 | 0.9287112** | -1.136924* | -4.018183*** |
| Local Contacts (LC) | 1.092227*** | 0.2776574 | - | - | - |
| Regional contacts (RC). | 0.0145981 | 0.4474843 | - | - | - |
| National Contacts (NC) | -1.356309 | 0.5181947 | - | - | - |
| | | | | | |
| **(b)Entrepreneur-related:** | | | | | |
| Age (Log form) | -0.2574903 | -0.3141566 | -0.8465496 | 0.4008095 | 5.111433** |
| Gender | 0.4416784* | -0.0293623 | -0.2337811 | -0.1055492 | -4.050044*** |
| Location of the Respondent | -2.06825*** | 0.2434624 | 0.4514045 | 2.635399*** | -4.077537 |
| Educational level | 0.0827355 | 0.0479231 | 0.1825082 | 0.5934178 | 0.5322168* |
| Owner's Period of experience (log form) | 0.1612917 | -0.1033626 | -0.5007559** | -0.0989244 | 5.111433** |
| | | | | | |
| **(c)Enterprise-related:** | | | | | |
| Manufacturing Industry (S1) | 0.1445633 | 0.6296169** | -0.2698701 | 0.1677356 | 0.8007031* |
| Service Sector (S2) | -0.077937 | -0.4589423* | -0.4939045* | -1.022068* | 1.368797 |
| < 5 Employees (SE1) | 0.544956 | -0.8335374 | -0.5937174 | 0.632742 | 0.674099 |
| > 5 Employees (SE2) | 0.2237928 | -0.1952878 | -0.1158605 | 0.3893944 | -4.110874* |
| Firm's life time (Log form) | -0.0351872 | 0.3125358* | 0.1420394 | 0.493515 | -1.291059 |
| Regular Employees (RE) | 0.0521155 | 0.0197024 | 0.0444308 | -0.0241193 | 0.056759 |
| Seasonal Employees (SE) | -0.055761* | -0.0009008 | 0.0250711 | 0.0475733 | 0.6124792 |
| Intercept | - | - | 4.056091* | -8.055703* | -56.09511* |
| Pseudo R$^2$ | 0.1296*** | 0.0692*** | 0.1580*** | 0.2014*** | 0.4893*** |

Source: Survey data (2008 - 2009) Note: z-values are in parentheses; N = 386;[†]Baseline (comparison category) is non-growth group[‡] Baseline (comparison category) is regional market;*** P- value < 0.01-statistically significant at 1%** P- value < 0.05- statistically significant at 5%;*P -value < 0.10- statistically significant at 10%.

season's periods of high and low (Growth is in financial terms of which in sale terms it is measured by using available records of which most of the small firms do not own record therefore the entrepreneurs' point of view is taken into consideration).

In the major market location, 20.8% of the small business represented growth and 33.5% represented a decline with a higher percentage of 45.8 stagnating at a neutral state. The situation can further be understood by considering the market segment in which these enterprises operate be it at the local, regional or national level. The models of growth in financial terms (Model 1),

in sale terms (Model 2) and market expansion (Model 3) are presented in Table 3. Entrepreneur-related and enterprise-related factors were used as control variables in all models.The dependent variable of model 1 and 2 are binary choice as 1 for growth, and 0 for otherwise (decline). Model 1 is statistically significant with a moderate goodness of fit as indicated by the value of chi-square (p-value < 0.01, Pseudo R$^2$ = 0.1296). The model tests the impact of network elements on growth. In this model, growth is defined in financial terms of profits (1 = if growth, 0 = otherwise). Model 2 also tests the same impact, but in terms of sales. The second model is also

**Table 4.** Predicted probabilities.

| Dependent variable | Growth models[†] (ordered logit) financial | | Market expansion[‡] Model 3 (Logit) | | |
|---|---|---|---|---|---|
| Independent Variable | Profit Model 1 | Sale Model 2 | Local | Regional | National |
| (i) Membership of a support group (Memb.) | -0.1219823 | -0.0955673 | -0.1224285 | 0.020988 | - |
| (ii) Consult with Relatives (RltvC.) | 0.041908 | 0.075337 | -0.0007909 | 0.0053108 | 0.0050787 |
| (iii) Consult with friends (FrndC.) | 0.0968764 | 0.1235845 | -0.1817392* | 0.0280143** | 0.0004007 |
| (iv) Sponsor (Spo.) | -0.1427058** | 0.1075258 | -0.1494425** | -0.0272787* | -0.0014332 |
| (v) External Consultancy (Excon.) | -0.0704618 | 0.05534 | 0.1302733** | -0.0763014 | -0.0000402 |
| (vi)Training attendance (Trainat.) | 0.2595442** | -0.1806918** | 0.2135369** | 0.0356637 | - |
| (vii)Trade Fairs/exhibitions (Exhb.) | -0.2155145* | 0.0355592 | -0.1183603 | 0.034191 | - |
| (viii) Advertisement linkages (Advert.) | 0.2133669** | -0.1048577 | 0.2129096** | -0.0445727 | - |

Source: Survey data (2008 - 2009), *** P- value < 0.01; ** P- value < 0.05; * P- value < 0.10. Note: [†]baseline/ comparison category for growth models (profit and sale) is 'non-growth group'. [‡]baseline or comparison category for market expansion is 'regional market'.

significant at 0.01 levels (p-value < 0.01, Pseudo $R^2$ = 0.0692). Positive relationship between network formation and market expansion of small businesses has been identified by international business and marketing scholars (Johanson and Mattsson, 1993). Consequently, in addition to the growth measures (profit and sale) the study used market expansion within the seasonal periods as a dependent variable to test the hypothesis. Most of the small enterprises mainly serve the local market. In the multinomial logistic model, model 3, the study therefore, used regional market as the baseline (comparison category). The baseline (regional market) is very important when the results are interpreted. The multinomial logistic model is also statistically significant (p-value <0.01, Pseudo $R^2$ = 0.2014).

Given the difficulties in interpreting the changes in logit, the predicted probabilities were computed to show the marginal effects for all the network elements as Table 4 indicates. Half of the sub-hypothesis is statistically insignificant. However, the study found a positive impact of pro-poor growth for these network formation elements on business performance as expected in the main hypothesis. Meanwhile in terms of firm growth and performance a number of variables are significant for example sponsor (14 % at p < 0.05), Training and seminar attendance (26% at p < 0. 05), Trade fair/Exhibition (22% at p < 0.1), advertisement (21% at p < 0.05) on profit. Training and seminar attendance is significant (18% at p < 0.05) on sales. In terms of market expansion, the following variables are significant; consultation with friends (18% at p < 0.1), sponsor (15% at p < 0.05), External consultancy (13% at p < 0.050), training attendance and seminar (21% at p < 0.001), advertisement (21 % at p < 0.05) on local market expansion. For the case of regional markets, only two variables are statistically significant with consultation with friends (3% at p < 0.05) and sponsor (3% at p < 0.1) on regional market expansion. From Table 4, a firm which

has membership of a support group is likely to decrease its financial growth as measured by profits by 12% as compared to a firm without membership to a support group. In addition, membership to a support group is likely to decrease sales growth by 9.5% while it would increase market expansion from local to regional/ national level by 12.2% decreasing rate though the variable membership to support group is not statistically significant in all the models. Consultations with relatives increase growth in profits by 4.2%. It also increases sales growth by 7.5% and in addition would more likely increase market expansion from local to regional/ national by a decreased rate of less than one percent. Consultations with friends would increase profits and sales by 9.7 and 12.4% respectively. This would also significantly increase market expansion by a decreased rate of 18.2% at 10% level of significance. Sponsors can influence the agenda for actions of the MSE's through increased participation at the local market level characterized by a decline of 14 % and are negatively significant at five percent level of significance in order to expand their markets to the national level. In many cases sponsorship are not for profit gains in terms of profitability hence sponsorship has a 14% probability of decreasing MSE's profits at five percent level of significance meanwhile has 11%  probability of increasing sales though it is statistically insignificant in relation to sales.  In terms of external consultancy, rarely do the MSE's seek for professional consultants therefore it is statistically insignificant and due to this the profit levels are reduced by 7% but sales increased by 6% as markets for the service significantly increases by 13% at 5% level of significance towards the national level. Entrepreneurs that attend training and seminars significantly increase their profits by 26% at 5% level of significance. This is in conformity to other earlier studies carried out by other researchers in the field (Donckels and Lambrecht, 1995).

Whereas external consultancy has a negative impact

**Table 5.** Partial correlations matrix 2.

|  | Mean | S.D | Memb | RltvC. | FrndC. | Spo. | Excon | Trainat | Exhb | Advert |
|---|---|---|---|---|---|---|---|---|---|---|
| Memb | 0.94 | 0.2378 | 1.0000 |  |  |  |  |  |  |  |
| RltvC. | 0.055 | 0.2283 | 0.0610 | 1.0000 |  |  |  |  |  |  |
| FrndC. | 0.0725 | 0.2596 | -0.0106 | 0.1440 | 1.0000 |  |  |  |  |  |
| Spo. | 0.865 | 0.3422 | 0.0542 | 0.0632 | 0.0540 | 1.0000 |  |  |  |  |
| Excon | 0.40 | 0.4905 | 0.1633 | -0.1298 | -0.0708 | -0.1105 | 1.0000 |  |  |  |
| Trainat | 0.8775 | 0.3283 | 0.0661 | 0.0232 | 0.0457 | -0.1476 | 0.1027 | 1.0000 |  |  |
| Exhb | 0.0525 | 0.2233 | 0.0123 | -0.0568 | -0.0226 | 0.0602 | -0.0778 | -0.0488 | 1.0000 |  |
| Advert | 0.7075 | 0.4555 | -0.1162 | -0.0859 | 0.0526 | -0.2219 | 0.2333 | 0.1956 | -0.1197 | 1.0000 |

Index:(i) membership of support group (Memb.), (ii) consult with relatives (RltvC.), (iii) consult with friends (FrndC), (iv) sponsor (Spo.), (v) external consultancy (Excon.), (vi) seminar and training attendance (Trainat.), (vii)trade fairs/exhibitions (Exhb.), (viii) advertisement linkages (Advert), contacts with entrepreneurs (EntpC)-regional Contacts (RC)-both regional and national contacts (RC and NC),-national contacts (NC)‡For control variables refer to 5.1.3 Note: p-values (two-tailed significance) are in parentheses. N = 386,*p-value < 0.01,**p-value < 0.05,***p-value < 0.10,† contact with other entrepreneurs (EntpC) has four categories: 0 = no contact; 1 = only local contact; 2 = regional contact; and 3= only national contact.

on sales by 18% at 5% level of significance. The local entrepreneurs have a 21% probability at 5% level of significance of expanding their markets if they attend seminars and training. In contrast to this is that the MSE's or entrepreneurs who attend trade fairs or exhibition has a 22% probability of realizing decline in profit levels at 10% level of significance and an increase in market expansion by 12% decrease but is statistically insignificant. For advertisement linkages, those MSE's which advertise for their services and products has a 21% probability of registering growth in profits with similar percentage in terms of market expansion locally at five per cent level of significance. Meanwhile advertisement has a 10% negative impact on level of sales for these MSE's even though it is statistically insignificant. Important to note in this discussions is that marginal impacts on growth on these variables were pro-poor as the details above can indicate which is an attendant problem for the MSE's in Kenya. In addition to the probabilities, partial correlations for network formation variables were estimated as shown in Table 5.From Table 5, 94% of the firms had membership to support groups, 86.5% had a sponsor, 87.8% had attended training and 70.8% had advertisement linkages. Frequency of contacts on an average by relatives through consultations was 5.5% in building the social networks, 7.3% for consultations with friends, 40% for external consultations and 5.3% for trade fairs or exhibitions. Looking at the value of the correlations which are below 30%, the study is assured there is problem of collinearity of the variables.

## Discussion

Network relations are vital and important for small business, in particularly to the small firm as it does not have all resources such as raw materials, capital, machinery, etc. Therefore, small business network researches (Donckels and Lambrecht, 1995; Ozcan, 1995; Szarka, 1990; Uzzi, 1999) suggest networking as a necessary strategy in obtaining resources such as gathering information, technology, finance, etc. Besides, building contacts through networks are the fundamental factor in determining the success of any firm (MacMillan, 1993) because through entrepreneurial networks, the entrepreneur can gather information, look for customers and suppliers, and obtain the other resources he needs. As regards contacts with entrepreneurs, network literature suggests that inter-firm linkages may span various levels of aggregation: Firms may be linked only locally, sometimes, interregional or globally (Stabber, 1996a).

The purpose of this chapter has been to explore the impact of network formation on small business performances. The study predicted the positive impact of network formation on business performance. Logistic regression technique was used to analyze the data. The first hypothesis which includes seven sub-specific hypotheses is about the impact of the formation of networks on growth. The study tested this hypothesis by using three separate dependent variables. Entrepreneurs with only local contacts (LC) are significantly less likely to be in the growth group. But those who have national level connections are more likely to belong to the growth group. In the case of the market expansion, the formation of networks is positively related to the market expansion. The results conclude that when the market expands beyond the regional border, the influences of the network connections are vital and important for the small entrepreneurs. The second hypothesis is about the network elements and the network relations with regional and national entrepreneurs. The study expected the relations with other entrepreneurs to be promoted by the

network elements and they are positively related with the formation of networks. However, the study fails to identify considerable network relations with international entrepreneurs. At the same time, the study found that the small entrepreneurs do not have direct export opportunities. They deal with export market through some link-agents or firms. Although the study expected the second hypothesis that all of the network elements influence network formation, the contact with other entrepreneurs is not significantly influenced by external consultancy. One reason for the lack of significant relationship could be that the relationship between education and contact with other entrepreneurs is positive and significant. Meanwhile, we found that small entrepreneurs who attend seminars and training and participate in trade fairs have a higher chance of developing relations with other entrepreneurs. Consultation with relatives is also very critical as family ties occupy an important role in entrepreneurial networks in Kenya in which social relations are largely built around the family. In such a society, family members work together in their businesses as well as at home. The family relationship is stronger in rural areas. The study found that the rural-entrepreneurs consult and discuss their business matters with relatives more than the entrepreneurs in urban areas do. However, when the study defined consultation and discussion with relatives we omitted very close family members if they were partners of their business. In most cases, the close family members are also a part of the businesses. Future research should be conducted in this direction. Tribal variables should also be included into the overall model.

It is also important to study how the other enterprise- and entrepreneur- related factors such as gender, education, firms' location etc. separately influence on each of the network formation elements. The study found that there are some significant relationships between the network formation elements and the enterprise-and entrepreneur -related factors, though they are not very strong relationships. The results show that educated entrepreneurs are more likely to attend seminars, training, advertise and attend trade fairs, join professional and other societies, and contact other entrepreneurs, while they are less likely to discuss their business matters with relatives and friends. Meanwhile, female entrepreneurs discuss their business matters with relatives and friends more than their male counterparts. By contrast, compared to female owners, male counter-partners are looking for more external consultants, attending more seminars, and training, advertise and attend trade fairs. The male entrepreneurs also have more contacts with other entrepreneurs as pointed out above. In conclusion, this chapter analyzed the impact of network formation on the growth of small enterprises in Kenya. The study found that network formation is an essential aspect of small business development. Hence networking, therefore, becomes an important element in

the growth and performance of small enterprises. However, networking is time-consuming, experience-based, and does not evolve over night. Therefore, the policy makers, small entrepreneurs, donors and others, who deal with the development of small enterprises in developing countries, can use the network formation approach apart from their traditional supporting approach.

For instance, supporting institutions should organize network activities for small businesses. Small business owners should also realize the importance of constructing Networks. However, there are few empirical studies available in this area particularly in less developed countries. Therefore, further research is necessary in this direction. Researchers should also deeply consider enterprise- and entrepreneur -related factors when studying networking and small businesses.

## Conclusion

The purpose of the study has been to analyze the role and impact of networks on small business performance and sustainability in Kenya. However, the concept of networks and network analysis cannot easily be explained due to an array of different definitions of network found in the literature and on the other hand, network analysis has been used in different areas of studies by different researchers in different perspectives. In this study, networking has been seen as an effective vehicle for obtaining necessary resources for small enterprises from the outsiders or external environment. The study found that small entrepreneurs who maintain regular relationships with external actors are more likely to be successful in their respective businesses because such relationships provide a constant and reliable source of resources and effective influence on firms. These external relationships are identified as entrepreneurial networks in this study. This study is different from the other studies in the field of small business networking in four ways. First, current studies largely focus on formal business networks such as alliance. In contrast, the focus of this study is on the entrepreneurial informal network relationships in a less developed country. Second, most current studies are largely focused on the experiences of developed countries (for example Birley, 1985 (USA), Bryson et al., 1993 (UK), Curran et al., 1993 (UK); Goodman and Bamford, 1990, (Italy). Therefore, there was a gap in the understanding of small business networks in developing countries. In particular, small business networks in Kenya have not been studied and some studies which have been done focus on the possibilities of emerging clusters and subcontracting in the industrial estates (McCormick and Pedersen, 1996). Thirdly, this approach also differs from others in respect of the unit of analysis. For example, the industrial estate (holistic approach) has been widely used in the field of small business development in developing countries. This

study has employed an individualistic approach (the ego-centered firm) to study small business development within the context of entrepreneurial networks. Fourth, entrepreneurial networks are always regarded as advantageous for small business success. Apart from various case studies, however, a critical approach was needed in the network analysis in order to assess the importance of networks for small business performance. This study has filled this gap.

The study believe that this approach is necessary for advancing research on the field of entrepreneurial informal networks beyond general descriptions of the advantages of networks of single case studies. In this regard, the study contributes to network studies in four ways. Firstly, the study analyzed entrepreneurial informal network relationships.

Secondly, the recent studies in this area are largely focused on the experiences of developed countries. A very few or no such a study has been available in the field of entrepreneurial networks in developing countries, particularly in Africa.

Thirdly, the study used survey research approach to test a number of hypotheses. Overall, this study contributes to the literature by showing how small firms use network relationships to overcome their business bottle-necks, identify new market opportunities and finally to perform their business successfully.

The findings of this study will without doubt be useful to the policymakers, business community, researchers, public institutions, financial organizations, donors and supporting organizations of small firms, and social workers particularly in Kenya and the other countries as well.

To sum up, there are some conclusions from the study, but the major conclusion is that entrepreneurial networking can create a successful small firm sector by helping to overcome the lack of resources, the managerial and professional weakness of small firms within a broader supportive external environment. Owing to lack of resources, small enterprises always need to maintain contacts with their external actors to obtain necessary resources.

The actors of social networks and supporting networks are very important for small enterprises particularly in developing countries such as Kenya. Before a new entrepreneur starts his venture, his social network relationships work as an opportunity set. Then gradually the entrepreneur develops his network relationships with supporting agencies and other firms as well. The study emphasizes the fact that, in order to really succeed in business, small business entrepreneurs must use their own personal networks as well as the inter-organizational networks. To reach the conclusion, we analyzed informal networks of small enterprises in Kenya. The study also believes that the results have significant policy implications. This empirical study has further recommended the need for more in-depth comparative studies before generalizing the results.

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