# Business advisory services and risk among start-ups and young companies: A gender perspective.

# Purpose

This study aims to investigate the demand for business advisory services by owners of start-ups and young companies by taking a gender perspecitve. The study also examines whether risk-taking is more characteristic of masculine than feminine behaviour in this context.

# Design/method

A literature review examines business advisory services and risk aversion from a gender perspective. The empirical data are derived from interviews with owners of more than 2700 start-ups and young companies in Sweden. A number of key variables compare how the company owners (women and men) view business advisory services as a way to overcome risk and to gain access to information in networks. Several statistical tests are used to analyse these data.

## **Findings**

Women owners of start-ups and young companies use more and different business advisory services than men owners. There are differences among the men owners and women owners as far as the amount of start-up capital, company size, and industry sector. Given the risks associated with start-up, business advisory services are important to women in helping them reduce their risk in the start-up and early stages of their companies.

#### Research limitation

Companies in Sweden's largest city, Stockholm, were not included in the sample. Financial data were not used as variables.

# *Implications*

Policy makers should address women owners' greater demand for business advisory services in their companies' early stages.

# Value/originality

This study's originality is its gender perspective on the demand for business advisory services by startups and young companies, and its challenge to previous findings about entrepreneurial behaviour and risk taking.

# Keywords:

Business advisory services, risk, gender, network, start-up, young companies

# Research paper



# Introduction

Business advisory services, which support entrepreneurs and SMEs (Lundström and Stevenson, 2005), are usually provided to entrepreneurs in their new venture planning and in their launch stages (Chrisman et al., 2012). As Kirk and Belovics (2006) argue, there are several ways counsellors, academic advisers, and career coaches can help nascent entrepreneurs self-assess their fit with their careers, select business targets, secure technical support, build networks and alliances, and more. Companies often use business consultants for support, both in the start-up stages and in the later stages of their business life cycle. Such business support is an important area of entrepreneurship policy in European countries today (Lundström et al., 2008) as well as in SME policy generally (Boter and Lundström, 2005).

The rationale for business advisory services is the assumption that many entrepreneurs lack sufficient knowledge about the requirements for new venture success (Storey, 1994; Kirk and Belovics, 2006; Chrisman et al., 2012). A number of research studies address business advisory services in relation to the performance of start-ups and young companies (e.g., Storey, 2000). Other researchers have investigated the obstacles entrepreneurs face when starting a business. For example, Aldrich (1999), Baumol (2009), and Shane (2009) take different perspectives on the problems innovative entrepreneurs experience when support is provided to them.

In his study of nascent entrepreneurs over time, Reynolds (2007) found that many individuals who try to start a business ultimately fail in this intention. Various explanations for such failures have been suggested. One explanation is the lack of private or public support, in particular public financing for business advisory services. Another explanation is the inadequacy of supportive business networks (e.g., Watson, 2007), especially in the early start-up stages (Davidsson and Honig, 2003). For instance, in their study of small rural businesses in Sweden, Larsson et al. (2003) found that the lack of contact with outside expert advisors was an obstacle to business expansion.

Considerable research effort has focused on the concept of risk propensity in the business environment. Some researchers find that entrepreneurs are more risk tolerant than the general population (Gentry and Hubbard, 2001; Xu and Ruef, 2004). Other researchers have studied risk-taking from a gender perspective, concluding that risk-taking is more characteristic of masculine behaviour than feminine behaviour (e.g., Watson and McNaughton, 2007; Charness

and Gneezy, 2011). Supporters of business advisory services conclude that even high risk-takers (a common description of entrepreneurs) can reduce their risk when they start a business.

The research on business advisory services tends to emphasize its *support* structure in the business environment (Storey, 1994, 2000) rather than its *demand* structure. As Lundström and Kremel (2011) found, owners of start-up companies are indifferent as to whether governments provide business advisory services or whether family, friends, or other business owners provide this support. In this study, we take the owners' perspective; therefore, we do not distinguish between public- or private-supported business advisory services.

To our knowledge, no studies address the gender perspective as far as the demand for business advisory services by start-ups and young companies. Therefore, in this paper we address these two gaps in the literature with this study that takes a gender perspective on the issue. We pose two main research questions: First, which business advisory services do women and men owners of start-up and young companies use? Second are there gender differences, specifically related to risk-taking, in use of business advisory services by owners of start-ups and young companies?

# Literature review

Business advisory services – positive and negative evaluations

Studies on business advisory services reveal some positive results as the result of their use. For example, Chrisman et al. (2005), in one of the few studies that takes a demand perspective, found a positive relationship between the time entrepreneurs spend in guided preparation and their venture's turnover and job creation three to eight years after start-up. Their finding of a curvilinear relationship between the time spent in guided preparation and performance suggests there is a point at which the benefits of guided preparation diminish. In a study of a Danish business advisory programme, Rotger et al. (2012) found that the programme contributed to improved performance as far as turnover, job creation, and productivity.

However, some business advisory services studies reveal less positive results. Cooper and Mehta (2006) found that entrepreneurs who gathered more information from professional

sources did not perform better than the entrepreneurs who did not gather such information (the variables analysed: business survival, cash flows, and employment growth). Robson and Bennett (2000) found no positive relationship between firm performance and the use of business advice from governmental agencies. In fact, they warn against new public policy initiatives. In his study of SME support since the 1990s in Great Britain, Bennett (2008) found very little evidence to suggest that more intensive advisory support can produce more positive outcomes for SMEs.

Business advisory services – a means of reducing risk

Studies have shown a positive relationship between business advisory services and risk reduction. In an interview study of personal business advisers, Mole (2002) found the advice given small businesses was more often related to their survival than to their growth. This finding suggests that advisers are more likely to offer risk-averse business advice than business growth advice. Robson and Bennett (2000) found that advisers are used more often when SMEs are in trouble and need help with problems. Carter (1989) claimed that entrepreneurs' attitudes towards their business and their managerial experience are more important for company success than attempts to motivate individuals to become entrepreneurs or to encourage entrepreneurs to develop their firms. In a study of success and risk factors in the pre-start-up stage, Van Gelderen et al. (2005) found that the intended company size (number of employees) was an influential factor in the entrepreneur's decision to start a company. In studying SMEs in Sweden, in which the number of employees ranged from one to 49, Boter and Lundström (2005) found that company size clearly related to the frequent use of advisory support systems. In their study they found that the smallest micro companies (employing 1-9 people) were not the most intensive users of support services. This finding suggests that use of advisory support systems among small and medium sized companies follows an inverted U-curve - a finding that merits additional analysis in future studies.

#### Networks

Joining a network is way for entrepreneurs to access resources outside their immediate control and to reduce the risk of failure. Researchers have stressed the importance of networks to firm performance (e.g., Watson, 2007). In particular, researchers have pointed to the importance of social networks (Miles and Snow, 1986; Julien, 1995; Aldrich and Ruef, 2006). Davidsson and

Honig (2003) argue that family or community social networks are especially important as support for entrepreneurs.

Because they have few resources themselves, nascent entrepreneurs require help in several areas. They can benefit from others' work experiences, expert advice, and organizational models. Although they acquire this help largely through informal sources (Aldrich and Ruef, 2006), research reveals that formal business networks result in a positive correlation between net assets and value-added growth (Schoonjans et al., 2011). Network ties to people from different social environments and of different ethnicities may increase access to new markets, new business locations, and new innovations (Aldrich and Ruef, 2006).

These network ties may be either strong or weak (Granovetter, 1983; Perry, 1999; Schoonjans et al., 2011). One claim is that the support created by strong ties is more important for small and medium size enterprises than the support created by weak ties (Brüderl and Preisendörfer, 1998). On the other hand, Granovetter (2005) found that weak ties provide members with unique information and resources for job creation or entrepreneurial activities. Another claim is that weak ties are more important for immigrants who are professionals, although the degree of importance varies between the genders (Bagchi, 2001). Kim and Sherraden (2014) found that male micro-entrepreneurs are more likely than women micro-entrepreneurs to have larger networks, weaker ties, and more network-provided resources. They also claim that women entrepreneurs need to build more diverse and more valuable weak ties.

# Business advisory services and gender

As noted above, we found only a few studies on the demand for business advisory services that take a gender perspective. However, in examining the British government's support of SMEs since 1990, Bennett (2008) found that almost all such companies use business advisory services that are primarily provided by the private sector. Such private sources were particularly important for SMEs headed by women. Other studies (e.g., Barrett, 1995) confirmed that women are eager to seek and use business advice and value such advice more highly than men. Brown and Segal (1989) agreed that women are more likely than men to consult multiple advisory sources in the start-up stage of their companies' existence.

Nilsson (1997) took feminist and neo-institutional perspectives in her study of a business support programme for female entrepreneurs in a rural district in Sweden. She found that the view of the female entrepreneur as "the Other" led to legitimacy dilemmas in the interaction between the providers of business advisory services and the Local Enterprise Boards. Tillmar (2007) stressed the importance of sensitivity of business advisors to gender when they offer advice, especially advice to female entrepreneurs. Fowler et al. (2007) suggested limitations may exist in cross-gender relationships that involve one-on-one contacts (e.g., coaching and business advisory services) because of the participants' anxiety revealed in their observations on these informal interactions. Allen and Eby (2004) concluded that cross-gender mentor-protégé dyads pose challenges because of concerns about sexual harassment and sexual innuendo.

#### Women and men at work

Numerous research studies have discussed the invisibility and subordination of women in a variety of contexts, including the work context. Various researchers have referred to 'the gender effect' in business (e.g., Adler, 2002). Recent theoretical and empirical studies have attributed the lack of women entrepreneurs to this perception of women as invisible and subordinate (Sundin and Holmquist, 1989; Pettersson, 2002). Women entrepreneurs are often viewed as only complementary (although underused) resources for male entrepreneurs (Nilsson, 1997; Holmquist and Sundin, 2002; Lindström, 2010). In general, it appears that female entrepreneurship is regarded as weaker than male entrepreneurship (Wigren, 2003). Junquera (2011), for example, argues that discrimination against women reduces their entrepreneurial opportunities and depreciates female entrepreneurial human capital and business achievements.

The important and time-consuming responsibilities that women have in the family and in society may also be contributing factors to their limited presence in leadership and ownership positions. When certain stereotypes of women are perpetuated, it is difficult to create alternative role models in business (as well as in science) (Latu et al., 2013; Young et al., 2013). As Eccles (1994, 2010) found, women often are attracted to activities where they think they can succeed. As a result, without women role models for success in male-dominated domains, female stereotypes persist (Jacobs and Eccles, 1992; Jussim and Eccles, 1992; Diekman et al., 2010).

However, a Swedish survey (NUTEK, 2003), which notes the androcentric perspective of many research studies, found that an analysis of industry sectors is very relevant in the analysis of women and men at work. The two genders work primarily in different sectors: women are overrepresented in the healthcare and retail sectors, and men are overrepresented in construction and manufacturing (Tillmar, 2007). This may mean that findings about women and men at work are findings about industry sectors. This may have implications for the analysis of women and men entrepreneurs.

## Women, men, and risk-taking

Despite the claim that women and men are more alike than different, and that the within-sex variations are much larger than the between-sex variations (Carter, 1989; Ahl, 2004), some researchers argue that powerful differences exist between women and men as far as risk aversion related to financial and business decisions. For example, Wagner (2007) found that women's fear of failure is one explanation why twice as many men as women start a business in Western industrialized countries. Researchers have also found that women, who are more conservative in their investment activities than men (Watson and McNaughton, 2007), make smaller and fewer financial (e.g., retirement) investments than men (Charness and Gneezy, 2011) although women's lower incomes are also a factor.

Powell and Ansic (1997) found that women have a lower propensity for risk than men. However, they also found that although women use different strategies than men in making financial decisions, their investment results are not significantly different from the men's results. In their study of Australian SMEs, Watson and Robinson (2003) found that after adjusting for risk, there were no significant differences between the performance of male-controlled and female-controlled SMEs. They concluded that while women may take a different approach to business than men, and may be more cautious in the use of resources as they grow their businesses, they are likely to be no less effective than males, provided risk is taken into account.

According to Kepler and Shane (2007), gender does not affect new venture performance when other factors are controlled for. Yet they claim that several factors, such as different expectations, motivations, and opportunities sought, as well as types of businesses, vary

between the genders, resulting in different outcomes. One finding in their study is that female business owners are more likely to prefer low risk/low return endeavours.

Other researchers have examined risk aversion among women from other perspectives. Jianakoplos and Bernasek (1998) found that single women are more risk-averse than single men in financial decision-making. They also found that as their personal wealth increases, single women hold fewer risky investments than single men. Together these findings may partially explain why women have lower incomes and less wealth than men. There is a consensus that absolute risk aversion decreases with wealth, but there is no such consensus on relative risk aversion between women and men (Ibid.).

Researchers have also looked at female-male risk aversion in studies of personal decisions and managerial economics. For example, Hersch (1996) found that, on average, women make safer consumer decisions than men (e.g., decisions related to smoking, seat belt use, and preventative medical and dental care). In a study of entrepreneurs, White et al. (2006) found that women and men take work positions with different levels of risk exposure. Men are inclined to take positions with greater risk and uncertainty than women. Stranger (2004) suggested that women's risk aversion at work results from their limited prior work experience and their less relevant education. This conclusion confirms Roffey et al.'s (1996) findings in the Australian workforce. However, we note that Swedish women generally have more formal education than Swedish men (SCB, 2010; Swedish Agency for Economic and Regional Growth, 2012).

# Methodology

This paper expands on a study by Kremel and Lundström (2009) in which structured telephone interviews were conducted in the fall of 2008 at companies in four regions in Sweden: Skåne, Västra Götaland, Örebro, and Västernorrland. In that study, we used descriptive statistics only; we did not conduct tests related to the gender effect, and we did not use explorative research methods. The purpose of that study was to investigate the demand for business advisory services by young companies (founded in 2005) and start-up companies (founded in 2008). Data on the companies were obtained from Swedish Statistics (*Statistiska centralbyrån*). A Swedish organization that conducts opinion surveys (SKOP) made the telephone interviews. About 60% of the interviews were conducted at start-up companies and 40% at young companies. All This article is © Emerald Group Publishing and permission has been granted for this version to appear here (http://dx.doi.org/10.1108/IJGE-05-2013-0046). Emerald Group Publishing Limited.\*

companies had to be active at the time of the interviews. The survey identified 21 sources<sup>1</sup> of public and other support (e.g., friends and family). Of the 2763 business owners interviewed, around 30% were women and around 70% were men.

The following identifying characteristics were used to compare the female business owners with the male business owners: age, university education, work experience prior to current work, and other work positions. In addition, the survey asked about each company's start-up capital, number of employees, age, industry affiliation, and legal form. Statistical tests were used to analyse the results of this survey.

# Our hypotheses

Based on this literature review of the research on business advisory services, business networks, and risk-taking among women and men in the context of financial and entrepreneurial decision-making, and various other influential factors, we propose the following hypotheses about the use of business advisory services by women and men:

# Main Hypothesis

Hypothesis 1: The business owner's gender is expected to significantly influence the use of business advisory services in start-ups and young companies.

Hypotheses related to our control variables:

Hypothesis 2: The business owner's personal characteristics are expected to significantly influence the use of business advisory services in start-ups and young companies.

Hypothesis 3: Company size, measured by the number of employees, is expected to significantly influence the use of business advisory services in start-ups and young companies.

1 Family and relatives, Tax office, Labour office, Start-up course, ALMI (National support for companies all stages), Enterprise Agencies, Office for business support offered by the Municipality, Start-up guide on Internet or telephone offered by The Swedish Agency for Economic Growth, an industry organization, Accountant, Swedish companies registration office, Friends, Business hotel/incubator, Company owner you know, Export Council, Companion, Bank, IFS (Advisory services for people of foreign backgrounds), Företagarna (Swedish Federation of Business owners), Office for spin-offs at University, Svenskt Näringsliv (The Confederation of Swedish Enterprise).

Hypothesis 4: Industry sector is expected to significantly influence the use of business advisory services in start-ups and young companies.

# The empirical results

The descriptive statistics of the sample and relevant variables

The descriptive statistics of the sample and relevant variables are presented and analysed in this section. Table 1 displays the company and owner characteristics. Table 2 highlights the significance of business advisory services used at the start-up stage with its distribution of advice by source and gender. Table 3 shows the mean, standard deviation, ANOVA test results, and differences between the groups for the 21 sources. Table 4 shows the results from the binary logistic regression analysis.

Table 1: Mean, standard deviation, and number of characteristics of firms in the sample.

					Extera	•	<u> </u>			
			Education	Expstarta	Job-	Start		Year		Legal
Gender		Age	UN	before	biside	Capital	Employees	Dummy	Indus	form
Women	Mean	42,62	1,817204	1,759857	1,5209	3,499901	1,703704	0,66	4,378734	17,00119
	N	837	837	837	837	837	837	837	837	837
	Std.									
	Deviation	12,06	0,422218	0,430215	0,4999	2,126195	1,731539	0,47	6,023374	14,0994
Men	Mean	42,41	1,816719	1,602804	1,608	4,020787	2,292835	0,63	4,063344	21,77466
	N	1926	1926	1926	1926	1926	1926	1926	1926	1926
	Std.									
	Deviation	12,74	0,424143	0,495772	0,4957	2,061524	6,40774	0,48	5,423291	17,08634
Total	Mean	42,47	1,816866	1,65038	1,5816	3,862995	2,114368	0,64	4,158885	20,32863
	N	2763	2763	2763	2763	2763	2763	2763	2763	2763
	Std.									
	Deviation	12,53	0,423484	0,482221	0,4985	2,094667	5,440344	0,48	5,612623	16,38463
F	ANOVA	0,165	0,000767	63,28273	17,916	36,54351	6,856335	3,87	1,84288	50,40757
Sig.	ANOVA	0,685	0,977904	$0.0000^{**}$	$0.0000^{**}$	$0.0000^{**}$	0,00888**	0,05	0,174725	$0.0000^{**}$

Notes:\*\*,\* The coefficients are significant at the 5% or 1% level.

As shown by Table 1, the mean age of female and male owners (around 42.5 years) is similar (SD = 12.53,F test = 0.16,  $\rho$  = 0.68 > 0.01). Female and male owners have almost the same level of education (SD = 0,42, F test = 0,00,  $\rho$  = 0,977> 0.01). Women in the sample have had more prior work experience before founding their companies than men (F test = 63.28,  $\rho$  = 0.000 < 0.01). There is a significant difference between women and men in terms of work positions held outside their companies (F test = 17.91,  $\rho$  = 0.000 < 0.01).

Moreover, Table 1 shows that women have much less start-up capital than men. The difference is significant (F test = 36.5,  $\rho = 0.000 > 0.01$ ) at the 1% level. The size of male- and female-

owned companies in terms of number of employees also differs significantly (F test = 6.85,  $\rho = 0.0088 > 0.01$ ).

Of the firms, 70% are sole proprietorships, 22% are limited liability companies, and 8% are trading partnerships. Moreover, there are more retail trade and service companies (e.g., cafes, restaurants, etc.) than manufacturing and technological companies. Thus, of the 2763 small businesses in our sample, around 80% are in what we broadly classify as the service industry and 20% are in non-service industries. The service industry employs 81% of the women and 60% of the men. Male-owned companies are mainly organized as trading partnerships or limited liability companies; female-owned companies are mainly organized as sole proprietorships. Table 2 presents the mean, standard deviation, and number of observations (Yes = 2 and No = 1 answers). Table 2 highlights the significance of business advisory services used in the startup stage.

Table 2: Distribution of advisory services by sources.

Ü	-				Std.						Std.
		No	Yes	N	dev.			No	Yes	N	dev.
						Företagarna (Swedish Federation					
Family and relatives	Women	23%	77%	837	0.45	of Business owners)	Women	31%	69%	837	0,32
	Men	35%	65%	1887	0,49	,	Men	25%	75%	1887	0,32
					.,	Svenskt Näringsliv (The Confederation of Swedish					-,
Friends	Women	29%	71%	837	0,47	Enterprise)	Women	31%	69%	837	0,27
	Men	31%	69%	1887	0,48		Men	31%	69%	1887	0,27
	***	2201	5001	0.25	0.40	An industry	***	2001	<b>51</b> 0/	025	0.41
Company owner you know	Women	32%	68%	837	0,48	organisation	Women	29%	71%	837	0,41
	Men	30%	70%	1887	0,47		Men	37%	63%	1887	0,39
Banks	Women	31%	69%	837	0,50	Start-up courses	Women	28%	72%	837	0,45
	Men	30%	70%	1887	0,50	IFS(Advisory service for people of foreign	Men	43%	57%	1887	0,40
Tax Office	Women	24%	76%	837	0,47	backgrounds)	Women	31%	69%	837	0,10
	Men	35%	65%	1887	0,49		Men	35%	65%	1887	0,09
Accountants	Women	24%	76%	837	0,49	Coompanion	Women	31%	69%	837	0,11
	Men	35%	65%	1887	0,48		Men	26%	74%	1887	0,12
I I OCC	***	200/	710/	027	0.40	Office for spin-offs	***	210/	600/	027	0.17
Labour Office	Women	29%	71%	837	0,42	at University	Women	31%	69%	837	0,17
	Men	41%	59%	1887	0,38	Almi (National support for companies, all	Men	31%	69%	1887	0,17
Export Council	Women	31%	69%	1887	0,18	stages)	Women	29%	71%	837	0,40
	Men	35%	65%	837	0,17		Men	43%	57%	1887	0,35
Swedish companies' registration	****	30%	700/	1007	0.40	Entransies Associate	W	200/	720/	927	0.42
office	Women		70%	1887	0,49	Enterprise Agencies	Women	28%	72%	837	0,42
Start-up guide on Internet or telephone help offered by The	Men	32%	68%	837	0,49	Office for business	Men	48%	52%	1887	0,35
Swedish Agency for Economic and Regional Growth	Women	30%	70%	837	0,36	support offered by the Municipality	Women	30%	70%	837	0,34
rogional Giowni	Men	39%	61%	1887	0,30	are municipanty	Men	40%	60%	1887	0,30
Business hotel/incubator	Women	31%	69%	837	0,32		141011	<del>1</del> U /0	00 /0	100/	0,30
Duamesa Hotel/Hictorioi		25%	75%	1887	0,15						
	Men	25%	/3%	1887	0,15						

Table 2 shows that female owners use business advisory services more than male owners as the following statistics reveal: family and relatives (77%–65%), friends (71–69%), Tax Office (76%–65%) Accountants (76–65%), Labour Office (71–59%), Export Council (69–65%), Swedish companies' registration office (70–68%), Start-up guide on Internet or telephone help from The Swedish Agency for Economic and Regional Growth (70–61%), industry organization (71–63%), Start-up courses (72–57%), IFS (69–65%), ALMI (71–57%), Enterprise Agencies (72–52%), and Office for business support offered by the Municipality (70–60%). Male owners use other sources more than female owners, as the following statistics reveal: Company owner you know (70%–68%), Banks (70%–69%), Business hotel/incubator (75%–69%), Företagarna (75%–69%) and Coompanion (74%–69%).

The analysis of variance (ANOVA), Levene's and Welch's tests of the dependent variable

Table 3, which presents the result of our statistical tests, shows the means, standard deviations, and significant differences between the gender groups by source.

Table 3: Mean, standard deviation, ANOVA of the dependent variables

	Female			Male				
Name	Mean	N	ST.Dev	Mean	N	ST.Dev	F	Sig.
The external business advice services: Significant difference between gender groups								
Family and relatives	1,71	837	0,45	1,57	1887	0,49	46,37	0,000**
Tax Office	1,68	837	0,47	1,55	1887	0,50	41,78	0,000**
Labour Office	1,23	837	0,42	1,15	1887	0,36	26,80	0,000**
Start-up courses Almi (National support for companies all	1,28	837	0,45	1,16	1887	0,37	48,70	0,000**
stages)	1,20	837	0,40	1,11	1887	0,32	33,82	$0,000^{**}$
Enterprise Agencies Office for business support offered by the	1,22	837	0,42	1,11	1887	0,31	64,68	0,000**
Municipality Start-up guide on Internet or telephone help offered by The Swedish Agency for	1,13	837	0,34	1,09	1887	0,28	13,71	0,000**
Economic Growth	1,15	837	0,36	1,10	1887	0,31	11,27	0,000**
An industry organisation	1,22	837	0,41	1,17	1887	0,37	10,65	0,000**
Accountants	1,61	837	0,49	1,67	1887	0,47	9,13	0,000**
The external business advice services: No Significant difference between gender groups								
Swedish companies registration office	1,40	837	0,49	1,37	1887	0,48	2,45	0,12
Friends	1,67	837	0,47	1,65	1887	0,48	1,28	0,26
Business hotel/incubator	1,02	837	0,13	1,02	1887	0,15	0,94	0,33
Company owner you know of	1,65	837	0,48	1,67	1887	0,47	0,92	0,34
Export Council	1,03	837	0,18	1,03	1887	0,16	0,71	0,40
Coompanion	1,01	837	0,11	1,02	1887	0,12	0,48	0,49
Bank IFS (Advisory service for people of foreign	1,51	837	0,50	1,52	1887	0,50	0,44	0,51
backgrounds)	1,01	837	0,10	1,01	1887	0,09	0,18	0,67

Företagarna (Swedish Federation of								
Business Owners)	1,12	837	0,32	1,12	1887	0,32	0,00	0,96
Office for spin-offs at University	1,03	837	0,17	1,03	1887	0,17	0,00	0,98
Svensktnäringsliv (The Confederation of								
Swedish Enterprise)	1,08	837	0,27	1,08	1887	0,27	0,00	0,98

Notes: \*;\*\* results of ANOVA are significant at the 0.10 level.

The results of the ANOVA show a significant difference between female- and male-owned companies in terms of the advice provided by ten of the 21 sources. In nine of these ten cases, female-owned companies used more advice than male-owned companies. The overall conclusion is that women owners rely on business advisory services more than men owners.

The estimation equation in logistic regression analysis

Both discriminant analysis and logistic regression are appropriate for this study since the dependent variable is a categorical variable, and the independent variables are metric variables. However, the logistic regression analysis is more robust than the MDA (Multiple Discriminant Analysis) as the independent variables need not be normally distributed or have equal variances in each group. Also, the covariance matrix for the groups need not be homogeneous, the independent variables can be highly correlated, and the function does not require linearity.

The method specifications

The dependent variables in our method specifications are assumed a value of 2 if a company has used business advisory services. The value for a company that has not used business advisory services is assumed a value of 1.

The estimation equation in binary logistic regression analysis is as follows:

Business advisory services used at start-up stage =  $\beta_0 + \beta_1(X1) + \beta_2(X2) + \beta_3(X3...) + \epsilon$ 

where:  $Y_1 = \alpha_0 + \beta_1(X1) + \beta_2(X2) + \beta_3(X3) + \beta_4(X4) + \beta_5(X5) + \beta_6(X6) + \beta_7(X7) + \beta_8(X8) + \beta_9(X9) + \epsilon$ 

where:  $Y_1$ : Binary variable. If the firm used the specified business advisory services,  $Y_{1}=2$ .

Otherwise,  $y_i = 1$ ;

 $\alpha_0$ : Constant;

Variables in the equation Main independent variable

X1: Gender

Control independent variables

X2: Owner age

X3: University education

X3: Prior experience before starting company

X4: Additional work positions outside the company

X5: Start-up capital as a proxy of size

X6: number of employees as a proxy of size

X6: Dummy variables for year 2005 or year 2008

X7: Industry affiliation

X8: Legal form of company: the less formalised legal form, 1: sole proprietorships are coded (10); 2: trading partnerships (20); 3: the most formalised legal form, limited liability

companies (30)

# Results of the binary logistic regression analyses

Table 4 presents the results of estimated stepwise binary logistic regression analysis. The table shows the effect of the independent variable on the dependent variables. The insignificant independent variables are excluded from the method. Column B coefficients estimate the relationship between the independent variables and the dependent variables. The larger the B value, the greater the effect of the independent variable on the dependent variable.

Table 4: The results of logistic regression analysis

									Hosmer and		
Family & Relatives	В		S.E.	Wald	Df	Sig.	Exp(B)	Omnibus Tests	Lemeshow Test	Wald test	Classific ation
Gender	-	0,61	0,09	43,98	1,00	0,000**	0,55	0,00	0,91	0,00	61,60
Constant		2,26	0,84	7,25	1,00	0,01**	9,62				
Tax Office	<u>B</u>		<u>S.E.</u>	Wald	<u>df</u>	Sig.	Exp(B)				
Gender	-	0,57	0,09	41,02	1,00	0,000**	0,56	0,09	0,99	0,00	59,03
Industry		0,02	0,01	4,53	1,00	0,03*	1,02				
Constant		0,87	0,81	1,15	1,00	0,28	2,39				
Accountants	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender		0,22	0,09	6,30	1,00	0,01*	1,25	0,00	0,91	0,00	65,31
Industry	-	0,02	0,01	7,00	1,00	0,01 *	0,98				
Constant		1,36	0,86	2,47	1,00	0,12	3,89				
Labour Office	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender	-	0,52	0,11	23,55	1,00	0,000**	0,59	0,00	0,94	0,00	82,67
Industry		0,02	0,01	5,64	1,00	0,02 *	1,02				
Constant	-	20,91	0,91	0,00	1,00	1,00	0,00				

Start-up guide on Internet or telephone											
help	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender	-	0,41	0,12	11,13	1,00	0,000**	0,66	0,00	0,557	0,00	88,18
Constant	-	1,33	0,21	40,88	1,00	0,00	0,26				
An industry org	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender	-	0,32	0,11	8,92	1,00	0,000**	0,73	0.08	9,77	0.000	81,64
Constant	-	1,48	1,12	1,73	1,00	0,19	0,23				
Start-up courses	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender	-	0,70	0,10	46,79	1,00	0,000**	0,50	0,00	11,36	846,98	80,21
Constant		0,02	1,11	0,00	1,00	0,99	1,02				
ALMI	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender	-	0,65	0,12	30,62	1,00	0,000**	0,52	0,00	0,43	0,00	86,05
Constant	-	3,71	1,40	7,03	1,00	0,01	0,02				
Enterprise Agency	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender	-	0,89	0,12	58,70	1,00	0,000**	0,41	0,01	0,96	0,00	89,83
Constant Office for business	-	0,85	1,21	0,49	1,00	0,48	0,43				
support offered by the Municipality	В		S.E.	Wald	df	Sig.	Exp(B)				
Gender	-	0,50	0,13	13,87	1,00	0,000**	0,61	0,01	0,96	0,00	89,83
Age		1,03	0,52	3,91	1,00	0,0490*	2,81				
Constant	-	2,71	1,25	4,68	1,00	0,03	0,07				

Notes:\*,\*\*, The coefficients are significant at the 5% or 1% level.

In the methods presented here, consistent with Hypothesis 1, the variable Gender has a significance influence on the dependent variable in terms of Family and relatives, Tax Office, Labour Office, Start-up courses, ALMI, Enterprise Agencies, Office for business support offered by the Municipality, Start-up guide on Internet or telephone help offered by The Swedish Agency for Economic Growth, Industry Organization, and Accountants where women use these sources, (except for Accountants) more than men (these are the same findings shown in Table 3).

Moreover, the second important independent variable (the use of business advisory services used in the start-up stage) is industry affiliation (Hypothesis 4), which influences three dependent variables: Tax Office, Accountants, and Labour Office. The independent variable of age influences only one dependent variable, Office for business support offered by the Municipality. The results on the influence of industry affiliation partly support Hypothesis 3.

Size (Hypothesis 3) is not supported. Like the Chi-square test, the Wald test examines the significance and the stability of results when testing whether a variable significantly contributes to the predicted outcome. The higher the Wald value, the better the result of the method. Our results from the Wald test confirm the robustness of the results' coefficients of Gender in the methods. Similarly, in terms of the method's significance, the conclusion is that with a significance value of ( $\rho = 0.000 > 0.01$ ), Gender is highly significant at a 5% level. The Exp (B) column provides the values that are the odds ratios (OR) for each independent variable. The odds ratio represents the change in the odds of being in one outcome category when the value of a predictor increases by one unit. Values above 1,0 indicate a positive relationship; values below 1.0 indicate a negative relationship.

The results in Table 4 also show that the omnibus test of method coefficients (i.e., significance P = 0.00) yields a significant value for the method, implying an adequate data fit. Therefore, the conclusion is that the impact of the determinants of Gender on the dependent variable (i.e., business advisory services) is significant. Moreover, we used the Hosmer-Lemeshow test to compare the proposed method with a perfect method that can correctly classify the firms in their groups. This test evaluates the Goodness of Fit for the method. The null hypothesis of no difference between the observed values and the values predicted by the method can be accepted if the result is greater than 0.05. In Table 4, all corresponding values are above the 0,05, which establishes that the Hosmer-Lemeshow results are significant because they indicate that the Goodness of Fit is at an acceptable level.

The accuracy classification in Table 4 shows how well group membership matches predicted observed results. The overall accuracy ratio of the methods varies between 59% (Tax Office) and 90% (Enterprise Agency and Office for business support offered by the Municipality). The results suggest generally the relatively good classification power of the methods.

Overall, the results show that the method has three significant independent variables with an acceptable level of explanation.

## **Conclusions**

Results of hypothesis testing

We tested our four hypotheses about the use of business advisory services by women and men in this study against different variables. We tested our data statistically with various methods and tests (standard deviation, ANOVA, Levene, Welch, Wald test and logistic regression analysis). In this section we discuss our conclusions.

There are differences between women and men company owners as far as the use of business advisory services (confirmation of Hypothesis 1). Women use such services to a greater extent than men. Women also use different services than men.

The women owners had more prior business experience than the men before start-up although education levels were equal for the two groups. However, the women owners sought more business advice. The results indicate that only Gender has a stable effect on demand for business advisory services by start-ups and young companies for ten of the 21 types of business advisory sources. With the exception of one variable (the impact of age on the demand for business advisory from Office for business support offered by the Municipality), we are unable to draw any conclusions about the impact of other personal characteristics on demand for business advisory services (only partial confirmation of Hypothesis 2).

It was found that the men owners had more start-up capital (partial confirmation of Hypothesis 2) that could provide a cushion against early losses. This suggests that the men owners had less risk when they started their companies. In this case, women take a greater risk at start-up.

We found differences related to company organization. More men founded limited liability companies than women, and more women founded more sole proprietorships than men. Because more risk (personal liability for debt) is associated with sole proprietorships, women owners may seek more business advisory services in order to reduce this risk. Hypothesis 2 was partly confirmed.

Looking at the number of employees, the men employed more people than the women. This suggests that the men were greater risk-takers because of the higher production costs and the greater responsibility for the employees (partial confirmation of Hypotheses 3 and 4).

Another factor related to the difference in the number of employees is the nature of the businesses. In this study, 81% of the women owners and 60% of the men owners were involved in the service sector, which is associated with lower start-up costs. There is perhaps less risk in starting a business that employs fewer people and requires less initial investment (partial confirmation of Hypotheses 3 and 4)

Our contribution is also theoretical. In our literature study, we found no studies related to risk aversion by men and women that took a demand perspective on business advice provided at the start-up stage.

Our data for this study are the 2763 telephone interviews with women and men owners of startups and young companies in four urban and rural areas in Sweden (including the second and third largest cities). This breadth supports the validity of our conclusions for the Swedish economic environment.

## Discussion

We found that women use business advisory services more than men for start-ups and young companies (confirming Hypothesis 1). Of the 21 sources for advice (both public and private), women use ten sources to a greater extent than men; men use one source more than women; and women and men use ten sources equally. Our study supports Kim and Sherraden's (2014) study in which they claim women tend to have less access to networks (weak ties). A possible conclusion is that women use outside support to reduce their risks at start-up and to access information thorough network connections,

Consistent with findings by Kim and Sherraden (2014), we also found that women use different business advisory services than men. For instance, women use advice from Family and relatives, Tax Office, Labour Office, Start-up courses, ALMI (National support for companies at all stages), Enterprise Agencies, Office for business support offered by the Municipality, Start-up guides on Internet, and an industry organisation. Men mainly take advice from accountants. There were no differences in the use of sources such as Friends, The Export Counsel, or Banks. We found no differences in the use from Company owner you know of.

This finding is of interest because it is often argued that men are in a wider network of other business owners than women (see Wigren, 2003, for a discussion about male networks in a particular Swedish locality). This finding does not confirm the claim that role models for women are lacking (Latu et al., 2013; Young et al., 2013).

Our findings about prior business experience challenge earlier findings by Roffey et al. (1996) and Stranger (2004). Although the women owners in our study had more prior business experience before start-up than the men owners, they sought more business advice. It seems contradictory that the women owners, who generally start businesses that are more service-oriented and less complex, require more support. One explanation may be the higher level of women's risk aversion in financial decision-making. Our findings confirm the results of earlier studies (e.g., Powell and Ansic, 1997; Kepler and Shane, 2007; Charness and Gneezy, 2011). Women may view business advisory services from knowledgeable and experienced sources as a way to reduce their overall business risk. The finding also supports business advisory services as a way to expand the network and to gain access to other types of information. Hypothesis 2 was only partly confirmed; we were unable to draw firm conclusions about women's and men's use of business advisory services based on their education levels and prior work experience.

The findings by Van Gelderen et al. (2005) are not fully confirmed because, given that the companies in our research were all still in an early life cycle, we cannot evaluate their success other than on a very short-term basis. Our finding that men owners have more start-up capital may suggest that men actually take less risk when investing in a start-up because they have more capital available. This finding confirms Charness and Gneezy's (2011) study. Hypothesis 2 was partly confirmed because we found evidence that women, with less start-up capital, actually take a greater risk than men.

The choice of legal entity is an important decision in founding a business. The main issue relates to the responsibility for the company's liabilities. Because there is no legal distinction between owner and the entity in a sole proprietorship, the owner is responsible for the business debts. However, in a limited liability company, the company, not the owner, takes responsibility for the business debts. Yet of the companies in our study, 70% were sole proprietorships. Of these

sole proprietorships, 657 were founded by women and 1262 were founded by men. Given the personal risk associated with a sole proprietorship, the women owners may have sought more business advisory services as a way to reduce that legal risk (partial confirmation of Hypothesis 2).

Building on earlier findings by Granovetter (2005), business advisory services may be a means to gain access to other ties that provide women entrepreneurs with unique information not available to them in their existing networks. In this way, business advisory services are important to women because their use is a way to lower the risk associated with their personal financial situation.

With reference to NUTEK (2003) and Tillmar (2007), we also found that many women start their companies in the service sector, which is associated with lower start-up costs (partly confirming Hypotheses 3 and 4). This result can be analysed differently. Women may have less need for start-up capital because they start service industry companies that require less start-up capital. Alternatively, it may mean that women choose the service industry because they have limited access to start-up capital. It is also important to recognise that women are overrepresented in the service sector (see Diekman et al., 2010; Jacobs and Eccles, 1992; Jussim and Eccles, 1992). These are speculations; our research findings do not permit definitive conclusions.

As far as we know, our study is the first to take a gender perspective in the examination of the demand for business advisory services among start-ups and young companies. We conclude that providers of business advisory services should recognise women's greater need to reduce risk. Therefore, such providers should be sensitive to the use of business advisory services as a way to reduce such risk. Especially considering women owners' lower start-up capital (which may explain their need for more business advisory services), it is desirable to find ways to reduce their risk at start-up. Because knowledge about the behaviour of nascent entrepreneurs is important for policy makers at the macro-economic level (Van Gelderen et al., 2005), we support policy initiatives in this area. Such initiatives should be aimed at risk reduction for start-ups, particularly for female-owned companies so that more women will choose to become

entrepreneurs. In this respect, our study builds on other studies (e.g., Powell and Ansic, 1997; Watson and Robinson, 2003).

We offer some additional comments about the rather commonly held belief that women are more risk-averse than men. Our findings indicate that certain stereotypes underpin this idea. Because women are not perceived as the "norm" (i.e., they are only complements to male entrepreneurs; Nilsson, 1997; Holmquist and Sundin, 2002; Lindström, 2010), they may be discouraged from engaging in entrepreneurial activities. They may be more attracted to activities where they think they can succeed rather than to new, and more daring, activities (see Eccles, 1994, 2010; Jacobs and Eccles, 1992: Jussim and Eccles, 1992; Diekman et al., 2010).

In general, the taken-for-granted assumption is that men take more risks than women. However, examination of risk aversion, from a female perspective, has positive implications. Why rush into things you are not prepared for? It seems preferable to make careful investigations of the possible results of future actions, especially actions related to personal economy. One way to reduce the risk in a particular situation is to gain access to information from other sources — in other words use of a network. Because women have less access to networks, business advisory services are important in helping them reduce their risks.

#### Limitations

This study, despite its large and comprehensive sample of female- and male-owned companies in urban and rural areas in Sweden, may not be representative of companies in other countries or other socio-economic contexts. Moreover, our sample did not include companies from Sweden's largest city, Stockholm. Other limitations relate to the variables. In our study we controlled for nine variables. However, we were unable to include financial variables such as turnover or profit. Because our study consisted of start-ups and young companies, significant financial data were not yet available. We lack a variable that measures risk at company start-up.

#### Future research

We found that the demand for business advisory services at start-up is greater among women owners than men owners. We also addressed risk aversion among women and men. We concluded that women require more business advisory services in order to reduce risk at start-up and to access information using these services as networks. For future research, it would be interesting to study if the demand for such services among women and men differs or changes in later stages in the life cycle of the firm. It is possible that women have different attitudes about business advisory services and risk as their companies expand into exports, employ more people, develop new products/services, etc. Moreover, women may expand their networks as they become established as entrepreneurs.

Future studies need to use variables for innovation and risk-taking at start-up. We also suggest that more research be conducted on the relationship of gender to the use of business advisory services in other countries. Researchers may also investigate this issue by studying the consequences if women's demand for business advisory services is not met, and by proposing actions to meet this demand.

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