Why did I join networks? The moderating effect of risk-taking propensity on network linkage and the performance of women-owned businesses

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Abstract

Purpose – This study aims to contribute to the body of knowledge through focusing on the moderating effect of risk-taking propensity in the relationship between network linkage and business performance.

Design/methodology/approach – Exploratory factor analysis was conducted so as to verify the items. Furthermore, the direct and moderation tests were conducted through the PROCESS macro.

Findings – The findings revealed the propensity for risk-taking is a significant moderator of the relationship between network linkage and business performance.

Practical implications – Women entrepreneurs are urged to increase their level of involvement in the networks so as to obtain external resources. Also, women entrepreneurs are encouraged to improve their risk-taking behaviour through training.

Originality/value – Little is known about the moderating role of risk-taking proclivity in the relationship between network linkage and business performance, particularly for women-owned businesses.

Keywords Network linkage, Risk-taking propensity, Women entrepreneurs, Business performance

Paper type Research paper

Introduction

Small businesses worldwide provide numerous benefits, including job creation, firm competitiveness and innovation, as well as support the growth of financial inclusion strategies and industrialization policies (Ismail, 2022; Sadress et al., 2019). They are regarded as critical contributors to the poverty eradication of developing countries (Mashenene and Kumburu, 2020). In most cases, an individual’s state of poverty endures over the course of years and can continue for generations. It is characterized by a lack of available financial resources to satisfy fundamental requirements (Morris et al., 2018, 2020).

On the other hand, regardless of the efforts made by female entrepreneurs to start their own small businesses, their ventures are more likely to be less successful than those owned...
by their male counterparts (Tundui and Tundui, 2018). This is due to the fact that women
who have established businesses have been confronted with a slew of obstacles that have
stifled their expansion and performance. These include poor access to capital, lack of family
support and household obligations (Robichaud et al., 2015).

In the absence of a solution, these challenges will continue to pose a primary threat to the
survival of women’s businesses in a competitive market environment and will ultimately
derail women’s dream of being self-sufficient. Because the majority of the challenges are associated
with women’s limited access to resources, a strong network that provides a strong relationship
among women entrepreneurs can be the most effective solution for women to gain access to
both tangible and intangible resources (Malende and Väisänen, 2017).

According to Manolova et al. (2007), accessing social networks can assist individuals in
acquiring new social contacts (often referred to as social capital). This can be of further
assistance to business owners in terms of gaining access to limited resources that are necessary
for running their companies. This is supported by Ozkazanc-Pan and Clark Muntean, (2018)
who noted that women’s entrepreneurial networks increase access to valuable entrepreneurial
resources, which are important for improving their overall performance.

Despite the fact that network linkage offers numerous opportunities for women-owned
businesses, a robust network requires a strategic orientation to maintain a competitive
advantage in a rapidly changing business environment. This means that just being part of a
network is not enough to guarantee success. Network members must also have certain
personality traits, like a willingness to take risks. According to the theory of entrepreneurship,
entrepreneurs who are willing to accept uncertainty and risk have a better chance of realizing
the potential benefits of innovation and creativity (Schumpeter, 1934). This means that to
consider networking as a potential source of improved performance, entrepreneurs must
strategically accept the risks associated with it. Risk-seeking firms are generally thought to
have higher future performance expectations to a greater extent when compared to risk-averse
firms (Mahto and Khanin, 2015).

Consequently, those who are willing to take risks position themselves as leaders, while
those who are not do so end up falling behind (Keh et al., 2007). This is supported by Pratono
(2018) and Willebrands et al. (2012), who suggested that risk takers outperform risk avoiders
because they are willing to take risks with their money and skills when investing, in
contrast to risk avoiders who prefer to stay within their comfort zone. This leads to the
conclusion that women who take more risks are more likely to benefit from network linkage
than women who do not like taking risks.

Based on the explanations above, this study has several contributions to the body of
literature. First, there are few studies conducted in developing countries, specifically in
Tanzania, which have linked network linkage with the performance of businesses owned by
women. For example, a study by Kazungu (2020) on network linkages and performance of
small enterprises has ended up focusing on owner-managers of handicrafts – exporting
micro ventures without specifically discussing women-owned small enterprises. Further,
Rutashobywa et al. (2009) while discussing the gender, social networks and entrepreneurial
outcomes in Tanzania suggested that further studies can focus on investigating the
outcomes of women’s access to networks. Second, little is known about how risk-taking
propensity can moderate the relationship between network linkages and the performance of
businesses owned by women.

Theoretical foundations
This study argues that women who have a higher risk-taking propensity tend to have an
increased influence of network linkages on their performance than those who have a lower
risk-taking propensity. Literature has defined network linkage as the means of assisting entrepreneurs to gain access to limited entrepreneurial resources that are necessary for running their companies (Manolova et al., 2007).

According to the theory of resource-based view (RBV) by Barney (1991), organizations can gain profit and competitive advantage through the available resources presented at their disposal. Despite the fact that RBV has been widely applied, it has also been subjected to criticism (Bromley and Rau, 2016; Lavie, 2006). One notable criticism is that focusing only on internal resources, as proposed by RBV, is overly restrictive. Hence, organizations can achieve profitability and gain competitive advantage through joining networks so as to increase their resource endowments from the external environment (Collins and Hitt, 2006; Prajogo et al., 2021).

This idea is supported by the networking theory (NT), which suggests that divergent networks are significant providers of a variety of resources to actors. Similarly, the social capital theory (SCT) suggests that social relationships are resources that can lead to expected returns in the marketplace (Lin, 2001). However, the benefits of networks depend on the capabilities of the entrepreneurs to use resources. According to the theory of knowledge-based view (KBV), knowledge and capabilities can complement the existence of physical resources to achieve a competitive advantage (Grant, 1996). Therefore, this study theorizes that risk-taking propensity, as among the key elements of capabilities, can bring more outcomes to women-owned businesses if aligned with network resources.

### Literature review and hypothesis development

#### Network linkage and small business performances

Although several studies have reflected the importance of networks to women entrepreneurs, there is a need to further investigate the relationship between network linkages and the performance of women-owned enterprises because there is evidence that male entrepreneurs have higher comparative scores of bridging social capital in aggressive- and managed-growth venture networks than females (Neumeyer et al., 2019).

As women entrepreneurs represent the majority of the poor worldwide Santos and Neumeyer, (2021), understanding how networks can work in different contexts and settings is important so as to have proper practical and impractical implications. In addition, as women are often socially disconnected from the main institutions (Neumeyer et al., 2019) and the fact that women-led entrepreneurial businesses have demonstrated a lower propensity to grow and a higher propensity to exit Manolova et al. (2007), it is important to develop proper scientific evidence to see how networks can influence their performance. It can therefore be hypothesized that:

**H1.** Network linkage significantly influences small business performance.

#### The moderating role of risk-taking propensity

According to the conventional theory of risk-taking incentives, entrepreneurs who are more risk-takers can have better performance than less risk-takers (Willebrands et al., 2012). This implies that risk-taking can strengthen the relationship between business practices and outcomes. Although past studies have not extensively covered the moderating effect of risk-taking propensity on the relationship between network linkages and the performance of businesses, especially those owned by women, it is logical to urge that this behaviour can generate various business outcomes. This is supported by Hiebl (2013) who urged that there is a need for further studies to pursue investigation so as to better understand how firms can
involve risk-taking in their practices. This is because proper business outcomes are mostly related to risk mitigation, which can be explained by entrepreneurial competencies (Morris et al., 2020).

Apart from that, studies by Jones and Jayawarna (2010) and Witt et al. (2008) suggest that there is no proper evidence that networks can provide access to exclusive resources. This means, being a member of a network is not enough for high performance. Further, Jones and Jayawarna (2010) posted that networks are “reciprocal” and, therefore, they can be as costly as other market transactions. Therefore, network relationships may be a proper source of “social capital” if their strategic value is related to an entrepreneur’s ability (Witt et al., 2008) such as risk-taking propensity. As a result, the it is hypothesized that:

H2. Risk-taking propensity significantly moderates the relationship between network linkage and small business performance.

Methods
Study design and sampling procedures
This study was done in Dodoma, Tanzania. The study used a cross-sectional survey design, which helped collect data once at a given time (Creswell, 2014). The study population consisted of only female small business owners and managers who are network members. In addition, the study only included small businesses that had been in operation for five years consecutively since their founding. Based on the information gathered from the surveyed networks, the target population consisted of 590 individuals. However, based on simple random sampling, only 233 completed questionnaires were returned. This represents a response rate of 97.89%.

Data analysis
The study applied confirmatory factor analysis (CFA) to test the model fit and psychometric properties, and PROCESS macro v.4 was used to analyze the moderation effect. Apart from that, exploratory factor analysis (EFA) was used to verify the items, and CFA was used to confirm the loadings of the latent variables used. Also, the PROCESS macro v.4 was used to test the direct and moderation effects to analyze relationships (Hayes, 2018).

Measurement scales
The items used in this study were adopted from previous studies. However, they were modified to fit the women’s small businesses in Tanzanian context. Furthermore, the items were exposed to EFA. Items used to define network linkages were adopted and modified from Kazungu (2020). Also, items used to measure risk-taking propensity were adopted and modified from Buli (2017), Jalali et al. (2020) and Pratono, (2018). Finally, the study adopted and modified items for business performance from Abbas et al. (2019) and Fernandes Sampaio et al. (2020). These items are presented in Table 1.

Exploratory factor analysis
A total of 16 items were included in the EFA, of which a total of six items were dropped because the factor loading was less than 0.5. The remaining ten items accounted for 62.141% of the cumulative variance, which was higher than the dropped items. Additionally, the sample was adequate because the results of Kaiser–Meyer–Olkin (KMO) were 0.839 greater than 0.5. Further, Bartlett’s test of sphericity was found to have a $\chi^2$ of 1,563.034 at df = 91.
<table>
<thead>
<tr>
<th>Constructs and items</th>
<th>Initial eigenvalues</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Cronbach’s α</th>
<th>Standardized loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network linkage (NET)</strong></td>
<td></td>
<td></td>
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<tr>
<td>NET1: I have received adequate training on product quality enhancement</td>
<td>4.567</td>
<td>0.917</td>
<td></td>
<td></td>
<td>0.622</td>
<td>0.847</td>
</tr>
<tr>
<td>NET2: Network linkages have facilitated me with information on input supply</td>
<td></td>
<td>0.947</td>
<td></td>
<td></td>
<td>0.620</td>
<td></td>
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<tr>
<td>NET3: I have well-established ties with business associations</td>
<td></td>
<td>0.812</td>
<td></td>
<td></td>
<td>0.652</td>
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<tr>
<td>NET4: Network linkages assist me with market price information</td>
<td></td>
<td>0.845</td>
<td></td>
<td></td>
<td>0.836</td>
<td></td>
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<tr>
<td>NET5: My firm has well-established ties with distributors</td>
<td></td>
<td>0.756</td>
<td></td>
<td></td>
<td>0.852</td>
<td></td>
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<tr>
<td>NET6: Networking with distributors helps me in market promotion</td>
<td></td>
<td>0.235</td>
<td></td>
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<tr>
<td><strong>Risk-taking (RIS)</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>RIS1: To deal with uncertainty, my firm typically adopts a cautious, “wait-and-see” posture to minimize the risk</td>
<td>4.567</td>
<td>0.865</td>
<td></td>
<td></td>
<td>0.803</td>
<td>0.852</td>
</tr>
<tr>
<td>RIS2: I prefer to study a problem thoroughly before deploying resources to solve it</td>
<td></td>
<td>0.836</td>
<td></td>
<td></td>
<td>0.829</td>
<td></td>
</tr>
<tr>
<td>RIS3: The term “risk taker” is considered a positive attribute for people in my business</td>
<td></td>
<td>0.783</td>
<td></td>
<td></td>
<td>0.850</td>
<td></td>
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<tr>
<td>RIS4: My business emphasizes both exploration and experimentation for opportunities</td>
<td></td>
<td>0.323</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RIS5: I have a strong tendency toward getting involved in high-risk projects</td>
<td></td>
<td>0.324</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Business performance (BP)</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>BP1: Over the past 3 years, our net income has been increasing</td>
<td>1.353</td>
<td>0.937</td>
<td></td>
<td></td>
<td>0.870</td>
<td>0.777</td>
</tr>
<tr>
<td>BP2: Our product(s) have a higher quality than those of our competitors</td>
<td></td>
<td>0.911</td>
<td></td>
<td></td>
<td>0.886</td>
<td></td>
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<tr>
<td>BP3: Profit goals have been achieved</td>
<td></td>
<td>0.825</td>
<td></td>
<td></td>
<td>0.913</td>
<td></td>
</tr>
<tr>
<td>BP4: Our occupancy rate has been outstanding</td>
<td></td>
<td>0.688</td>
<td></td>
<td></td>
<td>0.780</td>
<td></td>
</tr>
</tbody>
</table>

**Notes:** KMO measure of sampling adequacy = 0.839; Bartlett’s test of sphericity approximate $\chi^2 = 1563.034; df = 91; \text{Sig.} = 0.000$
and significant at 0.000, which indicates that there is enough evidence to confirm a fit in EFA. See results in Table 1.

Common method bias
A Harman one-factor test was conducted to guarantee that the data does not have a common method bias. Thus, the factor analysis was done with unrotated factors (Podsakoff et al., 2003). The results indicated that the total variance was 34.343%. As the value is below 50%, it can be concluded that the problem of common method bias is not a concern in this study.

Validity and reliability
The Cronbach’s α coefficient for all variables is greater than 0.7, indicating that the study’s constructs are internally consistent and reliable, Table 1. Furthermore, the composite reliability (CR) value for all variables is greater than 0.6, indicating that the instruments were reliable. Finally, all three constructs have an average variance extracted (AVE) value greater than 0.5, indicating convergent validity in the data. Furthermore, the results in Table 2 show that, for each construct, the maximum shared squared variance (MSV) was less than the AVE and average shared variance (ASV), which is an indication of discriminant validity (Baron and Kenny, 1986).

Measurement model
Figure 1 shows that all the network linkage items are loaded above 0.5. This suggests that all items included explain the network linkage. Additionally, the goodness of fit was within the recommended values. This is because the $\chi^2$/degree of freedom (CMIN/DF) was 1.971, less than 3. Also, the incremental fit index (IFI) was 0.969, greater than 0.90; the goodness-of-fit index (GFI) was 0.926, greater than 0.90; the normed fit index (NFI) was 0.940, greater than 0.90; and the root mean square error of approximation (RMSEA) was 0.065, less than 0.08.

Structural model and testing of hypotheses
This study involved two hypotheses: $H1$ and $H2$. The results of PROCESS macro v.4.0 indicate that $H1$ was supported, Table 3. This is due to the fact that the relationship between network linkage and small business performance was both positive and statistically significant ($\beta = 0.3302$ and $p < 0.01$). Hence, increasing network linkage by one unit increases business performance by 33%. Aside from that, the interaction term (int_1) of risk-taking proclivity was both positive and statistically significant ($\beta = 0.1260$, $p = 0.0003$). This reveals that risk-taking propensity is a significant moderator of the relationship between network linkage and business performance. The interaction term (int_1) results show that the $R^2$ change is positive and significant ($\beta = 0.0490$, $p = 0.0003$). This means the introduction of risk-taking propensity contributes to the variance of general $R^2$ by 4.9%. Hence, $H2$ was supported. This means that the higher the risk-taking propensity, the stronger the relationship between the network linkage and business performance.

<table>
<thead>
<tr>
<th>CR</th>
<th>AVE</th>
<th>MSV</th>
<th>ASV</th>
<th>RIS</th>
<th>NET</th>
<th>BP</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIS</td>
<td>0.867</td>
<td>0.685</td>
<td>0.299</td>
<td>0.150</td>
<td>0.828</td>
<td></td>
</tr>
<tr>
<td>NET</td>
<td>0.844</td>
<td>0.524</td>
<td>0.299</td>
<td>0.195</td>
<td>0.547</td>
<td>0.724</td>
</tr>
<tr>
<td>BP</td>
<td>0.921</td>
<td>0.746</td>
<td>0.091</td>
<td>0.046</td>
<td>0.027</td>
<td>0.301</td>
</tr>
</tbody>
</table>
Furthermore, slope analysis results show that the effect of network linkage on business performance is strong at high levels of risk-taking propensity but weak at low levels of risk-taking propensity (Figure 2). This demonstrates that the proclivity for risk-taking strengthens the positive relationship between network linkage and business performance.

**Discussion and conclusions**

The findings of this study indicate that networks can influence the performance of women-owned enterprises as well as that risk-taking propensity can moderate the relationship. The
A plausible explanation is that networks provide women with numerous resources that can assist them to improve their performance. Benefits such as financial assistance, moral support, access to long-term business contacts, adequate training and knowledge exchange are important for increasing performance. This is in line with Bari and Arshad (2020) who suggested that networking among women business owners provides critical parameters for successful operations.

Moreover, the findings suggest that network linkage enables women entrepreneurs to develop effective relationships with business stakeholders such as financial institutions, which can increase the likelihood of their performance. This concurs with Khoja and Lutafali (2008) who noted that networks can enable businesses to gain access to credit from financial institutions, which is crucial for boosting business performance. Apart from that, the findings found that risk-taking propensity strengthens (moderates) the relationship between network linkage and business performance. This suggests that, when compared to women entrepreneurs who are less likely to take risks, those who are more likely to take risks perform better. This agrees with the conventional theory of risk-taking incentives, which suggests that entrepreneurs who are more risk-takers can have better performance than less risk-takers (Willebrands et al., 2012).

**Theoretical implication**
This study has ramifications for the field of study. First, the majority of prior research has based their studies on male-owned businesses. Therefore, this study adds to the literature by focusing on the businesses owned by women as well as considering the moderating effect of risk-taking propensity. Second, the findings of this study extend the theoretical understanding of the application of both the KBV and RBV by theorizing that a network linkage and a risk-taking propensity can be important resources for high performances of businesses owned by marginalized groups such as women. The application of the social capital theory, on the other hand, demonstrates that networks are able to function more efficiently when their members are able to make use of the social capital. This is due to the fact that social capital is considered to be one of the key resources for regulating the behavior of members and creating new forms of information exchange, both of which are essential components for making use of the physical resources that are available in the networks.

**Managerial implication**
The findings imply that there is a benefit for female entrepreneurs to join networks. Therefore, women should be encouraged to join networks. Second, joining networks is not a guarantee of business success. It should be mostly considered as a means of accessing resources. This means women entrepreneurs must attend workshops and training to
develop risk-taking propensity behavior that can help them to enjoy the resources available in networks.

**Limitations and areas for future research**

This study has limitations that present opportunities for future research. First, this is a quantitative study designed to test hypotheses. Future research may use a qualitative methodology to paint a comprehensive picture of the network linkages and risk-taking propensity. Second, the propensity for taking risks has been used as a moderator. There is a chance that risk-taking propensity can function as a mediating variable.

**References**


Further reading


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