

## ADAPTATION OF ENGINEERING PRODUCTS TO FOREIGN MARKETS

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**Abstract:** *Main actors of globalized economy are big international firms. International companies develop, produce, distribute and market their goods and services globally. However people, consumers and companies tend to live in different conditions, to use products differently and to have different perceptions about the products. This means that most of the products have to be modified, adapted and communicated to the local customer.*

*Product adaption to the particular market should have be done from three aspects: cultural adaptation, legal adaptation and adaption to local climatic conditions and geography.*

*Cultural adaptation mean that product design and product ergonomics are acceptable for the local clients. Legal adaptation of products means taking into account local legislation and standards.*

*Product adaptation to local conditions means adaptation to local climate conditions, security issues and other factors.*

*Product adaptations starts with the observation of local use of referred products. This requires good observational skills of sales people and methodology of reporting.*

*Keywords: exporting export marketing, product development.*

### 1. INTRODUCTION. ESTONIAN EXPORT OF ENGINEERING PRODUCTS

Export development is priority area for economic development in several countries. If to exclude raw material exporters then most of small economically successful countries also are big exporters. Developed countries export mainly sophisticated products and services containing engineering and customer know-how. Despite to the fact that such products are quite expensive they are often necessary to build infrastructure and for production.

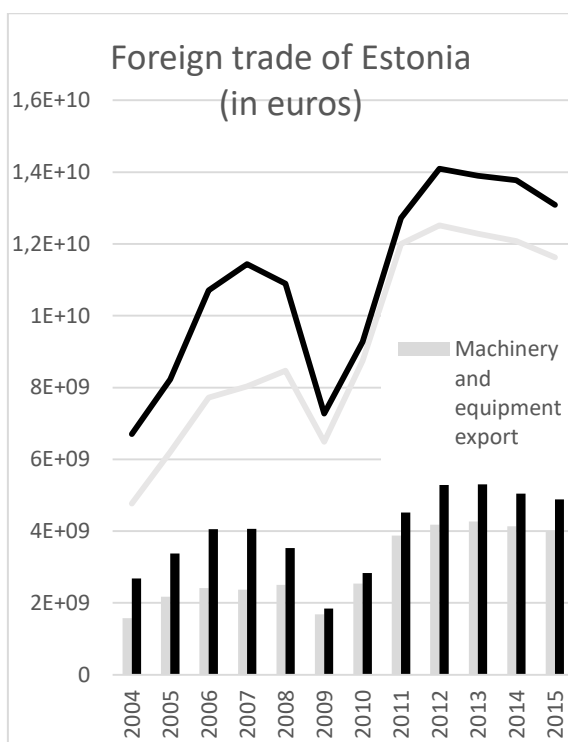
Product adaptation is a process that aims to customize the products to the needs of different customer groups. Product adaptation is well studied for consumer goods but less for engineering goods [<sup>1</sup>].

In consumer goods industries product adaptation often contains mainly marketing activities. When exporting of engineering goods both product technological features and marketing aspects should be taken into account.

### 2. ESTONIAN EXPORT

Machinery and equipment trade constitutes substantial part of Estonian foreign trade. Approximately one third of exports and imports are machinery and equipment products that require more or less intensive

engineering activities like: design, adaptation of design to production, sourcing, planning and others. Big share of machinery and equipment in Estonian foreign trade doesn't necessary always show high-technology level but rather good integration between Estonian metal sector enterprises with international and mainly Scandinavian multinational firms. Big part of Estonian machinery sector foreign trade are intra-firm trade with Nordic origin global firms.



### 3. RELOCATION OF ACTIVITIES AND INTERNATIONALIZATION

Growth of global firms, internationalization and real globalization are involving several processes. Uppsala model of internationalization supposed that in the first period foreign clients are served from home country [2]. With the extension of scale and scope of export activities certain processes are shifted closer to the

customers. First process that in internationalized is often creation of local sales office. Second level of internationalization contains transfer of production activities and establishing of production unit near clients location [3].

Earlier globalization thirty and twenty years ago supposed that manufacturing activities are shifted to lower labour cost and closer to growing market locations. Engineering activities still remained in core areas and near to the corporate headquarters. This is not anymore the dominant case. Technology governance is still the case but nowadays globalization contains also the transfer of engineering activities. There are several reason why engineering activities had been shifted to foreign countries [4]. Primarily reason are: stronger need to adapt to local conditions, difficult to understand preferences of local customers, well available and cheap engineering graduates pool, wish of FDI recipients to create more white-colour jobs and others.

### 4. PRODUCT CUSTOMIZATION AND ADAPTATION

Engineering products adaptation to foreign markets or even to particular customer groups involves wider scope of activities than customization of consumer products. Adaption of engineering products for foreign markets could be split into next categories: legal adaption

#### 4.1 Legal adaptation

Legal customization is easiest form to understand. Products should be in the compliance with local legislation and standards. That can sometimes be confusing because in some countries exist federal and local laws and knowing of all existing rules can be complicated.

Estonia as a part of European Union already produces the products that are in compliance with EU legislation. European Union legislation sets general level for products safety and conditions for the free movement of goods.

Part of legal adaptation are product standards. In European countries following the technical conditions in standards is voluntary but in some countries could be mandatory.

Part of business strategy and legal adaptation is intellectual property protection. Possible cases of illegal copying and counterfeit should be taken into account.

Rules in most of the countries require the translation of technical manuals and instructions. This process can be quite costly, requiring high quality translators. Translation of manuals is not only technical task. In some countries people like more visual cartoon like illustrations and in some countries more texts are used. Company ordering the translation of product manual should also take into account technology knowledge of main consumers. May be more detailed and explaining manuals are needed in some countries.

When your products are used in public procurement is good to know how these processes are organised in target market, what the main rules are and how the procurement system functions.

#### **4.2 Cultural adaptation**

Cultural adaptations of products deals with the circumstances under which the products are customly used in target country. It is partly cultural and partly technical problem.

Basis of customization are habits and the perceptions of the consumers. IN some

countries the product can be used as luxury product and in some countries middle range product. Same product can be in private consumption and used as professional tool.

Local consumer could have certain colouring and packaging preference. Common colours for domestic appliances in Northern Europe are white, silver and black. Consumers in other regions could prefer different colours. Certain colours can be preferred by up-market clients [<sup>1</sup>].

Clients could request additional quality, environmental and other certificates.

#### **4.3 Technical adaptation**

Clients could require different sizes and parameters of machinery and equipment.

Clients could also have additional preferences for safety, productivity and ergonomics parameters. For example agricultural machines in small agricultural plots in Northern Europe tends to be smaller than agricultural machinery sold in Australia and USA.

Operators working long hours in cabins could demand accessories that make work more comfortable. Additional ergonomics and comfort accessories adding can be part of commercial offer.

Devices work often in different climate and human related conditions. Among the climate conditions are extreme cold, hot climate, high humidity and other factors. Human behaviour and unsecure environment could insist that there are extra security measures like additional locks and immobilizers on device. Sometimes even insects and rats have caused breakdown of devices after eating the cable insulation.

Infrastructure influencing the use of your product can be different in target market. It

could be that mobile phone communication, water or electricity are not available in some locations

Decision to purchase new equipment can be influenced by compatibility with previous accessories and supply materials. Previously acquired accessories and spare parts could constitute substantial value and therefore influence the purchasing decision.

#### **4.4 Market (economic adaptation)**

Economic adaptation means customization of your products for customer groups with different purchasing power and other economic parameters. Countries are in different economic development stage and it is hard to believe that they customers in less developed countries are able to buy products at the same price as customers in Western Europe. General rule is cheaper products are made for developing countries.

Lowering the price of your products could be done by using cheaper components, smaller number of additional functions and by using of local assembly if possible.

In some countries people use products longer and repair them. In some countries repair of same products is uncommon and after some periods products are simply scrapped or sold to foreign markets.

Different requests from customers initiate the firms to offer different products and create product variation. Solution for cost efficient product portfolio can be using of modularized design [5].

Pricing models and business behaviour in developing markets often differs from saturated markets.

### **5. PRINCIPLES OF ADAPTATION TO LOCAL MARKET CONDITIONS**

When company product are unique and needed in foreign markets customers are probably willing to buy them without substantial customization. However this is quite rare in real life and in saturated and stable markets newcomers offer mostly products that are cheaper or with modified functions. By getting the market knowledge newcomers get the market information and start to modify their products and add new features for those products.

Selling of engineering goods abroad is exercise not only for marketing department who must speak foreign language but for all units of firm [6]. Well organised and sustainable export starts already from product design and financing. With customer demands should be familiar people in manufacturing and logistics units.

Communication with clients doesn't end after the sales of machine. Expensive capital good products customers ask in most of cases maintenance and guarantee services.

Point of considerations are operating in the case of urgencies when equipment breaks down and in other extra situations.

Exporting is therefore not only the customization of products but organizational changes and creation of enterprise networks with customers.

### **6. HOW TO START PRODUCT CUSTOMIZATION**

Customization of your engineering products for target markets starts form the learning of customer habits and product using practices.

Easiest and simplest way to the final product using information have resale, distribution, servicing and other specialist who are in direct contact with final

customers. Creation of helpful communication between final users and sales people require time and efforts. Methods like focus group, joint testing and lectures can be used.

When speaking to final customers sales people should show and act more like product development consultants rather than simple sales people. When joint development gives certain results in the form of new product solution is good to share those goals with final customers. For example pilot customers receive their samples cheaper. In exchange to pilot products they give detailed feedback and their opinions.

Good solution in one foreign market could serve as success factor in next foreign market.

## CONCLUSIONS

After the collapse of Soviet system and privatization, enterprises in Estonia and other newly free countries started to look for new markets and modernization. On general level machinery and metal goods made in Western Europe had higher quality and were more modern than products made in former Eastern bloc.

First modernization investments were made into new production equipment and premises. It was logical solution and new machinery helped to produce higher quality goods in more efficient way. This trend has continued last two decades.

However material or tangible side is only part in enterprises life. With available funds is relatively easy to acquire new equipment and production machinery. Creation of customer base, links with loyal customers especially in economically well off countries require equally investments and dedication. Big number of purchasing

decisions are personal and price is only one factor affecting the purchase.

To the certain extent managers of the first wave after liberalization of former Soviet bloc underestimated the client relations and other non-tangible factors.

Learning about the markets and growth of new SME-s were two factors that showed the importance of tense cooperation with customers.

Knowing the customer decision and purchasing process helps not only to create better products but assures the smooth communication.

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