ABSTRACT

Since entrepreneurs play a crucial role in job creation, and evidence suggests that networks play an important role in both facilitating new businesses and helping existing businesses grow, a strong incentive exists to better understand and support entrepreneurial network development. In this study, we examine the differential values perceived by female and male entrepreneurs of entrepreneurial network organizations (ENO). Women perceived a higher economic benefit (instrumental value) from the network than men, as well as a higher affective value. There were no significant differences on perceived normative value from ENO’s.

Keywords: entrepreneurial network organizations, female entrepreneur, networks, perceived values

INTRODUCTION

Since entrepreneurs play a crucial role in job and wealth creation (e.g., Robb, 1998), and evidence suggests that networks play an important role in both facilitating new businesses and helping existing businesses grow (e.g., Hoang and Antoncic 2003), a strong incentive exists to better understand and support entrepreneurial network development. Researchers from the National Commission on Entrepreneurship (NCOE, 2000) suggest that the existence of entrepreneurial networks is a key to promoting entrepreneurial vitality in a region.

Although critical for all entrepreneurs, networks may play a more important role for stimulating entrepreneurship among women than men. Women entrepreneurs are a rapidly growing sector of entrepreneurship worldwide (Minniti, Arenius, & Langowitz, 2005). In the U.S.
alone, women own more than 10 million firms that employed over 13 million people and generated $1.9 trillion in sales in 2008 (Center for Women’s Business Research, 2008). Notably, firms owned by women of color grew faster than all privately held firms between 2002 and 2008. According to a recent study sponsored by Intuit (King, Townsend, and Ockels, 2007):

“Over the next decade, women entrepreneurs will continue to grow in number. Demographics will play a part as baby boomer and Gen Y women form increasing numbers of small and personal businesses along with their male counterparts. But across the age cohorts, women looking for better career options and work–life balance will increasingly turn to entrepreneurship to fulfill their goals.”

Yet on a worldwide basis, the likelihood of becoming an entrepreneur remains far greater for men than women (Minniti, Arenius, and Langowitz 2005). Some research points to access to financial resources. Data from the Kauffman Firm Survey examining financing sources of high-tech firms found that women raised smaller amounts of financial capital than men did during the start-up stage (Robb & Coleman, 2009). However Lee and Denslow (2005) found that as women-owned businesses grew, they faced less credibility problems with banks than during the early start-up phases.

Given that entrepreneurship is critical to economic growth, and that women appear to represent underutilized potential, it becomes particularly critical for research to reveal the factors that encourage the strategy and growth of women-owned businesses in particular. From economic development, research and educational perspectives, we need to better understand the priorities and values of women as they make the choices to start and grow businesses.

This research explores whether men and women derive separate values from networks, deemed a critical element in an entrepreneurial climate, and attempts to categorize them into clear dimensions that contribute to the ongoing stream of gender-based network research. It also offers practical suggestions to leaders of network organizations to enhance their appeal to female entrepreneurs, thus facilitating entrepreneurial activity among women.

LITERATURE REVIEW

Value of Networks
Several researchers have suggested that networks are of particular value to entrepreneurs, partly due to their need for resource acquisition (e.g. Acs, 1996; Aldrich and Zimmer, 1986; Brush, Green, and Hart, 2001; Gatewood, Brush, Carter, Greene, and Hart, 2009; Larson, 1992; Hansen, 1995, Hoang and Antoncic, 2003) and advice (Renzulli and Aldrich, 2005; Robinson and Stubberud, 2009; Robinson and Stubberud 2011). Much research has centered on their role in business success (Miller, Besser, and Riibe, 2006/2007; Sorenson, Folkler and Brigham, 2008), business formation (Bygrave and Minniti, 2000; Aldrich and Zimmer, 1986); competitiveness (Malecki and Tootle 1996); growth (Johannisson 2000, Shaw 1999, Hansen 1995); and international market entry (Welch, Welch, Young and Wilkinson 1998, Iyer and Shapiro 1999, McAuley 1999). Networks have also been recognized as a source of innovation and a facilitator of opportunity recognition (Shaw 1999; Singh, Hills, Hybels, Lumpkin 1999), which may become the basis for innovative new
products (Sivadas and Dwyer 2000, Munro 1997). In a critical review of network based research in entrepreneurship, Hoang and Antonec (2003) find that substantial research supports that networks are a “principal medium for the transfer of resources critical to entrepreneurial success” (p. 177). The majority of this research has focused on the “instrumental,” or economic, value of entrepreneurial networks.

The Role of Entrepreneurial Networking Organizations (ENO)
Entrepreneurial networks can take many forms. This research focuses on the value derived from entrepreneurial network organizations (ENO), which are member-based organizations that sponsor structured activities and are committed to encouraging entrepreneurial firm member growth and interaction of entrepreneurs with other entrepreneurs, as well as with service providers, investors, and other resource providers. Following Davidsson and Honig (2003), which measured networking by membership in a professional or trade organization, this study uses such a membership as a basic indicator of networking. These associations are often important networking forums (McKendrick and Carroll 2001), and ties to business support and service organizations have been found to be predictive of nascent entrepreneurial activity (Honig and Davidsson 2000). Mentors, informal industry networks, and professional forums have direct, positive effects on opportunity recognition (Ozgen and Baron 2007), which confirms that there are different forms of networks that can make a potential contribution. Although ENOs are “formal” networks in the sense that an organization and a structure exist solely for the purpose of facilitating networking and knowledge exchange for entrepreneurial development, they exist for the purpose of spurring additional “informal” connections, i.e., personal interactions that occur outside of the ENO’s structured activities and efforts. Informal networks are generally considered to be those that exist without clear contractual governance mechanisms (Araujo and Easton 1996). One goal of ENOs is to become a vehicle for accelerating personal network development. From a managerial standpoint, an objective of this study is to provide insight on how to focus ENO’s on potential member benefits. Knowledge of member priorities and values can clearly inform ENO leadership. Since many ENOs are tax-supported (Pages and Garmise, 2001), enhancing their longevity and member utility, a likely consequence of improving perceived value, is also of interest from a public policy perspective.

The Networking Needs of Women Entrepreneurs
A number of studies confirm that the general business management skills of women and men do not vary significantly (e.g. Bass, 1990), but women business owners have been known to report social adroitness and interpersonal skills as their strongest assets (Hirsh and Brush 1984)—thus networking opportunities allow women to exercise one of the primary skills they bring to entrepreneurship.

Even though longitudinal trends in the U.S. show that women are an increasing proportion of entrepreneurs, they also seem more involved in starting sole proprietorships rather than partnerships or corporations (Ruef, Aldrich and Carter 2003). But multimember teams are associated with higher levels of success in entrepreneurship (e.g., Kamm and Nurick 1993, Lechler 2001), so it would be beneficial to assist women in expanding their entrepreneurial networks from
economic development and entrepreneurial education perspectives. Godwin, Stevens and Brenner (2006) suggest that establishing mixed-sex entrepreneurial founding teams is one way for women entrepreneurs to overcome unique, and often invisible, barriers stemming from sex-based stereotypes. (Evidence that these stereotypes still exist is found in Gupta, Turban, Wasti, and Sikdar’s study of gender stereotypes in perceptions of entrepreneurs, 2009). In addition, management teams with a gender team balance have been found to outperform either all male or all female management teams (Litz & Folker, 2002).

Langowitz and Minniti (2007) find that knowing other entrepreneurs is positively and significantly related to entrepreneurial propensity to start a businesses, and significantly higher for women than men, but they are not able to conclude whether this reflects the importance of role models or the existence of networks. Klyver and Grant (2010) also found the relationship between personally knowing an entrepreneur and becoming one, however they noted that women lacked entrepreneurial role models in their social networks. Nonetheless, ENOs would obviously facilitate opportunities for connections to other entrepreneurs, suggesting additional support for their particular importance to women.

Hampton, Cooper, & McGowan (2009), in their qualitative exploratory study, interviewed 18 female entrepreneurs in nascent, new and established ventures in Northern Ireland in order to “gain a deeper understanding of network ties and network quality” (pg. 199). They found that networking was key throughout the business life cycles, as it helped prevent isolation and provided support for the entrepreneur (early stages), and helped in promoting the company and building a sound reputation (later stages) (pg. 200). In addition, the female owners of established businesses had “become sophisticated and effective networkers” (pg 202). Informal networking was important throughout the life cycles, however as the business matured, the women developed more formal and semi-formal networks. “The female entrepreneurs in the later stages of the business life cycle considered these mixed gender industry networks as crucial to business development and growth, a finding which contrasted with the new business venturers whose need for confidence and support drew them to all female networks in the short term” (pg. 205).

Of significant interest from an economic perspective, women owners of firms with $1 million or more in revenue are more likely to belong to formal business organizations, associations or networks than other women business owners (81% vs. 61%; Center for Women’s Business Research, 2008).

Women Entrepreneurs and Multi-Dimensional Network Value
If ENOs are a critical element of an entrepreneurial climate (NCOE, 2000), and entrepreneurs play a crucial role in job and wealth creation in communities (Robb,1998), then an important research opportunity exists in providing insight on how to facilitate and nurture ENOs, particularly to meet the needs of women.

Prior research has suggested that women may use collaborative networks for a variety of reasons not tied to business success (Sorenson et al. 2008), and calls for further research on exploring gender differences in the ways networks are enacted inside and outside an organization, suggesting that males may focus more on
strategic business issues, while females may focus more on quality of life and personal, family, and community interests. This research addresses that call and adopts a multicomponent approach to network value, viewing it from instrumental, affective and normative perspectives.

In the context of an entrepreneurial networking organization (ENO), instrumental value may be defined as the perceived economic, or rational, value of participation (Gundlach, Achrol, and Mentzer, 1995). Affective value, a widely studied issue in both organizational and consumer behavior, focuses on emotional attachment. In the context of this study, it refers to the extent that members hold favorable attitudes or feelings toward the organization as well as their level of identification with it (Allen and Meyer, 1990). Normative value refers to the extent to which members perceive a moral obligation to maintain a relationship with the organization (Allen and Meyer, 1990; Gruen, Summers, and Acito, 2000), as well as the extent to which the organization contributes to a sense of social responsibility. A theoretical model of the multi-dimensional network value for ENOs is in Figure 1.

**Figure 1: Theoretical Model of the Multi-Dimensional Network Value for ENOs**

- **Perceptions of Entrepreneurial Network Organizations (ENOs)’ Value**
  - **INSTRUMENTAL VALUE**
    - Economic
    - Rational
  - **AFFECTIVE VALUE**
    - Emotional
    - Belonging
  - **NORMATIVE VALUE**
    - Obligation
    - Social Responsibility
Although some research suggests that men focus more narrowly on business success than women because women place a higher priority on maintaining a broad network involving both business and non-business interests (Fitzgerald and Folker, 2005), we contend that substantial research exists that both men and women seek instrumental value from networks. We do agree, however, that women are more likely than men to focus on diverse network benefits that go beyond business support alone.

In assessing whether women or men derive differential benefits from networks from an instrumental, or economic, perspective, the evidence, although mixed, tends to support the view that women derive more economic benefit from their networks. Some research finds little or no support that male and female networks differ (Diaz Garcia and Carter, 2009; Foss, 2010), while others find no differences in perceived network benefits based on gender (Miller, Besser, and Riibe, 2006/2007).

However, according to a review of the research by McKay (2001), compared to men, women prefer to organize in collaborative networks that enable them to acquire resources to meet business needs, considered an instrumental value. Sorenson, Folker and Brigham (2008) found that a collaborative network orientation (CNO) was associated with business success for both male and female business owners, but was significantly more positively associated with success for males. Women, however, had a stronger preference for a CNO. However the CNO included a much broader perspective of collaboration than just professional network organizations, including collaborative behaviors and teamwork.

In a study of Bulgarian entrepreneurs, growth expectancy was more positively associated with advice from networking for men than for women; women’s expectations were based more on perceived benefits from prior experience (Manolova, Carter, Manev, and Gyoshev 2007). This study also found that membership in a professional or trade association was not a predictor of growth expectancy for men or women. This contrasts with prior research that found that higher levels of available network contacts lead to higher growth expectancies (Gatewood 2004; Krueger, Reilly, and Carsrud, 2000).

Network development processes were thought to differ between male and female entrepreneurs, with women entrepreneurs requiring higher levels of network contacts that would provide legitimacy and critical business information (Burt, 1992; Ibarra 1992). However, Aldrich and Zimmer (1986) tested for gender differences in terms of size and amount of activity, but found none. Hoang and Antoncic (2003) suggest that this result means that the importance of “ascriptive” groups for organizing networks is overshadowed by similarities across groups in their resource requirements.

In a study of help-seeking behaviors, Fitzgerald, Philbrick, & Folker (2008) found that women entrepreneurs that continued (vs. those no longer in business) were more likely to use network resources such as State and Local Economic Development Corporations or Chamber of Commerce and State/County Extension. For men, those that continued in business were more likely to use the Extension office. In addition, Fielden, Davidson, Dawe, & Makin (2003) found that a lack of business networking groups was a barrier to women’s development of their businesses.
In spite of some mixed results, we suggest that although both men and women have a need for networks as a source for various economic resources, women will perceive a greater economic benefit from the network leading us to Hypothesis One:

**H1: Female entrepreneurs are more likely to derive instrumental value from formal networks than male entrepreneurs.**

Although women are involved in networks to meet business needs, several researchers contend that women, more so than men, tend to view the world holistically; in other words, they are more likely to see business, family, community, and society as an integrated whole than see their businesses as separate economic entities (Aldrich 1989, Brush 1992, Bird & Brush 2002). If we accept that family and business are both part of this “whole,” it seems reasonable to suggest that women are more likely than men to see value in affective relationships, given that they would be more likely to view networks as connected to all aspects of their lives, not just the economic, “rational” portion.

Some of these studies have been criticized for not taking into account personal variances such as level of education and work experience; however, a study by DeMartino and Barbato (2003) examined the motivations of women and men MBA graduates with similar work experience and concluded that equally-qualified women tend to become entrepreneurs for family-related, lifestyle reasons and are less motivated by wealth creation and advancement reasons.

The disproportionate value that women entrepreneurs put on relationships is reflected both in their orientation toward balancing work and family roles (Brush 1992; Carter, Gartner, Shaver and Gatewood 2003) and their leadership and management styles (e.g., Gray 1994). Women tend to organize their work groups, whether in small businesses or in larger companies, as a networked team, frequently characterized by people-related concerns (Gray 1994).

As noted earlier, research by Sorenson et al. (2008) found that female entrepreneurs had a stronger preference for a collaborative network orientation, which emphasized “maintaining positive relationships and achieving the interests of network members over the long-term” (p. 619). This emphasis on concern for relationships offers additional support for the importance of the “affective” orientation for female entrepreneurs. Support for different attitudes is also noted by Gupta et al. (2009); in a study across three countries, researchers found that women associate both feminine and masculine characteristics with entrepreneurship, but men associated only masculine traits.

Further evidence for the desire for an emotional attachment to a networking organization may stem from the need to support women’s self-perceptions and perceptions of the environment. In an assessment of entrepreneurial propensity using a broad survey base in 17 countries, Langowitz and Minniti (2007) find that “women appear to perceive themselves and their business environment in a less positive light than men” (p. 342). Manolova et al. (2007) affirms the idea that networks might be even more important when the environment is perceived as “hostile,” which she suggests is the case in transitional economies where material and financial resources are scarce and the institutional environment is unstable. Some
research suggests that environments that are not historically supportive of entrepreneurship may benefit most from networking efforts. Johannisson and Monsted (1997) mention that regional variations in values and attitudes toward entrepreneurship have an impact on the creation and development of new firms, and suggest that a “hostile general environment may be controlled through a rich personal network” (pg. 115). To the degree that women see their environment as less supportive, the affective need to identify with an organization as a source of emotional support seems to be a reasonable contention.

H2: Female entrepreneurs are more likely than males to derive affective value from networks.

According to the Center for Women’s Business Research (2000), both women and men business owners surpass the general population in terms of involvement in philanthropy, whether measured in terms of money donated or time volunteered. But women surpass men on both measures. Differences between women and men are also more dramatic in terms of tendencies to serve in leadership positions in volunteer initiatives. Notably, high net worth women business owners are even more philanthropic than their male counterparts. For both men and women, most of their philanthropy is primarily motivated by a desire to be socially responsible, rather than by the expectation of a financial return, but this motivation is higher for women than men (Center for Women’s Business Research, 2000). In addition, Hood & Thompson (1994) found that women entrepreneurs used care and connection as important criteria in charitable giving decisions. These criteria related to the personal connection to the recipient.

In an examination of female entrepreneur’s management style, Buttner (2001) found that women tended to use relationship building abilities to facilitate mutually empowering collaborations. Although these benefits were “mutual,“ it does suggest an orientation or willingness among women to be focused on “giving back” in some way.

As noted earlier, women entrepreneurs have been found to have a stronger preference for a collaborative network orientation; this research also suggests that entrepreneurs with high CNOs value community involvement and social standing in the community.

Other research has suggested that further evidence for supporting a work-life balance for themselves and their employees comes from a time-use study which found that self-employed women spend significantly more time on household management and child care activities than do self-employed men (Gurley-Calvez, Harper and Biehl 2009). In addition, earlier research in women’s entrepreneurship found that starting a business was motivated by a greater desire to balance work and family (e.g., Brush 1990, Scott 1986).

Moore and Buttners’s (1997) extensive interviews with female entrepreneurs suggest that self-fulfillment, rather than profits, is the most important measure of entrepreneurial success, implying again that personal values are reflected in women’s business organizations, which is likely to extend to their network organizations.

H3: Female entrepreneurs are more likely than males to derive normative value from networks.
RESEARCH METHODOLOGY AND DESIGN

Initial Interviews/Sample
The first phase of research focused on identifying ENOs and interviewing select members, followed by a member survey and statistical analysis. In-depth, semi-structured interviews were conducted with ten selected ENO members and leaders. One purpose for these interviews was to stimulate an interest on the part of the organization to participate in the study. Results overall supported that organization leaders believed that members potentially derived different values from the organizations, and leadership was strongly interested in better understanding what those were in an effort to enhance them. The sample was composed of members from six entrepreneur network organizations. See Table 1.

Survey Instrument
Most affective and normative measurement items were adapted from organizational behavior studies (e.g., Allen and Meyer 1990) and the relationship marketing literature (e.g., Gruen et al. 2000, Garbarino and Johnson 1999). Instrumental value refers to an interest in the organization based on perceived financial costs associated with leaving, or a self-interest stake in the relationship, usually cast in economic terms. Descriptor variables included business size (in terms of employees and sales) and business duration; at low levels, both variables may imply more of a “still struggling” business (Stinchcombe’s “liability of newness” theory, 1965), which may translate into a greater interest in networking. Length of membership in the organization was also measured; based on loyalty research in the consumer behavior literature (Sheth and Parvatiyar 1995), members who have been with the organization longer may, by definition, be the ones who perceive the greatest value. Given the diverse membership of ENOs, data was also collected on member industry and member type (e.g., entrepreneur, investor, government, university).

The ENO members interviewed during the qualitative phase, along with ten new members, were used to pretest a survey instrument to further assess relevance, consistency of interpretation and clarity of meaning of the questionnaire. The survey consisted of 65 items. This study focuses on a subset of the items, namely the 17 that relate to instrumental, normative and affective commitment as well as demographic information. After final adjustments, the survey, along with a cover letter noting the goals of the study, the benefit to the organization, and a five dollar Salvation Army donation, was e-mailed or hard copy mailed to all members of the organizations noted above, for a total mailing of 1205. No differences in response rates were noted between email and postal mail. Two waves of follow-ups to non-responders ensued, using fax, email and telephone, yielding an overall response rate of 17 percent, or a usable sample size of 205; 106 of the sample were categorized as entrepreneurs (based on their responses to survey items on the organization represented, size of business, and main product or service) and identified their gender, and formed the basis for this analysis. (See Table 2)
Table 1: A Sample of Entrepreneur Network Organizations (ENOs) in Wisconsin

<table>
<thead>
<tr>
<th>Organization</th>
<th>Mission</th>
<th>Year Founded</th>
<th>Location</th>
<th>Number of Members</th>
<th>Surveys Received</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Innovate</td>
<td>To encourage the formation, education, networking and mentoring of e-businesses in Wisconsin</td>
<td>1999</td>
<td>Milwaukee</td>
<td>176</td>
<td>29</td>
<td>16.5%</td>
</tr>
<tr>
<td>High-Tech Consortium (HTC)</td>
<td>To assist new and growing technology-based businesses with access to capital networking, information, and business</td>
<td>1985</td>
<td>Madison</td>
<td>425</td>
<td>51</td>
<td>12.0%</td>
</tr>
<tr>
<td>Wisconsin Biotechnology Association (WBA)</td>
<td>To advance Wisconsin’s biotechnology industry and support entrepreneurship among biotech companies of all sizes</td>
<td>1987</td>
<td>Madison</td>
<td>182</td>
<td>41</td>
<td>22.5%</td>
</tr>
<tr>
<td>Wisconsin Venture Network (WVN)</td>
<td>To provide a forum for entrepreneurs, investors, and business advisors to interact, learn and exchange resources, promoting, and contributing to the formation and growth of businesses</td>
<td>1984</td>
<td>Milwaukee</td>
<td>302</td>
<td>44</td>
<td>14.6%</td>
</tr>
<tr>
<td>Wisconsin Women Entrepreneurs (WWE)</td>
<td>To foster the stability, growth and continuing high ethical standards of independent businesses owned and co-owned by women</td>
<td>1991</td>
<td>Janesville</td>
<td>45</td>
<td>21</td>
<td>46.7%</td>
</tr>
<tr>
<td>National Association of Women Business Owners of Milwaukee (NAWBO)</td>
<td>To strengthen the wealth creating capacity of our members and promote economic development, create innovative and effective changes in the business culture; build strategic alliances, coalitions and affiliations; transform public policy and influence opinion makers</td>
<td>1990</td>
<td>Milwaukee</td>
<td>75</td>
<td>19</td>
<td>25.3%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>1205</td>
<td>205</td>
<td>17.0%</td>
</tr>
</tbody>
</table>

ENOs are regional, independent, member organizations with regular member services. *Net of bad contact information. **At meeting.
Table 2: Female & Male Entrepreneurs by Entrepreneur Network Organization (ENO)

<table>
<thead>
<tr>
<th>Organization</th>
<th>Entrepreneur surveys received</th>
<th>Male Entrepreneurs</th>
<th>Female Entrepreneurs</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Innovate</td>
<td>22</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>High-Tech Consortium (HTC)</td>
<td>14</td>
<td>13</td>
<td>1</td>
</tr>
<tr>
<td>Wisconsin Biotechnology Association (WBA)</td>
<td>21</td>
<td>14</td>
<td>7</td>
</tr>
<tr>
<td>Wisconsin Venture Network (WVN)</td>
<td>18</td>
<td>16</td>
<td>2</td>
</tr>
<tr>
<td>Wisconsin Women Entrepreneurs (WWE)</td>
<td>15</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>National Association of Women Business Owners of Milwaukee (NAWBO)</td>
<td>16</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>64</td>
<td>42</td>
</tr>
</tbody>
</table>

DATA ANALYSIS

Pre-Tests
To test for nonresponse bias, t-tests were conducted on all items, comparing early and late responses, based on the thesis that late responses may be representative of non-responders (Armstrong and Overton 1977, although this concept dates back to the 1940’s). No items had significant differences. Given that other information, such as sales or industry, was not available on non-responders (as it might be in more conventional databases like Dun and Bradstreet), the early and late comparison was the best quantitative option available. Organization leaders were asked to review the distribution of member types and membership duration, and they all considered the sample to be representative.

Factor Analysis and Mean Comparison
As noted in the sample description, based on responses to measurement items on the type of organization represented, the size of the business, and the main product or service of the organization, respondents were categorized as entrepreneurs, corporate representatives, service providers, public sector representatives, or investors/sources of capital; 106 respondents were classified as entrepreneurs, including 64 men and 42 women.

Since the measurement items were adapted, we used an exploratory factor analysis to review the scale items for the dimensions of instrumental, affective and normative. Exploratory factor analysis is useful for determining whether the measures are consistent with the constructs (Pedhazur & Schmelkin, 1991, pg. 69). T-tests were performed to test possible gender differences in means for both mean scores for the factor dimensions as well as individual items.

Using varimax rotation in the factor analysis, items loading at .500 and above were initially retained. Items loading across several factors were eliminated. Communalities were also examined; items with low communalities and poor or no loadings were removed (Hair, Anderson, Tatham, and Black, 1998). To test for reliability, item to total (> .50; the correlation of the item to the summed
scale score) and inter-item (> .30; the correlation among items) correlations were examined along with Cronbach’s alpha (> .70). The three projected factors emerged.

Results of the t-tests to examine gender mean comparisons between the factor summations as well as individual items are shown in Table 3. T-tests also compared men and women entrepreneurs on sales, number of employees, sales growth, years in business, and length of membership in the ENO. No significant differences were found.

Hypothesis 1, which proposed that women would perceive a higher economic benefit (instrumental value) from the network than men, was supported. A significant difference exists between the factor score and most of the scale items, suggesting that women find ENOs to be of greater value from an economic standpoint than men do. Hypothesis 2, which focused on affective value, found the strong support predicted. The factor summation and all individual items were statistically significant. However, in contrast to predictions, Hypothesis 3, which proposed that women would derive higher levels of normative value from ENO’s, was largely not supported. One exception was the individual item that measured whether respondents felt an obligation to participate in the ENO to help entrepreneurs.

### Table 3: Factor Dimensions and Item Comparisons by Gender

<table>
<thead>
<tr>
<th>Dimension/Variable Items</th>
<th>Mean Males</th>
<th>Mean Females</th>
<th>T-Value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Instrumental Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>D1. The benefit of membership in ENO contributes to the bottom line of my business/goals of my organization.</td>
<td>3.22</td>
<td>4.08</td>
<td>-4.67</td>
<td>.017*</td>
</tr>
<tr>
<td>D2. I generate more dollars in business (benefits) than the time or money I spend involved with ENO.</td>
<td>3.38</td>
<td>4.60</td>
<td>-2.98</td>
<td>.004*</td>
</tr>
<tr>
<td>D4. Belonging to ENO is extremely important to the growth of my business.</td>
<td>3.91</td>
<td>3.81</td>
<td>-2.27</td>
<td>.025*</td>
</tr>
<tr>
<td>Affective Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>E1. I feel a strong sense of belonging to ENO.</td>
<td>4.16</td>
<td>5.37</td>
<td>-4.67</td>
<td>.000*</td>
</tr>
<tr>
<td>E2(rs). I have little, if any, emotional attachment to ENO.</td>
<td>4.02</td>
<td>5.15</td>
<td>-3.29</td>
<td>.001*</td>
</tr>
<tr>
<td>E6. I am proud to be an ENO member.</td>
<td>1.84</td>
<td>1.41</td>
<td>-3.97</td>
<td>.000*</td>
</tr>
<tr>
<td>E7. I admire many other ENO members.</td>
<td>1.46</td>
<td>1.09</td>
<td>-4.12</td>
<td>.000*</td>
</tr>
<tr>
<td>Normative Factor</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F2. I feel I have an obligation to participate in ENO to help entrepreneurs.</td>
<td>4.11</td>
<td>4.90</td>
<td>-2.24</td>
<td>.027*</td>
</tr>
<tr>
<td>F3. I feel I have an obligation to participate in ENO to help the community.</td>
<td>4.22</td>
<td>4.29</td>
<td>-.183</td>
<td>.855</td>
</tr>
<tr>
<td>F4. Other entrepreneurs and organizations should participate in the ENO.</td>
<td>1.54</td>
<td>1.68</td>
<td>-4.05</td>
<td>.686</td>
</tr>
<tr>
<td>F5. ENO provides me with a means to help others.</td>
<td>4.09</td>
<td>4.31</td>
<td>-.669</td>
<td>.505</td>
</tr>
</tbody>
</table>

Variable items were based on 1(Disagree) – 7(Agree) scales. *Significant at p<.05 at a minimum
DISCUSSION

Past research on gender differences in entrepreneurship suggests that women view the world more holistically than men do, which implies that they are likely to be involved in networks for more than just instrumental value. Some studies have suggested that when researchers define network value in terms of business success only, it does not fully explain women’s involvement. As noted earlier, Sorenson et al. (2008) found a stronger association between business success and a collaborative network orientation for men than women, even though women had a stronger preference for a CNO. They acknowledge that perhaps it was because the benefit/outcome was described too narrowly. Because of women’s holistic views, we proposed that women may see professional business networks as offering not only instrumental value, but affective and normative benefits as well. The “professional” integrates with the “personal.”

Although the research on the instrumental value of networks to women was mixed, we suggested that women would perceive a higher economic value from the networks than men would. Our results support this, helping to clear up the confusion in this area. This finding is important for both women entrepreneurs and for ENOs.

Substantial research has suggested that affective value, based in emotional connections and relationships, is likely to be more important to women. This study confirmed the importance of this concept even in the context of a formal entrepreneur network organization; from a pragmatic standpoint, leaders of these organization that wish to specifically support female entrepreneurs may wish to take this into account. For example, ample time for social events, as well as face-to-face small group facilitation, may be particularly appealing. Educational topics might include those that focus on work-life balance as well as business growth issues.

Given prior empirical research that suggests that women tend to be disproportionately concerned with their communities, their employees, and philanthropy, we expected that women would report different results than men when it came to deriving normative value from the network organization, but this was not the case. These results could be due to a variety of reasons. Perhaps the way the questions were worded focusing on obligation and “should” did not resonate with women’s view of their holistic involvement in their communities. Or women are involved in their communities but do not utilize the ENOs for that purpose, although they did note that helping entrepreneurs through involvement in the ENO was a focus.

We appreciate recent calls in the literature to view gender as a social construction vs. a biological difference (e.g., Gupta, Turban, Wasti, Sikdar 2009), but from a pragmatic standpoint, given that biological sex is an easily identified and frequently collected demographic data point, and gender views are much less visible, we believe that it is important to continue research that uses a biological distinction as well as a more psychographic one. For example, as economic developers continue to support entrepreneurial networks, market segmentation can much more easily be performed based on a biological gender distinction.

From a small business strategy perspective, our research suggests that women entrepreneurs might consider joining ENOs,
as the women entrepreneurs in our sample found that the ENOs contributed to the bottom line for their business.

**LIMITATIONS**

Limitations include a relatively small sample size, possible geographic bias, as well as self-report bias. This research only addressed men and women entrepreneurs’ perceptions of the value of the ENO. We did not have success measures in the survey other than sales and growth in sales – (which are growth measures and size measures, but not necessarily success or profitability measures). In addition, the sample was not random across all ENOs nationally and was limited to ENO’s in Wisconsin. Wisconsin may have some unique regional culture issues that prevent generalization of these results at a national or international level.

Overall, however, women entrepreneurs appear to believe more strongly than men that their ENO is valuable and effective, and they tend to be more involved in the organization. However, it should also be noted that 31 of the 42 female entrepreneurs (74 percent) were from the two groups specifically targeted to women, so differences may be attributable to characteristics of the organizations themselves rather than to member gender. Further investigation of possible gender-driven differences in ENOs, through expanding such a study to greater numbers of women’s groups, is a logical area for further research.

**PRACTICAL IMPLICATIONS**

Countries where women have a higher degree of social equity are also those that are more economically successful. Given entrepreneurship’s role in promoting economic development in general, and the lower level of entrepreneurship among women worldwide, it becomes clear that we may be missing an opportunity. Although a variety of factors influence the entrepreneurial propensity and business growth motivation for women, this study points to the importance of entrepreneurial networks to women in particular. From a practical perspective, our research would encourage women entrepreneurs to get involved in ENOs.

This study supports the notion that networks, in this case formal network organizations, are not only more important to women for instrumental reasons, but they provide other forms of value as well. Recognizing that networking for women is more multidimensional than for men is critical for creating and positioning entrepreneurial networking organizations to meet the relatively unique needs of aspiring and existing women entrepreneurs, predicted to become an economic force of increasing importance to regions and nations.

**FUTURE RESEARCH**

Future research on gender and entrepreneurial networks should take into consideration utilizing narrative approaches that incorporate the “voice” of the entrepreneur (Foss, 2010) and thus perhaps find more variations within groups (female entrepreneurs or male entrepreneurs) than between groups (pg. 95). Jack (2010) calls for different research strategies to explore the “real process of networking” (pg. 131) and suggests that researchers might seize opportunities to study networks in which they are embedded, through longitudinal and ethnographic methods.
Given the foregoing, this researcher is contemplating studying the creation of networks and the utilization of existing ENOs by graduate students in an entrepreneurial technology program in which this researcher may become embedded. A qualitative, longitudinal approach would be taken to assess how the networks are created and change over time, as well as how those networks impact the successful launch of a business by these nascent entrepreneurs. This research would give “voice” to the entrepreneurs about the “real process of networking.”

REFERENCES


Langowitz, N., and Minniti, M. (2007). The entrepreneurial propensity of women,


Debra S. Malewicki was an assistant professor in Entrepreneurship at the University of Wisconsin-Whitewater. An earlier version of this paper was presented at USASBE in January 2010. Sadly, Debra passed away in May of 2010. According to her Dean, “Deb had a major impact on our College and took us a very long way in the small business/entrepreneurship area.” (e-mail correspondence with Chris Clements, Dean, College of Business and Economics, University of Wisconsin-Whitewater, June 8, 2010).

Cathleen A. (Folker) Leitch was an associate professor of Management and Entrepreneurship at the University of Wisconsin-Parkside. Currently, she is teaching at Wilfrid Laurier University in Ontario. Her teaching interests include small business and entrepreneurship, leadership, and family business. Her research interests include family business and gender differences in management and leadership.