



Internationalisation of innovation in SMEs

Case Studies, Exemplary Support Practices and Policy Implications

<http://www.ri-policy-analysis.eu>

Case Study No. 5:

Kapro Industries, Israel: International activities for incorporating manufacturing in R&D

May 2016

Author: Robbin te Velde

About the InterSME Study

The study on "internationalisation of innovation in SMEs" was based on a contract between the European Commission, Directorate General Research and Innovation, and empirica Gesellschaft für Kommunikations- und Technologieforschung mbH (coordinator, Bonn, Germany) as well as Dialogic (Utrecht, the Netherlands).

The study focuses on two subjects – innovation and internationalisation – which are deemed to be crucial for the European economy. It has two main parts: (1) Twelve case studies of small and medium-sized enterprises (SMEs) with insightful international innovation practice and (2) an analysis of strengths, weaknesses, opportunities and threats (SWOT) of European policy measures seeking to enhance such internationalisation. This publication presents one of the twelve cases selected.



empirica

dialogic

**IN A
NUT
SHELL**

Kapro Industries performs most of its production and R&D in its home country Israel. However, process innovations and some product innovations have sprung up from its subsidiary in China. Moreover, Kapro often customises its products for specific local markets. These adaptations are done in Israel.

Abstract



Kapro Industries is a manufacturer and developer of innovative hand tools for the professional and consumer markets. Kapro has approximately 300 employees: roughly 100 in Israel, 150 in China and 50 in the United States. Kapro is headquartered in Kadarim, Israel. Kapro's clients are distributors and retailers in the field of hand and measurement tools. Over 90% of the products are sold outside Israel, in more than 50 countries all over the world. Sales are predominantly made via local distributors. Only in the US, a large market for Kapro, it has an own sales office. Kapro has a production plant in China that is also used as a springboard for sales in China and the whole of Asia. Several local Chinese engineers are employed in the plant. This is because Kapro strongly believes that having R&D engineers close to the production process is a great benefit. These engineers are constantly further optimising the local production processes, and they have also initiated some product innovations that have been taken up by the main office in Israel. Kapro often customises products for local markets and these adaptations are implemented in the plant in Israel. No customisation is (yet) needed for the Chinese market. Kapro does not make use of European support measures, but it has made and does make use of a broad set of national measures designed to support SMEs and R&D activities – most notably assistance from the Chief Scientist Office.

Case study fact sheet

Full name of company:	<i>Kapro Industries LTD, Kadarim, Israel</i>
Subsidiaries:	<i>Kapro Tools Inc. (USA); Kapro China LTD</i>
Year of foundation:	<i>1974</i>
Number of employees (year):	<i>Approximately 300 (2015)</i>
Industry sector:	<i>Hand tools</i>
Business activity:	<i>Development and manufacturing of innovative hand tools for the professional and consumer market.</i>
Activities focused in this case study:	<i>International product and process development</i>
Case gatekeeper:	<i>Shahar Harari, Innovation Manager, Kapro</i>

Background

Business activity, competitive situation, and importance of innovation

Profile: Kapro Industries is a manufacturer and developer of innovative hand tools for the professional and consumer markets. The firm was founded in 1974 and renamed to Kapro (derived from Kadarim Products) in 1990. Kapro has approximately 300 employees: roughly 100 in Israel, 150 in China and 50 in the United States. Kapro is headquartered in Kadarim, a kibbutz in Israel.¹ The company's US sales subsidiary, Kapro Tools Inc., is located in Lake Mills, Wisconsin. Kapro has

¹ A collective community in Israel. While they were traditionally based on agriculture, farming has been partly supplanted by other economic branches such as high-tech enterprises.

a large production plant in Suzhou, China. The company's website states its **main objective** is "to develop and manufacture innovative, professional quality hand tools that make building easier and better".

Kapro's **clients** are distributors and retailers in the field of hand and measurement tools. Some products target professional markets, others do-it-yourself practitioners, while some products are used by both. Kapro works with over 50 countries and sells its products in every continent. 95% of its sales are outside Israel. The US and China are both large markets for Kapro (5 - 10% of total market share each). Other prominent countries are France, Germany, Spain, Poland, and Russia.

Regarding **innovation** activities, Kapro performs most R&D in Israel. This mainly concerns product development and design. Most of its new products are designed at its headquarters. Kapro has collaborated with Israeli universities in the past. This is not standard practice, however, as Kapro usually needs faster development cycles than academics are used to. A small number of employees at the Chinese production plant do some process design, too. Kapro uses different innovation methods, including Systematic Inventive Thinking (SIT), in its innovation process.² With its innovative products Kapro has been able to achieve success in a market in which many products resemble commodities. Being able to consistently come up with innovative products is thus of high importance to Kapro's long term strategy.

Kapro's **product** line includes spirit levels, laser levels, layout tools, marking tools and measuring tools. The added value of these products lies in their high-end quality and innovative designs and features, which have been secured in more than 100 patents. A prominent example is *the Plumb Site® Dual-View™ vial* (see Exhibit 1-1). In 1997 it was the first spirit level with a plumb site, i.e. a viewing mirror that makes it easier for the user to set verticals.

Exhibit 4-Fehler! Kein Text mit angegebener Formatvorlage im Dokument.-1: Kapro's Plumb Site® Dual-View™ vial



Source: www.kapro.com

How and why Kapro internationalised its business activities

Kapro's international activities concern mainly sales – all over the world but with a subsidiary in the US and production in China. The international approach with regard to sales is more or less common practice for Israeli SMEs, as their home market is relatively small. Kapro has two approaches for selling on foreign markets: either via distributors or via direct sales and marketing. The latter option is preferred because it gives more control but it is also a costly approach. Therefore Kapro only maintains its own sales agents in the **US**, which is a big and important market for Kapro. The main advantage is the reduction of the physical distance to customers, and the fact that sales representatives operate in the same time zone as their client base.

The plant in China is first and foremost established for production purposes but the office is also used as a springboard for sales in China and the whole of Asia. Kapro located the plant in China because it is the best place for manufacturing in Asia. There is a readily available network of suppliers and subcontractors which enables the production of high quality goods against the lowest prices. Furthermore, there is the apparent advantage of a huge domestic market.

Internationalisation of innovation in Kapro

Practice

Most of Kapro's R&D happens in Israel. However, three local engineers at the company's Chinese production plant perform some **product and process development**. Process innovations refer to

² See <http://www.sitsite.com>.

constant improvements in the local production processes of Kapro's products. The Chinese engineers have also developed a number of product innovations, e.g. with regard to a new laser design for plastic products. The factory in China is run by an Israeli manager. The engineers in China collaborate on a day to day basis with the engineers in the R&D headquarters in Israel, using any means of communication tools such as telephone, voice over internet, and e-mail. Furthermore, people from Israel visit the plant in China on a regular, quarterly basis.

Kapro **customises its products to local markets**. The building and construction market is rather traditional and some countries and regions have developed their own particular routines and preferences over time. For instance, in Germany – and only there – foldable rulers are a must. Therefore Kapro has introduced foldable versions for the German market. In a similar vein, in South America levers are used with a specific shape (Y-beams) and Kapro has adapted its products accordingly. For the Chinese market, so far no special adjustments have to be made, so basic products are being used and sold.

The US subsidiary is solely geared towards sales and support. No R&D is done there.

Drivers and barriers

Kapro's main motivation behind its *international* business activities stems from the fact that it wants to be physically close to its clients (US sales subsidiary) and that it wants to lower its production costs (China production subsidiary). Thus there is a **strong economic rationale**. In the case of China, this has resulted in the subsequent hiring of local engineers. Kapro believes that having R&D engineers close to the production process is a great benefit. According to Kapro, the engineers are constantly further optimising the local production processes, and they have also initiated some product innovations that have been taken up by the main office (see above). Hence the innovation activities in China followed from the production process (i.e. a cost reduction rationale), not from an explicit strategy to perform R&D and innovation abroad (i.e. a knowledge sourcing rationale).

The economic rationale has also been a driver to hire local (Chinese) engineers, as these have **lower labour costs** than engineers from Israel or most European countries or the US.

The localisation of the production plant in China has not been driven by the need to customise products for the local Chinese market, as final products are not customised for the Chinese market (see also above). All customisations, for example the ones for the German and South American market, are made in the Israeli plant.

In the interviews for this case study, **no explicit barriers were mentioned with regard to internationalisation**, except of some issues with cultural differences. Developing good communication with customers, suppliers and international employees proved to be a challenge due to different mentalities, behaviour and languages. Physical distance between the headquarters on the one hand as well as foreign staff and customers on the other hand is a hurdle. If there were no cost issues, Kapro would operate many more local sales agencies. However, cultural differences are no really big issue. The company deals with the physical (and time) distances in a pragmatic manner which seems to work well: In nearly all markets, local distributors handle communication, and part of the cultural differences expressed in local ways of working in building and construction are embodied in customised products. Furthermore, the Chinese plant is headed by an Israeli expat.

Public support to internationalisation

Although firms from Israel are eligible for EU R&D funding, and many Israeli firms actually have received funding, Kapro does not participate in the European Union's Framework Programmes or in other European R&D support measures.³ However, Kapro does receive the full range of R&D support provided by Israel's Ministry of Industry, Trade and Labor (MOITAL), which is managed by

³ Israel is the only non-European country fully participating in the European Union's Framework Programme (FP). ISERD, the Israel-Europe R&D Directorate for the FP, also operating through the Office of the Chief Scientist.

the **Office of the Chief Scientist** (OCS). OCS is the support arm of the ministry charged with fostering the development of industrial R&D within Israel.

Although Israel has a fiscal policy that allows up to 40% of R&D expenditures to be tax deductible, most measures take the form of direct grants. One prominent measure named by Kapro is the **R&D Fund**, which reduces the risk of performing R&D by providing 20 – 50% of the costs of a project.⁴ In return, Kapro pays royalties if the project succeeds. Kapro has also received some support by the Office of the Chief Scientist in export and marketing activities; mainly by providing funding for Kapro's presence at fairs and exhibitions abroad. The Israeli embassies provide assistance in establishing and developing international business partners.

Another effective policy instrument from MOITAL that Kapro mentioned was **Global Enterprise R&D Cooperation Framework**. This programme encourages large multinationals to forge alliances with Israeli start-ups. This is accomplished via strategic cooperation agreements between the State of Israel and foreign multinationals, such as Alcatel, IBM, Intel, HP, Coca Cola and General Electric.⁵

Impact of internationalising innovation on Kapro and lessons learned

Impact

Kapro sells over 90% of its products abroad and is thus very much dependent on international markets. It has successfully adapted its products to local markets by implementing various customisations to its products. The production plant in China was mainly set up for economic reasons, i.e. lower production costs. The production activities in that plant have led to subsequent RDI activities but this has not resulted in local customisations of the final products. It has however resulted in some changes and additions to the basic range of final products.

Except for the plant in China and the sales agency in the US, all activities from Kapro have remained in Israel, although most staff are located abroad. Hence Kapro is able to sell its products worldwide without having strong local presence in target markets. For its sales it relies on its vast network of local and regional distributors. It has taken Kapro several decades to build and steadily expand this global network of distributors.

Lessons learned

▪ **A network of local distributors may be sufficient for world-wide sales**

Neither local physical presence nor sophisticated technologies are required to sell products worldwide. Instead Kapro relies on its network of local distributors which it has steadily expanded over a long period of time. This network also fed Kapro with knowledge about the specific needs in local markets which led to subsequent customisation of the basic portfolio of final products. No local production or R&D facilities are needed to implement these customisations – this is all being done from Israel. However, Kapro's products are medium tech not high tech.

▪ **Production in foreign countries may support process and product innovation**

Local production activities (the Chinese plant) have led to subsequent innovation activities, not only resulting in process innovations (optimisation of local production processes) but also in product innovations (changes to the basis range of final products). This "upgrade" from non-innovative production activities into process innovations and in turn in product innovations has occurred despite the fact that the prime driver for establishing the local Chinese plant was an economic rational (reduction of production costs).

▪ **Some firms may seek support only from national sources**

Kapro has made a lot of use of national R&D support schemes but it has not participated in EU programmes, despite the presence of a dedicated bridging institute for Israeli-EU R&D collaboration (ISERD). Some firms may, like Kapro, first and foremost orient themselves to local (national) government support and the subsequent step to the European level is not self-evident.

⁴ See <http://www.investinisrael.gov.il/NR/exeres/1D1F23F8-20CF-4548-B253-EAFB3FE288AF.htm>

⁵ See MOITAL (2015). R&D Incentive Programs. <http://www.moital.gov.il/NR/rdonlyres/5E7A4322-4D0F-4320-953C-83F94024E7AA/0/RDspreads.pdf>

References

Research for this case study was conducted by Robbin te Velde, principal researcher at Dialogic Innovation & Interaction, Utrecht, on behalf of the study about internationalisation of innovation in SMEs. Sources and references used include desk research plus the following:

Interviews

- Shahar Harari, Innovation Manager, Kapro, by phone, 8th of October 2015, with a follow-up on 3th of December 2015.

Websites

Kapro Industries, corporate website: www.kapro.com. Last accessed 23/10/15.

Interview with Rafi Ben-Josef, CEO of Kapro: <http://www.zooz.co.il/eng/LaZOOZ/LaZOOZ63.html>.

Last accessed 23/10/15.

<http://www.israelbusiness.org.il/>. Last accessed 26/10/15.

<http://www.investinisrael.gov.il/NR/exeres/1D1F23F8-20CF-4548-B253-EAFB3FE288AF.htm>. Last accessed 7/12/15.

MOITAL (2015). R&D Incentive Programs. <http://www.moital.gov.il/NR/rdonlyres/5E7A4322-4D0F-4320-953C-83F94024E7AA/0/RDspreads.pdf>. Last accessed 7/12/15.

Databases

CORDIS database with participants in FP7 programmes (for assessing presence of Israeli firms).