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The relationship formation paths of international entrepreneurs

Thor Sigfusson · Simon Harris

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9 Abstract The study of entrepreneurs' relationships and their influence of firm 10development has been dominated by static analysis that typically discriminates 11 dichotomously between 'weak' and 'strong'. Little is known about other qualities 12of international entrepreneurs' (IEs') relationships and the paths that are followed in 13their formation. We employ a Multi-grounded Theorizing theory-building approach 14 with ten IE cases in Iceland and Scotland to develop a descriptive framework that 15includes many types of relationship paths of relationship formation. This multi-16 dimensional relationship model usefully develops from conceptual foundations from 17 entrepreneurship to an international setting. The richer picture of IEs' relationships 18 provided highlights the importance of weak relationships with embeddedness and 19commitment characteristics, and the path of development from low trust to high. 20 03

KeywordsInternational entrepreneurship · Relationships · Internationalization ·21Networks · Embeddedness · Trust2223

Introduction

Relationships within networks have been acknowledged as very valuable resources in25the process of internationalization of firms and of entrepreneurs (Johanson and26Vahlne 2003; Harris and Wheeler 2005; Chetty and Campbell-Hunt 2003; Coviello272006; Ojala 2009; Dimitratos and Jones 2005). Research into the relationship net-28works of entrepreneurs has mainly focused on entrepreneurs within particular nation-29al or regional context, but international entrepreneurship research has also studied the30

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relationships that have been found to be essential for the international expansion of 31 small high-tech firms (Ojala 2009; Laanti et al. 2007; Komulainen et al. 2006; 32 Coviello 2006; Harris and Wheeler 2005; Sharma and Blomstermo 2003). 33

Little, however, is known about these relationships, especially at the initial stages 34 of internationalization, where they are often described dichotomously as weak or 35 strong (Sharma and Blomstermo 2003; Ozcan and Eisenhardt 2007; p. 271) or as 36 04 business or social (Coviello 2006). These categorizations reflect studies in domestic 37 entrepreneurship which have focused on the static notion of relationship strength 38 rather than the dynamic notion of relationship development, and have only seen 39 strong relationships to be important in the development of entrepreneurial firms. 40 Research suggests, however, that international entrepreneurs' (IEs') initial business 41 relationships may usually involve large numbers of weak ties, which questions the 42 validity of assumptions based on the analysis of domestic entrepreneurs (Oviatt and 43McDougall 2005; Sharma and Blomstermo 2003; Sigfusson and Chetty 2012). 44 05

A more complex picture of multidimensional, heterogeneous relationships and 45dynamic paths of relationship development within domestic enterprises has been 46presented by Hite (2003, 2005), whose conceptual advances we borrow to offer 47new perspectives on how IEs develop relationships in initial internationalization. 48Focusing on the initial stages of startup and internationalization (Coviello 2006), we 49observe the relationships used for internationalization by software IEs in Iceland and 50Scotland to find out the relationship paths IEs develop and use at the early stages of 51their internationalization. Working inductively from the case findings, in which we 52identify some distinctive patterns in the network development of IEs, we build on 53Hite's work with a descriptive "TEC" (trust, embeddednesss, commitment) model of 54the relationship development of IEs, based on the embeddedness in relationships 55notion from network theory (Granovetter 1985) and the perspectives on commitment 56and trust offered in relationship marketing research (Morgan and Hunt 1994). 57

By integrating social network perspectives into international entrepreneurship 58process research, this paper responds to calls for more studies that examine the role 59of social networks and relational ties in the internationalization process (McDougall 60 and Oviatt 1996, 2005). By using a multi-grounded theorizing (MGT) approach to 61 theory building (Goldkuhl and Cronholm 2010) which has not before been used in IE 62 research, we contribute a more nuanced, multidimensional and dynamic framework 63 for understanding IEs' relationships that escape the dichotomy between 'weak' and 64'strong' that has for too long paralyzed this field of research. 65

Embeddedness in networks

Since Oviatt and McDougall (2005: p. 540) defined international entrepreneurship as 67 the "discovery, enactment, evaluation, and exploitation of opportunities across na-68 tional borders to create future goods and services", research has examined how social 69 networks enable IEs to acquire and mobilize resources for internationalization. 70Network relationships are interconnected relationships between different agents 71(Chetty and Agndal 2007), and entrepreneurs' network relationships are the dyadic, 72often social relationships they have with others. It is because entrepreneurs can work 73 better as a cooperative network than as a collection of competitive individualists 74

(Casson 1997) that network relationships, and entrepreneur's relationship-creation 75skills are important in the internationalization of small high-tech firms (Coviello 76 2006; Harris and Wheeler 2005). The extent to which entrepreneurs can obtain local 77 knowledge, opportunities and linkages that are essential in the internationalization 78process, and also to acquire resources (Batiargal 2003), is thought to be linked to how 79much they are "embedded" in networks (Granovetter 1985), and the strength of their 80 relationships within them (Fletcher and Harris 2012). Despite increasing interest in 81 international entrepreneurship, however, the relationship between new venture inter-82 nationalization speed, the types of social networks involved and the relationships 83 within them remains poorly investigated (Kiss and Danis 2008). 84

Since Bott (1955) first presented the idea of close or loose-knit networks, the 85 notion of embeddedness has been at the core of social network research (Granovetter 86 1985, 1992). Uzzi (1997) sees strongly embedded relationships to give "economies of 87 time" in protecting against opportunism that can occur with "arm's length" relation-88 ships, and this enables rapid capitalization of market opportunities. Here, we diverge 89 from the network perspective of embeddedness in order to see embeddedness as a 90 quality that an IE might seek in someone that they may include in their relationship 91portfolio, in order to help their internationalization. 92

People who will help an IE's internationalization will have relationships in foreign 93 territories that will be able potentially to help the IE, and that embeddedness there will 94help by offering opportunities, and give know-how and assistance. The potential 95value of a relationship with an internationally embedded party does not, therefore, 96 depend on their physical location. Rather, it depends on the extent that they are 97 embedded in one or more of these ways to help the IE to internationalize, reflecting 98any aspect of the linkages that can offer informed opportunity, how-to advice and 99 assistance. Their value will also depend on the particular territories, networks and 100 social or professional circles involved; some will be more valuable than others, 101 depending on the specific products or services, customers and markets (Yli-Renko 102et al. 2002). 103

Zukin and DiMaggio (1990) characterize four elements of such embeddedness to 104describe the social arrangements underlying economic action: cognitive, cultural, 105structural and political. Their cognitive embeddedness yields understanding of 106the people's shared mental models and ways of thinking, and their cultural 107 embeddedness would convey their shared beliefs and values (Hite 2003; Zukin 108and DiMaggio 1990). Their structural embeddedness reflects how much their social 109relations are interconnected in the territory (Granovetter 1985), and is key to their 110 ability to provide useful knowledge, opportunities and linkages to help internation-111 alization. Political embeddedness will inform what is possible and what is not, and 112how power and influence can be leveraged in a society, and is an essential element in 113many markets. 114

Relationships in networks

There have been calls for greater attention to the international dimension of relation-116ship networks (Kiss and Danis 2008), and for focus on weak ties and their importance117(McDougall and Oviatt 2005; Sharma and Blomstermo 2003; Sigfusson and Chetty118Q6

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2012; Komulainen et al. 2006). There is little evidence, however, as to how the 119embeddedness of IEs in networks and the strength of relationships in them influence 120internationalization, and much of that evidence is contradictory. Internationalization 121process research links internationalization success to existing networks (Johanson 122and Vahlne 2003), which influences the search for opportunities abroad (Ellis 2011). 123Welch and Luostarinen (1993) suggest that strong relationships can offer IEs links to 124networks which they are a part of in other countries, and personal relationships of 125young entrepreneurs have been found to open the doors for new foreign market 126opportunities and build further market knowledge (Harris and Wheeler 2005). 127

On the other hand, Oviatt and McDougall (2005) argue that many relationships can 128be involved in internationalization, and that weak ties are also very important. Weak 129relationships have been defined broadly and differently. Weak ties are "friendly and 130business like" relationships (McDougall and Oviatt 2005, p. 544) or a "source of 131referral" (Sharma and Blomstermo 2003). For two parties to co-operate, there has to 132be at least a minimal level of trust between them for cooperation to occur (Harris and 133Dibben 1999). There may, however, be latent relationships; connections initiated in 134the past, such as at conferences, that are "technically possible but not yet activated 135socially", which without developing as relationships, enable connections to others 136later (Haythornthwaite 2005, p. 137). These can be encouraged with the use of new 137communication technology (Sigfusson and Chetty 2012). The online social networks 138widely used among software entrepreneurs (Ellison et al. 2007) may encourage users 139to activate latent relationships, developing them into weak relationships and later, 140possibly, into actual business opportunities (Sharma and Blomstermo 2003). 141

Most IE's relationships will be weak, but we do not know much about their role.142We also do not know about IE's investment in relationships, weak or strong,143investment that can enhance credibility at the beginning of the relationship, improve144trust and reduce uncertainty and the risk of opportunism (Wuyts and Geyskens 2005).145In this study, we explore IE's relationships and how they develop, by combining the146embeddedness concept from network theory with the trust and commitment notion147from relationship marketing research.148

Paths of relationship development

The dynamic aspects of relationship portfolio evolution are critical for young inter-150national firms (Oviatt and McDougall 2005; Coviello 2006; Komulainen et al. 2006; 151Sharma and Blomstermo 2003). In their classic model of network development, 152Larson and Starr (1993) suggest that, over time, network relationships are trans-153formed from simple dyadic exchanges to a dense set of multidimensional and 154multilayered organizational relationships. They propose that entrepreneurs shift from 155relying on family friends, or previous contacts, to using relationships based more on 156mutual business interests, such that their number of economic ties increases and 157overlaps with their social relationships. Developing from this, Hite and Hesterly 158Q7 (2001) argue that an entrepreneur's personal networks evolve from being dominated 159by strong ties to being intentionally managed networks with many weak ties. Sup-160porting this view, Jenssen and Koenig (2002) present the entrepreneur's personal 161friendships to be crucial for initial venture creation, so strong relationships are more 162

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important in the start-up and early growth stage than in later stages (Starr and
MacMillan 1990). So, we have a dynamic picture of emerging enterprises initially
relying on strong relationships that will provide resources, later expanding their
networks to include weaker relationships that will help to give information on new
business leads.163
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Presenting an entirely different view of the dynamics of network development, Greve168and Salaff (2003) and Steier and Greenwood (2000) observe more weak relationships169in the emergence phase, seeing these to be the source of new information that170entrepreneurs need when developing their business plans. Elfring and Hulsink171(2007) suggest some reconciliation of these conflicting ideas by suggesting that172different patterns of relationship portfolio evolution result from different initial173founding conditions and different post-founding entrepreneural processes.174

This debate about the value of relationships at the emerging stage of entrepreneur-175ship has not, however, included an international dimension, which is the context for 176this enquiry. While the research evidence remains far from conclusive (Kiss and 177 Danis 2008), an overall pattern is emerging, presented in Fig. 1. The framework 178proposes that when entrepreneurs initially develop their ventures, their relationship 179networks can comprise mainly a few strong relationships as found in the studies noted 180towards the left hand side of Fig. 1, or a large number of weak relationships, as found 181 in the studies noted towards the right hand side. This suggests two evolutionary paths 182for relationships within entrepreneurs' portfolios of relationships (Zolkiewski and 183Turnbull 2002; Sigfusson and Harris 2012), one in domestic contexts (D) and one in 184international (I) contexts. It is evident that most domestic-focused entrepreneurship 185studies emphasize the role of strong relationships at early stages, while studies of 186 international new ventures emphasize a greater role for weak relationships. 187

We have now reached a stage in international entrepreneurship research, however, 188 when we should abandon the notion of just 'strong' or 'weak' in network relationships (Jones et al. 2011). Strength can be seen in very different ways because different relationships do different things, combined and singly (Morse et al. 2007). Having concluded that we should not regard relationships as simply strong or weak, Ozcan and Eisenhardt (2009) argue that we should regard relationships and alliances to be developed in 'portfolios' that firms develop stategically according to their firms' 194

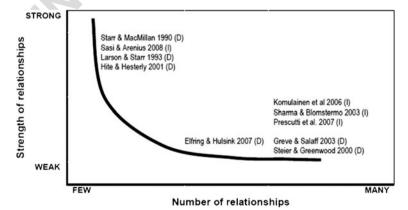


Fig. 1 Studies on relationship strength for entrepreneurial firm foundation in domestic (D) and international (I) firms

needs. In this study, we will also escape the weak-strong dichotomy and will seek a195more more nuanced interpretation of the qualities that IEs might seek for relationships196in their portfolios. We now turn to international marketing, network and international197entrepreneurship research that has identified some of those qualities.198

Trust and commitment in relationships

The global scale of international entrepreneurs demands that they search wider 200and harder for trusted and committed relationships in networks from whom to 201elicit cooperative behaviour. All international business requires cooperation 202between people at one stage or another, trust between parties is fundamental 203for the neccessary agreement between people to be developed (Buckley and 204Casson 1985; Williamson 1985). Trust, when "one party has confidence in an 205exchange partner's reliability and integrity" (Morgan and Hunt 1994: p. 23), has 206therefore long been recognized as an essential element of international business 207linkages that enable the search for opportunities abroad (Ellis 2011). These linkages 208can be through joint ventures, alliances, contracts, informal understandings or net-209work arrangements (Axelsson and Easton 1992; Blankenburg and Johanson 1992; 210Child et al. 1997; Johanson and Mattsson 1992). Trust lies at the heart of relationships 211that are fundamental for entrepreneurial internationalization by offering the necessary 212linkages to networks in other countries (Johanson and Vahlne 2003; Welch and 213Luostarinen 1993). 214

Influential marketing and international marketing research has identified trust as 215one of two components of relationship strength in business exchange relationships, 216commitment being the other (Morgan and Hunt 1994). Partnership research sees trust 217to depend on the previous history in partnership of negotiating, making commitments 218and executing those commitments so does not discriminate between trust and com-219mitment (e.g. Larson 1992; Ring and Van de Ven 1994). Within alliances, trust and 220commitment are usually seen to be closely related, sometimes dynamically interde-221pendent; investment in a relationship through commitment enhances parties' credi-222bility at the beginning of the relationship and by improving trust, reduces uncertainty 223and the risk of opportunism (Wuyts and Geyskens 2005). 224

Commitment, the belief that a "relationship is worth working on to ensure that it 225continues indefinitely" (Morgan and Hunt 1994: p. 23), is influenced by trust. Even 226though commitment can develop without trust, trust can promote commitment to a 227relationship. Similarly, entrepreneurs need to invest commitment in relationships to 228enhance their credibility at the beginning of the relationship, to improve the other's trust 229in them and to reduce the uncertainty and the risk of opportunism for both parties (Harris 230and Dibben 1999; Wuyts and Geyskens 2005). When "both commitment and trust-231not just one or the other—are present, they produce outcomes that promote efficiency, 232productivity, and effectiveness" (Morgan and Hunt 1994: p. 22). In short, commit-233ment and trust lead directly to cooperative behaviours that are conducive to relation-234ship marketing success. For two parties to co-operate, however, both must be 235prepared to co-operate, and *both* must sufficiently trust the other party (Harris and 236Dibben 1999). Being embedded in a network of relationships provides a context of 237trust between known partners or people who can be endorsed by known others; this 238

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helps people to co-operate with one another, and the commitment then expressed 239 builds individual trust (Uzzi 1996). 240

How trust develops in relationships and the extent to which it needs to do so (for 241 the necessary cooperation to take place) depend on the context; we can expect 242 different levels of trust within different contexts (Grossetti 2005). Internationalization 243 increases entrepreneur's distance from markets and relationships, and requires a 244 broader focus towards other and new networks (Fletcher 2001). Early international 245 relationships may be valued for knowledge and market access rather than for permanent commitment (Hadjikhani and Sharma 1999; Hite 2003). 247

This review shows how, notwithstanding that relationships play an important role 248in international entrepreneurship, the simple "weak" and "strong" dichotomy that has 249characterized much research into IE's relationships and their paths of development 250may be vague and incomplete. Further, we do not know what relationships IEs use at 251the early stages of their internationalization, how these relationships develop and are 252managed by the IEs and how they influence the internationalization process. We call 253this dynamic process of relationship development the relationship path; this study 254seeks to shed light on relationship paths of IEs at the early stages of their interna-255tionalization. To examine the early relationship formations of IEs, we use a MGT 256approach, to which we now turn. 257

Research approach

Our research questions are in an avenue of enquiry which extant theory does not yet 259address well, in the relatively new field of international entrepreneurship research that is 260not yet on stable theoretical ground (Kiss and Danis 2008). It also faces a liability of 261newness for an emerging theoretical field that can lead to the use of insufficiently 262sophisticated research methods, with analysis and theorizing from poorly processed 263mixtures of qualitative and quantitative data that ignores or excludes "disconfirming 264evidence" (Eisenhardt 1989: p. 540). This provides opportunities for theory develop-265ment, but it requires a clear research methodology for doing so. The research also 266needs a clear view of the unit of analysis (Jack et al. 2010) and needs to consider "the 267key and distinguishing qualities of entrepreneurial phenomena" (Zahra 2007, p. 444). 268

Grounded theory approaches seek inductively to develop theory from empirical data, 269stressing open-mindedness towards the empirical data in data collection so that it is not 270corrupted by preexisting theory (Creswell 2007; Harris 2000). Avoiding established 271theoretical categories in analysis, however, weakens the opportunity for theoretical 272triangulation and for developing a more coherent body of theory (Goldkuhl and 273Q9 Cronholm 2007). The constant comparative element of a grounded approach is 274therefore often employed (Anderson et al. 2007), but "full blown grounded theoriz-275ing" is rarely used (Jack et al. 2010). 276

Faced with these challenges, international business case research often employs an
abductive approach (Pierce 1867) to generate theoretical propositions to explain
behaviour, to explore the relevance and usefulness of conceptual frameworks and
to explore and understand possible relationships between concepts, contexts and
management processes. In an abductive process, first one and then multiple cases
are explored in the light of theoretical frameworks, and then theory is inductively277
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built from case data where the theoretical frameworks yield contradictory, inadequate283or no explanations (Powell 2001, 2003). Abductive research approaches have become284more common in entrepreneurship and international business research (Jack et al.2852010; Sinkovics et al. 2011), which also respond to calls to combine qualitative and286quantitative data (Coviello 2006; Hambrick 2007; Harris 2000).287

This process, however, by prioritizing theory, presents the danger of "theory 288fetish" which "prevents the reporting of rich detail about interesting phenomena for 289which no theory yet exists" (Hambrick 2007: p. 1346). To avoid this, whilst also 290recognizong useful prior theory, we prioritize the grounded data by employing 291Goldkuhl and Cronholm's (2010) modification of MGT approach. This approach 292first explores the data without a priori specifications of the constructs, and only later 293allows the researcher to recognise useful existing theoretical contributions and em-294pirical work in the field. As such, MGT is a formalized research and analytical 295approach for mixing methods in a way that can help theory generation for an 296 emerging field such as international entrepreneurship (Hohenthal 2006). 297

We apply the MGT approach within a multiple case study, which is well suited to our 298research enquiry. First, the multiple case study method is especially appropriate when 299researchers want to cover contextual or complex multivariate conditions and not isolated 300 variables (Eisenhardt 1989; Eisenhardt and Graebner 2007; Yin 2009). Second, our 301 questions are specifically focused on a thorough analysis of individual network 302 relationships, in which we are asking "why" and "how" questions. The qualitative 303 multiple case study method enables selectivity to focus on this topic, and is also 304especially suitable for exploring the reasons and the processes behind management 305 phenomena (Yin 2009), a reason that underpins Hoang and Antoncic's (2003) plea for 306 more qualitative research in research in entrepreneurs' networks. Recent studies of 307 the networks of entrepreneurs or ventures have therefore employed qualitative case 308 study methods (Jack et al. 2010; Sasi and Arenius 2008; Elfring and Hulsink 2007; 309 Laanti et al. 2007; Harris and Wheeler 2005; Halinen and Tornroos 1998). 310

This study is seeking deeper and richer understanding of IE's relationships, and 311 Creswell (2007) suggests that qualitative research is "as an intricate fabric composed 312 of minute threads, many colors, different textures, and various blends of material. 313 This fabric is not explained easily or simply" (p. 35). To appreciate these "different 314colors", international entrepreneurship studies often employ Eisenhardt's (1989) 315approach in their case study research, and mix different forms of qualitative and 316 quantitative data (Harris 2000) "given that qualitative case data can be analysed and 317 interpreted with a bifocal lens, that is, both qualitatively and quantitatively oriented" 318 (Coviello 2006: p. 717). 319

Research method: Operationalizing the MGT approach in a multiple case study 320

The MGT approach for theory development involves inductive coding, conceptual 321 refinement, pattern coding and theory condensation in three stages: (1) theory generation 322 with a grounded approach to data gathering, (2) explicit grounding through inductive 323 coding to achieve conceptual refinement and pattern identification and (3) reflection and 324 revision for empirical and theoretical matching and validation. These stages are now 325 described in turn. 326

The relationship formation paths of international entrepreneurs

Theory generation stage: Data gathering

The relationship formation of ten international software development entrepreneurs,328five in each of two countries, Iceland and Scotland, was studied in order to widen the329scope of the sampling and to strengthen the generalizability of the research results.330The number of cases was guided by the objective of reaching a thorough understand-331ing of the relationships of the entrepreneurs in their venturing.332

The sampling procedure was therefore purposive. We studied networks of software 333 entrepreneurs to enable comparison with other studies in this field (e.g. Ojala 2009; 334 Laanti et al. 2007; Sasi and Arenius 2008; Elfring and Hulsink 2007; Coviello 2006; 335 Ellis 2000; Bell 1995). We followed theoretical sampling logic (Eisenhardt 1989) to 336 gather case entrepreneurs within different relationship categories from lists of soft-337 ware ventures provided by national industry associations in the two countries. At the 338 time of data collection, the entrepreneurs were all operating relatively small indepen-339 dent business to business ventures, and all met the size, age and export criteria for 340 international new ventures used by McDougall et al. (2003) and by Oviatt and 341 McDougall (2005). Descriptive data are shown in Table 1. 342

The research used multiple sources of information including open-ended face-to-face 343 semi-structured interviews, social media data and secondary public and private data 345which yielded detailed information on the initiation of relationships and their context. 346 The same researcher interviewed the entrepreneurs in both countries, face to face, in fall 347 2010, to a point of data saturation when it was believed that further interviews would not 348 add significant new information. Interviewees were questioned about the relationships 349and the events during the early development and internationalization of their firms. 350 Concerning the relationships, interviewees were asked how they were initiated, how the 351participants would describe them and about the effects of the relationships on their firms. 352

Entreprene	eur Year founded	Business	Turnover (2010)	Years from foundation to first internationalization	Years previous experience
A1	2000	Mobile meeting platform software	<\$2 m	2	10+ in IT
A2	1998	Information security	\$5 m	2	13 in IT
A3	2005	Web solutions for the music industry	\$1–2 m	1	5 in IT
A4	2003	Mobile games	\$6	<1	Founded straight from University
A5	2004	Ticketing software	\$12 m	2	Many in internet an investments
A6	2009	Mobile software	\$2 m	<1	2 in IT
A7	2001	Mobile games	\$8 m	1	3 in IT
A8	1999	Broadcasting technology	\$20	<1	10 in IT, pioneer of sector.
A9	2002	Web game service		2	4 in mgt.
A10	2007	Data software		2	8 in IT

t1.1 **Table 1** Characteristics of case entrepreneurs

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In line with similar studies in the field, the interviews were constructed as 353 openly as possible, but were focused on gaining information about the IE's 354relationships (Coviello 2006). To refine the interview process, in late winter 2009, 355preliminary open interviews were carried out with four software IEs who were 356 subsequently included in the study. These revealed complex and somewhat 357 chaotic networks of relationships, which provoked interest in further study 358 and led the main body of interviews to focus on understanding the IE's 359 relationships. 360

Each interview continued until the IE had thoroughly described his or her 361 relationships and the path of development of each. Asking specifically about 362 individual relationships yielded data about when the relationship was initiated 363 and who provided introductions, the depth and content of the relationship and 364 the frequency of contact and how the IE valued and viewed the relationship. 365 The answers and discussion that followed gave deep information from the 366 initiation of the relationship and its role at the stage of venture development 367 concerned, to the personal emotional intensity, intimacy and commitment of the 368 relationship. 369

Inductive coding stage for conceptual refinement and pattern identification

Inductive coding in the MGT approach emphasizes analysis of the data as free 371as possible from preconceptions to let the data speak. It also allows focus to 372 the research topic; the objective is not to accumulate all the data possible, but 373 to identify and reveal the essences with enough context data to allow the 374 research subjects' situation to be understood (Wolcott 1990). Our preliminary 375 phenomenological analysis began, as Eisenhardt (1989) recommends, with sifting 376 through all the data to discard irrelevant information and combining the most 377 important information. In initial coding, interview and secondary text was broken 378 into "meaningful chunks or segments" (MacQueen et al. 1998; p. 33), and significant 379 statements, sentences or quotes that "provide an understanding of how the partic-380 ipants experienced the phenomenon" were highlighted (Creswell 2007: p. 61). 381Conceptual refinement involved progressively organizing the concepts that emerged 382 from the open inductive coding into emergent themes that could be related these to 383 the central overall phenomenon of relationships. Three main concepts emerged: trust, 384embeddedness and commitment. 385

This judgmental process was difficult as it involved massive reduction from 386 the plethora of variables and concepts that emerged from the open interviews, 387 and it was necessary to guard against the risk of bias from preconceptions. 388 MGT emphasizes the importance of addressing the influence of the researcher's 389 prior perceptions as researchers cannot isolate themselves from their mental 390 models which Greene (2007) describes as "a set of assumptions, understandings, 391predispositions, and values and beliefs with which all social inquirers approach 392 their work" (p. 12). Here, some models are present even before the researcher 393 formalizes extant theories into the analysis, mental models that "subsume 394 philosophical paradigms, as well as substantive theories, disciplinary perspec-395 tives, and a whole host of more personalized experiences, values and ways of 396 knowing" (p. 13). 397

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Reflection and revision stage for empirical and theoretical matching and validation 398

In the MGT approach, data are examined and explored for detail relating to the 399themes which either had emerged in the open interviews or were under consideration 400 in the IE literature *before* it is validated and confronted with prior theories and extant 401 research. As other entrepreneurial relationship and network studies have found 402 (Anderson et al. 2007; Jack et al. 2008), the MGT approach provides a way to 403 undertake empirical research "which is informed by prior theoretical understanding, 404 but which is not so determined or constrained by this understanding that the potential 405for making novel insights is foregone" (Finch 2002: p. 57). 406

The pattern coding in the MGT approach implies "an interest toward concep-407 tualizing action patterns" (Goldkuhl and Cronholm 2007: p. 196), with categories 408 being combined into theories or theoretical patterns, models and other possible 409conceptual frames. Importantly, the three categories of trust, embeddedness and 410 committment that emerged were the most frequently mentioned themes in the 411 interviews. Other concepts were of interest, and through analysis, we were partly 412 able to relate their context to the three main categories, which strengthened that 413emergent categorisation and deepened its grounding in the data. A great number of 414 themes emerged in the data, such as resource acquisitions, and the influence of 415changes in external business environment on the IE's internationalization, but our 416focus here is their relationships, where the initial constructs were largely related to 417 their dynamism, multiplicity and variety. In order to relate the study to the others 418 presented in Fig. 1, so the relationships were defined as weak or strong in a separate 419exercise, this based on four criteria: the frequency of contact, the emotional intensity 420 of the relationship, the degree of intimacy and reciprocal commitments between the 421 actors involved (Granovetter 1995). 422

Initial inductive findings from the case studies

The preliminary interviews indicated that the participants had not thought of their 424 relationships as something which needed to be structured and managed, but all the 425IEs emphasized the importance of building good relationships for their interna-426 tionalization. The IEs did not view themselves as partners in informal or formal 427networks. 'Formal relationships', for them, meant structured industrial or strategic 428 networks among businesses, or individual contracts between a supplier and a 429producer, and their relationships did not fit this idea; the IEs had no clear idea 430of what a network was. The IE's previous ventures, their years of business and 431 social activities, and the personal networks which resulted were central. It was 432therefore essential to take the IE as a person into consideration if we are to 433 understand the IE's emerging venture network. 434

A holistic view of the IE's networks was enabled by looking at the relationships within435the IEs' networks, and the interactions between them, but a picture of rapidly changing,436dynamically driven and evolving relationship portfolios was formed by looking at the437particular individuals and the bundle of changing relationships that represented their438networks. Our analysis was limited by the underlying static data gathering process, but439we were able to identify a picture of these relationships at different stages.440

Important background support for many of the IE's initial venture's startup, for 441 example, came from family and close friends. The IE's personal social relationships, 442 of various sorts, typically represented long-standing support with "He has been a 443 solid partner and we go back since University" or "He is a friend who has had great 444 influence on me ever since we worked together at X." These relationships had been 445initiated at home and abroad, some of the entrepreneurs had studied or worked 446 abroad, attended various trade shows, worked with other software specialists and 447 have been members at various associations. 448

Relationship expansion was important, and this could be coincidental, or it could be 449 managed in a strategic way, where relationship strength could be built through frequency 450of contact. It was important to build a good reputation through good relationships with 451other software firms, in order to build trust within the industry. Relationships with 452people who could connect the IE with others were frequently mentioned as being 453important for internationalization, these people being brokers, people at trade shows 454 and go-betweeners (Uzzi 1997). In all cases, however, the network of relationships 455that were critical to the IE's international expansion were regarded as being, to a large 456extent, under the influence of the IE and subject to the IE's strategic and operational 457decisions. The IEs, and the relationship strategies they chose, drove their networks. 458

All of the participants had large relationship networks on LinkedIn, the online 459social networking site with 120 million users worldwide, where they actively devel-460 oped latent relationships. For example, one relationship, coded as 'latent' was 461described as "I met him in San Fransisco in 1999-2000 and we hooked up on 462LinkedIn. Then 6 years later we started talking which later led to some activities", 463and another as "We had been in the same online network for some time". One IE cited 464 a recent e-mail from an individual who had been connected with him for some years 465on LinkedIn, but without a single meeting between them: 466

Hi ... Good to connect again via LinkedIn. It has been a long time! Hope468you're well. I actually moved back to (city) last year to begin life as a Canadian469again. Good fun. I'm working on a new tech idea and if you had a minute I470would be keen to hear your thoughts... [LinkedIn communication to software471entrepreneur]472

Latent ties, initiated, for example, through one-time sharing of business cards at a 474 trade show, often developed into inactive online relationships. The online network 475could then nourish the possible relationship between the parties by revealing for both 476 the list of other people to which each is connected. This partly guarded both parties 477 from opportunism, as one participant noted: "He knew that in my network (online 478relationships) were a lot of important people in the industry. He wouldn't risk going 479 behind our backs." We observed a pattern in which the IEs managed large relation-480ship networks through the online social network, which they used to develop relation-481 ships, for references and to guard against opportunism. 482

Three emergent themes: Trust, embeddedness and committment

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Very few of the relationships used by the entrepreneurs in their international venturing 484 had the high frequency of contact, emotional intensity and reciprocal commitments that 485

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would mark them as strong relationships under Granovetter's (1985) definition. Supporting the studies towards the right hand side of Fig. 1, as well as Oviatt and486McDougall (2005) and Sigfusson and Chetty (2012), nearly all the important relation-488ships for early internationalization were weak. One reason that may explain this489variance from, for example, Ellis (2000) and Harris and Wheeler (2006), is that the490Q11study did not explicitly constrain its data gathering towards the relationships that491492

Three themes emerged from the coding process: trust, embeddedness and committ-493ment (TEC). Trust is the individual, personal trust between the IE and the relation-494ship, reflecting a calculation of the trustworthiness, knowledge of the party involved 495and affection between the parties. Embeddedness of the relationship refers to that 496relationship's embeddedness within foreign markets and in networks in overseas 497territories that would help the IE's internationalization. Commitment is the expression 498of business commitment to a joint project, implying action. These are now described 499in turn, with examination both of the categories themselves and also of how they 500interact with one another. 501

Trust

The IEs rarely used the word "trust", but the level of trust which the relation-503ships were built on was an important thread that ran through the interviews. 504Trust is specific in its nature and can differ in what it means because people 505can be trusted for one thing or activity and not for another. We saw many types 506of trust, and it was coded in a variety of ways. Examples included "this is a 507 guy I have worked with for a long time and we have had great cooperation". 508 "you will not find a more solid partner", "he contacts me weekly and gives 509great advice" and "my father has been a great inspiration to me and he is also 510in software". Trust always, however, included aspects of knowledge of the other 511party, such as honesty, value and reliance, or affective qualities, such as closeness and 512family ties. 513

Trust was always important in some form in the relationships that were 514involved in actual activity, though it could be operating at different levels as 515well as in different ways. It was clear, for example, that internationalization 516rarely used relationships that involved a lot of trust, and rather tended to use 517weaker relationships that did not use so much (Oviatt and McDougall 2005; 518Duque et al. 2009). The trust in internationalization relationships could arise quickly, 519and not only be linked to friends or family ties. Many of the IE's relationships 520that were most associated with internationalization were virtual 'online' rela-521tionships, where the LinkedIn social networking site decreased the time it took 522to build a minimal level of trust (Morse et al. 2007). These descriptions included 523"I met him at the trade show and we exchanged emails. We connected on LinkedIn 524and after 3 years of silence he contacted me and we relised we could do 525business together." and "We realised after being connected on LinkedIn for 526some time but never met, that we both had same contacts in New York, hooked 527up and did a project with these guys". It was the creativity that was possible 528with the relationships that seemed to matter, and the potential for accessing 529opportunities through them. 530

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Embeddedness

The extent to which relationships were enmeshed in a social network was a very 532strong underlying theme in nearly all the descriptions of relationships. These young 533ventures lacked resources, and they were actively seeking intangible and tangible 534resources from personal relationships, many of which might be local (Sharma and 535Blomstermo 2003; Harris and Wheeler 2005; Komulainen et al. 2006). But for 536internationalization, if an individual is not embedded by having a position in a 537network, an IE's relationship with that individual will be of no value for international 538venturing. The embeddedness sought here was to find or to activate opportunities. 539The embeddedness was being, for example, in the same industry in a particular 540territory, in virtual communities on the web, in associations of software specialists, 541in governmental programs, trade shows, or financial institutions, or being buyers and 542sellers and brokers abroad. 543

These networks were valued differently by the different IEs. Many of the 544opportunities were current "I always attend this conference as it open many 545doors", "I am a member of Small World (online network) which has been useful 546for establishing relationships with investors", while others were seen as being for 547the future "I think our new high tech association can help to establish the 548 industry", "the international success of CCP (large gaming company in Iceland) 549can open doors for all of us", "the University's effort to build an IT research 550community in Dundee (Scotland) is important". 551

The most important role played by go-betweeners arose from their embeddedness 552in useful networks: these individuals could transfer expectations and opportunities of 553existing relationships into new relationships (Uzzi 1997). These were often leaders in 554a field, brokers or important media or marketing people, and they were especially 555valuable when there was a tight industry cluster that needed to be accessed. 556

Commitment

The final underlying theme which emerged from the data was commitment, and 558this was important if actual activity was being planned, or was being realised. 559In the large portfolio of relationships that the IEs held, we identified a number 560of different indicators of commitment and of the value the IEs gave to commitment in 561relationships. 562

One consequence of these being young firms in the initial paths of interna-563tional development, the IE's descriptions were mainly of perceived future com-564mitment, not then having had much personal experience of actual cooperation. 565Without perceiving commitment, however, any investment in the relationship 566might not be worthwhile. 567

Commitment implies some form of intrinsic agreement between the parties 568concerning what they want to achieve with one another, but the commitment is only 569of value if it carries knowledge, skills or abilities that the IE has seen to be helpful for the 570business, which we can collectively call "competence". Actual or perceived commit-571ment was therefore expressed through expressions of the relationships' competence 572such as in terms of the relationships "getting things done", "ability to lead", "extremely 573skillful" or being "actively involved". Even though there can be commitment without 574

trust (Uzzi 1996), when commitment and trust go hand in hand, they promote 575effectiveness (Morgan and Hunt 1994). 576

Beyond strength: An emergent model of relationships

The major themes of TEC emerged from the inductive stages of the MGT approach, 578 and when this was examined at the later stages of the process against prior theory and 579extant research, a model for relationships was suggested. It was also evident that these 580three categorizations had strong theoretical associations with three primary constructs 581(social capital, personal relationship and dvadic economic interaction) discovered 582inductively in Hite's (2003) inductive analysis of domestically focused entrepreneurs. 583Hite's (2003) substantial contribution to understanding relationships in entrepreneur-584ship shows the complexity of social relationships in emerging firms, challenges the 585view of relationships that sees them only as 'strong' or 'weak' with a multidimen-586sional perspective. Hite (2005) subsequently presents a process of evolution toward 587 full embeddedness that both adds a dynamic perspective of the relationships and 588strengthens the theoretical and empirical grounding of the work. 589

Hite's (2003) work, however, was based on an inductive analysis of emerging 590SMEs in a purely domestic environment, and her attention is to locate and analyse 591only strong relationships. From the three characteristics of relationships she discov-592ered, she characterized seven categories of relationships, with different properties and 593values. We now adapt that categorization for the relationships of international entre-594preneurs at the initial stages of international development, based on all the kinds of 595relationships that they use into the TEC model, shown in Fig. 2. The different types of 596relationships are now outlined, and are presented in Table 2. 597

Personal relationships

Personal relationships were valued by the entrepreneurs, but these relationships 599lacked embeddedness and commitment, and provided moral more than practical 600 support to the strategy of exploration in the internationalization process. One IE, 601 for example, noted "My father has been important to my venturing ever since I 602started. He has always been there for me as a backbencher" and another declared 603

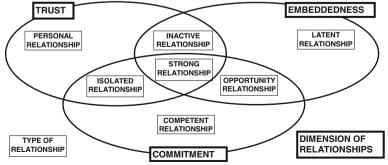


Fig. 2 The types of relationships within the TEC model

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$^{t2:1}_{t2:2}$	Table 2 types	The seven IE relationship	Types of relationship	Description
t2.3			Personal	Relationships based on trust, on a personal basis, and this trust may or may not transfer to a business activity, and may not be trust regarding business activity
t2.4			Latent	Relationships with people located in a place (such as an industry or a foreign market) that is of interest to the IE. These have not (yet) developed into either business activity (requiring commitment) or personal relationships (requiring trust), but they may open doors to new networks or resources
t2.5			Competent	The IE perceives the agent to be committed to work with the IE, and have value in that commitment by being competent, by having knowledge (e.g. technical, managerial or financial) or skills that are or which could be of value to the IE. But the relationship is not usefully located, and the person is not (yet) trusted
t2.6			Opportunity	Relationships that combine embeddedness and commitment; a competent business partner embedded in a network or a social sphere that presents opportunity to do new things such as opening of venture possibilities, new markets and new activities
t2.7			Isolated	Relationships with personal trust and commitment, but the absence of embeddedness within any internal or external relationship network means that the scope for offering new opportunities is limited
t2.8		R	Inactive	Trusted relationships embedded in a social network, with potential for doing something useful but without commitment, so actual plans or activity are limited
t2.9		JNCU	Strong	This is a fully functioning business relationship, with the scope and potential and strength to enable the pursuit of new business activities based on trust, embeddedness and commitment. Some of the most important, such as go-betweeners, may show some but low levels of personal trust

"Family members have been shareholders but their role has been more a mental 604 support than anything else." Lacking network embeddedness or the competence that 605 we would expect with committment, these relationships tend not to provide the 606 opportunities that the IEs need (Ruef 2002), and especially not in international 607 markets. 608

It is here that we find the clearest explanation for the difference between domestically focused entrepreneurs, where many studies have found these personal relationships to be very important, and international entrepreneurs, where the research evidence tends to downplay their inportance. Rather than being based on highly trusted 'strong' relationships, with family and friends playing a pivotal role (Larson 613

and Starr 1993), IEs usually rely more on weaker relationships without this personal 614 trust (Oviatt and McDougall 2005). 615

Latent relationships

In line with other studies in this field (Laanti et al. 2007; Sharma and Blomstermo 617 2003), the IEs' initial internationalization were based on a strategy of exploration. 618 The IEs actively sought relationships in a way that appeared to be without strategy, 619 but this reflected that they did not know, at such an early stage of their firm's 620 development, where the best opportunities would lie. Such a strategy of exploration 621 is best pursued by a large number of relationships (Oviatt and McDougall 2005; 622 Sharma and Blomstermo 2003). 623

As a result, a large poroportion of the IE's relationship portfolios were represented 624 by latent relationships, often formed at trade shows and industry events. To become 625 operationally useful, however, these latent relationships needed to be developed, and 626 most of the IEs did this actively and enthusiastically, often nurturing them through the 627 web and using online methods. The task here was to develop personal trust and 628 commitment, so that they could become strong business relationships. 629

Competent relationships

The IEs rarely mentioned their competent relationships, even though these individuals were important for the internal development and operations of their firms and had value for having knowledge, skills and abilities that were essential for the firm. But these relationships lacked location attributes or network embeddedness that would have helped the firm in its international venturing, and lacked personal trust that would have made them personally valuable. These relationships do not therefore transpire as being central to the firm's international growth.

Opportunity relationships

Opportunity relationships played an important role in the development of the venture. 639 Here, we have individuals with particular capabilities such as technical knowledge or managerial skills which can be of use for the entrepreneur. These individuals had often been involved in similar technological areas or in other entrepreneurial ventures. These individuals were technically competent or knowledgable in specific business areas, and are also located in or have network relationships in areas of interest. 645

The IEs spent a lot of time creating new latent relationships as their experience had indicated that many of these relationships could be developed, by gaining some commitment from them, so that they would present new opportunities. These opportunity relationships helped the IEs to address structural holes in networks and create competitive advantage by spanning these holes (Burt 1992). 650

On the other hand, some opportunity relationships showed strong signs of insufficient trust, which resulted in opportunism. As one participant noted: "The leaders [of the other business concerned] have left the city with the profits and have shown limited interest in investing in us," and another, "This American giant showed huge 654

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interest in us, we became overenthusiastic and they plainly took our ideas, started 655 their own venture and left us in the cold." 656

There were many examples of opportunity relationships, and all of the firms had at 657 least one. A good example is of an IE who moved from Iceland to London in 1999. 658 Without friends, family or work history there, he sought to establish relationships 659 with people with similar interest to build his venture. He became a member of the 660 London Business School's online network of entrepreneurs and through that network 661 established connections with three individuals who were competent in a relevant 662 technology and were interested in the specific technology he was presenting. He then 663 built his international business with the opportunities presented by these individuals. 664

Isolated relationships

Personal relationships (with only trust attributes) and competent relationships (with 666 only committment attributes) did not feature in the initial stages of internationaliza-667 tion of these IEs, nor did isolated relationships, which were strong, trusted competent 668 relationships but without embeddedness characteristics. While this is fully in line 669 with the propositions of Oviatt and McDougall (2005), Laanti et al. (2007) and 670 Sharma and Blomstermo (2003), this contradicts entrepreneurship literature which 671 emphasizes the value of strong ties at the initial stage of the entrepreneurship (Larson 672 and Starr 1993; Starr and MacMillan 1990; Hite and Hesterly 2001), and also studies 673**Q12** that have emphasized the role of close, trusted relationships for the initial stages of 674 firms' internationalization (Bell et al. 2003; Ellis 2000; Gemser et al. 2004; Harris 675 and Wheeler 2005; Komulainen et al. 2006; Zain and Ng 2006). 676

Inactive relationships

The IEs often cited inactive relationships, which were based on trust with people 678 embedded in valuable networks, but where there was little commitment or where any 679 committment had ended. Often, these were "sleeping" relationships with people 680 where there had been frequent relationships in the past, such as with old classmates, 681 former colleagues and business partners, or trusted relationships with family and 682 friends. 683

These relationships were often seen as representing potential for doing something684in the future, but these individuals were not considered as having significant influence685on the business development at the time of the study. As one participant noted, "He686was important when we started the business as he knew all about public funding of687startups." As new forms of online networks are being formed, the IEs indicated that688the numbers of inactive relationships were increasing, these relationships holding689more formalised positions within their online networks.690

Strong relationships

Like the opportunity relationships, strong relationships with people with whom there 692 was also some personal trust were extremely important. The level of trust may well be 693 limited, but is sufficient that the person involved is motivated to commit to the IE and 694 is trusted by the IE to represent the entrepreneur in some way. 695

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The most common way for these relationships to act usefully for internationalization was as go-betweeners, being competent partners who are more likely to fill the holes in the networks by helping the development of first relationships abroad. Relationships with go-betweeners developed as highly valuable opportunity presenting partnerships, for example in the ways described by Chetty and Campbell-Hunt (2003), who show that internationalization can be speeded up through the firm's distributors who have alliances with other top international companies. 702

Four IEs in the study used relationships with a business partner or acquaintance 703 that was embedded within a network to start their foreign transactions. We found, 704 as did Harris and Wheeler (2006), that in most of the cases, these go-betweeners 705 were domestic but with a large internationally embedded relationship network, had 706 a strong network identity and filled certain holes in the network. In some cases, 707 these relationships became strong over time, and in these cases, the relationships 708 could have a powerful and long-standing influence on the international development of 709 the firms. 710

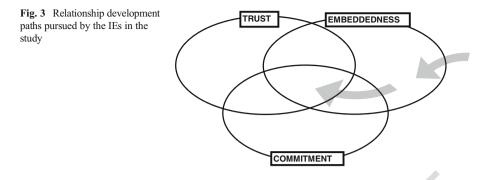
Relationship path activity

We found the IEs saw that large numbers of weak relationships suited their exploration 712 strategies, and we found that these were latent relationships that initially only had the 713 quality of being well embedded in useful networks (McDougall and Oviatt 2005). The 714 IEs actively sought to establish relationships with people with the potential to help 715their internationalization. Personal links with people in, for example, software devel-716 opment or wireless technology were often sought after trade shows and industry 717 conferences, mainly by using internet-based networks. The aim was to build up a 718 portfolio of contacts who could act as go-betweeners possibly at that time, but more 719 likely, sometime in the future. 720

Many were not active, therefore, but did not have to be active and to be fulfilling 721 transactions to be valued by the IEs, either internationally (Hadjikhani and Sharma 722013 1999) or domestically (Hite 2003). Their value was to present the IE with a valuable 723 resource: knowledge about the the go-betweeners in their industry, the key marketeers 724and leaders in large organisations, and those that are best embedded in the most 725important relationship networks. Many of the IEs developed their firms internation-726 ally from latent relationships such as this. Many had initially began as online 727 relationships, but had functioned as market openers themselves, had been go-728 betweeners or had connected the IEs with go-betweeners. One IE said: "We were 729introduced through mutual mail by the CEO of [sector leader in the country]", and 730 another mentioned how one go-betweener had invited him to dinner with an impor-731 tant executive in the TV network business, who later became a client. 732

Notwithstanding how these relationships were developed, they were always maintained on-line. The IE's online social networks have dramatically increased the size of their relationship portfolios in recent years. On average, the IEs had over 500 online relationship connections on LinkedIn, where they undertook, as one expressed it, "connections book keeping". While the IEs indicated that they knew their online relationships, they regarded them as relationships they would use when needed, so they were mainly "sleeping" or "inactive". New web tools helped the IEs to manage these 739

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large portfolios by "keeping my relations open", being a "good reminder", with it being 740 "good to know who knows whom". 741

There were, however, expressions of concern regarding this online development. 742 First, serving a large portfolio of latent relationships could be time-consuming, and 743 several IEs believed that they did not have the best business network. Second, there is 744 a growing problem of people who waste the IE's time by sending excessive requests; 745network research indicates that personal network size does not neccessarily correlate 746 to business success. The rapid growth of arm's length relationships through "viral 747 marketing" can cause problems of control, of prioritizing effort and in leveraging the 748 key relationships Coviello (2006). 749

There were benefits for all parties when IEs actively developed their relationship 750portfolios since entrepreneurs in heterogeneous networks are viewed as being more 751innovative than entrepreneurs in more homogeneous networks. As trust developed 752with go-betweeners over time, the IEs would develop some into becoming key strong 753 relationships for internationalization, in the pattern of development shown in Fig. 3. 754This process costs resources, but the growth in trust and commitment presented 755 opportunities to improve efficiencies through cooperation, to reduce operational costs 756through cooperation and to build strong relationships that would be resources for the 757 future (Jarillo 1989). 758

Conclusions

Though international entrepreneurship research recognizes the importance of relationships in the internationalization process, it has not paid much attention to the different qualities of IE's relationships nor how they develop over time. Using a multigrounded theory-building (MGT) approach with ten IE case studies, we have contributed a multidimensional picture of international entrepreneurial relationships that help us to escape simplistic notions of strength and help us to understand the dynamic paths of IE's development of their relationship portfolios. 766

Using concepts of trust and commitment from relationship marketing theory and 767 embeddedness from social networking theory, we have built a trust–embeddedness– commitment (TEC) framework that develops on earlier 'domestic' entrepreneurial 769 network research of Hite (2003, 2006), to describe the qualities of the relationships 770 that the IEs look for in the relationships that they are recruiting to their relationship 771

The relationship formation paths of international entrepreneurs

portfolio. The study contributes analysis of the paths of development of relationships772and the activities of the IEs in that process, and plots this activity in the initial stages773of internationalization. These better explain the relationships of IEs and demonstrate774some especially international dimensions to entrepreneurial relationship portfolio775development that were not included in Hite's (2003) work. These are now considered776relationship777

The model describes different qualities in IE's relationships

The initial stages of internationalization were characterized by intense networking 779 and use of network relationships, as previous studies have found (Bell 1995; Coviello 7802006; Coviello and Martin 1999; Coviello and Munro 1995; Zain and Ng 2006). 781014 Building relationships is essential in the development of the IEs venture. But the 782 model departs from the dichotomous perspective of relationships as "weak" or 783 "strong" that has characterized much previous research, and introduces a more 784 nuanced perspective of relationship formation in our descriptive model. This includes 785 three relationship qualities, trust, embeddedness and commitment, that give the name 786 to our model. If all three are present, strong business relationships are formed. If one 787 of the three is missing, there is a weakness in the relationship, either lack of trust, 788 commitment or embeddedness. 789

But it is unlikely that IEs, in the initial stages of their internationalization, will be able 790 to form sufficient numbers of relationships with all three qualities. Previous studies have 791 found that many IEs may make great use of highly trusted personal relationships (Sasi 792 and Arenius 2008; Harris and Wheeler 2005; Ellis 2000; Komulainen et al. 2004; 793015 Gemser et al. 2004). The problem here is that these may rarely help in the interna-794tionalization process because they are insufficiently embedded in foreign markets 795 (Sigfusson and Harris 2012). The IEs in this study, by contrast, mainly used relation-796 ships that were well embedded in international territories and networks, with whom 797 the IE began without trust or committment. They worked with these 'latent' relation-798 ships to build trust and committment, and many became 'go-betweeners' to provide 799 new linkages, and others became valuable for internationalization in their own right. 800

The model helps present the dynamic process of relationship development

In this study, we saw the initial steps in internationalization were based on collecting 802 mainly latent relationships (with only embeddedness as a quality) which they hoped 803 would develop further, and opportunity relationships (with only embeddedness and 804 commitment). They engaged in a relationship development process in which they 805 worked with the most promising of these well-embedded relationships, to strengthen 806 them with trust and commitment characteristics. The TEC model can be used to examine 807 other possible approaches that might be pursued by IEs in different circumstances. 808

The model helps us to understand and interpret the IE's use of online networks by 809 entrepreneurs. The entrepreneurs have large online relationship networks. These 810 helped the entrepreneurs to expand their relationship portfolios faster than traditional 811 methods would allow. The web helped them to recruit latent (embedded only) 812 relationships and establish contact with people who are also connected to other 813 members of their relationship networks. The use of the web leads to less 814

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"opportunism" (Uzzi 1996), allows more rapid buildup of trust (Morse et al. 2007), 815 facilitates more rapid development of relationships into opportunity and strong 816 relationships and enables more rapid use of and importance of go-betweeners in the 817 process of internationalization. 818

Limitations and directions for future research

This paper has a number of limitations. First, we have looked at only IEs in the software 820 industry in two European countries, Scotland and Iceland, but to the extent that 821 conditions are similar to those in other countries, these results may prove to be valuable 822 in other contexts as well. This study did not find any major differences in the relation-823 ships between the entrepreneurs interviewed in the two countries, which gives us some 824 confidence in the theoretical generalizability of the research to other countries. The 825 qualitative nature of this study limits the empirical generalizability beyond these 826 entrepreneurs, and more extensive studies in other types of industries are required to 827 test the extent to which our findings can be applied more generally, not only in software. 828

Second, social relationships are not fixed; they are activated according to need and can change frequently (Granovetter 1985), so relationship observations (for example through participant observation) would be more informative. As this is not possible in this research area, our best but inevitably impoverished alternative was thoroughly to discuss the paths of the relationships with the IEs studied.

For the future, with the importance we found of latent relationships in the 834 internationalization process of entrepreneurs, it would be valuable to explore further 835 how these are used by IEs in other sectors and contexts. The involvement of 836 entrepreneurs in social networking has been presented as an import issue for future 837 research in SME internationalization (Loane 2006; Gabrielsson and Gabrielsson 838 2011). Here, the use of online social networks by international entrepreneurs offers 839 great opportunities for IE researchers to explore the large relationship network of 840 these entrepreneurs. Networking and relationship development strategies are essential 841 within the internationalization process, and the TEC model can also help us under-842 stand more about it. 843

This will help inform IEs as well. From this study, we can see the limitations of IEs844relying on strong domestic relationships that are not well embedded in foreign845territories. We can also see the potential value for IEs of active networking activities,846(including through web-based social networking sites) to recruit, and then work with847individuals who *are* well embedded but are not yet trusted or committed.848

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