Competitive Intelligence in the Defense Industry: A Perspective from Israel – A Case study analysis

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ABSTRACT: Purpose - The defense industry is one of the leading business sectors in Israel and also worldwide. Competitive Intelligence (hereafter CI) is embedded into this sector and supports its decision making process. In recent years more information about this industry and about the CI activity is available while characterized by fierce competition and quick changes in the competitive environment. It is evident that CI is used widely by the leading firms in this sector while it has become an integral part of the business activity, and its added value seems to be significant. It is possible to define a framework of CI activity in this industry and to reflect on its advantages and limitations. It is my hope that this paper will encourage further research on this topic. Methodology/approach – Gathering information that has been published in Israel and abroad that was analyzed and thus offers insight into this issue. Findings – The defense industry in general and especially in Israel is using CI intensively in the highly competitive environment of defense products to support the decision making process. Research limitations – For many years, the information on this sector was not
available. It is in now in a process of change and this enables us to build up a comprehensive picture. Practical implications – This study can make a contribution to global corporations competing in highly dynamic sectors, especially those that are operating in the governmental sectors. Originality/value – This is the first work in Israel on the use of CI in the defense sector. Paper type: A case study analysis.

KEYWORDS: Competitive intelligence, Marketing intelligence, defense industry, Israel

Introduction
The defense industry was one of the fastest growing business fields in Israel (2010). In recent years and especially since the mid 1990's, defense export became one of Israel's leading export sectors, with high profitability and stable growth. Israel was considered worldwide as one of the leading countries in the field of defense exports. According to national data on arms exporters in 2007, Israel was in fourth place, with sales of $4.4 billion after USA; Russia and France (http://www.sipri.org/yearbook/2009/07/07B). According to recent estimations Israel's global share on the arms exports in 2009 has reached to 14% (http://jdw.janes.com/public/jdw/index.shtml). In 2010 the overall spending of worldwide governments on defense has reached to $1.7 trillion while the US is responsible to 45% of it. Israel's defense exports in 2009 amounted was $ 6.75 billion, which is 16% of total Israeli exports in 2009 (http://www.israelwtc.co.il). This is a slight increase compared to 2008, which amounted to defense exports at $ 6.3 billion, an increase of 7%. The Israeli defense exports 2010 results are indicating that they have reached to $7.2 billion in 2010 (http://www.globes.co.il/news/article.aspx?id=1000654713). It should be noted that defense exports is one of the few areas that have been hurt less during the global economic slowdown that began at 2008 (http://www.israelwtc.co.il, http://www.pr-inside.com/research-and-markets-israel-defense-and-r2131715.htm).

The heart of the Israeli defense companies was its advanced technology. Its comparative advantage was technological excellence. Israeli solutions were often considered to be highly innovative and better than other solutions by the competitors. Investment of hundreds of millions of dollars a year in research and development intended to maintain this advantage. Israeli defense products and technologies were considered to be most advanced,
multi-disciplinary and often long ahead of the technology used in the civil market.

The primary source of Israel's relative advantage in this industry was the needs for the most advanced products set by the Israeli military systems, especially by the IDF (Israel Defense Forces). On the other hand, one of the most important goals of Israel's economy is to increase its exports as its economy relied heavily on export of most advanced technological products. A distinct advantage of Israeli defense products is the fact that they usually have gained a variety of combat experiences by the IDF, which increased their attractiveness in the eyes of its customers (http://www.businessmonitor.com/defence/israel.html).

Although there were security limitations on defense exports to avoid leakage of secrets that could damage the state security, Israel authorized a wide range of defense products for be exported. (Dvir & Tishler, 1998).

As Competitive Intelligence (hereafter, CI) became recognized, and its value was more acknowledged in recent years, its direction went towards gaining strategic intelligence (Montgomery and Weinberg, 1979). Fulfilling CI became part of the many firms’ capabilities (Porter, 1980). Qualified CI functions have been playing growing role by Israeli firms in this sector to become more competitive.

The purpose of this paper is to assess the value of CI to the defense industry, especially in Israel and to see how beneficial it was for the process of decision-making in this field. Referring to this issue was possible through studying the performance of Israel's defense firms in foreign markets, mainly in recent years.

**Characteristics of the sector of defense industries**

Here are the characteristics of the defense industries’ markets:

1. Defense equipment purchasing is determined by states based on their assessments of military threats and on the allocations to defense budgets, usually affected by economic parameters.

2. This market was characterized by intense competition, while the leading companies were based mainly in the US, UK, France and Germany. Although 2010 has seen changes in these markets while US shifted its priorities, China's global rise while threats in Europe have been much reduced, the competition was still fierce.

3. The targets of the sales were usually government organizations, mainly the military and the defense establishments which have high quality demands and
were anticipating for highly sophisticated solutions.

4. Usually, the sales were resulted of winning tenders. These wins have far been reaching financial and strategic significance, as often it would be leading to extended business relations, including later upgrading of the systems and expanding sales of existing systems.

5. Defense export process was characterized by high entry barriers to be able to develop advanced products that have undergone a long process of field experience in complex situations and have been proved their effectiveness.

6. Defense export procedures were generally long-term processes, from raising the initial demand, responsiveness, getting security clearance, selecting the winner, the start of procurement, implementation and execution of systems and acquisition returns.

7. Defense exports were characterized by the participation of huge corporations with high complexity of demands that often required ad hoc cooperation with other companies to increase the chances of winning tenders. That implied that these companies also required a double vision - both for customers and potential customers, usually state military and security organizations and also for competitors, which often were the ones you have shared with them in the past and possible candidates for cooperation again in the future. Hence, defense industries are also characterized by intense competition and also by cooperation between the rival companies (known as co-operation).

The turning point in the Israeli defense exports' industry was in 1993 after major political developments in the Middle East: the agreement between Israel and the Palestinian Authority and the peace agreement signed with Jordan that changed the strategic position of Israel and enhanced Israel's rapid economic growth while the export was its leading strength. As we can see in Table 1, the transformation in the external forces influenced intensively on this industry while the demand to fulfill CI needs was evidently growing.
Table 1: Impact of external forces

<table>
<thead>
<tr>
<th>No.</th>
<th>External forces</th>
<th>Before 1993</th>
<th>After 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Technological</td>
<td>Moving towards more advanced technologies in response primarily to the local needs</td>
<td>Developed new capabilities and advanced technological products to answer global needs and compete successfully with leading world corporations</td>
</tr>
<tr>
<td>2</td>
<td>Political</td>
<td>Mainly influenced by internal politics among government and military</td>
<td>Enhanced an international strategy by aiming towards identifying the needs of foreign customers</td>
</tr>
<tr>
<td>3</td>
<td>Economic</td>
<td>Supplied mainly local military needs</td>
<td>Moved towards global markets with distinctive pricing structure</td>
</tr>
<tr>
<td>4</td>
<td>Industry competition</td>
<td>Low exposure to global competition. Low competition in the local market</td>
<td>Intense competition in global markets</td>
</tr>
<tr>
<td>4</td>
<td>Key CI needs</td>
<td>Monitoring local needs of the military establishment</td>
<td>Monitoring capturing of global needs of numerous military establishments</td>
</tr>
</tbody>
</table>

Characteristics of Competitive Intelligence in the defense industries

A survey conducted in the USA (Prior, 2009) compared 152 companies actively involved in CI with 1,396 in the same 19 industries. A benchmarking study of 24 firms in aerospace and defense found that, by using CI, three companies obtained outstanding results. The study showed that the industry average:

1. Bid success rate was 18 per cent, but the top three won 87 per cent,
75 per cent, and 57 per cent respectively;
2. Return for every dollar spent on proposals was US$78, but the top three averaged US$225.

The evolution of CI in Israel was behind the progress achieved in the US and other western countries (Prescott, 1999). One of the main reasons for this inferiority was the over-confidence of Israeli executives claimed to have captured the essence of intelligence while in their military service and implemented it within the business field with no need to develop dedicated CI capabilities. This has been changed in the last ten years (Barnea 2004).

By its nature, CI in defense industries was more strategically oriented, then tactical. The issues CI often covered were more long term defense trends and in-depth competitors and customers assessments. Its customers were the top management, (but also sales teams and technological teams) and its analysis methods were advanced to meet the expectations of senior executives.

The fierce competition described above brings the companies engaged in defense exports to develop strong CI units that make the best use of CI discipline for competitive benchmarking. (McGonagle & Vella, 1996). Companies engage in this sector, unlike many other sectors (Attaway, 1998), recognize the need for professional peripheral vision (see Day and Schoemaker 2006). They actually acted by applying 'informed anticipation' approach (see Day 1997) to systematically identify in advance changes in the needs and in the markets and to respond by build comprehensive understanding of the technological trends that shape the future and make their assessment available to their management.

Here are some distinctive features of CI in the Israeli defense industry:

1. CI activity was perceived as it can significantly increase the chances of winning tenders and producing competitive advantage (see Kahaner 1996). One of the results was wide CI awareness among executives and members of staff in this sector.
2. Defense export companies tend to allocate significant resources to develop in-house CI capabilities.
3. CI activities in this area were characterized by the need to monitor comprehensive range of many frequent changes in the competition map with large quantities of information. It was considered more as a strategic tool rather as a tactical tool by providing important insights (general discussion on the value of CI see in Prescott and Gibbons, 1993).
4. The key intelligence topics (KIT’s) of CI units in this industry were mainly the requirements, intentions and plans of countries and defense establishments to improve their military capabilities by purchase defense products and competitors’ activity aiming to beat the others. Special attention was given to technological innovations. The price issue was a significant factor in decisions regarding winning tenders.

5. Strong macroeconomic analysis capabilities were implemented to understand long-term trends and to be able to assist in solutions to strategic planning needs.

6. The development of early warning capabilities that help early identification of business opportunities and threats from existing and new players. These allowed better monitoring and enhance for understanding (for further discussion see Gilad 2004).

7. Assistance by external research companies to get updates through initial definition of key intelligence needs and also initiating specific research needs like assessing firms that were potential targets for acquisition or for partnership or considering entering into new business sectors close to their core business, as homeland security.

8. Durable relying on the gathering capabilities and sharing of information by the sales force teams (contrary to what we know in other industries, Lambert, 1990) that were also benefited from the CI analysis capabilities. Sale force has become an important gathering tool and efforts are conducted to improve their CI capabilities (the conceptual issue is discussed in Moncrief and Marshal, 2005).

9. CI functions usually were holding highly the interrelations between them and the various business units and expected to provide added value to the decision making process.

It is likely to infer as shown in Table 2, that the progress of CI practices conformed to the changes in the activity of this sector supplied added value intelligence:
Table 2: Changes in Israeli CI activities

<table>
<thead>
<tr>
<th>No.</th>
<th>CI activities</th>
<th>Before 1993</th>
<th>After 1993</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CI model</td>
<td>Process of slow developing formal CI and infrequently use CI task forces</td>
<td>CI dedicated capabilities became formal</td>
</tr>
<tr>
<td>2</td>
<td>CI unit location</td>
<td>Mainly in HQ slightly spread in business units</td>
<td>In HQ (corporate level) and also in business units</td>
</tr>
<tr>
<td>3</td>
<td>CI area focus</td>
<td>Domestic</td>
<td>Global</td>
</tr>
<tr>
<td>4</td>
<td>CI topics</td>
<td>Narrow: to cover mainly local competition, usually tactical information</td>
<td>Broad: to cover world competition covers tactical and strategic issues</td>
</tr>
<tr>
<td>5</td>
<td>Support by IT dedicated tools</td>
<td>Little</td>
<td>Moderately becoming intensive</td>
</tr>
<tr>
<td>6</td>
<td>Extent of analysis</td>
<td>Limited</td>
<td>Moderate</td>
</tr>
<tr>
<td>7</td>
<td>Extent of use of out sourcing</td>
<td>Limited</td>
<td>Broad, mainly for gathering through Open Source Intelligence (OSINT)</td>
</tr>
<tr>
<td>8</td>
<td>CI support to the selling process</td>
<td>Not considerable</td>
<td>Critical as the buying processes and the marketplace became more complex.</td>
</tr>
</tbody>
</table>

**Practical implementation of Competitive Intelligence**

Usually the professional level of CI units among defense export companies was considered to be high ranked at the top, comparing to similar units in other sectors by the total resources invested in them including the use of advanced information technological systems (see discussion of the use of these tools in Israel in Barnea, 2009). This was the outcome as of the need to cover a wide range of information sources, regular updates of the decision-makers and being involved in countless activities, including assessments of the state of competition. These units often
make use of forecasting tools of the business environment being characterized by monitoring long-term planning processes (for further discussion on the challenges of business forecasting see Laseter, Lichtendahl and Grushka-Cockayne, 2010 and Courtney, 2001).

An important part in responsibilities of CI units was early identification of business opportunities. The purpose was to find opportunities while still in the initial stage at the prospect, preferably in the stage of shaping the requirements, to be able to prepare a response ahead of the competitors.

Although CI in defense industries enjoyed high awareness to the importance of CI by many executives in the firm, still the implementation of the discipline of "sharing of information" had to be enhanced. The obstacles were not just the nature of people but also the security aspects which were not to be ignored. Still the need to share more competitive information existed. Defense industries are not alone. Lovello and Sibony (2010) were referring to the problematic culture of many organizations that withhold to share information and practically were strengthening the "silo thinking" while CI was often aiming towards avoiding these behaviors.

Accepted estimate was that anyone who could translate the competitive information received from Open Source Intelligence (OSINT) combined with primary sources and translated it all into formulating an answer would have an advantage and increase the chance to win defense tenders. We could assume that a British company in the defense industry will monitor the difficulties of British soldiers fighting in Afghanistan, for example, in the early detection of enemy snipers and will initiate the British Defense Ministry to propose a solution, even if the bureaucratic procedure of issuing a tender yet not started or completed. This information may come from a variety of sources, including social networks, publications of the Department of Defense, blogs of soldiers participating in the war, interviews with soldiers who have returned from the battlefield in local newspapers, publications of the Islamic organizations active in Afghanistan and more.

Key Intelligence Topics in the defense industries

1. Military threats

Monitoring and assessing of military threats encountered by clients or potential clients such as defense organizations and defense forces are critical to early identification of business opportunities. For example, the threats that were faced by Indian troops on the border with Pakistan were different than the threats faced by the Spanish intelligence and
security organizations fighting against the Basque resistance ETA. Being aware of military threats often led later to characterizing the operational needs and the requirements specific tools, which will reduce the threat or cancel it altogether. Comprehension of the progress of the operational needs by the customers or future customers were critical factors expected to be addressed by CI units.

2. *Technological Intelligence*

Technological intelligence continuously monitors technological solutions offered by competitors in response to customers' needs as early as possible. The aim was to understand the existing and future products that would compete in the marketplace in the future. It was required to implement the discipline of Competitive Technology Intelligence (CTI). One aspect of this issue was the need of the CI units to build strong internal collaborations with technological professionals to estimate precisely the current and future markets. One of the challenges was determining the right priorities of the technological issues that have to be monitored at any given time.

3. *Marketing Intelligence*

While technological intelligence was targeting competitors' capabilities, the focus in marketing intelligence was on the customers. Marketing focuses on gathering intelligence on customer needs and rising opportunities and support decisions throughout all stages of the competition. An important tool was the company's employees who were in continuous touch with their customers. They should be briefed also to collect information on current and future marketing needs. For example – prior knowledge of budgetary limitations of potential customer, which was familiar to just a few, ended in submission of a competitive proposal that brought this into account.

4. *Strategic Intelligence*

Strategic intelligence was the intelligence required to assess long-term processes and intentions by various players and the marketplace. That was, which direction facing the operational requirements of the countries and armies, the extent of investments in R & D by competitors over the coming years, estimates of new directions by the competitors beyond their core business areas, their intentions to enter into new areas, whether by self-development or through acquisitions, mergers and strategic partners. For example, it was reasonable to estimate that the world's leading companies in defense were following with great interest after the business moves of their Israeli competitor Elbit Systems, which in recent years entered into new areas of activity mostly through mergers.
and acquisitions and not by organic development and would try to assess Elbit's strategy in the coming years (http://www.accessmylibrary.com/coms2/summary_0286-28619791_ITM). Sometimes these strategic reports (for example see BAE Systems http://www.baesystems.com/ProductsServices/baeProdEisGlobalAnalysis.html) are distributed to clients (policymakers and intelligence officers) to help them to understand the threats, risks and opportunities in the international environment.

5. **Tactical Intelligence**

Tactical intelligence was considered to be less critical in this sector, but it was still done on day-to-day basis: monitoring changes in the markets, customer insights, changes among competitors and new products (see discussion on tactical and strategical CI in Sawka 2010). This intelligence often had an added value for the strategic intelligence.

In conclusion of this chapter - some people may think mistakenly that CI in defense industries was about price discovery offered by competing tenders. It was usually impossible to obtain this information in advance and companies competing in this area were required to expand their intelligence scoop as outlined above in order to maximize their chances to win.

CI in this industry was actually in its strongest position of managing the intelligence, according with the outline that was described in the white paper by Arthur D. Little consultancy (2010).

**Working programs**

CI functions usually fit into the annual programs of the Israeli defense companies. The main task of the intelligence was to respond to the intelligence requirements according with these plans. For example, a company decided to focus on the defense market of the Far East which until recently was ranked low in its priorities list. Its CI unit was expected to provide information about competitors' activities in the above mentioned region, the customer's needs by defense establishments and states, to point towards new competitions (tenders) and to identify early strategic partnerships between companies that may give a joined response to the customer's needs and so on.

It was assumed that it was impossible to develop a strategy of winning competitions without setting up an orderly Key Intelligence Topics (KIT's) list executed by the intelligence unit. It was also likely that the CI functions may build quickly intelligence capabilities that would meet the needs of the firms and thus
increase their chances of winning. Action plans were expected to summarize priorities in collaboration with their business units. CI units expected to work closely with the company's executives to bring on to their attention the new opportunities as a result of the intelligence monitoring.

The uniqueness of CI activities in the sector of defense was the ability to act simultaneously in several areas of intelligence as mentioned above, in markets which were characterized by tough competition and often insignificant differences in products offered by competitors. Therefore, it was necessary for finest understanding of customer needs, markets and capabilities of competitors to know how to produce competitive advantage that would help in pointing at the competitive price which was often a determining factor in the final decision who wins the competition.

**Sources of information and managing the gathering efforts**

**Primary sources**

The defense export market was often characterized by ad hoc collaborations between companies and simultaneously fierce competition known as co-operation. Therefore, it is possible that at the same time a single unit at a certain company cooperated with another company while another business unit within that firm competed against it in another sector. This modus operandi allowed skilled benefits of the primary sources among the company employees, especially among the skilled sales force and technological staff that having been working at relationships with various elements in the market. Primary sources were also intensive users of CI materials and their professional expertise was playing a role in obtain important information on customers, products, competitors and opportunities, and shared it with CI professionals and other users. Thus capable internal networks within the firm, supported by dedicated software often enable CI managers effectively to manage it.

*Secondary sources*

What characterizes the activity of secondary sources in this industry was the challenge of utilizing enormous amounts of information gathered on military equipment needs, marketing intelligence, new technologies etc. The defense market was characterized by a lot of open source information on one hand and on the other hand, keeping secrets tight. This required high quality information management and precise direction of collection efforts, selection and analysis and distribution to the appropriate units. Usually it was hard
to expect to handle information without the assistance of dedicated information systems (see Barnea 2009).

**Managing the intelligencer efforts**

This competitive market required constant development of new information sources while keeping the existing sources. This was a result of the need to cover new technological solutions, new geographical regions and countries that were not in focus in the past, new products, etc. At the same time, there were sources that become obsolete as a result of changing priorities and focus in other lines of businesses. Therefore, it was necessary to conduct an advanced system for managing Key Intelligence Topics (KIT's) and the targets of gathering (firms, armies, military establishment, etc.), including answers to the needs: who was the firm initiating the request (asking for the information), who in the organization could provide the answers, monitoring and access to the answers received at any given time and information collected in response to avoid duplication and ensure optimal use of resources by the firm. By implementing the above, the CI functions were moving from occasional management of its KIT's to a systematic direction.

**Production of quality analysis**

Complexities of strategic and technological issues in the exports' defense industries enhanced the need for qualitative analysis, including frequent use of forecasts and assessments methodologies, formulated the overall quality intelligence into the decision making process. For example, analysis of information about competitor's activity indicated that it moved into fast development of an advanced generation of technological solution, although the previous generation was relatively new. Further thorough examination revealed that the existing solution did not meet the needs of the state acquired it so that competitor needed to present a suitable solution soon. This analysis also elevated business opportunity resulted in an attractive offer to the disappointed customer, a solution that proved itself but was not purchased in the past by that state in respect of the high price.

This industry was often characterized by intense macro analysis of foreign economies, internal politics, international relations, social changes, and a good understanding of legal and regulation issues. This was in addition to common analysis of competitors, customer, supplies and monitoring of new technologies and advanced applications.
Using internal information systems

CI units in the field of defense understood that one of the keys for their added value was on one side to give access to many people in the organization to competitive information and on the other hand to make many in the organization relate to information obtained, to evaluate the significance and bring it to the attention of others in the organization. Advanced information systems were a critical support tool for the success of competitive intelligence processes but the primary challenge was to develop the awareness among the employees.

These systems usually divided into two types:

1. Systems developed by the companies themselves often via their information technology units
2. Purchased solutions in which adjustments were implemented so that they can give the answers expected of them.

The direction was to acquire and later adjust systems from the external software houses because solutions were often cheaper and enable internal information systems units to focus on their core areas. One of the challenges is to require of systems that interface with other systems within the organization, such as CRM (Customer Relations Management) and ERP (Enterprise Resource Planning), where important information was analyzed in conjunction with competitive information. For example, an army of a certain country issued an immediate RFP (Request For Proposals). It was required to know all "our" existing and potential capabilities to know if and how a reply could be provided. Further assessments revealed that the date of the development of essential parts of the required system was two years therefore it was impossible to give an answer to that RFP. Its submission date was in six months and placing the system was within a year.

Key success factors (KSF's) for CI function

Defining KSF’s (Key Success Factors) for a CI unit is important in any industry (Singh, Fuld and Beurschgens, 2008). It seems that the defense industry has implemented these KSF’s more than other sectors:

1. Organizational culture – It is basically the development and the implementation of broad CI awareness by policy of sharing of information, streaming from both sides – from the CI to the internal clients and from them to the CI function.
2. Procedures - Mainly internal procedures guaranteeing the two-sided flow of information from external and internal sources and making intelligence available to those who need it to accomplish their assignments.

3. Support by IT technology – Meaning the use of expert tools for complex demands of information attention, for the full intelligence cycle and by an easy access to the intelligence products to those who need it.

The outcome using this methodology was that decision making without the contribution of CI was incomplete. These three essentials were together critical for the success of CI function in a corporation. They all had to be interrelated as shown in Figure 1.

*Figure 1: KSF's*

![Organizational culture](expert tools) (Procedures)

*Conditions to obtain needed information*

The following figure (see Figure 2) has been prepared based on assumptions made by CI managers in the Israeli defense field. It was looking towards two parameters – one- the extent of the difficulties in acquiring valuable information. The other one was the importance of the information received to significant decisions by the firm. As we can see from this figure, it was relatively easy to receive information about customers, competitors, suppliers, partners and decision makers. It was getting more complicated to acquire information about R&D planning and strategic planning while the most difficult was to get information which could directly support to win tenders. The difficulties of maximizing the value of the information were similar to those to obtain information. Although a typical CI function strived to cover these topics, it was aspiring to obtain more valuable information (on new technologies,
Summarizing so far shows:

CI units operated in the heart of the business activity in the Israeli defense sector were involved in the decision making process. Although there were often significant gaps of the information required, CI was expected to give assessments that could bridge the lack of focused information. This was done by successful involvement of many employees in the organization into the intelligence process, beyond the immediate scope of the CI unit. There was a good implementation of the discipline of "Sharing of Information" (internally), as one of the key success factors of CI in this sector.

The complex challenges for CI were imposing on the structure of CI in this field. The results were often a combined CI activity in the corporate level which actually directed the CI efforts while the business units have focused CI activity to answer their specific and often immediate needs.
**Decision making process by the customer**

I have already pointed towards the importance of intimate knowledge of the customers (including potential customers), as a key success factor of firms operating in the defense sector.

The following Key Intelligence Topics (KIT's) were guiding the intelligence efforts:

1. **Knowing your customer** - A close and intimate knowledge was a must in order to be able to make insightful decisions regarding the solutions offered and to be able to reply precisely to the implicit and explicit needs of the customer. Interpreting it to actionable intelligence was the challenge of CI in defense firms. This was probably impossible without a cross-organization strategy by the CI function. Growing number of firms in this sector admitted that there was no win in a competition without valuable contribution of CI.

2. **Customer's budget limitations** - Estimating the over whole budget allocated for a defense project. This was included also in assessing the priorities inside the defense establishment in that country. I.e. – the allocations to air force against the needs approved to the armored forces.

3. **Hidden operational needs** - What were additional needs that went beyond those that have already formally defined, like what additional components embedded in the proposal could give a competitive edge.

4. **Special conditions and limitations** - Certain limitations and conditions that were expected to be part of the over whole deal like the need to involve local manufacturing, collaboration with local contractors etc.

5. **Knowing the decision makers** – Who were taking part in the decision making process especially in the final stage of the decision about the winner in the competition. Key personalities including influencers, approvers, users and buyers (see Barnea 2006). Obviously there was ongoing search for information that could be used to increase our chances to win.

6. **Past experience with the customer** - It was highly important to know the past of our relations with the customers and possibly their relations with our competitors. Has this customer fulfilled his
obligations? How the customer treated his partners. His suppliers. Was that customer paying in time according with the agreements? History of artificial obstacles created for unjustifiable reasons? Sometimes to obtain this information, there was a need to look at the experience of various sections in "our" company as customers may have lots of contacts that are unknown internally to others.

7. Relations between Israel and foreign countries – These relations had an immediate impact on the decision of the regulators whether to approve export of defense products to certain countries in extreme cases when it was assessed that it could harm the security of Israel. I.e. – Israel was exporting to Turkey for many years as part of the close relations between the two states. When these relations have been hurt, it affected also on the volume of export defense goods.

Observations by senior executives of the role of competitive intelligence

My continuous CI consulting with Israeli corporations indicates that senior executives in this sector considered CI functions as follows:

1. CI functions had excellent understanding of firms intelligence needs (or the specific business units' needs) and were centering their efforts to provide competitive advantage information.

2. CI functions were integrated into the up to date priorities and had been given resources that enabled them to fulfill their missions.

3. There was an ongoing effort to assure that CI capabilities were matched to the scope of their KIT's and were executed in accordance with the working plans.

4. The value of the CI was assessed continuously by the senior executives to maximize its contribution.

5. The resources allocated to CI had to be measured to make sure that shortage of resources will not hurt its activity.

Conclusions

The recent global economic downturn since 2008 had only minor effect on this sector. The number of military conflicts is in increase
and a moderate rise in global defense expenditures is expected to continue in the coming years jointly with the increase of the competition on each governmental customer. Israeli firms in the defense sector enjoy a high reputation by their competitors and customers for their CI professionalism. Not very much has been written about the role of CI functions inside defense companies and their effectiveness in the fierce competition in this sector (see an example in the Journal of Competitive Intelligence Management, Vol.2, No. 4 2004), either worldwide or specifically in Israel. The main objective of this paper is to focus on the role of CI in the Israeli defense industries and its importance.

It appears that CI was capable of holding an advanced position among the Israeli defense firms while its capabilities were considered to be a critical success factor like in other sectors, i.e. Pharma (Badr, Madden and Wright 2006) and medical devises. This was mainly a result of the recognition by the valuable input of CI into the decision making process and its contribution to the success of companies in their various business lines. CI functions held a critical position in the strategic decisions making process.

Many business defense issues could not be met effectively and accomplished without CI implementation. In this sector’s activity in Israel, CI considered an integral part of the organizational structure and its business culture. Still there was a tendency to keep the CI capabilities’ secret, but this was in a swift change as it became evident that strong CI capabilities were common in this sector worldwide as in many other competitive areas.

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