IS THE WORLD OF VENTURE CAPITAL INVESTORS TURNING FLAT?
PERSPECTIVES OF RADICAL STRATEGIC CHANGES IN HIGH-TECHNOLOGY NEW VENTURE

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ABSTRACT

High-technology new ventures (HTNVs) usually operate in a dynamic environment, with high levels of uncertainty; therefore they often require radical changes in strategy. The perspective of venture capital investors (VCs) – the main source of funding for HTNVs – towards radical changes in strategy (RSC) is therefore crucial to the understanding causes of radical strategic change in these new ventures. This paper examines the effect of cultural differences on the approach of VCs to RSC. A mixed-method methodology of semi-structured interviews was employed to compare Israeli with non-Israeli investor groups. Most of the investors agreed that radical strategic changes are likely to occur in new ventures, but they did not consider them to be favourable events. While previous research suggested that cultural differences should be expected, our findings surprisingly indicated limited cross-cultural differences among the VCs. Unlike the non-Israeli investors, the Israeli investors deemed RSC events to be influenced significantly more by internal causes than by external ones. Based on the findings, we conclude that VCs from different developed countries share fairly similar views of RSC in HTNVs. A possible explanation of this lack of difference might be the comparatively small VC community and globalization of the high-technology venture markets.

Keywords: Venture capital • High-technology new ventures • Strategic change • Cultural differences • Israel
INTRODUCTION

In recent years the high-technology industry has adopted a global orientation, with technologies designed in one country made to fit users in many others. The venture capital finance industry, traditionally dominated by US firms, appears to be following the globalization trend, with European and Asian VC firms joining the industry (MacMillan et al. 2008). However, the 2008 Global Entrepreneurship Monitor (GEM) report asserted that early-stage entrepreneurial activities vary across countries (Bosma et al. 2009), with the highest adult-population prevalence rates of high-growth expectation entrepreneurs found in high-income countries such as the US, Israel, Iceland, and Canada. The findings of Lee et al. (2011) also demonstrated the role of culture in entrepreneurial orientation, indicating significant differences among the countries in most entrepreneurial orientation dimensions. The identification of country-specific entrepreneurial concepts can be useful for researchers of international entrepreneurship, as well as practitioners operating in different countries (Gupta and Fernandez 2009).

High-technology new ventures (HTNVs) are unique within the world of entrepreneurial ventures. They usually operate in a dynamic environment, characterized by high levels of uncertainty due to the newness of the technology, markets, and products involved. HTNVs are commonly expected to have high growth rates which are associated with various crises (Hanks et al. 1993). Following the resource based view of the firm, sometimes changes are to a level that “it is difficult to know how to organize a firm” (Alvarez and Barney 2005: 777). Due to the rapid change in emergent industries, and especially high-technology, new venture strategies must change in order to survive (Shepherd, Douglas and Shanley 2000). Radical strategic change (RSC) is a common event in HTNVs, marked by a conflict between a proposed new opportunity and the risk of departing from the planned and approved strategy (Farjoun 2007). The successful execution of strategic change is a rare achievement, and such change may have a crucial impact on organizations (Beaver 2003). Since venture capitalists are an important funding source for HTNVs, and are therefore involved in the strategy process of their portfolio companies (Sapienza and De Clercq 2000), their perspective along with their changed perspectives are crucial to understanding the causes of RSC in HTNVs.
The effect of culture on the decision patterns and organizational behavior of VCs has been explored in different countries (Bruton and Ahlstrom 2003; Manigart et al. 2002; Morris et al. 2000; Sapienza et al. 1996; Wright et al. 2004). Most of the studies have examined the cultural aspects of venture capital by focusing on each specific country and outlining significant differences in investment activity between countries and between local and foreign VCs. However, cross-cultural research in the field of entrepreneurship is still in its infancy and underexplored (Engelen et al. 2009; Wright et al. 2005). In light of the tension between globalization pressures and the inherent localization of VCs (Iriyama et al. 2010) further research of the globalization of the venture capital industry is required.

Radical changes in strategy involve increased risk and are a common source of friction between investors and company management. The question arises of whether cross-country cultural differences are reflected in the attitudes of venture capital investors towards RSC. Israel is well known for its HTNV industry, as well as high entrepreneurship levels (Senor and Singer 2009). However, it is relatively small, homogeneous, and culturally distinct in comparison with other developed countries. Drawing from previous research on the subject, this study compares the perspectives of private investors in Israel with those of non-Israeli investors regarding RSC.

We examine the cultural perspectives of high-technology investors by looking at their perceptions of the causes of RSC in their portfolio companies. This will contribute to the underexplored field of the attitudes of VCs from different cultures towards strategic changes (Pettigrew et.al. 2001; Alvesson and Sveningsson. 2007).

LITERATURE REVIEW

Venture capital investors

The foundations of the venture capital industry in its current format are often traced to 1946, when United States Brigadier General Georges Doriot, recognizing the need for risk capital, created ARD (American Research and Development Corporation) to supply it. The development of the venture capital industry in the United States was encouraged by legislation of the Small Business Investment Act of 1958, which allowed the US Small
Business Administration (SBA) to license private “small business investment companies” (SBICs) to help finance and manage small enterprises in the United States. The public success of the venture capital industry in the 1970s encouraged the proliferation of venture capital investment firms. During the 1980s, due to factors such as changes in financial regulations, the number of VCs operating in the United States surged to over 650 (Florida and Kenny 1988; Gompers and Lerner 2004; Kenny, 2000).

American firms have traditionally been the largest participants in venture deals. In 1996 the United States venture capital pool was about three times larger than the total venture capital pool in the 21 other countries where it existed. Moreover, about 70% of the venture capital in the rest of the world was concentrated in three countries with strong ties to the United States economy: Israel, Canada, and the Netherlands (Jeng and Wells, 2000). Some may argue that countries with strong bank financing systems, like Germany and Japan, have less need for venture capital, but research has demonstrated the inherent differences between venture capital investments and bank finance (Mason and Stark 2004). In recent years non-United States venture investment has been increasing steadily, as has the number and size of non-United States venture capitalists. The European venture capital industry seems to be following the pattern of its US counterpart (Morris et al. 2000), with rapidly increasing awareness, size of investments, and number of exits (European Private Equity and Venture Capital Association website; MacMillan et al. 2008). A similar phenomenon is also indicated in Asian countries such as Singapore, Taiwan, and China (Bruton and Ahlstrom 2003). In light of the United States’ example, policy makers believe that venture capital should be encouraged, because of its association with the development of high-technology industries and national economic growth (Timmons and Spinelli 2009).

Cultural aspects of new ventures

Following Hofstede’s (1991) comprehensive examination of the effect of culture on organizational behavior, numerous researchers have explored the patterns of VC decision making in different countries. However, in contrast with Hofstede (1991), the studies that focus specifically on the cultural aspects of venture capital have generally been limited to
consideration of specific countries without comparisons between cultures. Paruthi et al. (2003) compared India-based VCs with foreign VCs, outlining major differences in investment activity between the two groups. Their findings corroborated those of Lockett et al. (2002), who compared investment approaches of VCs in the United States, Hong Kong, India, and Singapore, and those indicated by Morris et al.’s (2000) investigation of the South African VC community. Mayer et al. (2005) concluded that neither financial systems nor sources of finance adequately explain the pronounced variation among different VC activities. However, Baughen and Neupert (2003) showed that cultural aspects are dominant in the entrepreneurial process, and the Global Entrepreneurship Monitor indicated that early-stage entrepreneurial activity varies across countries (Bosma et al. 2008). In a general business context, organizational behavior is expected to vary among countries due to different national cultures (Hofstede 1991; Ronen 2007). Based on their previous research, it seems reasonable to expect a difference in the attitudes of private investors to strategic events in their portfolio companies, corresponding to the VC’s country of operation. Culture has a major impact on the executive mindset, as demonstrated by the findings that executives from different cultural backgrounds vary in their attitudes to change in organizational strategy, leadership profiles, and perceptions of strategic issues (Barr and Glynn 2004; Geletkanycz 1997).

The avoidance of uncertainty is one of the cultural attributes measured by Hofstede (1991) and House et al. (2004) as an indicator of managerial resistance to change. Members of high uncertainty avoidance cultures tend to prefer a more solid structure, together with clear rules and standardized operating procedures (Hofstede, 1991; House et al. 2004). In comparison, executives with a cultural background characterized by low uncertainty avoidance values are more comfortable with instability (de Vries and Miller 1986; Hambrick and Brandon 1988).

**Strategy in HTNVs**

Business strategy is one of the major factors affecting new venture performance (Baum et al. 2001; Chrisman et al. 1998; Gartner et al. 1999; Vesper 1990). Business strategy could be described by numerous definitions while Andrews (1971) is credited for being first to
define strategy formulation as a process of aligning firm capabilities and constrains with environmental opportunities and threats. Mintzberg et al. (2003) focused on firm dynamics which aligns the organization resources and capabilities with the environment, aiming at sustainable competitive advantage. High-technology new ventures face a broad range of strategic technological alternatives. Since technology markets play a role in strategy formation, this process appears to be particularly complex (Arora et al. 2001; Mathewes 2003). Venture capitalists (VCs) have also been found to consider strategy as a major investment criterion. Focusing on strategy aspects, Shepherd et al. (2000) found that the most important strategy-related criterion as considered by VCs in their assessment of new venture profitability is founders’ industry-related competence, followed by educational capability (resources and skills available to overcome market ignorance by means of education), competitive rivalry, and timing.

While at a given time some factors such as market regulation and industry structure are fixed, the strategy of a new venture is constantly subject to change. The founders of a new venture present an initial strategic direction, which puts a constraint on subsequent changes in strategy (Boeker 1989). Therefore the entrepreneurial-strategy formation process can be regarded as either a "planned strategy" or an "emergent strategy" (Harries et al. 2000).

In cases where small incremental changes are insufficient, the top management team may decide on RSC and re-establishment of the new venture’s business strategy. Changes in business orientation are generally classified by magnitude, that is, incremental vs. dramatic (Miller et al. 1984: 203), or incremental vs. radical (Ginsberg and Abrahamson 1991), where radical changes involve business state and pattern. Rajagopalan and Spreitzer (1996: 49) defined strategic change as “a difference in the form, quality, or state over time in an organization’s alignment with its external environment, the fundamental pattern of present and planned resource deployments and environmental interactions that indicates how the organization will achieve its objectives.” Hopkins (1987) described strategic change as “radical” rather than “ordinary” if it combined three distinct factors: (1) a significant departure from the organization's former way of doing business; (2) far-reaching effects; and (3) the generation of uncertainty and insecurity among
organizational members. Despite the differences, researchers agree that a radical change in strategy is an outstanding event in a venture, worthy of scholarly attention in its own right.

Substantial theoretical and empirical work has been conducted regarding strategy changes in mature organizations (e.g. Gioia and Chittipeddi 1991; Rajagopalan and Spreitzer 1996; Stacey, 1995). In addition, cultural aspects such as uncertainty avoidance have been found to influence strategic decision made by top management teams (TMT) and strategy change factors (Corley 2004; Papadakis and Barwise 2002; Schwartz and Davis 1981). However, the research of strategy change in new ventures still leaves an area uncovered (Nicholls-Nixon et al. 2000).

*Venture capitalists and RSC*

The procedures by which VCs assess the survival and competitive advantage of new ventures are largely consistent with those arising from the strategy literature (Shepherd 1999). Investors in new ventures are highly involved in business strategy formulation (Ehrlich et al. 1994), and may consider increasing their involvement and leading radical changes in strategy as an alternative to venture shutdown (DeTienne 2010; Wennberg et al. 2010). Nevertheless, VCs are generally expected to dislike RSC; they may deem changes to be potentially risky for organizations (Beaver 2003; Hannan and Freeman 1984; Hopkins 1987), or feel attrition of the initial appeal of the organization due to such changes, causing them to leave (Schneider 1987).

Due to the fast pace of change in emergent industries, and especially in high tech, new venture strategies require changes in order to survive:

Venture capitalists can assess a venture’s strategy and projected environment via a business plan, but this only provides the strategic intentions behind the venture. Plans almost certainly will not turn out as predicted, and the environment faced by a venture will not be as anticipated and may change frequently. Performance will deteriorate if changes in the environment are not detected by the entrepreneur(s), if strategies are not
reassessed, and if new strategies are not formulated and implemented. (Shepherd, Douglas, and Shanley 2000: 399)

Research has shown that better understanding is needed about how investors assess a new venture’s strategy (Shepherd, Ettenson, and Crouch 2000). Thus, the post-investment activity of VCs in their portfolio companies is a fertile area for research (Tyebjee and Bruno 1984: 1054). Investors’ attitude towards RSC can be explored based on decisions made prior to or during execution of the RSC. Following Rajagopalan and Spreitzer (1996), the focus of this study is on the content of strategic change rather than on the process of its implementation.

Causes of strategic changes

Environmental changes may require changes in strategy, but the firm’s resources affect the likelihood and the magnitude of these changes. Ecology and strategy researchers have traditionally differed in their respective emphases regarding the phenomenon of strategic change: ecologists have stressed that change should be rare, because organizations find change very difficult and undesirable, but strategists have argued that change should be more common because organizations can and should adapt (notwithstanding the difficulties) to their changing organizational and environmental conditions (Zajac et al. 2000: 450). One way to estimate the frequency of RSC in high tech industries is to ask VCs whether they find RSC to be a rare event in their portfolio companies.

Events causing RSC are commonly referred to as "environmental changes" (e.g. Bhide 1994; Kraatz and Zajac 2001; Rajagopalan and Spreitzer 1996). They are also viewed as “changes in the strategic ‘recipes’ or ‘formulae’ that managers use to construe their environment,” which are advocated internally by new members of the top management team or externally by management consultants (Ginsberg and Abrahamson 1991: 174). Zajac et al. (2000) found that the timing, direction, and magnitude of successful strategic changes can be logically predicted on the basis of environmental forces and organizational resources.
Miller and Friesen (1984: 28) asserted that organizations "reinforce or extend their past structures and strategy-making practices, adhering to previous directions of evolution." Such momentum also applies to recurrent changes that have been experienced in the past. In other words, while faced with environmental changes, organizations continue to extrapolate past trends. Furthermore, according to Papadakis (2002: 90), in addition to the effect of the external environment, top management teams influence the strategic decision-making process. Presenting a different angle, Nicholls-Nixon et al. (2000) proposed that the level of perceived environmental hostility affects the level of strategic change undertaken in new ventures. Still, the causes for these changes might be internal (the company) or external (the environment), a factor that may also influence the investor’s attitude towards RSC.

This study explores the views of investors in HTNVs in different countries regarding the causes of RSC in their portfolio companies. House et al. (2004: 622) and Hofstede (1991: 151) ranked Israel as low on the uncertainty avoidance index. Such a cultural perspective that allows high levels of uncertainty may indicate a relatively high propensity for change.

Hypothesis 1: RSC events are more likely to occur in Israeli HTNVs than in non-Israeli HTNVs.

The high-technology industry is considered to be a highly turbulent environment where RSCs are likely to be driven more by environmental (i.e. external) causes than by internal ones (Farjoun 2007). Furthermore, in light of the “culture-free” structural characteristics of HTNVs (Engelen et al. 2009), environmental conditions may have the same effect in countries characterized by different cultures.

Hypothesis 2:

(a) RSCs in HTNVs will be initiated more by external rather than internal causes.

(b) Israeli HTNVs will not differ from non-Israeli HTNVs in terms of the division between internal and external causes of RSC.
METHODOLOGY

The issue of strategic change can be explored at the micro and macro levels. Based on Meyer et al. (1990) and Scott (2000: 7), we shifted away from the individual organization level to the industry level and focused on the portfolios of VCs. The top-level view of the HTNV industry is that of the venture capital investors that are involved in firms of this type. The investors’ view of strategy changes in new ventures was obtained by means of a mixed-method survey (Johnson and Onwuegbuzie 2004), to enable understanding and representation of the experiences and actions of people as they encounter, engage, and live through situations (Elliott et al. 1999: 216). This view of RSC was explored by qualitative analysis of textual data, as well as attitudes and views expressed by the interviewees. The research procedure, based on mixed-method methodology (Morgan 1998: 370) consisted of two main stages: we first conducted an exploratory qualitative study of 16 investors, and then performed quantitative analysis of the 59 reports of RSC events. This approach is especially recommended for research in the field of entrepreneurship when seeking “concepts that enhance the understanding of social phenomena in a natural setting, with the emphasis on the meanings, experiences and views of all participants” (Neergaard and Ulhoi 2006: 4).

Following Wright et al. (2004), we selected a multi-country sample of HTNV investors in order to compare cultural attributes. The study focuses on the venture capital industry in Israel, which currently includes 42 venture capital funds (High-Tech Industry Association 2008). It is relatively small and homogenous, but is considered significant in the global context (Senor and Singer 2009). According to the Globe survey, Israel is classified in the Latin Europe cluster, together with Italy, Portugal, Spain, France, and Switzerland (House et al. 2004: 32), and rated in band C in terms of uncertainty avoidance (House et al. 2004: 622). We compared Israel with other developed countries that belong to different clusters and are rated with higher levels of uncertainty avoidance (bands A or B).

The sample was comprised of 8 investors of different venture funds that operate in Israel and 8 investors that operate in 6 other countries: USA, UK, Norway, Singapore, Korea, and Taiwan. The latter (foreign) 8 investors were somewhat familiar with the Israeli
venture industry, although they operated in their home countries. In order to control for national growth (following the GEM report; Bosma et al. 2008) and create a homogenous cohort, all 7 countries of operation chosen were developed economies. The selected investors operated in different high-technology sectors such as software, medical devices, and digital signal processing. Out of the 16 interviewees, 5 were business angels and 11 were VCs, since these two types of investors represent similar attitudes (Mason and Stark 2004). All the selected investors had been engaged in early-stage high-technology investments for at least two years prior to the interview, reporting an aggregate of 82 early-stage investments out of 89 investments made during the last two years.

Data were collected from the investors by means of semi-structured interviews, conducted in Hebrew or English. The interviews were taped and later transcribed and tabulated, in order to compare the responses of all interviewees, as recommended by Myles and Huberman (1994). Patterns were sought in the data by looking for consistencies and inconsistencies in the attitudes the VCs espoused before and after the presentation of results from previous research. The interviews were analyzed using NVivo software (Richards 1999), marking and cross-referencing statements made throughout the interviews. Two independent coders classified the phrases describing the causes of RSC into either internal or external factors. The Cohen Kappa test on levels of disagreement indicated very good agreement between the coders (Kappa value 0.828). The coders then discussed the differences and created an agreed classified list of causes, except for one phrase, which was therefore excluded from the sample analysis.

The questions were designed to reveal the attitudes of investors to RSC, including the importance they ascribed to strategy as an investment criterion (Fried and Hisrich 1994; Sandberg et al. 1988; Shepherd 1999; Tyebjee and Bruno 1984). The interviewees were also asked about their perception of the causes of RSC and the frequency (or rarity) of their occurrence in their portfolio companies. At first, the interviewers asked the investors open-ended questions about the reasons for strategic change and their attitudes toward this phenomenon. Later, the findings of previous research were presented, and the VCs were asked for their views again.
RESULTS

The data analysis began with determination of whether the investors considered RSC to be a rare event. In the 16 conducted interviews, the respondents classified 32 of the 82 early-stage investment cases as RSC events such as change in the business model or shifting to a different market. Only one of the respondents indicated that she/he had not encountered even one RSC in his portfolio companies. The findings also indicated that the number of RSCs encountered in early-stage investments ranged from 0% (1 respondent) to 100% (2 respondents) of all cases, with an average of about 40% of investments and a mode of 50% of investments having experienced an RSC (see Table 1).

Next, a comparison was made between the Israeli and non-Israeli investors, in order to examine the possibility of cultural perspective. The overall percentage of RSCs relative to the total early-stage investments was in the range of 40%. The figure for the non-Israeli investors was approximately 45%, while the Israeli investors reported an average of 35% RSCs in their portfolio companies. A two-tailed t-test was used to compare the two independent sample means, producing a t-test critical value of 2.144 (p = 0.05). The t-test yielded a t value of -1.068 with a degree of freedom of 14. This confirms that there is no statistically significant difference between the mean number of RSCs of non-Israeli investors and that of Israeli investors, since the test statistic | -1.068 | does not meet or exceed the critical value of 2.144 for a two-tailed t-test.

A chi-square analysis, including Yates’ correction for a single degree of freedom (Yates 1934), yielded a significant chi-square statistic: $\chi^2(0.05) = 0.561$, (p > 0.05). This indicates that the subsamples of investors by country and number of radical strategic changes by country were statistically independent.
Table 1: Characteristics of interviewees

<table>
<thead>
<tr>
<th>Code</th>
<th>Type</th>
<th>Country</th>
<th>Number of early-stage investments</th>
<th>Number of RSC events</th>
<th>Investment field</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>BA</td>
<td>UK</td>
<td>3</td>
<td>2</td>
<td>Optical</td>
</tr>
<tr>
<td>A2</td>
<td>BA</td>
<td>USA Israel</td>
<td>4</td>
<td>2</td>
<td>Diverse portfolio</td>
</tr>
<tr>
<td>A3</td>
<td>BA</td>
<td>Singapore</td>
<td>1</td>
<td>1</td>
<td>Industrial high tech</td>
</tr>
<tr>
<td>A4</td>
<td>BA</td>
<td>USA</td>
<td>10</td>
<td>5</td>
<td>Medical devices, medical services</td>
</tr>
<tr>
<td>A5</td>
<td>BA</td>
<td>Israel</td>
<td>1</td>
<td>1</td>
<td>Biotechnology, digital signal processing</td>
</tr>
<tr>
<td>VC1</td>
<td>VC</td>
<td>Israel</td>
<td>6</td>
<td>3</td>
<td>Industrial high tech</td>
</tr>
<tr>
<td>VC2</td>
<td>VC</td>
<td>Israel</td>
<td>2</td>
<td>3</td>
<td>Software</td>
</tr>
<tr>
<td>VC3</td>
<td>VC</td>
<td>Europe USA</td>
<td>USA</td>
<td>5</td>
<td>Biotechnology, clean technology</td>
</tr>
<tr>
<td>VC4</td>
<td>VC</td>
<td>Korea</td>
<td>2</td>
<td>0</td>
<td>Information technology, biotechnology</td>
</tr>
<tr>
<td>VC5</td>
<td>VC</td>
<td>Israel</td>
<td>4</td>
<td>3</td>
<td>Information and communication technology</td>
</tr>
<tr>
<td>VC6</td>
<td>VC</td>
<td>Israel</td>
<td>10</td>
<td>1</td>
<td>Diverse portfolio</td>
</tr>
<tr>
<td>VC7</td>
<td>VC</td>
<td>Israel Taiwan</td>
<td>5</td>
<td>3</td>
<td>Software, semiconductors, medical devices</td>
</tr>
<tr>
<td>VC8</td>
<td>VC</td>
<td>Israel</td>
<td>5</td>
<td>1</td>
<td>Information technology, software</td>
</tr>
<tr>
<td>VC9</td>
<td>VC</td>
<td>Israel</td>
<td>7</td>
<td>2</td>
<td>Internet, new media</td>
</tr>
<tr>
<td>VC10</td>
<td>VC</td>
<td>Israel</td>
<td>11</td>
<td>3</td>
<td>ICT, clean tech</td>
</tr>
<tr>
<td>VC11</td>
<td>VC</td>
<td>Norway</td>
<td>3</td>
<td>1</td>
<td>Diverse portfolio</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td>82</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

*a BA = business angel; VC = venture capital firm*
Table 2: Investors’ reports of RSC, by country

<table>
<thead>
<tr>
<th>Investor subsamples by country</th>
<th>Number of early-stage investments</th>
<th>Total number of RSC events</th>
<th>Rate of RSC events out of total early-stage investments</th>
<th>Mean number of RSC events</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Israeli (n = 8)</td>
<td>33</td>
<td>15</td>
<td>45.5%</td>
<td>1.875</td>
<td>1.553</td>
</tr>
<tr>
<td>Israeli (n = 8)</td>
<td>49</td>
<td>17</td>
<td>34.7%</td>
<td>2.569</td>
<td>0.981</td>
</tr>
<tr>
<td>Total:</td>
<td>82</td>
<td>32</td>
<td>39.0%</td>
<td>2.000</td>
<td>1.265</td>
</tr>
</tbody>
</table>

In order to evaluate the importance of venture strategy from the investors’ perspectives and its correlation with the findings regarding RSC, we asked the respondents to rank the role of strategy in their consideration of investment criteria. When presented with six investment criteria, they gave “business strategy” a relatively low score: between fourth and fifth place (see Table 3). Only one business angel and one VC ranked it as the second most important investment criterion. A small difference in this respect was found between country groups, with Israeli investors ascribing greater importance to business strategy as an investment criterion relative to the non-Israeli investors. However, due to the small sample size of 16 interviewees, the difference was not tested for significance.

Table 3: Strategy as an investment criterion

<table>
<thead>
<tr>
<th></th>
<th>All investors</th>
<th>Non-Israeli investors</th>
<th>Israeli investors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>4.5</td>
<td>3.3</td>
<td>5</td>
</tr>
<tr>
<td>STDV</td>
<td>1.62</td>
<td>1.21</td>
<td>1.39</td>
</tr>
<tr>
<td>Mode</td>
<td>6.0</td>
<td>2.0</td>
<td>6.0</td>
</tr>
<tr>
<td>Min</td>
<td>7</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Max</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

To explore the investors’ views regarding the causes of RSC, 59 phrases were tagged in the transcripts of the 16 interviews and then classified. Table 4 presents the principal phrases used by the interviewees, as classified into the four categories by the coders.
Analysis of the perceived causes revealed that more events were attributed to internal causes than external ones (37 vs. 22). A two-tailed z analysis indicated that in the overall sample (Israeli and non-Israeli cases), internal events were more common than external events in causing RSC in HTNVs, though the difference between internal and external causes is marginally significant \((z = 1.95, \text{ which is smaller than } 1.96; p = 0.05)\).

Table 4: Examples of perceived causes of RSC in high-technology new ventures

<table>
<thead>
<tr>
<th>Internal (37)</th>
<th>External (22)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• “Identifying alternative or additional sources of revenues”</td>
<td>• &quot;Change in the funding environment&quot;</td>
</tr>
<tr>
<td>• “Key personnel change position”</td>
<td>• “The market was found to be saturated with similar products”</td>
</tr>
<tr>
<td>• “The technology was not adequate”</td>
<td>• “New competitors entered the target market”</td>
</tr>
<tr>
<td>• &quot;Lack of trust in the &quot;old&quot; business model&quot;</td>
<td></td>
</tr>
<tr>
<td>Israeli</td>
<td></td>
</tr>
<tr>
<td>• “Wrong assumptions about market trends”</td>
<td>• &quot;Market environment change such as reduced demand&quot;</td>
</tr>
<tr>
<td>• &quot;The company did not meet their sales forecast&quot;</td>
<td>• “Government policy easing regulations”</td>
</tr>
<tr>
<td>• &quot;Venture's financial situation&quot;</td>
<td>• &quot;Change in the value chain&quot;</td>
</tr>
<tr>
<td>Non-Israeli</td>
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Comparison of the causes for RSC as perceived by Israeli and non-Israeli investors, respectively, revealed that among the Israelis, internal events were found to be a stronger motive for RSC than external events (see Table 5). A two-tailed z analysis indicated that in the Israeli sub-sample, internal events had significantly greater perceived influence on RSC in the venture than external events did \((z = 2.33, \text{ which is higher than } 1.96; p = 0.05)\).

An additional two-tailed z analysis indicated that in the non-Israeli sub-sample, internal events had greater perceived influence on RSC than external ones, but not to a significant degree \((z = 0.38, \text{ which is lower than the threshold of } 1.96; p = 0.05)\).
DISCUSSION

The findings of this study do not support most of the hypotheses that were formulated on the basis of previous research.

Hypothesis 1 – RSC events are more likely to occur in Israeli HTNVs than in non-Israeli HTNVs – was not supported. Actually, the non-Israelis reported higher percentage of RSC events relative to the number of investments in their portfolio companies than the Israeli investors did. However, the difference between the mean number of RSCs in the portfolios of non-Israeli and Israeli investors, respectively, was not statistically significant.

Hypothesis 2 (a) – RSCs in HTNVs will be initiated more by external rather than internal causes – was not supported. In fact, the opposite was found: according to the overall sample, internal events were more often (although with only marginal significance) the cause of RSC in HTNVs, compared with external events.

Hypothesis 2 (b) – Israeli HTNVs will not differ from non-Israeli HTNVs in terms of the division between internal and external causes of RSC – was not supported. The Israeli investors indicated significantly more internal versus external causes for RSC in comparison with the non-Israeli investors.

In summary, cultural differences between Israeli and non-Israeli investors were found to be significant with regard to only one of the three tested hypotheses: the Israeli investors perceived internal events as the cause of RSC significantly more than the non-Israeli investors, who showed no statistical bias towards internal or external causes. Contrary to expectations, no significant differences were found with regard to the other tested issue: the non-Israelis reported more (about 45%) RSC events in their portfolio companies than

<table>
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<tr>
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<th>Internal</th>
<th>External</th>
<th>Total</th>
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<tbody>
<tr>
<td>All</td>
<td>37</td>
<td>22</td>
<td>59</td>
</tr>
<tr>
<td>Israeli</td>
<td>22</td>
<td>9</td>
<td>31</td>
</tr>
<tr>
<td>Non-Israeli</td>
<td>15</td>
<td>13</td>
<td>28</td>
</tr>
</tbody>
</table>

Table 5: Perceived causes of RSC: Israeli vs. non-Israeli investors
the Israeli group (which reported about 35% RSCs), but the difference between the two groups was not statistically significant. The Israeli investors ascribed greater importance to business strategy as an investment criterion compared with the non-Israeli investors; however this finding should be verified in a larger sample.

Based on these findings, we argue that attitudes of VCs towards changes in their ventures are quite similar across different cultures of developed economies. This conclusion supports Morris et al. (2000), who attributed the common views to the firm establishment of the roots of the VC community in the United States, and the fact that most global industry professionals continue to model themselves on the US community. Moreover, the prominent global characteristics of technological ventures may explain the apparently limited sensitivity to culture in the perceptions of these investors regarding RSC.

However, there is no consensus in previous research regarding the globalized trend of the VC industry. Meta-analysis of previous studies have demonstrated more cultural differences than similarities in the international VC industry (Wright et al. 2005). Similarly, Iriyama et al. (2010) found that cross-border VC flows have a subtly regional character, contrary to the implications of nation-level globalization. They further argued that the ongoing globalization of VC flows does not signify a flattening of the competitive landscape, and the locally bounded nature of venture capitalists’ competitive advantage may still be operative. Based on our findings, we assert that the patterns characterizing the VC industry, as perceived by VCs in regard to HTNV strategy, is becoming flat, demonstrating less variation among different cultures or country-specific patterns. However, there are still some cultural differences, indicating that the world of venture capital investors is not yet completely flat.

The finding that Israeli VCs encountered fewer RSC events (though not to a significant extent) compared with their counterparts in the US, Europe, Singapore, Korea, and Taiwan, may be due to the Israeli investors' attitude toward radical changes. Although the interviewers defined “radical strategic change” as a major change, some Israeli VCs were more tolerant regarding changes made in their portfolio ventures, which they considered “normal” events. This explanation fits the expected national cultural differences
(Hofstede 1991; House et al. 2004; Ronen 2007) between Israeli and non-Israeli management people. The reason for this may be the Israelis’ expectation of higher uncertainty, since their start-ups are located at a distance from their target markets in the US, Europe, and the Far East. Furthermore, the large overall number of RSC events might be due to prior experience in performing RSCs. Aldrich (2006: 138) has shown that the likelihood of transformations increases with the number of prior changes. Since VCs are involved in the TMT of several startups, they are exposed to a larger number of RSCs, a situation that increases their propensity for future RSCs.

For practitioners, these findings mean that all investors, regardless of cultural background, should be ready for an RSC in their high-technology new ventures. Our findings support recent research indicating that RSC is not a rare event in new ventures. Furthermore, the current result that early-stage high-technology investors find RSC to be a highly common event contradicts the claim by Hannan and Freeman (1984) that such events are expected to be rare. Moreover, they also indicate that RSC is not as risky or costly as claimed by Hannan and Freeman (1984); in this study, only about half of the cases required additional funding. In light of the wide agreement among interviewees that RSC had a positive impact on the venture, it seems that the additional investment of funds would be justified. The awareness of RSC can be explained by the dynamic nature of new technologies and their impact on high-technology new ventures, features that are well known to stakeholders in this industry. This is in line with Schneider’s (1987) ASA (attraction–selection–attrition) framework, which suggested organizations are not capable of changing unless they contain people with appropriate inclinations.

A common limitation of the mixed-method methodology employed in this study is the sample size. The qualitative analysis was based on 16 interviews, representing 82 early-stage investments. In order to expand the macro-level view provided in this study, further research of the micro view, using a larger sample of early-stage investments and a broader quantitative analysis, is needed to validate the findings of this study. Another limitation is the reliance on the investors’ espoused investment criteria as coming out of their introspection, which may differ from their actual in-use criteria (Shepherd 1999; Zacharakis and Meyer 1998). Further comparative studies of multi-cultural views might
reveal differences as well as similarities in the perspectives of investors from different countries and enhance the effectiveness of this global industry.

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