
Self-Awareness of Mastery and Improvability of Entrepreneurial Competence in Small Businesses in the Agrifood Sector

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An important assumption of entrepreneurial competence is that (at least part of) it can be learned and developed. However, human resources development (HRD) practices aimed at further strengthening and developing small-business owner–managers' entrepreneurial competence are complex and underdeveloped. A multisource assessment of owner–managers' entrepreneurial competence in a well-defined sector was conducted to provide an answer to the research question: How do self-assessments about mastery and improvability of entrepreneurial competence made by owner–managers relate to the same assessments made by significant others in the small-business work environment? The data show that owner–managers rate their own mastery of entrepreneurial competence significantly lower than internal assessors in their work environment do. Furthermore, the assessors indicate many possible areas for improvement of owner–managers' entrepreneurial competence. Nonetheless, mastery and improvability patterns differ considerably between the assessors. Multisource assessments as adopted in this study can help owner–managers raise their self-awareness, and consequently help them bypass some of their often costly trial-and-error learning.

Small businesses, having less than 50 occupied persons, are important contributors to employment and the economy of the European Union. Together they are responsible for more than 50% of the total employment and 40% of the total added value (which is as much as large firms). Panel data from the European Union show that small businesses have contributed significantly to the

growth of employment over the last 5 years (Audretsch, Van der Horst, Kwaak, & Thurik, 2009). Even though employment and economic development are highly dependent on small businesses, it has been found that owner–managers of small businesses are often more concerned about survival and day-to-day problem solving than about long-term issues such as innovation, growth, or strategic renewal (Gray, 2002). This short-term focus makes small businesses vulnerable, especially over time, when internal or external environments change. It can lead to situations in which owner–managers are unable to anticipate competition, new markets, new demands, new rules, and regulations.

Innovation, growth, and strategic renewal require the identification and pursuit of (new) business opportunities (Sharma & Chrisman, 1999). It is suggested in small-business and entrepreneurship literature that these processes are enabled by entrepreneurial competence (Chandler & Jansen, 1992; Man, Lau, & Chan, 2002; Ucbasaran, Westhead, & Wright, 2008). Entrepreneurial competence refers to new pathways for achieving innovation-related business targets on the one hand and the set of knowledge, skills, and attitudes of owner–managers to identify and pursue these opportunities on the other hand. Innovation-related targets can be defined in terms of growth and measures that are needed to establish this, but can also include the development of new products, the exploration of new client groups, expansion in new markets, making business processes more sustainable, or delivering more responsible accounting and rewarding practices.

An important aspect of entrepreneurial competence is the notion that (part of) these competencies are assumed to be subject to learning and development (Baron & Ensley, 2006; Detienne & Chandler, 2004). Many scholars argue that small businesses are potentially rich settings in terms of learning and development (Cope & Watts, 2000; Ehrich & Billett, 2004). However, literature shows that human resource development (HRD) practices aimed at further strengthening and developing the strategic, entrepreneurial role of owner–managers are complex and underdeveloped (Storey, 2004). Small-business owner–managers hardly participate in formal learning activities, have limited time and financial slack at their disposal, have no direct access to peers or role models within the organization, and depend heavily on external contacts and available support and guidance in their work-related learning (Jones & Macpherson, 2006; Jones, Macpherson, Thorpe, & Ghecham, 2007; Kotey & Folker, 2007; Lans, Biemans, Verstege, & Mulder, 2008; Lepoutre & Heene, 2006).

In this article we explore two important aspects that reflect the nature of entrepreneurial learning in small businesses and influence the decision of owner–managers of small businesses to develop their entrepreneurial competence further, namely, self-awareness of their current competence profile and self-awareness of the improvability of these competencies. Research addressing self-awareness of competence has been carried out in large organizations and nonbusiness settings (e.g., Dochy, Segers, & Sluijsmans, 1999; Maurer, Wrenn, Pierce, Tross, & Collins, 2003; Ostroff, Atwater, & Feinberg, 2004),

but there are limited data on these concepts in relation to owner–managers of existing small businesses (Murphy & Young, 1996) (except the work that has been done on entrepreneurial self-efficacy, a construct that is conceptually related, e.g., Chen, Greene, & Crick, 1998).

An appealing sector for studying entrepreneurial competence in small businesses is the Dutch agrifood sector. With a 9.4% share of the national gross added value and accounting for 665,000 labor years, the agrifood sector has an important position in the economy of the Netherlands (Ministry of Agriculture, Nature and Food Quality, 2008). After the United States and before France, the Netherlands was the second-largest exporter of agricultural products in 2006. The animal and plant production sectors are dominated by around 75,000 small businesses that operate under highly comparable conditions with respect to climate, laws and regulations, financial institutions, markets, and availability of labor and technology. In the last few decades, primary agricultural production in the Netherlands has been significantly influenced by a reduced protection of agricultural markets, changing consumer habits, enhanced environmental regulations, new requirements for product quality, chain management, food safety, sustainability, and so on. Owner–managers of these firms increasingly require entrepreneurial competence to deal with these developments and to identify and pursue new business opportunities. Strengthening and developing entrepreneurial competence thus really makes a difference in this sector (Bergevoet, 2005; De Lauwere, 2005). This is a major challenge for HRD professionals active in sector development, small-business support, and education and training of small-business owner–managers.

Self-awareness of mastery and improvability of entrepreneurial competence are explored in this study by means of a multisource assessment, that is, an assessment in which the subject is rated by multiple individuals with whom the subject has varying relationships (Craig & Hannum, 2006). Multisource assessments of competence are quite rare in this setting, not only in small-business practice, but also as a method in small-business research (Hoehn, Brush, & Baron, 2002). This contribution will start by briefly describing the core concepts, as they are central to this study, which will lead to the specific research questions, the applied methods, results, discussion, and conclusion.

Entrepreneurial Competence in Relation to Small Businesses

Traditionally, entrepreneurship research focuses on start-ups, in which the start-up process is seen as the entrepreneurial act. Entrepreneurial competence and its importance were approached from the perspective of studying innate traits of those who started a company. Examples of such traits included internal locus of control, risk-taking propensity, and need for achievement (for a thorough meta-analysis see Rauch & Frese, 2007). Despite the many efforts that have been put into defining entrepreneurial competence as an aggregate

of general traits, no consensus exists on any exclusive set of traits. Not surprisingly, in the beginning of the 1990s approaches like these were criticized for paying too little attention to the process of the creation of the organization, and the tasks and behaviors involved in enabling the firm to come into existence and blossom (Gartner, 1989). More recent approaches on entrepreneurial competence in entrepreneurship literature focus on behavioral and cognitive aspects of the entrepreneurial individual (Dyer, Gregersen, & Christensen, 2008; Gaglio & Katz, 2001). These approaches discern themselves from trait approaches in that they focus on the entrepreneurial task (i.e., the identification and pursuit of opportunities aiming toward new ventures, innovation, or strategic renewal), as well as the behavior(s) supporting this area of work (e.g., identifying customer needs, scanning the environment, formulating strategies, bringing networks together, taking initiative, introducing diversity, and collaboration). What is more, entrepreneurial competence and its relation to business performance seem to depend on contexts. For example, Baron and Markman (2003) as well as Man and Lau (2005) found that the importance and impact of certain entrepreneurial competencies (e.g., social and strategic competencies) depended on the specific sector they studied.

The change of viewing entrepreneurial competence from a stable trait perspective toward embracing more task-specific and context-sensitive operationalizations of competence is not unique for entrepreneurship and small-business literature. They mark a general development in educational and HRD literature to more comprehensive conceptualizations of competence in order to contrast them clearly with disintegrative and reductionist models of competence—approaches to competence popular in the previous century (Biemans et al., 2009; Capaldo, Iandoli, & Zollo, 2006; Cheetham & Chivers, 1996; Deist & Winterton, 2005; Moore, Cheng, & Dainty, 2002; Sandberg, 2000). Moreover, working and learning are inextricably linked: Competence is subject to continuous improvement and lifelong learning (Boud & Falchikov, 2006). Sometimes competence development is intentional, but most of the time it is linked to performing tasks and activities on the job—tasks and activities that are embedded in a particular social practice (Billett, 2001; Boud, 2000; Eraut, 2004; Hager, 2004; Lans et al., 2008; Tynjälä, 2008).

Assessments of competence are extensively carried out in large organizations (e.g., in 360-degree feedback performance appraisals) and in educational settings (self-, peer-, and coassessment). Both fields share the general belief that participating in assessment processes increases the learner's self-awareness, which has a positive effect on all sorts of learning-related behaviors. Self-awareness in competence assessments can be defined as "the extent to which the self- and other-raters agree on the level of competence the focal individual (or 'target') attains," or "the extent to which individuals agree on the relative strengths and weaknesses of the target individual" (Fletcher & Bailey, 2003, pp. 397, 398). Studies on workers in large organizations report that lack of self-awareness leads to ignorance of criticism, overlooking of failures (for instance,

mistakes), lack of feedback-seeking behavior, less confidence, compensation behavior, and putting too much energy into activities that are not critical for a specific function or perhaps difficult to develop (Atwater, Ostroff, Yammarino, & Fleenor, 1998; Ehrlinger, Johnson, Banner, Dunning, & Kruger, 2008; Jansen & Vloeberghs, 1999). Similarly, studies carried out among students in higher education report that the use of self-assessments in relation to assessments of others has positive effects on confidence, awareness, reflection behavior, satisfaction, effectiveness of learning approaches, taking responsibility for learning, and stimulating a learning climate (Dochy et al., 1999).

Entrepreneurship and small-business literature also indirectly suggest that lack of self-awareness can impede small-business development. Although one might argue that it is beneficial for entrepreneurs to have a positive self-image, to have high expectations, and to be optimistic, Hambrick and Crozier (1985) observe that extremely fast-growing firms led by executives who are not aware of their limitations, and therefore do not change their behavior or delegate part of their tasks to someone else, often end up with low performance or even in bankruptcy. Also, Meyer and Dean (1990) state that founders repeatedly blindly rely on their own, often narrow, technical skills, whereas they actually should develop (or hire someone who has) additional abilities. In addition, also more recent literature suggest that (too) high self-efficacy (defined as the degree to which people perceive themselves as having the ability to perform the entrepreneurial role) is not always beneficial, and in fact may be even negative under some conditions (Hmieleski & Baron, 2008).

Studies on assessments of entrepreneurial competence of owner-managers in existing small businesses are scarce in comparison to the attention paid to new or nascent venture entrepreneurs (Rae, 2007). Previous research on entrepreneurial competence in small businesses typically focuses on mapping all sorts of relevant competencies required at different stages in a variety of small-business sectors (Collins, Smith, & Hannon, 2006; Man, Lau, & Chan, 2002; Nuthall, 2006). Other studies have investigated the relationship between self-assessed entrepreneurial competencies of owner-managers and business success (Baron & Markman, 2003; Chandler & Jansen, 1992; Ucbasaran et al., 2008). Only Hoehn et al. (2002) and Mulder, Lans, Verstegen, Biemans, and Meijer (2007) investigated the assessment of entrepreneurial competence from more than one perspective. The Mulder et al. (2007) study showed that owner-managers of small businesses seem to score the mastery of their competence lower compared with the scores their coworkers and advisers gave them. Nevertheless, they drew from a very small sample, and their data did not include any detailed information about whether there were differences in underlying competencies. Contrary to the Mulder et al. (2007) study, Hoehn et al. (2002) showed a typical self-serving bias among a sample of serial entrepreneurs: the entrepreneurs were more positive about their own persuasion and social skills than the experts were. However, ratings were not consistent among all competencies; for instance, emotional expressiveness did not differ

significantly between the entrepreneur and the outside expert. Moreover, their sample included entrepreneurs from a wide range of sectors and backgrounds. Furthermore, the other assessors were psychologist or MBA students and not people from their work environment.

None of these studies explored whether owner–managers themselves believe it is possible to improve on these competencies, that is, whether they can be learned. Besides the importance of self-awareness of mastery, self-motivation, and drive, studies on adults in other organizational contexts have shown that learning-oriented behavior is also influenced by perceptions of individuals of whether it is possible to develop and improve specific competencies (Martocchio, 1994). Ideas about flexibility of knowledge, skills, and abilities have always been associated with theories on personal motivation and cognitive processes, such as the conception of ability with which people approach complex activities. What seems to be clear from the diversity of concepts used in the learning and development literature is that people differ in their perceptions on how improvable profession-relevant characteristics are (Dweck & Leggett, 1988; Maurer, 2002; Maurer et al., 2003). From an entrepreneurial competence perspective this is a salient aspect, considering the persistent discussion on whether entrepreneurs are born or made (Henry, Hill, & Leitch, 2005).

In summary, given the importance of entrepreneurial competence attributed to small-business success, it is surprising that empirical studies that investigated entrepreneurial competence from the perspective of self-awareness of mastery and improvability are scarce.

Conceptual Framework

There is no consensus on any list of behaviors or competencies associated with the entrepreneurial role (Gibb, 2002). Unlike the studies of managers in large organizations, there has been very little systematic research on entrepreneurial competence in small businesses. This is probably due to the multitude of definitions that can be found for the concepts *entrepreneur* and *competence*. From the perspective of small businesses, as well as the shift toward more comprehensive notions of competence, the framework as suggested by Man et al. (2002) provides a good starting point. Man et al. (2002) explicitly connect an entrepreneurial orientation of the small business to individual competence with a definition of competence that comes close to our definition. On the basis of an extensive literature review, they assert that entrepreneurial competence consists of six competence domains, namely, opportunity, relationship, conceptual, organizing, strategic, and commitment competencies. Because these domains are still rather broad, based on previous research several underlying competencies that meet the Man et al. (2002) definition were formulated (Lans, Bergevoet, Mulder, & Van Woerkum, 2005; Mulder et al., 2007). These competencies can be regarded as underlying competencies: the clusters of knowledge, skills, and attitudes that support an area of work (Moore et al.,

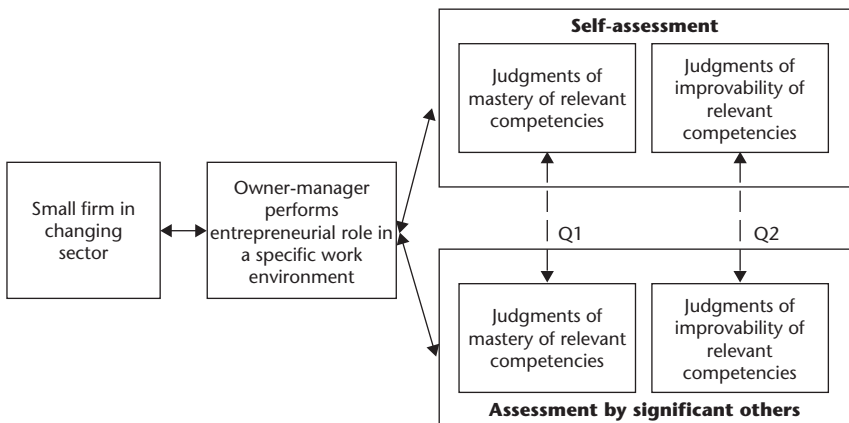
2002). For example, a competency necessary for the entrepreneurial role is networking—the ability to develop and manage contacts and relationships with (internal) customers, suppliers, and other stakeholders actively (see the Appendix). As can be seen from this example, this competency is not formulated in terms of directly observable behavior. So, what is assessed is (self-) perception of the owner–manager’s ability (which includes knowledge, skills, and attitudes) to perform a certain task or activity related to the entrepreneurial role. The Appendix presents an overview of the competencies, which were selected based on the literature (see Lans, Versteegen, & Mulder, forthcoming, for a more thorough analysis of the Man et al., 2002, framework).

The discussed shift in entrepreneurship literature from viewing entrepreneurship as a set of innate traits toward embracing new notions of competence, and the outlined importance of self-awareness in small businesses lead us to formulate two exploratory research questions:

1. How do owner–managers of small businesses assess their own entrepreneurial competence, and how do these assessments relate to the perceptions of significant others in the work environment?
2. How do owner–managers of small businesses assess the improvability of their entrepreneurial competence themselves, and how do these assessments relate to the perceptions of significant others in the work environment?

Figure 1 summarizes how entrepreneurial competence in small businesses relates specifically to the formulated two research questions.

Figure 1. Relation Between the Postulated Research Questions (Q1 and Q2) and Entrepreneurial Competence in Small Businesses



Method

The adopted method to investigate the formulated research questions is further elaborated in the subsequent sections.

Participants and Setting. The research population consisted of 40 owner–managers, who were selected from a specific Dutch small-business sector, namely, horticulture. This was a purposeful selection, because entrepreneurial competence and its development have become increasingly important in this particular sector (Mulder et al., 2007). This importance is reflected in horticultural trends, such as fast growth, innovations in logistics, innovations in energy-saving technology, production and harvesting techniques, and internationalization. Only active small businesses, in terms of innovation, growth, or strategic renewal, in this sector were recruited for this study. This selection was based on the appraisal of experts from the sector.

Data Collection. Assessment procedures were designed based on the theoretical considerations outlined above and the categorization of entrepreneurial competence for small businesses described by Man et al. (2002). The procedures consisted of (a) a self-assessment, (b) an internal assessment, and (c) an external assessment. One external assessor and one internal assessor were selected by each owner–manager to participate in the study. The internal assessor was someone within the business (in most cases a direct employee or member of the management team) who works closely with the owner–manager. The external assessor was someone from outside the firm who has a professional understanding of the owner–manager’s business activities. External assessors were in most cases business consultants or advisers who frequently (several times a year) meet with the owner–managers to discuss selected strategies. The owner–managers were instructed to select objective assessors, and all participants were encouraged to be as honest as possible in answering the study questions.

The self-assessment questionnaire consisted of two parts. In the first part the owner–managers had to answer several questions about themselves and their businesses (age, gender, education, work experience, size of the business). In the second part the owner–managers had to assess themselves on the 20 underlying competencies mentioned in the Appendix. For each of the 20 competencies the respondents were instructed to indicate to what extent they have mastered it (*mastery*) and to what extent they think they can develop it further over the coming 5 years (*improvability*). The internal and external assessment questionnaires asked the respondents to assess the owner–manager on the same set of competencies. Again, two questions were asked about each of the 20 competencies: To what extent do the assessors think the owner–manager has mastered it and to what extent do they think the owner–manager will be able to develop it over the coming 5 years. All ratings were made on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*to a high extent*).

The self-assessment questionnaires were distributed via ordinary mail. The internal and external assessment questionnaires were distributed directly from the owner–manager to the selected assessors. The owner–managers had to collect all the assessments and return them by mail to the research team. Because external assessors were not always directly available, data collection took place between fall 2005 and spring 2006.

Data Analysis. To calculate the similarities between the assessments of the owner–managers and those of the other assessors, two commonly used indices for self-awareness were calculated (Bailey & Fletcher, 2002; Edwards, 1994; Warr & Bourne, 1999). First, congruence- r , which is the correlation between the self-assessment and other ratings, was computed by Spearman's correlation coefficient. Congruence- r is a measure of the extent to which assessors agree on the relative strengths and weaknesses of the owner–managers (i.e., do the different patterns correlate?). If the correlation is high, there is strong agreement about the relative strengths and weaknesses; if it is low, there is little agreement. Although correlation reveals something about the coherence between the self-assessment and other scores, it does not say anything about whether the absolute difference between self-assessment and other scores is large or small (Warr & Bourne, 1999). Therefore, a second measure was calculated, congruence- d , which is the standardized difference between two profiles' means. It is calculated by dividing the difference between two ratings by the pooled standard deviation of those ratings (Bailey & Fletcher, 2002). This measure reveals the extent to which all three assessors agree on the level of competence of the owner–manager. If congruence- d is low, there is little difference; thus there is strong agreement about the absolute level of competence. If it is high, there is little agreement.

The scores the owner–managers gave in response to the second question (whether they saw possibilities to develop a particular competence further) were also compared with the ratings the internal and external assessors gave for this same question (congruence- r and - d).

Results

Data for 36 of the 40 owner–managers were suitable for the analysis (108 questionnaires in total). Three cases could not be used because of incomplete assessments; either the complete internal (two cases) or external assessments (one case) were missing. In one case the interviewed manager appeared to run a firm that was part of a portfolio business construction that in total employed 420 full-time workers. Although there are different definitions of small businesses (ranging from fewer than 50 to fewer than 100 employees), this firm no longer fit our definition of an independent small business.

On the average the selected firms employed 7.3 full-time equivalents and had expanded their firm less than 5 years ago. The average age of the

owner–managers was 39 years, with 17 years of work experience as owner–manager. They were all men. More than half of the owner–managers (55%) had work experience outside the sector of their current businesses. About half of the participants (53%) had an intermediate vocational education background, a quarter (28%) lower vocational education or primary school, and one-fifth (19%) higher vocational or university education.

Perceptions of Mastery Scores. In relation to the first research question, Table 1 presents the average mastery assessment scores. The owner–managers indicate that organizing, problem analysis, and leadership are competencies that they have mastered to a high extent, whereas personnel management and international orientation are only mastered to low extent. The internal and external assessors also gave a high mastery score to the competency organizing, but indicate that result orientation is even better developed. International

Table 1. Mastery Scores Including Standard Deviation for the Different Assessors

<i>Competencies</i>	<i>Self</i>	<i>Internal</i>	<i>External</i>
Organizing	3.67 (0.68)	3.89 (0.63)	3.81 (0.79)
Problem analysis	3.61 (0.87)	3.66 (0.64)	3.47 (0.74)
Leadership	3.58 (0.77)	3.75 (0.91)	3.67 (0.89)
Conceptual thinking	3.51 (0.66)	3.67 (0.68)	3.44 (0.77)
Persuasiveness	3.51 (0.82)	3.69 (0.83)	3.49 (0.85)
Communication	3.50 (0.70)	3.56 (0.77)	3.42 (1.02)
Strategic thinking	3.50 (0.85)	3.60 (0.81)	3.36 (0.90)
Planning	3.49 (0.82)	3.57 (0.74)	3.56 (0.77)
Result orientation	3.46 (0.84)	4.00 (0.73)	3.89 (0.92)
Negotiating	3.39 (0.96)	3.60 (0.55)	3.58 (0.84)
Teamwork	3.34 (0.94)	3.60 (0.81)	3.56 (0.94)
Market orientation	3.31 (0.79)	3.81 (0.67)	3.53 (0.81)
Networking	3.31 (0.71)	3.50 (0.88)	3.67 (0.96)
Judgment	3.28 (0.85)	3.40 (0.74)	3.49 (0.66)
Vision	3.24 (0.94)	3.51 (0.78)	3.33 (0.93)
General awareness	3.23 (1.03)	3.54 (0.89)	3.67 (0.76)
Management control	3.15 (0.74)	3.60 (0.65)	3.33 (0.89)
Value clarification	3.00 (1.01)	3.54 (0.78)	3.39 (1.08)
Personnel management	2.79 (0.98)	3.03 (0.83)	2.94 (0.92)
International orientation	2.39 (1.20)	3.32 (0.81)	3.03 (1.06)
Overall entrepreneurial competence*	3.31 _a (0.41)	3.60 _b (0.40)	3.48 _{ab} (0.46)

Note: The competencies are sorted on the self-ratings (high–low). Judgments were made on 5-point scales (1 = *not at all*; 5 = *to a high extent*).

*Means in this same row that do not share subscripts differ at $p < 0.05$ in the Tukey honestly significant difference comparison.

orientation and personnel management are also rated by the internal and external assessors as mastered to a low extent. The overall competence scores suggest that the owner–managers underestimate their entrepreneurial competence: The absolute overall scores of the self-assessments are lower than the absolute overall scores of the internal and external assessments. This underestimation is significant for the difference between the self-assessment scores and the internal assessors’ scores.

Comparing the self-assessment scores with the other scores (Table 2) reveals that overall the correlations (congruence-*r*) between self- and internal assessment

Table 2. Intercorrelations (Congruence-*r*) and Standardized Differences (Congruence-*d*) of the Mastery Scores for the Different Assessors

Competencies	Self–Int		Self–Ext		Int–Ext	
	<i>r</i> _s	<i>d</i>	<i>r</i> _s	<i>d</i>	<i>r</i> _s	<i>d</i>
Organizing	0.19	0.23	0.11	0.14	−0.09	0.08
Problem analysis	0.47**	0.04	0.20	0.13	−0.06	0.19
Leadership	0.40*	0.15	0.14	0.08	0.13	0.07
Conceptual thinking	0.21	0.16	0.01	0.07	−0.07	0.22
Persuasiveness	0.10	0.16	0.43**	0.03	−0.03	0.18
Communication	0.05	0.05	0.24	0.07	0.10	0.12
Strategic thinking	0.19	0.09	0.43**	0.13	0.11	0.22
Planning	0.07	0.08	0.06	0.07	0.15	0.02
Result orientation	0.09	0.51**	0.31	0.39*	0.00	0.10
Negotiating	−0.06	0.20	0.15	0.17	0.08	0.02
Teamwork	0.30	0.23	0.29	0.18	−0.20	0.04
Market orientation	0.21	0.49**	0.13	0.21	0.18	0.27
Networking	−0.12	0.18	0.35*	0.33	−0.02	0.15
Judgment	0.28	0.12	0.15	0.20	0.00	0.09
Vision	0.12	0.25	0.24	0.08	0.24	0.16
General awareness	0.64**	0.27	0.28	0.39*	0.19	0.11
Management control	0.02	0.45**	0.09	0.17	0.00	0.25
Value clarification	0.16	0.48*	0.23	0.32	0.14	0.13
Personnel management	0.31	0.21	0.28	0.13	0.26	0.08
International orientation	0.07	0.78***	0.47**	0.51*	0.02	0.25
Overall entrepreneurial competence	0.30	0.61**	0.36*	0.40	0.08	0.46

Note: The competencies are sorted on the self-ratings (high–low). Judgments were made on 5-point scales (1 = not at all; 5 = to a high extent). Self = self-assessment; Int = internal assessment; Ext = external assessment.

**p* < 0.05.

***p* < 0.01.

****p* < 0.001.

scores and between self- and external assessment scores are small to medium, respectively, $r_s = 0.30$ and $r_s = 0.36$. With an alpha level of 0.05 the self-internal correlation is nonsignificant ($p = 0.08$), whereas the self-external correlation is significant ($p = 0.03$). No significant correlation was found between the internal and external assessment scores ($r_s = 0.08$). The overall differences between the ratings are highest for the self- and internal assessment scores ($d = 0.61$) and lowest for the self- and external assessment scores ($d = 0.40$). The self-internal difference is highly significant, which confirms the observation made earlier from Table 1 that the absolute overall scores of the self-assessments are significantly lower than the absolute overall scores of the internal assessments.

Table 2 reveals in more detail that correlation patterns differ between the self-internal and self-external sets of scores for the 20 underlying competencies. Significant correlations for the self-internal scores are found for the competencies problem analysis, leadership, and general awareness. For the self-external scores significant correlations are found for the competencies persuasiveness, strategic thinking, networking, and international orientation. The owner-managers underestimated themselves significantly (reflected by the highest d scores) in relation to the internal assessors' estimation for the competencies result orientation, market orientation, management control, value clarification, and international orientation (all these differences are significant). In relation to the external assessors' scores, the owner-managers underestimated themselves significantly for the competencies result orientation, general awareness, and international orientation (all differences on these competencies are significant).

Perceived Improvability Scores. Related to the second research question, the owner-managers as well as their internal and external assessors saw areas for improvement: They indicated that aspects of entrepreneurial competence were improvable to some extent (Table 3). The competencies networking and leadership were identified as the most promising areas for individual improvement from the viewpoint of the owner-managers. Value clarification and international orientation were perceived as the least improvable for the coming 5 years. According to the internal assessors, there is most room for improvement for typical internally oriented owner-managers' competencies (in the areas of communication and leadership), whereas the external assessors see greater opportunities for developing typical externally oriented owner-managers' competencies (negotiation and strategic thinking).

Overall, the external assessors seem to be the most optimistic about the improbability of the owner-managers' entrepreneurial competence. Nonetheless, none of the differences between the overall assessments of improbability of the owner-managers and those of the other assessors were found to be significant.

Furthermore, the congruence- r scores for entrepreneurial competence overall show that there is a significant level of agreement between what the owner-managers and the internal assessors saw as improvable (Table 4). There is less agreement, however, between the owner-managers' and the external assessors'

Table 3. Improvability Scores Including Standard Deviation for the Different Assessors

<i>Competencies</i>	<i>Self</i>	<i>Internal</i>	<i>External</i>
Networking	3.69 (0.76)	3.39 (0.99)	3.69 (0.98)
Leadership	3.66 (1.16)	3.49 (1.04)	3.61 (0.96)
Strategic thinking	3.60 (0.85)	3.20 (1.05)	3.75 (0.77)
Communication	3.59 (0.99)	3.51 (0.92)	3.64 (0.99)
Planning	3.57 (1.04)	3.11 (1.02)	3.72 (0.85)
Personnel management	3.51 (0.92)	3.15 (1.05)	3.42 (0.94)
Market orientation	3.46 (0.82)	3.39 (0.90)	3.75 (1.02)
Vision	3.46 (0.98)	3.31 (1.11)	3.53 (0.81)
Result orientation	3.43 (0.95)	3.29 (1.06)	3.69 (1.06)
Negotiating	3.37 (0.77)	3.46 (0.92)	3.78 (0.72)
Organizing	3.37 (1.03)	3.21 (1.15)	3.63 (0.91)
Persuasiveness	3.29 (1.10)	3.26 (1.02)	3.64 (0.83)
Judgment	3.29 (0.83)	3.17 (0.89)	3.60 (0.69)
Conceptual thinking	3.26 (0.90)	3.15 (0.86)	3.47 (0.91)
Problem analysis	3.23 (1.11)	3.24 (1.09)	3.61 (0.77)
Management control	3.23 (0.88)	3.14 (0.94)	3.58 (0.73)
Teamwork	3.04 (0.82)	3.23 (0.84)	3.47 (0.91)
General awareness	3.00 (1.03)	3.17 (0.89)	3.58 (0.87)
Value clarification	2.86 (1.29)	3.29 (0.99)	3.53 (0.91)
International orientation	2.69 (1.11)	3.18 (0.97)	3.38 (0.99)
Overall entrepreneurial competence	3.33 (0.62)	3.31 (0.78)	3.60 (0.64)

Note: The competencies are sorted on the self-ratings (high-low). Judgments were made on 5-point scales (1 = *not at all*, 5 = *to a high extent*).

scores and between the internal and external assessors' scores (reflected in the insignificant congruence-*r* scores on overall entrepreneurial competence).

More in detail, correlations between the internal assessment and self-assessment scores are medium and significant for leadership, communication, planning, result orientation, management control, and teamwork (Table 4). As suggested already from Table 3, this list reflects the more internally oriented competencies. The correlations between the external-assessment scores and self-assessment scores are practically not existent, with the exception of general awareness. Finally, the owner–manager and external assessor do not agree about the level of improvement possible concerning the competencies negotiating, teamwork, general awareness, and international orientation, reflected in the significant *d* scores. Also, the internal and external assessor do not agree about the level of improvability possible for specific competencies. Significant differences were found for the competencies strategic thinking, planning, judgment, and management control.

Table 4. Intercorrelations (Congruence-*r*) and Standardized Differences (Congruence-*d*) of the Improvability Scores for the Different Assessors

Competencies	Self-Int		Self-Ext		Int-Ext	
	<i>r_s</i>	<i>d</i>	<i>r_s</i>	<i>d</i>	<i>r_s</i>	<i>d</i>
Networking	0.26	0.27	0.06	0.01	-0.13	0.26
Leadership	0.39*	0.14	-0.13	0.04	0.10	0.11
Strategic thinking	0.29	0.34	0.09	0.14	0.14	0.48*
Communication	0.37*	0.06	0.08	0.04	0.27	0.11
Planning	0.38*	0.38	0.03	0.13	0.18	0.53**
Personnel management	0.34	0.31	0.19	0.09	0.04	0.23
Market orientation	0.23	0.06	0.05	0.26	0.21	0.31
Vision	0.22	0.12	-0.04	0.06	0.22	0.18
Result orientation	0.56**	0.11	0.17	0.22	0.23	0.33
Negotiating	0.18	0.08	0.20	0.40*	0.26	0.30
Organizing	0.31	0.13	0.30	0.22	0.03	0.35
Persuasiveness	0.30	0.02	-0.07	0.30	0.22	0.33
Judgment	0.01	0.10	-0.04	0.30	0.03	0.40*
Conceptual thinking	0.00	0.11	0.25	0.18	0.07	0.29
Problem analysis	0.35	0.01	0.06	0.33	0.26	0.32
Management control	0.40*	0.08	0.01	0.33	-0.01	0.40*
Team work	0.38*	0.17	0.09	0.39*	0.31	0.22
General awareness	0.02	0.15	0.44**	0.50*	0.14	0.37
Value clarification	0.12	0.34	0.08	0.53*	0.25	0.21
International orientation	0.22	0.40	0.17	0.57**	0.09	0.18
Overall entrepreneurial competence	0.38*	0.02	0.21	0.29	0.17	0.29

Note: The competencies are sorted on the self-ratings (high-low). Judgments were made on 5-point scales (1 = *not at all*; 5 = *to a high extent*). Self = self-assessment; Int = internal assessment; Ext = external assessment.

**p* < 0.05.

***p* < 0.01.

Discussion

The primary aim of this chapter was to shed more light on self-awareness concerning the mastery and improvability of entrepreneurial competence. A multisource assessment of owner-managers was conducted to provide input for discussions on entrepreneurial competence from a learning and development perspective. The results of the study will be discussed below in relation to the described literature and the postulated research questions: How do self-assessments about mastery and improvability of entrepreneurial competence made by

owner–managers relate to the same assessments made by significant others in the small-business work environment? This section is followed by a discussion of the limitations and the implications of this research for HRD practice and suggestions for subsequent research.

Although many studies focused on managers in large firms have found a tendency toward overestimation of personal attributes, this study of small-business owner–managers found a tendency toward underestimation, although the correlations between self-assessments and ratings of others were comparable to the correlations found in other studies (see, for instance, Church, 1997). The small-business owner–managers' almost consistent underestimation of their own competencies in particular in relation to the internal assessors seems to illustrate the tacit nature of much of what they have learned during their work as owners of their firms and suggests, at least internally, a lack of feedback on their accomplishments. Such an explanation fits well with the unique and complex situation of small-business owner–managers in terms of HRD practices, namely, no direct access to peers or role models within the organization and a high dependence for feedback on external contacts and available support and guidance. An additional explanation refers to the argument of using more comprehensive notions of competence for studying it. The overly conservative self-assessments made by owner–managers in this sector could indicate an industry effect. For example, the consequences of overestimation could be much milder in an industry in which self-promotion is valued and considered to be important (e.g., services).

What is also interesting in this particular study is the difference between internal and external ratings in the mastery as well as the improvability scores. For instance, the internal–external correlations for the overall ratings of entrepreneurial competence are quite low and insignificant. This observation is also reflected in the different congruence patterns between the self-assessment and internal or external assessment. Congruence on competency level for self-internal and self-external scores is found for different competencies. A logical explanation for this would be that the internal as well as the external assessors have more insight into or attach more value to particular areas, and thus also see more aspects of mastery or opportunities for improvement. Assessors have their own expectations and frames of reference, which color their understanding of the competencies to be assessed. This aspect bears the question of whether congruence in small-business assessments as they were used in this study should be seen from a classical large-firm performance-appraisal paradigm. From such a paradigm lack of congruence might be problematic (Atwater et al., 1998); however, from a learning point of view this is not necessarily so. Lack of congruence also suggests different judgments and ideas about mastery and improvability among relevant others in the environment of the focal person. This idea is potentially relevant for HRD-related practices, because as a consequence there are many stepping stones for further discussion, which may help the focal person, in this case the small-business owner–manager, to

sharpen his or her current competence profile and to gain better insight into learning activities necessary for the future.

Finally, this research suggests that entrepreneurial competence overall is seen as subject to at least some development. It underlines the importance of studying the development of entrepreneurial competence in existing small businesses over time. The owner–managers in this study assessed the competencies networking and leadership the highest, reflecting the largest potential for improvement. Value clarification and international orientation were perceived as the least improvable. The low score for international orientation could reflect whether a company is focused on internationalization, for example, on a very specific (transcontinental) niche market. If most of the firms in this particular sample were not so much orientated toward these areas, this orientation would not represent an area for improvement. An alternative explanation for the low score is that international orientation is perceived as a more complex construct, which requires many different elements such as foreign-language skills, cultural sensitivity, and international experience.

Limitations. This study has also limitations. The sample size was relatively small compared with studies carried out in large firms. Therefore, it was not possible to conduct more advanced statistical analyses, for instance, investigating possible overlaps between the different competencies through factor analysis. In addition, although the used competencies are associated in the literature with the entrepreneurial role in small businesses, this model has not been tested extensively in small businesses. Thus, questions remain as to the extent to which the identified competencies influence performance of the entrepreneurial task and vice versa.

Besides the sample size, sources of judgment should be considered specifically in setting up multisource assessments (Warr & Bourne, 1999). First, the owner–managers themselves should be considered. Studies like these focus on highly personal issues. Those owner–managers who are already interested in personal development are perhaps more inclined to participate in this kind of research compared with those who are not. Second, there is some empirical evidence that personal characteristics, such as self-esteem and cognitive abilities of the focal person, influence congruence in multisource assessments (Warr & Bourne, 1999). These characteristics should be controlled for. Finally, it is possible that internal and external assessors, because of their power relationships with the owner–managers, were tempted to assess the owner–managers more positively than how they actually perceive the owner–managers' strengths and/or weaknesses. We controlled for this by instructing the owner–managers to select internal and external assessors who knew the owner–managers' strengths/weaknesses well and were not afraid to articulate their thoughts. If this was a systematic bias, all the competencies would have received higher internal/external scores compared with the self-assessment scores. However, this is most likely not the case, because the self-assessment scores for some competencies, such as problem analysis, communication, and strategic thinking, are higher than the other scores.

Implications for HRD Practice. As stated in the introduction, participation of small businesses in HRD-related practices, including formal education and training, is low (Storey, 2004). This does not mean that owner–managers of small businesses do not learn (Lans et al., 2004); they learn mostly by doing (Cope & Watts, 2000). However, this type of learning sometimes comes at a price (Cope & Watts, 2000; Fenwick, 2003). Multisource assessments as adopted in this study can help owner–managers raise their self-awareness, and consequently help them bypass some of their (costly) trial-and-error learning experiences.

In this particular case, in which owner–managers underestimated their entrepreneurial competence in relation to significant others, a program aimed at strengthening entrepreneurial management would have to focus not on competence deficits (which is often the case) but rather on making owner–managers more aware of their entrepreneurial strengths and assisting them in working on their confidence (e.g., entrepreneurial self-efficacy) by providing them with more regular feedback. In dynamic environments the effects of high entrepreneurial self-efficacy was found to be positively related to firm performance when combined with moderate optimism (Hmieleski & Baron, 2008).

Furthermore, because this type of assessment functions as a learning and development tool, and not a test, it should also be communicated that way, not in terms of deficits, but in terms of areas for further improvement. In education and HRD literature, multisource assessments like these are referred to as formative assessments (Sadler, 1989). Formative assessments are used to acquire more insight into the strengths and weaknesses of the person being rated, as well as to discover areas for improvement by discussing the results (i.e., assessment for learning).

A potential advantage of engaging business owner–managers in multisource (formative) assessments, besides stimulating their own development, is that it can help raise awareness about the possibilities and opportunities for learning in the small business in general. Small-business HRD practices are not only influenced by the owner–managers' attitudes and experiences with HR strategies, but also by interaction with the wider business community (Bacon & Hoque, 2005; Jones & Macpherson, 2006). Interactions with external assessors about learning and development may convince the owner–managers to adopt learning-fostering activities like multisource assessments on a broader scale in the small business.

Suggestions for Further Research. First, this research was conducted with a limited number of small businesses in a specific sector. It would be interesting to replicate and expand the scale of the research in the same (or a comparable well-defined) small-business sector. Second, in such a study it would be advisable to include entrepreneurial performance measures as well, in order to find out what the predictive validity of these competencies are. Preferably such data should encompass different variables, on different levels (individual level, business level) and from different sources over a longer period of time.

Finally, in terms of consequential validity, this research does not provide an answer to the question of whether heightened self-awareness does indeed lead to follow-up learning activities. In general, research findings from studies on large organizations suggest that the impact of multisource assessments is relatively weak if they only involve peer or supervisor feedback (Smither, London, & Reilly, 2005). A time-series type of study could look into which combinations of multisource assessments, feedback, and other learning-orientated interventions lead to engagement in actual goal-oriented learning activities.

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Appendix: Competencies with Description

<i>Competencies</i>	<i>Description (after Lans et al., 2005)</i>
Organizing	The ability to identify, acquire, and employ human as well as financial resources necessary to realize opportunities for the small firm
Problem analysis	The ability to signal problems on the work floor, discern underlying components, and detect likely causes
Leadership	The ability to provide directions and guidance to employees in the small firm
Conceptual thinking	The ability to analyze occupational core challenges and interpret them, thinking about their relative importance, their interrelationships, and whether they can be generalized
Persuasiveness	The ability to convince others about a certain proposition, idea, plan, or product by argumentation
Communication	The ability to express ideas or opinions to others, by means of clear language, gestures, and nonverbal communication
Strategic thinking	The ability to identify long-term goals and to lay them down in plans
Planning	The ability to recognize goals and priorities
Result orientation	The ability to pursue concrete, tangible results and to deploy activities to realize these results
Negotiating	The ability to discuss information and arguments and to recognize commonalities in order to come to an agreement
Teamwork	The ability to contribute to joint results, also when a team objective is not, in first instance, a personal objective
Market orientation	The ability to identify and pursue market- and technology-related opportunities within as well as outside the sector
Networking	The ability to develop and manage contacts and relationships with (internal) customers, suppliers, and other stakeholders actively
Judgment	The ability to assess possible strategies, and information related to these strategies, in the light of relevant criteria
Vision	The ability to identify future directions for the small firm and its environment and to formulate a long-term policy
General awareness	The ability to generate information about societal as well as political developments within as well as outside the sector
Management control	The ability to manage and control the progress of one's own work as well as that of others in the light of available time and resources
Value clarification	The ability to propagate the value and culture of one's own small firm; to be an ambassador of the sector
Personnel management	The ability to develop employees by analyzing their learning needs, creating and fostering learning activities on the job and off the job
International orientation	The ability to identify and pursue opportunities that can lead to internationalization of the small firm