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# Does Gender Matter? Women Business Angels and the Supply of Entrepreneurial Finance

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**There is a substantial literature on the relationship between gender and access to finance. However, most studies have been concerned with access to debt finance. More recently, the focus of this research has broadened to examine women and venture capital. This article extends the focus further by examining the role of women in the business angel market, which is more important than the formal venture capital market in terms of both the number of ventures supported and total capital flows. Based on a detailed analysis of business angels in the U.K., the study concludes that women investors who are active in the market differ from their male counterparts in only limited respects. Future research into women business angels, and the possible existence of gender differences, needs to be based on more fully elaborated standpoint epistemologies that focus on the experience of the woman angel investor *per se*, and center on the examination of the role of homophily, social capital, networking, and competition in investment behavior.**

## Introduction

The role of gender in access to business finance has been the subject of extensive research, debate, and policy concern in recent years as part of a wider interest in issues of women's entrepreneurship and business ownership (Ahl, 2004; Carter, Anderson, & Shaw, 2003; Duchenaut, 1997; Gatewood, Carter, Brush, Greene, & Hart, 2003; Leitch & Hill, 2006). Reflecting the nature of the funding environment and the characteristics of the ventures established by women entrepreneurs, much of the debate on gender and finance has been concerned with access to loan finance and with the role of the banks in creating or perpetuating gender-based differences in access to finance (Buttner & Rosen, 1988, 1989; Carter & Rosa, 1998; Coleman, 2000; Fay & Williams, 1993; McKechnie, Ennew, & Read, 1998; Read, 1998; Riding & Swift, 1990; Verhuel & Thurik, 2001). Despite the volume of research, there is no unequivocal support for the idea that there are gender-based differences in access to finance: While several studies "report discrimination . . . it seems to be related to structural factors rather than gender *per se*" (Ahl, 2004, p. 99). From a policy perspective, two fundamental questions remain unanswered in unequivocal terms: Is there a real shortage of capital for women entrepreneurs (the funding gap), and to what

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extent are the constraints faced by women entrepreneurs due to the “general business environment, a lack of information, firm characteristics, gender-based discrimination or other factors?” (Koreen, 2000, p. 4).

More recently, attention has shifted to the examination of a number of gender-related features of the venture capital market (Carter, Brush, Greene, Gatewood, & Hart, 2003; Greene, Brush, Hart, & Saporito, 1999). Based on an assessment of the empirical evidence, on the demand-side, only a very small proportion of women-owned businesses raise venture capital. On the supply-side, there very few women involved in making investments, either as venture capital fund managers or as business angels, leading to suggestions that gender homophily<sup>1</sup> (the existence of sex-segregated social networks: Aldrich, 1989; Moore & Buttner, 1997; Ruef et al., 2003) will constrain the women entrepreneurs’ search for, and access to, capital. These features may be related: The limited participation of women as investors may go a considerable way toward explaining the limited use of venture capital as a financing source by women entrepreneurs. However, as the DIANA project notes, “missing from research is an understanding about the interaction between the demand- and the supply-side for equity capital” (Brush, Carter, Gatewood, Greene, & Hart, 2004). Furthermore, as access to funding by new and early stage ventures frequently follows a “pipeline” model where the entrepreneurs’ own resources and capital from family and friends provide the initial funding, followed by angel investment and then institutional venture capital (Harrison & Mason, 2000), gender-based differences in access to venture capital may reflect differential access to investment at an earlier stage in the funding pipeline. Accordingly, this study provides a first attempt to answer, in the business angel context, three key questions posed by the DIANA project on women in venture capital. First, are women business angels different from their male counterparts in terms of their backgrounds and demographic features? Second, do male and female business angels have the same approach to investment? Third, are women business angels more likely to invest in women-led ventures? Answers to these questions will be valuable both in guiding intervention to support women entrepreneurs and in supporting women entrepreneurs in their search for finance.

To date, there has been very little consideration of women’s access to angel financing (Amatucci & Sohl, 2004; Becker-Blease & Sohl, 2005) despite this being quantitatively more important as a source of venture capital (Mason & Harrison, 2000a; Sohl, 1999, 2003) and as a stepping stone to build businesses to the point where they become attractive to venture capital investors (Freear & Wetzel, 1990; Harrison & Mason, 2000). For example, there is only very limited reference in the DIANA project (Brush et al., 2004; Greene et al., 2003) to angels, and recent policy papers on women entrepreneurs’ access to finance have made no reference to angel finance (e.g., Canada, 2003). Nevertheless, there have been claims (frequently unsupported by direct evidence) that there are gender-based issues in access to business angel capital. For example, “although finding and engaging angel investors is a challenge for anyone, women entrepreneurs have experienced particular difficulty” (Brush et al., 2004, p. 56). This is attributed to two reasons in particular. First, women are less likely to have had prior entrepreneurial experience or a high level of managerial experience in a corporate setting and are hence less likely to participate in networks with high net worth individuals (what Verheul & Thurik [2001] refer to as the indirect effects underlying gender-based differential access to capital). It is

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1. “Homophily refers to the selection of other team members on the basis of similar ascriptive characteristics, such as gender, ethnicity, nationality, appearance, and the like” (Ruef, Aldrich, & Carter, 2003, p. 196; see also McPherson, Smith-Lovin, & Cook, 2001).

these factors, rather than gender per se, which underlies the observed differences in the propensity of men and women to become active angel investors. Second, if women do establish such contacts, they need to build a strong case for their capabilities and commitment, often without the benefit of an established relationship or trust engendered by long-standing relationships. Accordingly, there is an argument that an increase in the number and visibility of women business angels, including the development of women-only business angel networks (BANs) (Abramson, 2001; Hill, Nealis, & Sohl, 2004; Shaw, 2001), would enhance the supply of finance to women entrepreneurs and redress, at least in part, the lower involvement of women in the asset and wealth creation process, which is reflected in the lower involvement of women in the angel investment market (Hudson, Kenefake, & Grinstead, 2006<sup>2</sup>).

Against this background, the contributions of the preliminary analyses reported in this article are fourfold: First, we develop a framework for investigating the relationship (if any) between gender and business angel investing; second, we identify and analyze examples of women business angel activity; third, we provide the first ever profile of the characteristics, motivation, and investment criteria of women business angels using data from a sample of investors in the U.K.; and fourth, we explore the extent to which women business angels are more likely to invest in women entrepreneurs. The research is exploratory, given the paucity of prior research on the supply of capital from women business angels: If the business angel market in general is “virtually invisible and often misunderstood” (Wetzel, 1987, p. 299), this applies with an even greater emphasis for that part of the market accounted for by women investors. Given the importance of angel investment in the entrepreneurial business development process, however, a deeper understanding of this segment of the market can contribute to our understanding of the dynamics of the relationship between gender and access to venture capital, and its implications for venture growth and development, at later stages.

## Context

The existence of gender differences in a wide range of entrepreneurial contexts (including business ownership, growth and performance, access to finance, networking) is widely accepted, although individual studies vary in the extent of the differences identified (Ahl, 2004; Bruni, Gherardi, & Poggio, 2005; Koreen, 2000). Less well understood are the possible explanations for the gender-based differences observed, and any investigation into the supply of investment capital from women business angels must be set in the context of the wider debate over the nature of women’s entrepreneurship. Here, there is a lack of cumulative knowledge, adequate conceptualisation, and theory building (Carter, Anderson et al., 2003, p. 72), and “women’s entrepreneurship has mostly been studied from the very limited perspective of the differences between men and women” (Ahl, 2004, p. 34). She goes on to argue that entrepreneurship is itself a male-gendered concept that requires a particular gendered division of labor (Ahl, 2004, p. 61).

As Ahl (2006) has more recently pointed out, the terms sex and gender (originally introduced to distinguish between socially constructed sex [sex-related differences, or the factors that vary with sex; McHugh, Koeske, & Frieze, 1986; Unger, 1979] and biological sex) have been widely conflated in the entrepreneurship literature. One consequence is to

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2. This Kauffman Foundation report is based on the reporting of a roundtable discussion with 12 women business angel investors in the United States and provides anecdotal information on this marketplace.

attribute problems (such as lower business growth performance or more problematic access to finance) to women instead of to social orders and to emphasize the individual over the structural and situational. For Ahl (2004, pp. 176–177; 2006), the current discourse on women’s entrepreneurship sustains a social order that benefits men as a group compared to women as a group<sup>3</sup> and, in emphasizing the individualist perspective, diverts attention from structural and institutional arrangements. Her response is to advocate research that, by comparison with current research in the field, expands the research object and shifts the epistemological position. In terms of the research object, most current research has adopted an individualist focus, approaching this with an objectivist epistemology based on the position that “judgements about [a topic] are objectively true or false, meaning that they are true or false independently of us, or of our perspectives, or opinions” (Blackburn, 1995, p. 368; see also Brown, 1987; Putnam, 1981; Rorty, 1979). Within this epistemological perspective, it is possible to consider a change in the nature of the research object by, for example, shifting the focus from the individualistic perspective (the entrepreneur, the investor) to include factors “outside” the individual entrepreneur/business. This shift in research object places more attention on the relationships between entrepreneurs/businesses and on wider contextual factors (for example, legislation, social norms, labor market structures, economic policies, financial market structures), and encourages a greater emphasis on longitudinal and comparative studies where situational contexts may vary while acknowledging that such research is subject to many difficulties in practice.

More radical is the shift in epistemological position advocated by Ahl (2006). This draws on Berger and Luckmann’s (1967) discussion of the social construction of reality and on Lyotard’s (1979/1991) development of the idea of local, time-, and space-bound determinisms of social reality replacing the idea of grand narratives. However, it is more specifically grounded in Haraway’s (1991) feminist argument for situated knowledge, which recognizes that science is socially constructed and operates through argument and persuasion and that all knowledge is embodied in a position in time and space rather than standing outside this (as objectivism would suggest) (see also Code, 1991; Letherby, 2003; McCarl Nielsen, 1990). For Ahl (2006), the shift to a constructivist epistemology will require a reexamination of the separation of the categories of “men” and “women,” not least on the basis that “the reviewed research about women entrepreneurs showed very few differences between men and women anyway, so even if maintaining an essentialist position, there is not really a reason to study sex differences per se. It seems like a dead end for research” (Ahl, 2004, p. 187). More generally, this is supported by other recent calls for a greater recognition of the social construction of entrepreneurship, which “arises from universal processes of social construction—the narrative dramatic means by which actors coordinate actions and identities. Entrepreneurship, like the rest of social life, is a collaborative social achievement. The interactions of entrepreneurs and their stakeholders sustain and transform the nature of entrepreneurship” (Downing, 2005, p. 196).

Quite what this epistemological shift will look like in terms of the focus of, and methodology for, research is unclear. For advocates of the development of a feminist-standpoint epistemology, “experience should be the starting point for any knowledge

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3. This is seen in: (1) the proclamation of women entrepreneurs as unusual, which sustains the idea of the “masculine entrepreneur” and of entrepreneurship as a male-gendered construct; (2) the idea of women’s entrepreneurship as a lifestyle choice, which preserves man’s primary right to a career; and (3) the advocacy of women’s entrepreneurship as a solution to the glass ceiling problem, which “reinforces a social order where men support men in a homo-social pattern and acknowledges the discrimination of women in the corporate ladders” (Ahl, 2004, p. 177).

production” (Letherby, 2003, p. 45). This would begin with but not end with women’s experiences (McCarl Nielsen, 1990) and would proceed without universalizing a particular experience to create an overall perspective or worldview (Smith, 1988). In the argument that follows, we respond partially to this call by examining *sui generis* the characteristics and behavior of women business angels and the implications of these for the financing of women-led businesses in particular. In this, we set the research in the context of the debate over feminist research methodologies generally (Letherby, 2003; Mirchandani, 1999; Riger, 1992; Stanley & Wise, 1993) and in entrepreneurship specifically (Ahl, 2004; Marlow & Patton, 2005). In so doing, we follow an emerging trend in research into gender and entrepreneurial finance: Rather than comparing the experiences of men and women, a number of recent studies have focused specifically on those of women (Hill, Leitch, & Harrison, 2006). This is important for at least two reasons: “[F]irst, it overcomes the prevailing dichotomous perspective that concentrates on differences rather than similarities; and second it permits access to women’s realities regarding the raising of finance” (Leitch & Hill, 2006, pp. 9–10). As such, it moves beyond the traditional “difference” model of scientific research,<sup>4</sup> including much gender research (Riger, 1992), to recognize that it is necessary to give voice to women’s experience and to view society from women’s perspective (Belenky, Clinchy, Goldberger, & Tarule, 1986; Gilligan, 1982; Smith, 1988).

However, while our primary focus is on the “real world” of the woman business angel, because the present study is the first formal detailed study of women business angel investors, we also include a comparison with male business angel investors drawn from the same sample frame.<sup>5</sup> This allows us to contribute to the wider debate over the nature and status of women’s entrepreneurship. If there are observable gender-differentiated differences in characteristics and behavior, this will provide a stimulus to further research on the extent to which there is both a difference in the “real world” of the woman business angel and a social order within which these relationships exist and are developed. If, however, there are few or no observable differences between men and women business angel investors, we may conclude, with Ahl (2004) and others, that “gender” is itself a problematic construct and one that is not helpful in framing useful and interesting research questions. In this case, we will raise questions about the most appropriate research designs and methodologies for further research in entrepreneurial finance and about the orientation and focus of the “gender” theme in entrepreneurship research.

## Gender and Access to Capital

A consistent finding in previous studies of business angels is that there are very few women investors identified (Becker-Blease & Sohl, 2005; Center for Venture Research, 2004; Mason & Harrison, 1994)—typically fewer than 5% of the total (Table 1).<sup>6</sup>

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4. The “difference” model is built into the methods of science because experiments are formally designed to test and reject the null hypothesis that there is no difference between the experimental group and the control group (Riger, 1992, p. 731; Unger, 1979).

5. It should be noted that this is not a matched pairs methodology in the strictest sense. This methodology has been used quite widely in studies of the financing of women entrepreneurs and involves matching samples of male and female businesses on a range of attributes in order to eliminate the influence of structural factors in order to reveal the effect of gender (e.g., Read, 1998; Riding & Swift, 1990). In the absence of any prior information on investor characteristics, we had no criteria on which to effect a meaningful matching.

6. In the Becker-Blease and Sohl (2005) analysis of angel portals in the United States, the proportion of women angels per portal (including women-only angel networks) varies from 3.3% to 7.1% (median), from 6.2% to 21.4% (mean), over the period 2000–2005.

Table 1

## Proportion of Women Business Angels: International Comparisons

% of women business angels in sample	Country	Source
0	Australia	Hindle and Wenban (1999)
0	Japan	Tashiro (1999)
0–1	Denmark	Vækstfonden (2002); Neergaard, Nielsen, and Kjeldsen (2006)
1	U.K.	Mason and Harrison (1994)
2	Canada	Riding, Dal Cin, Duxbury, Haines, and Safrata (1993)
2	United States—East Coast	Haar, Starr, and MacMillan (1988)
3	Norway	Reitan and Sørheim (2000)
4	United States	Gaston (1989)
5	Finland	Lumme et al. (1998)
5	Germany	Stedler and Peters (2003)
5	U.K.	InvestorPulse (2003)
5	New Zealand	Infometrics Ltd (2004)
6–10	United States	Becker-Blease and Sohl (2005)
8	Scotland	Paul, Whittam, and Johnston (2003)
10	Singapore	Hindle and Lee (2002)

Furthermore, there are suggestions that women are significantly less likely than men to become active investors, although this is more a reflection of their accumulated human capital characteristics and lesser involvement in the wealth accumulation process than any apparent innate gender-related difference (Cowling, Harding, & Murray, 2003). Given that the majority of angel investors have entrepreneurial backgrounds and are often serial entrepreneurs, this, in turn, may reflect wider issues of gender differences in business start-up and ownership, business growth (and the related capital accumulation realized at exit), and exit.<sup>7</sup>

While there have been very few efforts to explain the underrepresentation of women in the business angel population, there is a wider literature on the underrepresentation of women in a wide range of economic and social contexts that provides a basis for developing an understanding of this issue. These studies have relied upon a wide range of factors and explanations, but three groups in particular can be identified: (1) discrimination; (2) abilities and preferences; and (3) competition.

### Discrimination

The first group of explanations relate to discrimination—in the case of the access to finance debate, in the financial markets, and by financial institutions—which leads to the differential treatment of women and men with otherwise equal abilities and preferences. This is consistent with liberal feminist theory, which suggests that women are disadvantaged with respect to men due to either overt discrimination or to systematic factors that preclude their access to key resources (Fischer, Reuber, & Dyke, 1993; Greer & Greene,

7. Although business start-up and ownership have been the focus of much of the women's entrepreneurship literature, there have been no studies of gender issues in the exit process and the only studies of exits included in Gatewood et al. (2003) do not take a gender perspective.

2003). However, the observation of difference is not in and of itself sufficient to support the diagnosis of discrimination, not least because of methodological deficiencies in the research on the financing of women-led businesses (Leitch, Hill, & Harrison, 2006). First, there is a general absence of studies that have fully taken into account or controlled for the full range of factors that may influence a venture's success in raising finance (Read, 1998). Second, much of this research, as discussed previously, is predicated on the notion of "difference" and assumes that male entrepreneurship is the benchmark against which to judge women's entrepreneurship (Carter & Brush, 2004, p. 13). Third, most previous studies of the financing of women-led ventures have focused on the supply of finance, and relatively few have examined either the gendered supply of finance (Read, 1998) or the demand-side of transactions from a female perspective (Amatucci & Sohl, 2004). Fourth, a high proportion of the research that has been conducted has been based on North American experience, which may not readily transfer to other contexts (Ahl, 2004). What does emerge from this research is the suggestion that structural issues such as the size, age, and type of business (Coleman, 2000; Fabowale, Orser, & Riding, 1995; Read, 1998) are relatively more important than gender issues, and gender differences are fine nuances rather than radical differences. Women may, for example, make fewer applications for loans (Orser & Connell, 2005), have broadly similar success rates as men in gaining offers of finance, but this may be on less favorable terms (Coleman, 2000; McKechnie et al., 1998; Riding & Swift, 1990).

### **Abilities and Preferences**

The second class of explanations rests on gender differences in abilities and preferences. This perspective is consistent with social feminist theory, which attributes inherent differences between men and women to differences in early and ongoing socialisation (Fischer et al., 1993) and suggests that women are not inferior to men but have developed different but equally effective traits that may not be readily captured by analytical categories appropriate for men (Acker, 1978; Smith, 1988). This argument has been advanced more generally as an explanation for occupational self-selection (Polachek, 1981), which gives rise to the glass ceiling effect and underlies a number of studies in entrepreneurship. These suggest that levels of entrepreneurial self-efficacy are higher in males than females (Kourilsky & Walstad, 1998; Matthews & Moser, 1995, 1996), although some commentators do suggest that this reflects the fact that men are socialized into entrepreneurship to a higher degree than women are (Scherer, Brodzinsky, & Wiebe, 1990). However, there is little to suggest that there are systematic gender-based differences in start-up motivations and intentions (Ahl, 2004). Until further well-grounded research is available, apparent men-women differences may play a role in accounting for these (Carter & Brush, 2004). These men-women differences may be reflected, for example, in women's lower stock of resources (both human and financial capital, as a result of occupational segregation in the labor market), women's lower levels of meaningful business experience, family background and social roles (with women socialized into the caring/nurturing role), and women's different intentions in establishing a business (in response to labor market or domestic subordination, for work-family balance or as a feminist move—Goffee & Scase, 1983).

### **Competition**

A third set of explanations attributes these differences to the fact that women may be less effective than men in competitive environments, even if they are able to perform similarly in noncompetitive environments: "[T]his fact will reduce the chances of success

for women when they compete for new jobs, promotions, etc.” (Gneezy, Niederle, & Rustichini, 2003, p. 1049). In a series of controlled experiments, Gneezy et al. concluded that in incentive systems that reward only the winner, there is a significant relative increase in male performance, but not in female performance. However, this male/female performance difference is only observed in mixed-gender groups. Specifically, it is not attributable to the uncertainty of the payment, through gender differences in risk aversion. Nor is it due to an absence of competitiveness in the women participants: In single-sex competitions, women participants improve their performance relative to both the benchmark level and to that recorded in mixed-gender situations, with the result that the performance gap between men and women is significantly reduced.

This resonates with Fels’s (2004a, 2004b) recent argument that women may lack ambition (a striving for mastery in a field), in that ambitions held in youth are suppressed and attenuated by adulthood, and experience a lack of recognition (a wish to be appreciated for that mastery), which reinforces the absence of ambition. The problem, as Fels sees it, is that over time, recognition dries up, and the pervasive climate of nonrecognition leads women to “seek sanctuary on the higher ground of internal satisfaction: [T]hey look for rewards in the work itself, not in fame, honor, or money” (Stansell, 2004). In other words, “the daily texture of women’s lives from childhood on is infiltrated with microencounters in which quiet withdrawal and the ceding of available attention to others is expected—particularly in the presence of men” (Fels, 2004a). As a result, there is at work a systemic process of role socialization and acculturation, which is reflected in the positions women occupy and the roles they play. More generally, this argument that there are gender differences in reaction to competition can be related to a longer tradition of feminist writing: the relational perspective of Miller (1987, 1991), which sees an inner sense of connection to others as a central organizing feature of women’s development; Chodorow’s (1978) discussion of gender identification and the development of a sense of self; and Gilligan’s (1982) theory of women’s moral development where women stress caring in the face of moral dilemmas in contrast to the emphasis of men on justice. The identification of these as contributions to a relational theory of women’s experiences (Jordan, 1993; Miller, 1993) provides a model of human growth and development “that is an alternative to the masculine bias in mainstream theories of development” (Buttner, 2001, p. 256).

These sociological and psychological arguments reinforce the conclusions of Gneezy et al. (2003) and suggest that in a competitive environment, women will perform differently, and less well, in mixed-sex groups and contexts. This carries across into entrepreneurship contexts and suggests that where gender-based differences are observed, it may not be because of differences in abilities and preferences or because of discrimination in the absence of such differences, but because of differences in the effectiveness of women in competitive, particularly mixed-gender, environments.

## Implications

This has implications for the development of social capital as the basis for engaging in entrepreneurial activity. For some, what Fels (2004a) sees as a problem—the lack of ambition and the “gender recognition differential”—is the basis for an alternative approach based on the development of a more cooperative way of working and sharing recognition through an emphasis on women’s relationality and connectedness (Gilligan, 1982). There is evidence to suggest that gender and network roles are related in the development of social capital: Networks with a high percentage of women members are more likely to provide support to other members. As Wellman and Frank (2001, p. 252)



express it, “it appears that a high percentage of women in a network potentiates the entire network to be more supportive. Or, perhaps egos at the center of such networks have consciously organized their networks to provide more support.” Furthermore, there is evidence to support an empirical generalization that “women express, men repress”: In other words, women interact in networks face to face by exchanging emotional support, while men interact side by side by exchanging goods and services (Moore, 1990; Perlman & Fehr, 1987).

Taking these observations on competition, ambition, and network roles and behaviors together provides a framework for exploring some of Ahl’s (2004, 2006) suggestions for the repositioning of gendered entrepreneurship research, which goes beyond simply using gender as another factor or variable to be included in a research design.

## Methodology

The difficulties in identifying and obtaining information from business angels are well documented (e.g., Mason & Harrison, 1994, pp. 71–76). Business angels are an invisible population. They are not listed in any directories, and the market as a whole “operates in almost total obscurity” (Prowse, 1998, p. 785). As a consequence, researchers are often forced to use samples of convenience, which may be biased toward certain types of investor. As the debate between Stevenson and Coveney (1996) and Mason and Harrison (1997) clearly demonstrated, differences in the characteristics of the convenience samples used can lead to a substantial variation in the profiles of angels drawn up and the conclusions drawn, a variation that is attributable to the nature of the underlying data sources and to the limitations on the sampling procedures that are necessarily employed. These problems are compounded in the case of women business angels because of their scarcity. Studies from a variety of different countries consistently show that women business angels generally comprise fewer than 5% of all business angels (Table 1). In a U.K. context, it was estimated that there were around 20,000 active and potential business angel investors in the late 1990s (Mason & Harrison, 2000a). Experienced market analysts in the U.K. suggest that as a result of the collapse of the “dot com” boom and of subsequent decline in venture capital investing, the number of business angels is now significantly smaller. Assuming that women angels represent 2–5% of the total (see Table 1) and that the total number of business angels has halved since the late 1990s, this suggests that there might be around 200–500 potential and active women business angel investors in the U.K. at the present time. Given such a small, diffuse, and invisible population, the development of a robust random sampling approach is even more problematic than in the case of research into the angel market more generally.

Given these specific and more generic difficulties in accessing individual business angels, for the purposes of this study, women business angels were identified and contacted through BANs—organizations that enable entrepreneurs seeking finance and investors seeking investment opportunities to connect (referred to as angel portals in the Becker-Blease and Sohl [2005] study). One concern arising from the use of BANs as a sample frame to identify business angels is that this approach provides no mechanism for comparing the characteristics of angels registered with BANs with either those angels not so registered or with the wider population of nonangels. However, given the methodological perspective adopted in this research, which is exploratory and grounded in an experience epistemology, this is not a major issue for the research reported. Of greater pertinence is the possibility that angels who are attracted to become members of a BAN are different from other angels in some respects, in which case, a potential source of bias

is introduced which would constrain our ability to draw more general conclusions from the research. But as previous research has suggested that there are in fact few observable differences between angels who are members of BANs and those who are not (Van Osnabrugge, 2000), we follow Becker-Blease and Sohl (2005) in using BANs (or portals) as a frame for identifying business angels and by drawing responses from the widest possible range of BANs to minimize any bias resulting from the unique characteristics of individual BANs (Mason & Harrison, 1997). Finally, in order to minimize the potential bias inherent in comparing results of studies using samples drawn from different sample frames, our comparison of women and men business angels is based on a sample of men angels drawn from the same BANs. There is also the possibility of bias arising from differences in the characteristics of male and female BAN members and their motivations and propensity to join networks, as compared with non-BAN member investors; however, in the absence of any evidence or obvious reason for anticipating any differences, we follow Van Osnabrugge (2000) in assuming that such differences are likely to be minor while identifying this as an important issue for further more detailed research.

Fifteen of the 22 BANs that responded to our initial approach (out of a total of 27 active BANs contacted in the U.K., identified from the directory *Business Angel Finance 2003/4* [NBAN, 2004], plus two other active networks not listed in the directory) had one or more women investors. Thirteen of these BANs had a total of 25 women business angels—this average is lower than that recorded in the United States, where it appears that there was a mean of 4.3 and a median of two women angel investors per angel portal in 2004 (Becker-Blease & Sohl, 2005). A further two BANs responded that they had significant numbers of women registered (34 and 44, respectively) but could not separately identify those who were business angels, investing their own money, from those who were representing organizations (e.g., corporate finance companies, fund managers). These 15 BANs were then sent self-completion questionnaires for onward transmission to all of their women investors and to an equal number of randomly selected male business angels. The questionnaire covered the following: personal and employment backgrounds, investment motivation, investment preferences, investment activity (types of investment, frequency), sources of deal flow, deal evaluation factors, method of investing (independent, ad hoc syndicates, formal syndicate membership), value-added contribution, and attitude to investing in women-owned businesses. The survey instrument was developed to collect data through both closed and open-ended questions: Given that we were not directly administering the schedule, closed questions with prompt-list answers predominated. We obtained 21 completed questionnaires from women and 19 from men. Assuming that every recipient of the questionnaire was an active or potentially active business angel (which is likely to be an overrestrictive assumption), this gives a minimum response rate of 20.4% for women and 18.4% for men on a single cycle survey methodology, above-average response rates when compared with previous comparable angel surveys.

## Findings

### Personal and Employment Background

Accepting that there is a relationship between specific forms of human capital and the incidence of business angel activity, gender differences in the distribution of human capital may be expected to lead to parallel differences in the incidence of investment activity. Based on an analysis of Global Entrepreneurship Monitor (GEM) data, which

covers more than business angel investing as defined here,<sup>8</sup> Cowling et al. (2003) conclude that this is indeed the case: the apparent male–female disparity in investment activity they identify is attributable to differences in other characteristics rather than to gender per se. What is not clear, however, is the extent to which this finding applies equally to both “pure” angel investing and to investment in family and friends (see also Maula et al., 2005).

Given this, it is not surprising that male and female business investors in this research share many common characteristics in terms of their demographics, employment, and financial backgrounds (Table 2), and this overall profile is consistent with the accumulated evidence from previous research on the angel market, which has found relatively little variation over time and across countries in profile characteristics (Harrison & Mason, 1992; Mason & Harrison, 2000b).

Both male and female investors have a diverse working experience in terms of type of company, industry sector, and function. Men have had a wider range of experience in terms of company size and type. However, women have worked in a wider range of industries. In terms of functional experience, women are significantly more likely to have expertise in human resources (HR) and rather more in marketing. Although there are few significant differences, the profiles reflect patterns expected given the nature of women’s participation in the workforce (Anker, 1997) and raise some issues for further research. For example, is the slightly younger age distribution of women angels a reflection of differences in their wealth accumulation process, specifically the greater reliance on inheritance (although this is still only cited by one-third of respondents)? Or, given that the primary investment activity of business angels in general comes out of income from entrepreneurial capital rather than from accumulated capital per se (Don & Harrison, 2006), does it reflect the recent rapid rise in women’s entrepreneurial activity (Carter, Anderson, & Shaw, 2003)? Equally, is the work history, experience, and expertise of women angel investors and their stronger background in the services sector and in the “softer” business disciplines likely to be reflected in the nature of the investments that they make, as it appears to be in Germany, where women business angels show a strong preference for investment in the service sector (Stedler & Peters, 2003)? While some of these issues lie outside the scope of this initial article to address, we do throw some light on the connection between investor characteristics and investment activity later in the article.

It is well established that a majority of business angels have entrepreneurial backgrounds. This is also found here, with 62% of women and 63% of men having founded one or more businesses. The average was 2.15 businesses started by women and 2.3 by

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8. GEM data have been used in a number of studies of informal investment activity (Bygrave, Hay, Ng, & Reynolds, 2003 summarized the approach). However, this research is subject to a number of limitations in the present context. First, these GEM-based studies do not adopt the conventional definition of business angels and so are not comparable with the existing research on the phenomenon. Second, the majority of the informal investment recorded in the GEM database is investment in family-related businesses—only around 12% of the activity is meritocratic investment in third-party ventures; this within-family investment, while important for an entrepreneurial economy, is excluded from analyses of the business angel market. Third, exchanges (in this case investments) dictated by kinship or friendship do not constitute a market as conventionally understood and financial support for family or close friends cannot necessarily be viewed as the exercise of the same order of rationality as in the case of nonrelated party investments. Fourth, an analysis of this wider flow of capital will provide opportunities for gender-related research, notably on the relational issues of within-family investment, which lie outside the scope of the present study. Finally and specifically, the GEM data do not include any information on the process issues of informal investment, and this data set is not suitable for addressing the issues identified in the present study from the methodological standpoint adopted. For another treatment of the investment data in GEM, which does analyze separately the close ties and pure angel investment, see Maula, Autio, and Arenius (2005).

Table 2

## Characteristics of Female and Male Business Angels

Characteristic	Women (% of total)	Men (% of total)	$\chi^2$
Age	Under 35 years	0	)
	35–44 years	38.1	)
	45–54 years	33.3	) 2.72 n.s.
	55–64 years	28.6	)
	65 and over	0	)
Education	First degree	76.2	0.06 n.s.
	Masters	38.0	0.001 n.s.
	Professional qualification	61.9	1.6 n.s.
Company experience	Senior management—small company	52.4	0.73 n.s.
	Senior management—medium company	33.3	0.42 n.s.
	Senior management—large company	33.3	1.21 n.s.
	Senior management—public sector	9.5	0.00 n.s.
Functional areas of expertise	Business professional	38.1	0.59 n.s.
	General management	94.7	1.12 n.s.
	Financial management	42.1	0.42 n.s.
	Sales	26.3	0.00 n.s.
	Marketing	42.1	1.06 n.s.
	Human relations	52.6	10.37**
	Other	25.3	—
Current economic status	Retired	4.8	1.35 n.s.
	Salaried employee	0.0	—
	Working in own/family business	28.6	0.05 n.s.
	Self-employed consultant	33.3	0.33 n.s.
	Partner in professional firm	14.3	—
	Other	19.0	—
Entrepreneurial experience	Founded a business	61.9	0.001 n.s.
	Number of start-ups (average)	2.15	
	Participation in MBO/MBI (%) (No)	9.5	14.91***
Annual income	<£50 k	27.8	)
	£50–100 k	38.9	) 0.38 n.s.
	>£100 k	33.4	)
Net worth (excluding principal residence)	<£500 k	33.4	)
	£500 k–1 m	27.8	) 2.22 n.s.
	>£1 m	27.8	)
Source of investment funds	Inherited	33.3	0.72 n.s.
	Employment (incl bonuses, options)	52.4	0.97 n.s.
	Investment income	42.9	0.4 n.s.
	Own business	33.3	0.24 n.s.
	Family business	0.0	—
	Lump sum (incl business disposal)	10.0	1.61 n.s.
	Life partner	9.5	0.0

\*\* significant at  $p < 0.01$ ; \*\*\* significant at  $p < 0.001$ .  
n.s., not significant at  $p < 0.05$ .  
MBO/MBI, management buy-out/management buy-in.

men. However, participation by women in a management buyout or buyin was significantly lower than for men, reflecting the relative absence of women in senior management positions in large businesses.

Finally, in terms of wealth, there was little difference in salary levels. However, male business angels had a wider distribution of net worth. As a result, men dominated both ends of the distribution: 16% of men had net worth of less than £250,000 compared with no women and 47% had over £1 m in net worth compared with 28% of women. Sources of investment funds were diverse for both male and female investors. However, women were relatively more likely to be investing from inheritance, salary, and spouse/partner wealth and were less likely to be investing from family business wealth or a lump sum (which includes business exit).

### Investment Motivation and Investment Preferences

The evidence on the motivation for investing in unquoted companies confirms what is now well established, that business angels are primarily motivated by two factors: First, by the satisfaction from being involved in the entrepreneurial process, and second, by financial considerations (Table 3). Although there are almost no significant differences between male and female investors in terms of motivation, there are some subtle differences in emphasis. For example, women are marginally more likely to be motivated by the desire to support the next generation of entrepreneurs and, significantly, to support socially beneficial products or services—the only motivation where statistically significant differences are observed. Women also gave more emphasis to “a way of having fun with my money.” Although in a wider perspective, women appear to be more likely to invest in close ties (family and close friends) than men are (Bygrave et al., 2003), the absence of significant differences on a male–female basis in this study suggests that those women who do act as angel investors do so, for the most part, on a similar basis to their male equivalents.

The vast majority of investors of both sexes say that they have an interest in investing in technology sectors (90% of women and 94% of men). However, we need to interpret this

Table 3

#### Motivation for Being a Business Angel

	Women N = 20	Men N = 19	$\chi^2$
To support the next generation of entrepreneurs	2.10	2.68	4.03 n.s.
Personal satisfaction from being involved with entrepreneurial businesses	1.45	1.47	0.018 n.s.
Potential for high capital appreciation	1.50	1.58	0.214 n.s.
To help friend(s) set up in business	2.60	2.89	3.64 n.s.
For current or future income (e.g., dividends, fees)	1.80	1.95	1.4 n.s.
Support socially beneficial products or services	2.20	2.84	7.8**
A way of having some fun with my money	1.95	2.32	2.18 n.s.
For positive recognition in the community	2.60	2.89	2.89 n.s.
For nonfinancial perks, privileges, etc.	2.70	2.95	1.12 n.s.
To make use of tax breaks	2.05	2.16	0.186 n.s.

\*\* significant at  $p = .01$  ( $\chi^2_{crit} = 6.64$ ).

1 = very important; 2 = quite important; 3 = not important.

Table 4

## Business Angel Interest in Investing in Technology Businesses

	Women		Men		$\chi^2$
	No.	%	No.	%	
Interested in investing in technology businesses	18	90.0	17	94.4	0.28 n.s.
Not interested in investing in technology businesses	2	10.0	1	5.6	
No response	(1)		(1)		
For those investors expressing an interest, their interest in specific technology sectors (1 = no interest, 5 = strong interest)	Mean score	# with strong/very strong interest	Mean score	# with strong/very strong interest	
Communications technologies	2.67	1/18	2.53	3/17	n.s.
Computer hardware	1.50	0	1.94	1/17	—
Internet	2.50	5/18	2.53	3/17	n.s.
Semiconductors	1.44	1/18	1.62	0	—
Software	3.05	6/18	2.94	6/17	n.s.
Electronics	2.11	2/18	2.82	5/18	n.s.
Biotechnology	2.67	5/18	2.41	3/17	n.s.
Medical instruments	2.83	6/18	2.71	5/17	n.s.
Pharmaceuticals	2.39	6/18	2.41	3/17	n.s.
Healthcare	2.94	7/18	2.75	6/16	n.s.
Environmental technologies	3.33	10/18	2.53	3/17	5.34**
Creative industries	2.89	4/18	2.35	3/17	n.s.

\*\* significant at  $p = 0.05$ .

finding with some caution. When asked to indicate their interest in specific sectors, the majority did not report a “very strong interest” in any sector and four males and one female never reported more than a “moderate interest” in any industry. Nevertheless, there are some noticeable differences in score and ranking between males and females in terms of their interest in specific technologies (Table 4).<sup>9</sup> There are two technologies in which women express a much higher interest than men: environmental technologies and creative industries. While there is an interesting link back to the motivations for business angel investing, with women being slightly more likely to support socially beneficial products or services (Table 3), there is a need for further more detailed research (both in terms of larger sample research and more detailed grounded in-depth experience-based research) in this area.

### Investment Activity

Given the methodology for identifying business angels, it is not surprising that BANs featured prominently as a major source of investment opportunities. Putting this aside, the

9. These responses are based on ranked replies from those investors who indicated that they had an interest in investing in technology businesses.

Table 5

## Main Sources of Information on Investment Opportunities

	Women (N = 20)		Men (N = 18)		$\chi^2$
	No.	% of total	No.	% of total	
Media: magazines, newspapers, etc.	7	35	6	33	0.018 n.s.
Banks	3	15	1	6	0.92 n.s.
Active personal search	9	45	13	72	2.92 n.s.
Friends	8	37	8	44	
Business associates	16	80	11	61	1.66 n.s.
Contacted by entrepreneurs seeking finance	9	45	9	50	0.11 n.s.
NBAN	3	16	8	44	4.02**
Other business angel networks	17	85	16	89	0.23 n.s.
Family	3	15	2	11	0.15 n.s.
Accountants	9	45	4	22	2.27 n.s.
Lawyers	5	25	1	6	2.57 n.s.
Stockbrokers	3	15	0	—	—
Venture capital funds	5	25	3	17	0.41 n.s.
Other	1	5	1	6	—

\*\* significant at  $p = 0.05$ .

NBAN, National Business Angel Network.

main sources of deal flow are business associates and active personal search (Table 5). The ranking of sources of deal flow is similar for both male and female investors. However, males give greater emphasis to active personal search and women make greater use of business associates, accountants, and lawyers.

One possible explanation for this lies in the different levels of social capital held by men angels and women angels, and specifically Burt's (1998) argument that legitimacy affects the returns to social capital. As Burt states: "[T]he key for outsiders breaking into the game is to borrow social capital rather than build it. Legitimate members of a population succeed by building their own social capital. Illegitimate members of the population have to borrow" (p. 5). In Burt's corporate example, as in the present context, women are the outsiders, and he produces strong evidence to suggest that the returns to social capital are gender differentiated. He argues that success is attributable to the existence of hierarchy in social networks—the extent to which links between contacts are indirect through a central person (other than the respondent herself). This borrowing of social capital that results can be productive as a legitimizing strategy (Raider & Burt, 1996).

In the context of the operation of the informal venture capital market in the U.K., this argument suggests that whereas men have social capital relationships that allow them to identify potential investment opportunities, women have to rely, to a much greater extent, on borrowing social capital to identify opportunities and build market presence. This has two possible implications, which should be the focus of further research. First, the fact that women have to rely on borrowing social capital suggests that they have a legitimacy problem in this market that will constrain their involvement as active investors. Second, if "borrowing social capital is a strategy through which suspect outsiders (however suspect outsiders are defined in a population) get access to the benefits of social capital, then a category of people for whom success depends on

borrowing social capital is a category of people deemed suspect” (Burt, 1998). If this argument holds in the informal venture capital market, this will have significant implications for the development of services and initiatives (including women-led or women-only BANs) to strengthen and extend the involvement of women as business angel investors.

The male business angels are slightly more active investors, making a total of 59 investments between January 2001 and mid-2004 (mean of 3.3 and median of 2.5), compared with 51 investments by women (mean of 2.6; median of 2.0). The proportion of angels who had made no investments was similar (15% women and 11% men). The women business angels have invested  $\text{c}\text{£}1.85$  m (with two non-responses) over the period. This is more than the amount invested by men ( $\text{£}1.3$  m). However, the amount invested by women is skewed by two major investors ( $\text{£}410,000$  and  $\text{£}330,000$ ). The two samples contain identical numbers of big investors, with seven women and seven men each investing over  $\text{£}100,000$ .

The proportion of the investment portfolio that is accounted for by angel investments varies widely among both men and women. However, women are slightly more weighted toward angel investing, with angel investments accounting for an average of 20% of their overall investment portfolio compared with 10% for men. This may point to differences in attitude to building household expenditure and investment portfolios (Guiso, Haliassos, & Jappelli, 2002), but the place of informal investment generally in household portfolio composition, and of gender differences in that specifically, has not been subjected to any research so far and remains an important but unexplored issue.

Calculating yield ratios—investments made as a proportion of deals received—is very difficult. Some investors are precise about the number of investment opportunities that they have seen whereas others are very imprecise, reporting that they have seen “hundreds” of opportunities. Women have received slightly fewer investment opportunities than men but seriously considered marginally more (172 cf. 157, although this apparent difference disappears if the mean number of investment opportunities considered is the measure) and, as previously noted, made slightly fewer investments. Thus, the overall yield rate for women business angels was higher than that for men, with women making one investment for every 32 opportunities received compared with 28 for men. But given the imprecision of many of the responses concerning the number of opportunities received, this difference should be interpreted cautiously. The data on the number of opportunities seriously considered are more reliable. This indicates that women made one investment for every 3.4% that they seriously considered, compared with 2.7% for men. There are no equivalent data on yield rates for men and women investors from other studies, but these results are consistent with demand-side evidence from the United States, which suggests that there are no statistically significant differences between men- and women-owned businesses in the likelihood of raising angel capital once the decision to seek it has been made (Becker-Blease & Sohl, 2005).

The investment constraints that are cited are similar for both men and women, notably poor quality of investment opportunities, followed at some distance by lack of time to search for opportunities and lack of sufficient deal flow. Women are more likely than men to acknowledge the role of personal factors, notably their lack of experience in cutting investment deals and time taken by existing portfolio. Indeed, over half of all investors (56% of men and 55% of women) have an upper limit on the number of investments that they will hold. For women, this limit is around five investments (median) compared with six by men. The reasons are insufficient time to play a hands-on role—emphasized by all men (11/11) but only 7 out of 11 women—and insufficient time to monitor investments (8/11 men, 7/11 women). This may be influenced by the composition of the investment portfolios—a higher



Table 6

## Investment Performance

Performance	Women		Men	
	Number	%	Number	%
Total loss	8	36.4	12	48.0
Partial loss	3	13.6	3	12.0
Breakeven	4	18.2	2	8.0
1–2 times multiple	4	18.2	2	8.0
3–5 times multiple	1	4.5	1	4.0
6–10 times multiple	0	—	3	12.0
Over 10 times multiple	2	9.1	2	8.0
Total	22	100	25	—

$\chi^2 = 3.2$ ,  $df = 3$ , not significant at 0.05.

proportion of new and early stage investments, as opposed to older and more mature ones, may be expected to require more intensive hands-on monitoring and involvement and to limit the number of investments in the portfolio. However, we are unable to identify the extent to which this is the case in the present analysis, and we have no evidence to suggest that there are any identifiable (or in principle) variations between women and men investors in this respect.

Similar proportions of male and female investors are also constrained by their lack of knowledge of particular sectors, technologies or markets (70% of women and 68% of men). However, this has a more dramatic effect on those women business angels who are constrained by this lack of knowledge, as they reject some 75% (median) of the investments that they see for this reason, compared with just 50% for the men who are similarly constrained. Again, this is a fruitful area for further research, not least because there is some evidence to suggest both that the subjective experience of gender impinges on issues such as work choice (Henwood, 1996) and that in populations of “experienced” decision makers (such as managers), unlike in nonmanagerial populations, males and females display a similar risk propensity and make decisions of equal quality (Johnson & Powell, 1994). Explorations of this tension in the area of women’s involvement in and experience of informal investment activity is an important area for further research, specifically to investigate the extent to which women are more modest in their knowledge claims (Garry & Pearsall, 1996; Haraway, 1998).

Respondents were asked to report the outcomes of any investments that they had exited from in the previous 3 years. This generated information on 22 exits by 12 women business angels and 25 exits from 14 male business angels (Table 6). Half of the exits by women were either partial or total losses compared with 60% among men. At the other end of the returns spectrum, 20% of exits by male investors achieved a six times multiple or more compared with just 9% for women. This is a higher loss rate than that reported in previous studies of exits (Lumme, Mason, & Suomi, 1998; Mason & Harrison, 2002). While not statistically significant, these data tentatively suggest a slightly more cautious approach to investing by women business angels. This would also be consistent with the view that women access a set of investment opportunities mediated through the borrowing

of social capital (Burt, 1998) rather than through directly generated social capital, which are of “lower” potential. However, a much bigger data set and more systematic study is needed for this to be confirmed, as part of a wider program of research into the returns to business angel investing (Mason & Harrison, 2002; Wiltbank, 2005).

### **Attitude to Investing in Women-Owned Businesses**

The women investors in the sample are marginally more likely to have invested in businesses owned and managed by women (37% have done so compared with 21% of the men), but the difference is not statistically significant. In numerical terms, women investors have made substantially more investments in women entrepreneurs (19 cf. 5), but this is skewed by one particular investor who had made such 10 investments. Both male and female investors claim to be gender-neutral in their investment evaluations. Just two women investors said that they would be willing to relax their investment criteria to consider a female entrepreneur and three said that they would be willing to help female entrepreneurs become investment ready. Just one man said he would be more willing to help a female than a male entrepreneur to become investment ready.

Given the popular emphasis on the development of women-only networks as a mutual self-help and competitiveness-enhancing structure (Klieman, 1980) to overcome the problems of women’s loss of competitiveness or unwillingness to become competitive, in mixed-sex environments (Fels, 2004a; Gneezy et al., 2003), there appears to be a *prima facie* case in principle for the development of women-only BANs. Indeed, a number of women-only networks have been established in the United States (Abramson, 2001; Becker-Blease & Sohl, 2005) and also in France. However, this expectation is not borne out in practice by the evidence from the current exploratory study, with 70% of women investors reporting that they have no interest in being part of a women-only investment network. This has potential implications for strategies to develop the women business angel market, which require further more detailed research.

### **Networking**

Male angels are slightly more self-contained than women. Specifically, men are less likely than women to always invest with others (Table 7). Men are also marginally less likely to use professional advice for deal appraisal or deal structuring (47% cf. 57%). However, male investors are better networked than women in the sense of knowing more business angels: 58% of males know more than 10 other angels compared with 48% of women (Tables 8–9). Again, this does suggest that there may be differences between men and women business angels in how they develop and use social capital, which requires further more detailed research. However, what is perhaps more surprising is the relatively small numbers of other business angels that are known to the respondents of either gender. For example, only 5% of both male and female business angels personally know more than 50 other angels. This might simply reflect the balkanization of the angel market into lots of local markets, although it could equally suggest that business angels are not as widespread as is generally thought. It certainly suggests that BANs, through the membership lists of which we identified our respondents, have a limited impact on increasing the interconnectedness within the market.

Less surprising is that few of the respondents know other women business angels (Table 8). Indeed, 39% of women and 32% of men do not know any women business

Table 7

## Frequency of Co-Investment Activity

	Women (n = 20)		Men (n = 19)	
	No.	%	No.	%
No response	(1)		(—)	
Always invest on my own	4	20.0	5	26.3
Sometimes invest on my own	6	30.0	10	52.6
Always invest with others	10	50.0	4	21.1

$\chi^2 = 3.61$ ,  $df = 2$ , not significant at 0.05.

Table 8

## Extent of Personal Business Angel Networks (General: All Angel Investors Known)

	Women (n = 21)		Men (n = 19)	
	Number of angels known	%	Number of angels known	%
None	1	4.8	1	5.3
Less than 5	6	28.8	2	10.5
5–10	4	19.0	5	26.3
11–24	4	19.0	8	42.1
25–49	5	23.8	2	10.5
50–99	0	—	0	—
100+	1	4.8	1	5.3

angels and none of the women know more than five other women angels. Even the woman investor who knows over 100 angels knows fewer than five other women angels. Male investors actually know slightly more women angels—four (21%) know between 5 and 10 and one knows between 11 and 24. This might simply reflect their slightly more extensive networking within the angel investment community.

### Conclusion

From this exploratory research, it appears that overall, women business angels are slightly more likely to invest in women-owned businesses, although this is not because

Table 9

## Extent of Personal Business Angel Networks (Specific: Women Angel Investors Known)

	Women (n = 21)		Men (n = 19)	
	Number of women angels known	%	Number of women angels known	%
None	8	38.1	6	31.6
Less than 5	13	61.9	8	42.1
5–10	0	—	4	21.1
11–24	0	—	1	5.3
25–49	0	—	0	—
50+	0	—	0	—

they factor gender into their investment decision. Furthermore, there appear to be more pronounced differences in characteristics and investment attitudes and behavior within the samples of women angels and men angels in this study than between them. Together, these findings tentatively suggest that gender is not a major issue in determining the supply of business angel finance and that the informal venture capital market is not differentiated on gender lines. It may be, therefore, that in this area as in others, the study of sex differences per se is indeed a “dead end” for research (Ahl, 2004, p. 187). This is consistent with prior research, which has suggested that in gender-comparison studies where differences are found they are usually small, but the small size differential is usually overshadowed in discussion by the fact that the a difference exists at all (Epstein, 1988). Our results suggest that intergender differences are indeed small and only rarely significant. On the basis of this, we conclude that the focus on between-gender differences that characterizes the framing and execution of most entrepreneurship research in this area, and the corresponding lack of attention to within-gender differences, reflects a general presupposition of gender polarity in research (Fine & Gordon, 1989; Riger, 1992).

That is not to say that there is no value in focusing on the gender issue in future research. First, there do appear to be some interesting implications for practice arising from this study, which warrant further exploration in more extensive research using both larger samples and more in-depth qualitative research. A minority of women did suggest that they would relax their investment criteria to consider investing in a female entrepreneur, or would spend time helping women entrepreneurs become investment ready (in an illustration of Perlman and Fehr’s [1987] suggestion that in terms of network behavior and relationships, women “express” and offer [emotional] support rather than engage in transactional behavior). From this, it can be inferred that having more women angel investors is, *ceteris paribus*, likely to result in more investments in women entrepreneurs, in absolute if not in relative terms. Specifically, increasing the visibility and number of women business angels might attract additional deal flow from women entrepreneurs. There is some evidence that while women venture capitalists do not actively canvass women entrepreneurs, they may attract more deal flow from women entrepreneurs because of their visibility (Brush et al., 2004).

Second, there are differences in the sources of deal flow used by women angels (greater reliance on business associates and professionals and lower reliance on active personal search), their networking behavior (women are less likely to invest alone, less likely to rely solely on their own judgment in due diligence and less well connected with or knowing other business angels, including women angels), and their postinvestment value-added contribution (women were more likely to assist on strategy development and with short-term problems, making contacts with suppliers and customers and management team recruitment). These differences suggest that a fruitful line of further investigation will be into the nature of the relationships and social capital structures within which women investors (and their actual and potential investees) are embedded (Burt, 1998; Uzzi & Lancaster, 2003).

Finally, there is a specific opportunity to extend this research, and draw on more general research on networks in entrepreneurship (Jack, 2005), into an examination of the role of women's private equity networks in mobilizing capital into women-led businesses and in providing training, encouragement, education, and support for their members (Abramson, 2001; Hill et al., 2004.). The informal venture capital market may not be characterized as a gender-differentiated market, and there is no support for an essentialist argument that there are fundamental gender-based differences between women and men angel investors. However, there are sufficient issues raised from this initial exploration of the market, reinforced by the small number and lack of visibility of women investors, to suggest that further research into how women angel investors construct their lives and businesses—how they “do” gender—is warranted (Bruni et al., 2005). In so doing, the epistemological position underlying the research will shift from objectivism to a social constructionist position, which in turn will provide a platform for the development of an understanding of an expanded research object based around the understanding of investment and business development as a (gendered) social order (Ahl, 2004). As such, gender research in entrepreneurship will move to consider more specifically the ways in which gender itself is created and maintained as a social construct and will recognize that gender does not reside within the person but is rather constituted by the ways in which we “do” rather than “have” gender as an interactional process (West & Zimmerman, 1987). The conclusion of this research, and the starting point for further research on the role of gender relations in the angel investment process, is that gender is enacted not a collection of traits we express. Accordingly, as earlier research in psychology has demonstrated (Connell, 1985, 1987; Crawford & Maracek, 1989), gender is a “pattern of social organization that structures the relations, especially the power relations, between women and men” (Riger, 1992, p. 737). The challenge for entrepreneurship research will be to move from the conflation of sex and gender as a set of traits to be compared with the malestream (Delamont, 2003; Rees, 1998) to a perspective that bridges conceptions of agency and context in a more integrated discourse on the evolution of social orders.

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