
Final accepted version (with author's formatting)

This version is available at: http://eprints.mdx.ac.uk/19695/

Copyright:

Middlesex University Research Repository makes the University's research available electronically.

Copyright and moral rights to this work are retained by the author and/or other copyright owners unless otherwise stated. The work is supplied on the understanding that any use for commercial gain is strictly forbidden. A copy may be downloaded for personal, non-commercial, research or study without prior permission and without charge.

Works, including theses and research projects, may not be reproduced in any format or medium, or extensive quotations taken from them, or their content changed in any way, without first obtaining permission in writing from the copyright holder(s). They may not be sold or exploited commercially in any format or medium without the prior written permission of the copyright holder(s).

Full bibliographic details must be given when referring to, or quoting from full items including the author's name, the title of the work, publication details where relevant (place, publisher, date), pagination, and for theses or dissertations the awarding institution, the degree type awarded, and the date of the award.

If you believe that any material held in the repository infringes copyright law, please contact the Repository Team at Middlesex University via the following email address:

eprints@mdx.ac.uk

The item will be removed from the repository while any claim is being investigated.

See also repository copyright: re-use policy: http://eprints.mdx.ac.uk/policies.html#copy
Developing social trust in IJVs: the characteristics of effective boundary spanners in western-Chinese IJVs

Paul Gooderham
NHH – The Norwegian School of Economics
5040 Bergen
Norway
paul.gooderham@nhh.no

Michael Zhang
Nottingham Business School
Nottingham, NG1 4BU
UK
michael.zhang@ntu.ac.uk

Atle Jordahl
The Administrative Research Institute (AFF) at the Norwegian School of Economics
5040 Bergen
Norway
atle.jordahl@aff.no
Developing social trust in IJVs: the characteristics of effective IJV boundary spanners in western-Chinese IJVs

Abstract

IJVs are confronted by institutional, cultural and organizational diversity. Prior research has shown that the development of social trust is a significant factor in overcoming diversity and in ensuring IJV durability. Questions remain, nonetheless, as to how social trust can be effectively built and maintained. In this paper, we explore the characteristics of key individual boundary spanners in developing social trust. We do so the basis of a polar-sample: two 50/50 IJVs that involve the same MNE and two local enterprises. Despite the many commonalities of the two IJVs, our data indicate that while both are facing challenging market conditions the one IJV is characterized by social trust and the other by distrust. Employing a managerial level approach we identified a ‘mixed bundle of capabilities’ possessed by boundary spanners who were effective in the development of social trust.

Keywords: IJVs, boundary spanners, social trust, industry experience, cultural intelligence
Developing and maintaining social trust in IJVs: the characteristics of effective boundary spanners in western-Chinese IJVs

Introduction

International joint ventures (IJVs) in emerging markets such as China typically comprise a western multinational enterprise (MNE) that contributes product and process technology, brand name/trade mark, and international marketing support and a local partner that contributes local knowledge-related expertise such as local marketing, local personnel management, or management of local government relations (Hitt et al., 2000; Inkpen and Beamish, 1997). In general the success rate of IJVs has been estimated to be no more than 50 percent (Bamford, Ernst and Gubini, 2004) and there is evidence of particular difficulties for IJVs involving Chinese partners (Child and Yan, 2003).

The effectiveness of achieving contractually based control is problematic in China for two reasons. First, common to IJVs in emerging markets the legislative quality and effectiveness in law enforcement is relatively low (Pistor and Xu, 2005). Second there is a culturally based preference for unwritten rules (Ronen and Shenkar, 2013) and exclusive relationship-based agreements (Wang, 2007). The term used in describing these relationships is “guanxi” and developing the trusting relationships signified by the concept is a particular quandary for foreign outsiders (Gao, et al., 2013). IJVs involving western and Chinese partners are therefore confronted by considerable institutional, cultural and organizational diversity that has to be handled effectively if trustworthy relationships amongst IJV partners are to be developed.

Robson, Katsikeas and Bello (2008) note that the issue of trust between IJV partners has become a key construct in inter-firm relationship management. Indeed Silva, Bradley and
Sousa (2012) observe that the success of IJVs is less related to ownership structure and more to the presence of trust between the IJV partners. In his trust-centered approach to IJV durability, Madhok (1995) differentiated between structural trust and social trust. Structural trust refers to the resources complementarity by the IJV partners with an inducement to continue the relationship and to abstain from behaving in a self-interested manner. In contrast, social trust indicates the quality of the relationship between IJV partners. Of the two components of trust, Madhok views the social component of trust as significantly more critical for IJV durability because it engenders a willingness by partners to endure periods of instability.

Kostova and Roth (2003) point to the need to develop the micro-foundations of inter-unit interaction and the development of social trust across international operations. Their micro-macro model centers on the pivotal role of boundary spanners. In the context of an IJV these are the individual managers who are the leading representatives of the IJV organizational constituencies and who operate at its various organization-organization interfaces (Luo, 2009). Their role is to create the linkages across the organizational boundaries of the IJV and in so doing they have a critical role in the creation of shared meaning and trust (Dyer and Chu, 2000; Li, Poppo and Zhou, 2010; Parkhe, 1991; Zaheer and Kamal, 2011).

In terms of developing social trust it should be borne in mind that boundary spanners “are almost always of differing nationalities—often (but not necessarily) the nationalities of the parent firms’ headquarters. And, because of systemic differences in the social and economic institutions of their home countries…there are likely to be schismatic, factionalized perceptions and behaviors among (them)…” (Hambrick, Li, Xin and Tsui, 2001: 1034). Thus conflicts of loyalty deriving from the underlying competing interests experienced by those IJV managers who act as boundary spanners is widespread (Gong et al., 2005). Particularly in periods when the IJV is confronting flux and volatility boundary spanning that results in
social trust will be a function of more than network position: individual skills and biographies are an important part of the picture (Fenton O’Creevy et al., 2011). However, it remains the case that “little is known about the characteristics of (effective) boundary spanners and whether their capabilities are inherent or can be developed” (Schotter et al., 2013).

The purpose of this paper is to contribute to this issue by adopting an explorative micro-level approach. We do this on the basis of a case study of the core boundary spanners involved in two IJVs based in China both of which involve one and the same Swedish MNE, SVP, two of SVP’s wholly-owned German subsidiaries and two Chinese state-owned enterprises (SOEs). Both IJVs are confronting down-turns in their markets and the dissolution of the original partner complementarities. However, whereas the one IJV is riven by conflict and “distrust” (Connelly, Miller and Devers, 2012) among its boundary spanners, the other is characterized by friendly relations and substantial social trust.

In the next section, we develop an overview of the literature on social trust in relation to IJVs and the role of boundary spanners. We identify a set of individual attributes that form a mixed bundle of capabilities for effective trust building. We then address our case methods and data followed by sections of analysis and discussion. In the final section we identify the implications of our findings for future research and theory development.

**Theoretical insights**

**Social trust in IJVs**

Aulakh et al. (1996) argue that the mode of IJV ownership and control is an *ex ante* condition and that in the longer term the actual stability and durability of the partnership is determined by *ex post* developments to the relationship. Madhok’s (1995) distinction between structural and social trust is particularly pertinent to *ex post* analysis. Synergistic
complementary resources from the partners constitute “a reservoir of potential value” (Madhok, 2006: 7) so that there is an ex ante inducement for both partners to contribute towards the relationship. Because IJVs will inevitably be exposed to periods of disequilibrium and instability a failure to develop a substantial degree of social trust has critical implications for longer-term durability. During periods of flux contributions to the IJV cannot be continuously evenly matched. Durability is made possible by the social dimension of trust because it “provides the tolerance through the social ‘glue’ (to preserve the partnerships)” (Madhok, 1995: 121).

Since Madhok’s (1995) theorizing the concept of trust has become more established both in international business research in general (Child and Möllering, 2003; Zaheer and Kamal, 2011) and in international alliances in particular (Das and Teng, 1998; Dyer and Chu, 2000; Parkhe, 1998; Silva, Bradley and Sousa, 2012). Like Madhok it is now common to distinguish between cognitive-based trust that is based on rational calculation (i.e. structural trust) and affect-based trust that is based on emotional bonds (i.e. social trust) (Fryxell, Dooley and Vryza, 2002; Jiang et al., 2011).

**Trust as a management-level phenomenon**

Some researchers argue that interpersonal trust can manifest itself in collectives such as an organization through the process of institutionalization (Dyer and Chu, 2011; Zaheer, McEvily and Perrone, 1998). However, Dyer and Chu (2011:11) contend that trust is fundamentally a construct delineating interpersonal relationships since “organizations cannot trust each other.” Likewise Currall and Inkpen (2002) have proposed that it would be more appropriate to study trust at the individual level. In the evolution of the IJV: “When individual IJV managers trust one another, the continuity of their relationship should enhance inter-firm trust because these managers influence other managers, groups and organizational routines”
(Currall and Inkpen, 2002:491). Similarly, Hambrick et al (2001) also emphasized the need to adopt a managerial view of the IJV in approaching the issue of social trust and durability in IJVs. Kostova and Roth (2003) suggest that by sharing their thoughts and feelings with their colleagues boundary spanners build socially shared perceptions about partner units thereby creating unit-level effects in terms of shared meaning, trust and reciprocal obligations.

Equally when the relationships between boundary spanners are poor their attitudes to one another may result in distrust and the disruption of cooperative behaviors at the business-unit level: “hence, the critical role of subunit boundary spanners” (Kostova and Roth, 2003:314). Thus interpersonal and organizational conflicts are often intertwined (Schotter and Beamish, 2011).

**Boundary spanners**

IJV partners consistently seek to have ‘due representation’ in the management of IJVs (Hambrick et al., 2001). The governance structure of IJVs varies but if an appointee of the local partner is the managing director (MD) typically the western MNE will seek to have an expatriate representative located at the IJV to ensure direct interaction between it and the IJV. The manager of the MNE business unit delegated with the responsibility for interacting with the IJV will effectively also be part of the governance structure. Each of the individuals occupying these positions is interacting with individuals who are located in different organizational systems and each is therefore engaged in boundary spanning roles (Johnson and Duxbury, 2010). Boundary spanning roles involve sharing information with other boundary spanners and acting as a “relationships lubricant” for effective cooperation and problem solving with the IJV exchange partners (Huang et al., 2013:2). The interaction between boundary spanners is not only complex because of having to operate across diverse business environments but also because of the competing interests of the IJV partners they
represent (Gong et al. 2005; Mohr and Puck, 2007) and their own personal partner loyalties (Li, et al., 2002).

Kostova and Roth (2003) recommend that future research should consider the individual-level factors which may affect how boundary spanners interact with one another. However, there has been a lack of theoretical development of the capabilities of IJV boundary spanners, especially those managers who are able to overcome their latent tendency towards distrust when market conditions change. Beamish and Lupton (2009) agree and recommend case studies for gaining deeper insights into the role of managerial characteristics, attitudes and experience in effective IJV management. Schotter and Beamish (2011) propose that boundary spanning ability is a function of individual personality, organizational ambidexterity and high levels of knowledge concerning products and/or services. This indicates a mixed bundle of capabilities consisting of industry experience at national and international levels, IJV experience, and cultural intelligence (CQ).

Although cultural intelligence (Earley and Ang, 2003) has primarily been applied to research on expatriates (e.g. Wu and Ang, 2011), it clearly has relevance for IJV boundary spanners (Ng et al., 2009; Ramalu et al., 2010) as it aims at capturing variations in individuals’ ability to operate across culturally diverse settings. Early and Ang distinguish three facets to CQ: cognitive, i.e. knowledge that can be gained about a new culture through study; motivational, i.e. the propensity to act on the cognitive facet and to persevere in acquiring knowledge and to overcome stumbling blocks and failure; behavioural, i.e. the capability of a person to enact his or her desired and intended actions in a given cultural situation.

Our case-based research aims at exploring the role of both CQ, national and international industry experience. Additionally, in conducting our research, we were sensitive to Luo’s (2009) finding that experience of managing cross-cultural IJVs is of importance.
Method

Organizational setting

The research context comprises a Swedish MNE, SVP, two of its wholly owned subsidiaries in Germany and two of its IJVs in China, SVP-Dalian-JV and SVP-Shanghai-JV. Although the latter IJV is characterized by social trust and the former by distrust they share many common features and as such may be regarded as a “matched pair” of cases. Each IJV involves a partnership between a Chinese state-owned enterprise (SOE) and one of SVP’s two German operations: the Dalian partner is SVP-Lübeck and the Shanghai partner is SVP-Bremen. Both IJVs are engaged in the same industry, delivering parts to European vehicle manufacturers operating in China. They are further matched in that both IJVs employ the same formal control and ownership mechanisms with each having balanced ownership structures (50/50) thereby maximizing the involvement of both partners (Li, Zhou and Zajac, 2009). The governance structures are also identical. Each IJV contained an SOE appointed Chinese MD, a German contact manager located in Germany and a Scandinavian expatriate IJV Chairman appointed by SVP. We view these managers as the core boundary spanners of their respective IJVs. Table 1 contains their identities and positions.

TABLE 1 ABOUT HERE

Another significant commonality is that both IJVs are experiencing significant contractions to their markets and therefore an undermining of the original structural trust that motivated their establishment. Thus the two IJVs confront challenging market situations in one and the same
industry on the basis of matching ownership and governance structures and, more broadly, both are confronted by similar degrees of institutional and cultural diversity.

**Approach**

Our research aims at exploring the role of the individual-level attributes, we define as a “mixed bundle of capabilities” across three different categories of boundary spanners in IJVs in relation to the development of social trust. Given the exploratory nature of our research we adopted a qualitative case study approach. Unlike quantitative sampling that employs random samples aimed at representing a broader population, qualitative sampling is purposive. “Purposive sampling seeks to identify cases that are extreme in the terms of the phenomenon of interest. Extreme cases increase the likelihood of accessing information-rich data…(in order to) generalize from the observations at hand to an underlying concept or theory (an analytic generalization), not to a broader population (a statistical generalization…)” (Johnson & Duxbury, 2010:32). Consequently our research was located within a context that not only contained a sufficient variety of boundary spanning roles but which also contained two IJV cases that in terms of levels of social trust constitute a “polar sample”. Martin and Eisenhardt (2010) argue that “polar samples” are a particularly potent design for observing emergent constructs.

Data from the six boundary spanners was collected through relatively loosely-structured interviews. At the outset of each interview it was made clear to them that their answers would be treated in confidence and that their anonymity would be safeguarded. In addition to recording the interviews one researcher was assigned the task of taking notes while another functioned as the interlocutor. In order to trigger the boundary spanners’ narratives of their experiences and their perceptions of the current performance and future outlook of their
respective IJVs we employed a small number of open-ended questions. However, we ensured that questions regarding their national and international industry experience and experience of IJVs were included. In order to acquire an insight into their CQ we sought for evidence of language skills, adaptability to the culture of the other IJV partner and general willingness to persevere. Certain questions were specific to the boundary spanner role of the informant: for example we asked the two SOE appointed Chinese MDs whether they considered themselves “as part of the SVP family”. Other questions were common to all interviews: for example “what is the future outlook for the IJV?” In terms of the future outlook there was a commonality of perception among the boundary spanners within, but not between, the two IJVs. Within each IJV we observed certain consistencies. While both sets of boundary spanners recognized that their respective joint ventures were currently struggling their view of the future diverged significantly. The SVP-Shanghai-JV boundary spanners were positive; their SVP-Dalian-JV counterparts were not.

In order to acquire other perspectives on the two IJVs and the functioning of their boundary spanners we conducted six additional loosely structured interviews including two senior managers at SVP corporate headquarters, two senior managers at SVP’s wholly-owned Norwegian subsidiary and a senior manager at SVP-Bremen. Our sixth supplementary interview was with a Swedish expatriate manager, Mr. Larsen, located at SVP’s wholly-owned subsidiary in Shanghai, SVP-Auto. Mr. Larsen had been delegated by SVP to broker at the troubled SVP-Dalian-JV. As such he may be regarded as a “virtual” chairman and therefore an additional key boundary spanner. We were unable to acquire access to managers within the two Chinese SOEs. Table 2 contains the identities of the six supplementary informants.

TABLE 2 ABOUT HERE
All interviews were conducted on site between July 21 2009 and February 14 2010 and each interview lasted for between 60 to 90 minutes. Interviews were conducted either in one of the Scandinavian languages (with the Scandinavian respondents) or English. An interpreter was used in our interview with the Chinese MD of SVP-Dalian-JV. The notes and tape recordings were transcribed into text by the note-taking researcher. Some interviews were supplemented with informal observation. We also collected secondary data by accessing company annual reports. Within-case analysis was conducted by all three authors (Eisenhardt, 1989).

Findings

Parent HQ

Founded in 1962, SVP remained a domestic company until 2001 when it rapidly expanded its foreign activities both in Western Europe, Canada and the Far East through a mix of entry strategies that included acquisitions, start-ups and joint-ventures. In 2009-2010 SVP directly employed 1,550 personnel worldwide, of whom 450 were located in Sweden and 640 in China. Only 8 persons were employed at corporate headquarters in Sweden.

Two of SVP’s most important Western European operations are located in Germany, SVP-Bremen and SVP-Lübeck. A third is located in Norway, SVP-Stavanger. All three are acquisitions. In simple terms these Western European operations contain the bulk of SVP’s advanced competencies in various vehicle parts. In contrast, its Chinese SOE partners are geared to low-cost production on the basis of standardized competencies. The view of the corporate headquarters is that its Chinese joint venture operations are critical for SVP not only
because they reduce factor costs, but also because of their geographical proximity to European vehicle manufacturers located in China.

SVP’s main operations in China are two IJVs, SVP-Shanghai-JV and SVP-Dalian-JV. The Chinese partners of the IJVs are both local SOEs. SVP-Bremen is the main partner of SVP-Shanghai-JV but is supplemented by SVP-Stavanger. SVP-Lübeck is the sole partner of the SVP-Dalian-JV. Apart from the chairmen of their boards, neither SVP-Shanghai-JV nor SVP-Dalian-JV employs any SVP expatriates. SVP employees from the European operations are only at these operations when there are well-defined tasks to carry out.

_SVP’s German JV Partners in China_

SVP-Bremen has approximately 110 employees and designs and manufacturers car fenders. It was acquired by SVP in 2001. Its MD, Mr. Schmidt, is in his early sixties and has been at the Bremen operation since the early 1980s. One of his main responsibilities is acting as the main go-between with SVP-Shanghai-JV.

SVP-Lübeck focuses on wheels, both for autos and heavy machinery such as dumper trucks. Bankrupt in 2004 it was thereafter acquired by SVP. It has 60 employees. The manager with the main responsibility for overseeing its relationship with SVP-Dalian-JV is Ms. Neuhaus. She is in her late thirties and has had most of her working career at SVP-Lübeck.

One significant difference between SVP-Lübeck and SVP-Bremen is that while the latter has been part of various MNEs since 1983 the former was an entirely independent and locally oriented entity until 2004. In particular SVP-Bremen has had a common ownership history with what is now SVP-Stavanger since 1983. In the context of SVP-Shanghai-JV, SVP-Stavanger and SVP-Bremen have a substantial history of cooperation. As a consequence Mr. Schmidt regards SVP-Bremen as having developed a decidedly Scandinavian outlook on
management whereas he regards SVP-Lübeck as “entirely German in its approach to management.” Although he is not uncritical of Scandinavian leadership, which he characterizes as “too discussion oriented”, equally he is not uncritical of SVP-Lübeck’s “German approach” which he views as “inflexible in relation to demanding clear guidelines and an unwillingness to engage in open discussion.”

The mono-cultural aspect to SVP-Lübeck and its managers is acknowledged by Ms. Neuhaus, who observes that “the old Lübeck history is still (in us) and the ‘new spirit’ (of the IJV) has not been communicated.” As our interview, which we report more fully below, with Ms. Neuhaus unfolded it came to appear to us that this mono-cultural dimension bordered on ethnocentrism (Selmer, Torbjörn, and de Leon, 1998).

The Joint-Ventures

SVP-Dalian-JV

SVP-Dalian-JV is partnered with SVP-Lübeck and has 80 employees. It was established at a new industrial site on the outskirts of Dalian in 2005 and is the outcome of an agreement between SVP and a local Chinese SOE for engineering, production and sale of wheels to European dumper truck makers in China. SVP’s decision to enter into this 50-50 joint venture was a product of its generally positive experience with SVP-Shanghai-JV. Indeed the legal document that formed the contractual basis of SVP-Shanghai-JV was used in establishing SVP-Dalian-JV as an authorized entity. Its MD is Mr. Wang who in business situations speaks no English.

In its first fully-operational year of 2007, SVP-Dalian-JV posted substantial profits and it appeared that the assessment underlying the setting up of the IJV that there were complementary assets that would generate successful performance was confirmed. However, during 2008 the market contracted resulting in considerably a significant reduction of profits.
While the relationship between Ms. Neuhaus of SVP-Lübeck and Mr. Ericsson the 63 year old Norwegian chairman of SVP-Dalian-JV remained cordial, the relationship between the latter and the MD, Mr. Wang, rapidly become so acrimonious that it was decided to appoint a new chairman, a 60 year old Swede, Mr. Hansen. Unlike Mr. Ericsson who had spent 30 years in China and who spoke rudimentary Chinese, Mr. Hansen spoke no Chinese. Mr. Hansen’s lack of Chinese was hardly surprising as most of his career has been spent in various managerial roles in the Scandinavian aquaculture industry. With his career coming to an end he revealed that he had no intention of learning any Chinese.

The relationship between Mr. Hansen and Mr. Wang was little better than between the latter and Mr. Ericsson. Mr. Hansen explained that “for the first six months no one came by my office even though it is located in the company building.” In meetings Mr. Wang refused to consent to Mr. Hansen to operate with his own interpreter insisting that he rely on Mr. Wang’s. Mr. Hansen informed us that after a stand-off with Mr. Wang he had reluctantly decided that if outright conflict was to be avoided it was better to concede the right to act as chair at SVP-Dalian-JV board meetings. Another issue was that Mr. Hansen regarded Mr. Wang’s interpretation of the contractual arrangements as limiting his insight into significant aspects of the workings of the IJV. The financial accounts were prepared by appointees of Mr. Wang and it was Mr. Wang who single-handedly negotiated with the sub-contractors all of whom belonged to his own personal network. This lack of transparency caused Mr. Hansen to conclude that SVP’s corporate management had paid insufficient attention to the design of its contractual arrangements with its Chinese partner.

The one area of agreement between Mr. Hansen and Mr. Wang was that they both viewed their respective relationships with Ms. Neuhaus of SVP-Lübeck as highly problematic for the continuation of the IJV. Ms. Neuhaus was highly critical of the quality of workmanship carried out by Mr. Wang’s network of local Chinese subcontractors. Some of these deviations,
according to Mr. Hansen, were no more than cosmetic so that he considered Ms. Neuhaus and her colleagues at SVP-Lübeck as indiscriminately “overly sensitive” in their approach to quality issues. However, he also regarded Mr. Wang as being unreasonable in refusing to accept requests from Ms. Neuhaus that SVP-Lübeck’s inspectors should be allowed to carry out quality checks at the subcontractors to pre-empt problems. In refusing to cooperate with Ms. Neuhaus, Mr. Wang argued that he was not contractually obliged to do so.

Mr. Wang’s primary disquiet with Ms. Neuhaus was that she refused to undertake the unblocking of core technical parameters meaning that the components SVP-Lübeck delivered to SVP-Dalian-JV could not be replicated locally. He remarked that if this issue could not be resolved “there will be a big problem”. Rather than trying to develop common cause with Mr. Hansen, Mr. Wang by-passed him and communicated his concerns directly to SVP corporate HQ.

From the perspective of Ms. Neuhaus, the explanation for distrust was very different. She reported that she found dealing with SVP-Dalian-JV “exasperating not least because of SVP-Dalian-JV’s continual reinterpretation of the joint venture contract” and the “tremendous quality problem” in regard to its output. Ms. Neuhaus stated that the poor quality of workmanship at SVP-Dalian-JV “hurts” SVP-Lübeck employees who have “an obsession with quality.” She complained about the high production staff turnover at SVP-Dalian-JV which resulted in a constant stream of new production employees who had to be trained. She further objected to Mr. Wang’s decision to locally purchase steel structures of “a cheaper and inferior quality than stipulated.” She attributed Mr. Wang’s decision to purchase locally as an abuse of the contract. However, “joint ventures cannot be taken to court”. So “the challenge is to find the right tone.” To date though Ms. Neuhaus felt that this was unattainable because in regard to quality and prices “the Chinese do whatever they want” and they also win all of
the arguments not least because “when they do not get their way they threaten to stop production.”

Ms. Neuhaus was conscious that immediately prior to its acquisition by SVP in 2004 the Lübeck operation was bankrupt and that the relationship with SVP-Dalian-JV had brought in significant orders – indeed 95 percent of SVP-Lübeck’s orders stem from SVP-Dalian-JV. She further accepted that SVP-Dalian-JV, under the “well-connected Mr. Wang has opened up a lot of doors for us in China.” Nevertheless, Ms. Neuhaus stressed that the basic attitude at SVP-Lübeck is that “they (the Chinese) will take all our knowledge” accompanied by bitterness that “SVP-Dalian-JV will have acquired everything in the space of a few years that has taken us sixty years of consistent effort to develop.”

Around SVP we observed an acute awareness of the distrust between the three formal boundary spanners involved with SVP-Dalian-JV and pronounced views on them. While all of these views obviously reflect the interests and the biases of our informants overall there were many common perceptions of these three managers.

Mr. Ericsson, the former chairman of SVP-Dalian-JV was unsurprisingly particularly critical of Mr. Wang even suggesting that the business model at SVP-Dalian-JV was so opaque that Mr. Wang was not trustworthy. Madam Tan, the MD of SVP-Shanghai-JV, regarded Mr. Wang as no more than a “metal-bashing production boss” with “no feel for marketing” and, unlike herself, no notion of how to develop a set of independent design capabilities. In other words, in her view Mr. Wang lacked relevant industry experience. Mr. Schmidt had a similar view claiming that Mr. Wang is a “production guy” rather than a “marketing guy”. Furthermore, he viewed Mr. Wang as “having a power focus rather than a business orientation”. Although Mr. Schmidt believed Mr. Wang understood English he assumed that his refusal to speak it was due to his fear of appearing weak. Mr. Selart, the MD of SVP-Stavanger, was also scathing claiming that “Mr. Wang has been a problem from day
one” and the Chief Financial Officer at SVP-Stavanger, Mr. Lindberg, also distrusted Mr. Wang.

At SVP’s corporate headquarters Mr. Nordhaug viewed Mr. Wang as a source of conflict and Ms. Dale, SVP’s After-Sales Services characterized him as insufficiently commercial in his outlook and was concerned about the long-term implications of the quality problem at SVP-Dalian-JV.

Equally though both Mr. Hansen and Ms. Neuhaus were the subject of criticism. Both Mr. Ericsson and Mr. Selart viewed Mr. Hansen as lacking industry experience and therefore easily deceived and isolated. Mr. Schmidt was unimpressed with his compatriot Ms. Neuhaus. He regarded her as being locked into an inflexible and “typically German” mind-set. More significantly for him was her dread of giving away knowledge to the Chinese and her fear that it would cost Lübeck jobs. The Chief Financial Officer at SVP-Stavanger, Mr. Lindberg, also viewed Ms. Neuhaus as blinkered in her relationship with SVP-Dalian-JV. In his view Ms. Neuhaus and her colleagues were failing to explore future possibilities such as developing new products for the Korean market.

While this account has features that are unique to SVP-Dalian-JV overall it conforms to the typical outcome of IJVs. There is an ex ante phase in which the conditions for structural trust are identified and the IJV is established. As market conditions changed the circumstances that gave rise to structural trust began to disintegrate. None of the three formal boundary spanners appeared to be capable of reducing the friction and distrust that had become rife at SVP-Dalian-JV.

*SVP-Shanghai-JV*
SVP-Shanghai-JV is a 50-50 joint venture located in Shanghai with 80 employees. It specializes in the design, engineering and marketing of wheels and fenders primarily aimed at European vehicle manufacturers in China. The actual production of these parts is outsourced locally. Until some months before we conducted our research it had been a consistently profitable operation. However, it then experienced a severe contraction to its market that its MD, Madam Tan, believed would last for at least three years.

The Shanghai SOE partner has had a long history of interacting with foreign companies stretching back to the early 1990s. In 1998 it established a 50/50 joint venture with what was to become SVP-Stavanger which at that point was owned by Swed-Auto. In 1999 Swed-Auto sold its share of the joint venture to the UK MNE, UK-Auto. In 2001 UK-Auto sold its share to SVP. Although SVP-Bremen is SVP-Shanghai-JV’s primary partner, SVP-Stavanger continued to have occasional dealings with SVP-Shanghai-JV mainly in the form of training and development and is the direct recipient of royalties from SVP-Shanghai-JV.

As we conducted our research we observed that despite the down-turn for SVP-Shanghai-JV and its bleak immediate prospects the relationships between its three boundary spanners, Madam Tan, Mr. Ericsson and Mr. Schmidt were characterized by mutual trust.

Madam Tan joined the Shanghai SOE in 1992 and since 1998 had been directly involved with SVP-Stavanger. Approaching retirement, she had succeeded in learning sufficient English since 1998, when she spoke little English, to be able to communicate in English effectively without the aid of an interpreter.

Madam Tan expressed general satisfaction with the performance of SVP-Shanghai-JV and regarded the cooperation with SVP-Bremen, as well as with SVP-Stavanger, as having been very positive and made it clear that she had a strong desire to maintain the relationship with SVP because in her view “SVP is exceptional at promoting the products of the IJV to European auto manufacturers.” Furthermore, she had every confidence in SVP’s capability in
regard to technology development. She planned to use the downturn to train and develop her employees in order to be able to grow when the market revives.

Madam Tan’s positive outlook on the IJV was not confined to the capabilities SVP-Bremen was contributing. On a more emotional level Madam Tan commented that SVP had consistently taken a “more kindly” approach to doing business than the former MNE partner, UK-Auto. Equally Madam Tan characterized the workings of SVP-Shanghai-JV as entirely transparent. She explained that the relationship that had evolved between the partners had meant that there was increasingly less need for formal meetings. In 2001 there were eight board-meetings a year. By 2009 this had been reduced to two.

Mr. Ericsson was appointed chairman of the SVP-Shanghai-JV board in 2005. He was engaged on the strength of more than 30 years of industry experience in China and other Asian countries. As we noted above, despite his many years in China Mr. Ericsson’s Chinese language skills had never progressed beyond the rudimentary. Mr. Ericsson shared Madam Tan’s generally positive analysis of the joint venture. As Chairman he was tasked with leading board meetings and writing the minutes. He felt that not only had he a good insight into the finances of SVP-Shanghai-JV, but that he was also able to request reports on all dealings with suppliers. As chairman of the board Mr. Ericsson had a casting vote. However, at no point had he ever felt any need to use this.

Mr. Schmidt, the MD and the key SVP-Bremen boundary spanner recounted that at the beginning there were problems relating to quality and “a lot of fights” with Madam Tan as “you have to be strong in China”. He reflected that “in Germany you are used to perfect workshops containing employees who are so technically proficient that they are able to independently correct design problems. In China, because of the lack of experience this is not the case.” The lesson he drew from this insight was that every aspect of a design has to be
entirely correct and explicitly communicated. Once this approach had been established Mr. Schmidt concluded that his partnership with Madam Tan and Mr. Ericsson had worked well.

The notion of social trust between the boundary spanners of SVP-Shanghai-JV was confirmed by other informants across SVP. Mr. Meyer, a management colleague of Mr. Schmidt, viewed SVP-Shanghai-JV as being an “excellent” partner and SVP as having being fortunate to enter an IJV with it. These views were echoed at SVP’s corporate headquarters.

*The virtual boundary spanner*

In response to the crisis at SVP-Dalian-JV we observed that SVP had regularly called on Mr. Larsen, the MD of its wholly-owned subsidiary, SVP Auto Shanghai, to parley between the formal boundary spanners involved in SVP-Dalian-JV. In his early forties, Mr. Larsen, a Swede, was locally married with two children and had seven years of experience in China during which he had forged good relationships with Madam Tan and Mr. Wang. Mr. Larsen’s relationship with Mr. Wang predated SVP-Dalian-JV and Mr. Larsen thought that it was this that meant Mr. Wang was uniquely prepared to speak in English to him on the phone.

Although there was intention on the part of SVP that Mr. Larsen should actually displace Mr. Hansen, he was significantly supplementing what was meant to be a key part of the task portfolio of the IJV chairman. As such in calming Mr. Wang by assuring him of SVP’s “good intentions” he functioned as a critical boundary spanner. He was also a calming influence on Ms. Neuhaus.

While both Mr. Ericsson and Mr. Hansen lived in apartments in international hotels, Mr. Larsen lived in a suburb with Chinese neighbours. Although Mr. Larsen used English as his main working language, his Chinese language skills were such that he could converse with some fluency with those Chinese employees who could not speak English. However, despite the positive nature of the dialog he had with Mr. Wang, Mr. Larsen acknowledged there were
profound differences between them in terms of management style. He remarked that Mr. Wang had “an extremely hierarchical style of management” that contrasted with what he regarded as his own “non-authoritarian Scandinavian style of management”. Equally, though, Mr. Larsen was critical of SVP-Lübeck managers describing them as “shrill and heavy-handed”.

**Analysis**

Despite a broad range of contextual commonalities including ownership, industry, contractual arrangements, governance structures, and national cultures, the common challenging market conditions have led the boundary spanners of the two IJVs to very different interpretations and emotional responses. Consequently, the quality of the social exchange relationships among the IJVs’ respective boundary spanners appears to be very different. Dulac et al.’s (2008:1084) statement that “Once a (social exchange) relationship is perceived as being of high quality, future transactions in the relationship may be more likely to be viewed as fair, regardless of actuality” is clearly pertinent to Madam Tan’s sanguine interpretation of the quality of the relationship with her partner boundary spanners.

In the case of SVP-Dalian-JV the situation is starkly different. The perception of complementary resources has eroded and been replaced by a stand-off in regard to the transfer of knowledge. From the perspective of Ms. Neuhaus, if SVP-Lübeck were to transfer its knowledge to SVP-Dalian-JV it would cease to be of value to the joint venture. From the perspective of Mr. Wang, without this knowledge SVP-Dalian-JV is overly dependent on SVP-Lübeck. Rather than the ‘win-win’ structural complementarities that appeared to exist in 2007 the relationship between the SVP-Dalian-JV boundary spanners had become pervaded by open distrust. The role of the virtual chairman at SVP-Dalian-JV, Mr. Larsen, is critical in maintaining the survival of the IJV.
Our main findings in terms of the quality of the relationships of the boundary spanners are summarized in Table 3. As a means to achieving concision we have dichotomized these relationships on the basis of trust/distrust.

**TABLE 3 ABOUT HERE**

The issue we now address is twofold. First, what distinguishes the boundary spanners involved with SVP-Shanghai-JV from those at SVP-Dalian-JV? Second, what are the characteristics of the virtual chairman at SVP-Dalian-JV, Mr. Larsen? We do so by analyzing the mixed bundle of capabilities comprising industry experience at both national and international levels, IJV experience, and CQ as elaborated earlier. In Tables 4 and 5 we summarize the distribution of these capabilities among the boundary spanners in SVP-Shanghai-JV and SVP-Dalian-JV. In terms of industry experience and IJV experience “substantial” indicates at least five years of relevant industry experience whereas “none” equates to considerably less or no relevant experience.

**TABLES 4 & 5 ABOUT HERE**

CQ is harder to gauge precisely than industry and IJV experience. However, our data suggests that Madam Tan’s perseverance in learning English indicates a high degree of the motivational facet of CQ. In a similar vein, Mr. Larsen’s ability to live a family life in an indigenous suburb of Shanghai is an indication of a highly developed behavioral facet of CQ. His characteristics accord well with Levy, Beechler, Taylor and Boyacigiller’s (2007:27) definition of the global mindset: “A highly complex individual-level cognitive structure characterized by an openness to and articulation of multiple cultural and strategic realities on
both global and local levels, and the cognitive ability to mediate and integrate across this multiplicity.”

In contrast neither Mr. Hansen nor Mr. Wang had made any investment in developing their cognitive knowledge. Mr. Hansen had decided to learn no Chinese and Mr. Wang generally preferred to avoid interacting with foreign colleagues without an interpreter. Mr. Schmidt and Ms. Neuhaus have had very different levels of exposure to interacting with international business partners. Mr. Schmidt has been part of a SVP-Bremen unit that has a long history of foreign ownership. Not only has he worked with Scandinavians since 1983 but he has also been part of MNEs that have had dealing with Chinese partners since 1998. In regards to management he has developed a relativistic approach regarding both Scandinavian and German management cultures viewing them as having both strengths and weaknesses (Selmer et al., 1998). He is more critical of the “typical” German style of management which he regards as overly rigid. When he recalls his initial responsibilities in fronting the relationship with SVP-Shanghai-JV while he recalls “a lot of fights” there is also a relativistic notion of why those fights occurred and a pragmatic view of how they could be resolved. The Chinese at SVP-Shanghai-JV lacked experience and it was therefore necessary to ensure that every aspect of a design be communicated in an entirely explicit manner. As such we view Mr. Schmidt as having a moderate level of CQ whereas Ms. Neuhaus who has had most of her career within a locally oriented German company that only became part of an MNE in 2004 has a low level of CQ. Finally, we regard Mr. Ericsson as having acquired a moderate level of CQ during his 30 years in China. While he had acquired only basic Chinese language skills and had lived in an apartment in an international hotel, he expressed a strong liking for living in China and over the years had rejected job offers in Europe.

Social trust and the mixed bundle of capabilities
Table 4 indicates that all three boundary spanners involved in SVP-Shanghai-JV, Madam Tan, Mr. Ericsson and Mr. Schmidt, had substantial levels of international industry and IJV experience and either moderate or, in the case of Madam Tan, substantial levels of CQ. Further, Table 3 indicates social trust between all three boundary spanners. Given the degree of cultural distance between Western Europe and China it seems possible that Madam Tan’s substantial degree of CQ has been an important factor in regard to her relationships. In her willingness to develop her English language skills in order to be able to interact directly with her foreign partners she has developed “the ability to initiate interaction, to carry on meaningful dialogues and to clear up misunderstandings” (Eschbach, Parker, and Stoeberl, 2001: 281). In turn this has created a common cognitive schema between her and both of her western partners that is at the basis of a positive sensemaking of the new uncertainty faced by SVP-Shanghai-JV. However, given the generally high levels of industry and IJV experience among the three boundary spanners it is difficult to determine the relative importance of CQ for developing social trust. Furthermore, it is probable that CQ is interrelated with international industry and IJV experience.

The first three columns of Table 5 contain the current formal boundary spanners involved in SVP-Dalian-JV. The bundles of capabilities these three IJV managers possess singly and collectively are in stark contrast to the bundles of capabilities that their equivalents at SVP-Shanghai-JV hold. None has international industry experience, IJV experience or moderate or high levels of CQ. As Table 3 indicates, distrust among these individuals is pervasive.

As the former chairman of SVP-Dalian-JV and the current chairman of SVP-Shanghai-JV Mr. Ericsson appears in both Tables 4 and 5. While social trust is characteristic of his relationships within SVP-Shanghai-JV, at SVP-Dalian-JV Mr. Ericsson’s relationship
with Mr. Wang became so abrasive that he had to leave. It would appear that substantial levels of industry and IJV experience do not compensate for a moderate degree of CQ when engaging across significant cultural distance with a boundary spanner such as Mr. Wang, who as Table 5 indicates is lacking in international industry experience, IJV experience and CQ.

Table 3 indicates that Mr. Larsen, the virtual chairman of SVP-Dalian-JV has developed social trust with all three of the formal boundary spanners and not least Mr. Wang. Although lacking IJV experience, Table 5 indicates that Mr. Larsen, like Mr. Ericsson, has substantial international industry experience, but unlike Mr. Ericsson, he also has a high degree of CQ. It would clearly be too simplistic to suggest that a high degree of CQ is the only critical determinant necessary for achieving social trust with an IJV boundary spanner such as Mr. Wang. Rather, as we have suggested it is likely that high levels of CQ emerge as a result of relevant international experience.

Discussion

IJVs are characterized by persistent institutional, cultural and organizational diversity, and this is especially so in the case of China given its distinct institutional (transitional economy), cultural (Confucianism embedded in long history), and organizational (dominant SOEs) settings. Madhok (1995) argues that the structural dimension of trust is largely sufficient for satisfactory IJV performance until disequilibrium and inequity arise. It is at that point that the social dimension of trust becomes critical in that it mitigates the threat of breakdown. Once social trust is established it not only functions as “glue” for stabilizing and preserving the partnership in times of flux and inequity and as a catalyst for considering new opportunities.

However, questions remain as to how social trust can be effectively built and maintained. To fill this research gap we have explored the characteristics of key individual boundary
spanners in developing and maintaining social trust. We conducted data collection and analysis through the theoretical lenses of social trust and boundary spanners and identified mixed bundles of capabilities amongst the six key IJV boundary spanners and the virtual boundary spanner.

In line with Felin and Foss (2005), our theory development of mixed bundles of capabilities is based on a rejection of the implicit assumption of individual level homogeneity. Our approach has been to analyze individual boundary spanners at an IJV characterized by a high level of social trust and to contrast them with their counterparts at an IJV characterized by distrust. This methodological individualism enables us to identify significant and critical sources of heterogeneity of capabilities among boundary spanning managers that are critical for the emergence of social trust. We observed that boundary spanners with high levels of CQ have a greater facility for creating social trust. However, we recognize that CQ in all probability emerges as an outcome of relevant extensive international industry experience. It was less clear whether previous IJV experience is necessarily as critical as international industry experience.

While we accept that our analysis of the managerial-level capabilities required for the development of social trust between IJV boundary spanners is only an initial contribution we would argue that it is of immediate practical relevance. It is noteworthy that SVP set up SVP-Dalian-JV on the basis of the same operating model that had worked well for SVP-Shanghai-JV. What SVP failed to do was to evaluate the mixed bundles of capabilities of the boundary spanners at SVP-Shanghai-JV in order to specify the capabilities that should be represented at SVP-Dalian-JV. Instead SVP operated on the basis of individual level homogeneity. Much greater attention should be applied to evaluating and selecting individual managers to fill boundary spanning roles.
While clearly we have drawn on CQ research for our analysis this resonates with the general conclusion in the expatriation literature that personal attributes do matter (Arthur and Bennett 1995; Harrison, Shaffer and Bhaskar-Shriniivas 2004; Hechanova, Beehr and Christiansen 2003; Holopainen and Björkman 2005; Huang, Chi and Lawler 2005; Kealey and Ruben 1983; Shaffer, Harrison, Gregersen, Black and Ferzandi 2006). By examining the personal attributes of boundary spanners in IJVs who are not traditional expatriates we have extended the application of expatriate literature to IJVs. For example one particularly relevant strand of the expatriate literature deals ethnocentrism, that is an evaluative bias in favour of one’s own group combined with a perception of outgroups as being irredeemably inferior (Hewstone and Ward 1985; Perreault and Bourhis 1999). In the expatriate literature there are indications that expatriates that hold ethnocentric attitudes experience lower degrees of interaction adjustment (Black 1990; Shaffer et al. 2006). The contrast in this regard between the two German contact managers in our case-studies clearly had implications for the development of social trust.

Finally, while one cannot generalize from our findings due to small samples and limited number of informants, our specific choice of unit of analysis mixed bundles of capabilities at the individual level and their impact on developing and maintaining social trust should contribute to further theory development in this emerging field and large-scale empirical theory testing.
References


Pistor, K. and Xu, C. 2005. Governing stock markets in transition economies:


159.
Table 1: The boundary spanners of SVP’s Chinese IJVs.

<table>
<thead>
<tr>
<th>IJV</th>
<th>SVP-Dalian-JV</th>
<th>SVP-Shanghai-JV</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Boundary spanner role</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOE appointed Chinese MD:</td>
<td>Mr. Wang</td>
<td>Madam Tan</td>
</tr>
<tr>
<td>German contact manager located in Germany</td>
<td>Ms. Neuhaus (Lübeck)</td>
<td>Mr. Schmidt (Bremen)</td>
</tr>
<tr>
<td>Scandinavian expatriate IJV Chairman: current</td>
<td>Mr. Hansen</td>
<td>Mr. Ericsson</td>
</tr>
<tr>
<td>former</td>
<td>Mr. Ericsson</td>
<td></td>
</tr>
</tbody>
</table>

Table 2: The locations, identities and positions of the supplementary informants

<table>
<thead>
<tr>
<th>Business unit</th>
<th>Location</th>
<th>Informant</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVP HQ</td>
<td>Sweden</td>
<td>Ms Dale</td>
<td>After-sales Manager</td>
</tr>
<tr>
<td>SVP HQ</td>
<td>Sweden</td>
<td>Mr. Nordhaug</td>
<td>Deputy CEO</td>
</tr>
<tr>
<td>SVP-Stavanger</td>
<td>Stavanger, Norway</td>
<td>Mr. Selart</td>
<td>MD</td>
</tr>
<tr>
<td>SVP-Stavanger</td>
<td>Stavanger, Norway</td>
<td>Mr. Lindberg</td>
<td>Chief FO</td>
</tr>
<tr>
<td>SVP-Bremen</td>
<td>Bremen, Germany</td>
<td>Mr. Meyer</td>
<td>Operations Manager</td>
</tr>
<tr>
<td>SVP-Auto</td>
<td>Shanghai, China</td>
<td>Mr. Larsen</td>
<td>MD</td>
</tr>
<tr>
<td>Shanghai</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 3 The quality of relationships developed by SVP’s boundary spanners within their IJVs.

<table>
<thead>
<tr>
<th>SOE appointed Chinese MDs</th>
<th>SVP-Dalian-JV</th>
<th>SVP-Shanghai-JV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Wang</td>
<td></td>
<td>Madam Tan</td>
</tr>
</tbody>
</table>

**Scandinavian expatriate**

**IJV chairmen:**

<table>
<thead>
<tr>
<th>Mr. Ericsson</th>
<th>Distrust</th>
<th>Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Hansen</td>
<td>Distrust</td>
<td>No contact</td>
</tr>
</tbody>
</table>

**Scandinavian expatriate**

**IJV virtual chairman:**

<table>
<thead>
<tr>
<th>Mr. Larsen</th>
<th>Trust</th>
<th>Trust</th>
</tr>
</thead>
</table>

**German contact managers**

**located in Germany**

<table>
<thead>
<tr>
<th>Ms. Neuhaus</th>
<th>Distrust</th>
<th>No contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Schmidt</td>
<td>No direct involvement</td>
<td>Trust</td>
</tr>
</tbody>
</table>

**Other relationships:**

- Mr. Hansen-Mr. Larsen: Trust
- Mr. Ericsson-Mr. Schmidt: Trust
- Mr. Hansen-Ms. Neuhaus: Distrust
- Mr. Ericsson-Ms. Neuhaus: Trust
Table 4 Mixed bundles of capabilities of boundary spanners involved in SVP-Shanghai-JV

<table>
<thead>
<tr>
<th></th>
<th>Mr. Ericsson</th>
<th>Madam Tan</th>
<th>Mr. Schmidt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>MD</td>
<td>SVP-Bremen</td>
<td></td>
</tr>
</tbody>
</table>

**Industry experience:**

<table>
<thead>
<tr>
<th></th>
<th>national</th>
<th>international</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Substantial</td>
<td>Substantial</td>
<td>Substantial</td>
</tr>
<tr>
<td></td>
<td>Substantial</td>
<td>Substantial</td>
<td>Substantial</td>
</tr>
</tbody>
</table>

**IJV experience**

|                | Substantial | Substantial | Substantial |

**Degree of CQ**

|                | Moderate | Substantial | Moderate |

Table 5 Mixed bundles of capabilities of boundary spanners currently and previously involved in SVP-Dalian-JV

<table>
<thead>
<tr>
<th></th>
<th>Mr. Hansen</th>
<th>Mr. Wang</th>
<th>Ms. Neuhaus</th>
<th>Mr. Ericsson</th>
<th>Mr. Larsen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chairman</td>
<td>MD</td>
<td>SVP-Lübeck</td>
<td>Former chairman</td>
<td>Virtual chairman</td>
<td></td>
</tr>
</tbody>
</table>

**Industry experience:**

<table>
<thead>
<tr>
<th></th>
<th>national</th>
<th>international</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

**IJV experience**

|                | None     | None           | Substantial | None |

**Degree of CQ**

|                | Low      | Low            | Low         | Moderate | Substantial |