

Tentti 10.10.2006

1. Oheisessa case -tapauksessa tarkastellaan Skandinavian eristyslasitoimialaan (the MGU industry) 1970- ja 1970-luvuilla (sivut 2-5). Eristyslasitoimiala oli sidoksissa sen lähellä oleviin toimialoihin. Tarkastele MGU-alan ja sen lähellä olevien toimialojen yritysten toimintaa. Kuvaile yritysten toimintaa kurssiaineistossa (artikkelit, luentomoniste ja luennot) olevilla käsitteillä. Mitä toimialalle tapahtui? Mitkä olivat mahdollisen muutokseen vaikuttavat toimialan sisäiset / ulkoiset tekijät. Analysoi kyseisiä tekijöitä ja niiden vaikutuksia toimialaan niin ikään kurssiaineistossa (artikkelit, luentomoniste ja luennot) olevilla käsitteillä. Perustele valitsemiesi käsitteiden sopivuus toimialan analyysiin. Muista, että analysointisi kohde on eristyslasitoimiala (the MGU industry) (30 pistettä).

PS. Laadi vastauksesi asiantuntijaa ja päätöksentekijää varten.

2. B to B - hyödykkeiden markkinoinnissa myyjän ja ostajan välinen rajapinta voi olla on hyvin moninainen. Markkinointi verkostossa (Marketing in business networks) osassa Cunningham ja Homse tarkastelevat henkilökohtaisten suhteiden vuorovaikutuskontekstia. He ovat kehittäneet organisaatioiden välisten kontaktien luokittelun (A taxonomy of patterns of interorganizational contacts). Kuva millaiset seuraavat yhteystavat ovat ja mitä edellytyksiä niiden toimiminen vaatii organisaatioilta?

- a. markkinoinnin kontrolloima yhteystapa (a marketing controlled pattern)
- b. markkinoinnin koordinoima yhteystapa (a marketing coordinated pattern)
- c. ~~markkinoinnin~~ ja oston kontrolloima yhteystapa (a marketing and purchasing controlled pattern) ja
- a. avoin yhteystapa (a stratified pattern)

(Cunningham & Homse, 1986, Controlling the Marketing-Purchasing Interface: Resource Development and Organizational Implications ja luennot) (15 pistettä)

3. Kuvaile napakasti mitkä ovat verkostojen neljä vertauskuvaa (metaforaa). Kuvaile tarkemmin verkostot suhteina ja prosesseina käsittelevät vertauskuvat (Networks as Positions and Processes). (Easton, G. (1992) Industrial Networks: A Review. In Axelsson & Easton (Eds.) Industrial Networks, A New View of Reality, Routledge, London) (15 pistettä).

5. Lundgren analysoi artikkelissaan digitaalisen kuvanmuodostamisen teknologian syntyä ja kehitystä Ruotsissa. Tutkimuksen tarkastelu ajanjakso oli 1975-1989. Analysoinnin perusteella Lundgren laati viitekehysten (framework), jonka avulla voidaan ymmärtää uuden toimialan verkostojen ja teknologiajärjestelmän syntyä. Laadi Lundgrenin viitekehys ja selvitä sen avulla uuden toimialan verkostojen ja teknologiajärjestelmien syntyä. Tätä kysymystä voit hahmottaa miettimällä kännykkästandardien (NMT ja GSM) syntymistä, kehitystä ja leviämistä eri toimialoille. (Lundgren A. (1993) Technological Innovation and the Emergence and Evolution of Industrial Networks: The Case of Digital Image Technology in Sweden in Cavusgil, T. S. & Sharma, D. D. (Eds.) Advances in International Marketing, Jai Press Inc., 5, pp. 145-170). (15 pistettä)

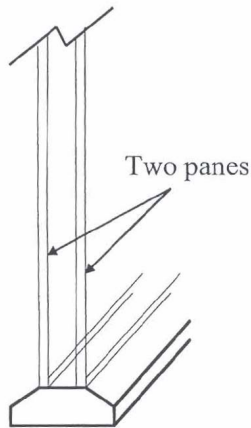
Kysymys 1 on pakollinen. Vastaa kysymyksistä 2-4 vain kahteen. Jos vastaat kaikkiin kolmeen (kysymykset 2-4), niin paras kolmesta vastauksesta putoaa pois.

Tentin maksimi on 60 pistettä. Läpikäytyyn vaaditaan 45 prosenttia eli 27 pistettä.

The Scandinavian MGU Industry

In the early 1970s the competition in the Scandinavian MGU (multi glass unit = MGU = erityslasi) market was hard. The market grew remarkably. New companies entered the market.

MGU technology



Single glazing does not give satisfactory insulation against cold and sound in windows. Double or triple glazing is therefore used in many places. Prefabricated insulating units are preferred to two or three individual panes of glass in a window. Multi glass units (MGU, see Figure 1), were developed in the 1930s by the U.S and German window glass manufacturers¹. The prefabricated units consist of two or more panes of glass with cleaned dehydrated air between them. Each unit is hermetically sealed around the edges. In the 1960s MGUs used window glass as raw material.

Figure 1. MGU-product

Background for the Scandinavia MGU Market

The Scandinavia Window Glass Market in the 1960s

After the II World War the reconstruction and economic growth created demand for window glass. In the early 1960s there were seven independent window glass manufacturers in Scandinavia: Emmaboda and Gränges (whose main business was in mining and steel manufacturing) in Sweden, Korsör in Denmark, Drammen in Norway and Lahti, Riihimäki and Valke in Finland. These companies had adopted window glass manufacturing processes in the 1920s and 1930s. Emmaboda had cooperated with St. Gobain, a French manufacturer, since the mid-1940s. St. Gobain owned 30% of Emmaboda's shares. Emmaboda increased its capacity in 1968 (to 30,000 tons/year). In 1969 Scanglas, a joint venture between Gränges and Korsör, started window glass production (capacity 50000 tons/year) in Denmark. In 1965 Drammen entered co-operation with St. Gobain, which partly financed the investment in new window glass machinery. St Gobain received 30 % of the share capital. In 1969 Lahti started production at a new plant (capacity 30,000 tons/year).

In Denmark flat glass was marketed via powerful wholesalers. In the Sweden there were both powerful wholesalers and processed glass end-users. In Finland sales in the domestic market were handled via five central wholesalers, none of which concentrated in the window glass sales. Direct sales were rare

This case was written by Professor Olavi Uusitalo of Tampere University of Technology as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

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¹ In the 1950s the flat glass industry was basically divided in two sub-industries: 1) the window glass industry providing cheap and low quality window glass for construction and 2) the plate glass industry providing expensive and high quality plate glass for the auto industry. In 1959 Pilkington introduced less expensive float glass to replace plate glass.

and the distribution was rigid. Import duties had prevented imports (only 7 % was imported). Flat glass exports accounted for 13% of production. The export prices were 30-40% lower than domestic prices.

The history of MGU industry

In the early 1950s large Belgium and German window glass manufacturers successfully marketed MGUs in Europe. Belgium exported MGUs also to Sweden, Denmark and Norway. To replace imports almost all Scandinavian window glass manufacturers licensed MGU technology. In 1957 Korsör licensed technology from a German window glass manufacturer and founded a manufacturing company. Drammen became immediately a partner with a 10 % share. At the beginning Drammen imported MGUs from the joint venture. In 1959 Drammen started MGU-production in Norway. Emmaboda joined this group and started MGU production in 1960. Next year also Gränges produced MGUs with a license acquired from a US company. Lahti sub-licensed MGU technology from Gränges in the mid 1960s. Thus, five out of seven Scandinavian window glass producers entered to the MGU business and controlled the market. In 1960 in Norway the Belgium MGUs had 85 % market share and leaving only 15 % for Drammen. However, in 1967 Drammen, market share passed 50 %. In Finland Riihimäki, another Finnish window glass manufacturer, and Lahti shared (within a rationalizing agreement) the market of the local construction industry. The former delivered tempered safety glass and the latter MGUs.

Changes in the Scandinavia MGU Market in the 1970s

Changes in the Scandinavian window glass market in the early 1970:

In the 1960s the European flat glass market was restructured. In 1960 there were 35 independent flat glass producers, but in the early 1970s three large companies, Pilkington (from the UK), St Gobain (from France) and another French company, BSN, dominated the European flat glass market. Pilkington and St. Gobain became interested also in Scandinavia. Pilkington (established in 1826) developed float glass, a new type of flat glass, in the 1950s. Float glass was introduced in 1959. That time it was too thick (6.5 mm; window glass had 2-4 thicknesses) and too expensive to replace window glass. In the 1950s and the 1960s Pilkington established manufacturing units in the Commonwealth Countries. In 1972 Pilkington's turnover was £226.5 million (\$400 million). St. Gobain's main business area is the flat glass business (60% of its sales in 1960). St. Gobain licensed float glass production in the Central Europe (France, Belgium, Italy, Spain and West Germany). In 1974 St. Gobain's turnover was 21 billion FrF (\$ 3 billion) and it employed 146.000.

The automobile and construction industries are the main users of flat glass. To replace window glass, a full range of commercial thicknesses of float glass should be available. In 1970 Pilkington could produce float glass of 2 mm thickness.

In January 1973-74 Pilkington tried to establish a joint float glass production unit with Scandinavian window glass producers (Scanglass, Emmaboda, Drammen and Lahti). The project was abandoned in 1974 after Emmaboda was sold to St. Gobain. Spring 1974 meant hard times for Scandinavian window glass manufacturers. The price of the flat glass industry's key fuel, oil had risen 300%. The oil crisis affected also the building and the automobile industries, which were the most important for the flat glass industry. The demand for MGUs increased as can be seen on Table 1. The power of large wholesalers increased and they planned to import float glass. In 1974 Pilkington informed to build a production unit (started in Summer 1976) with a capacity of 220 000 tons a year in Sweden. The flat glass supply in Scandinavia would be twice as large as the demand. Somewhat

earlier Pilkington had started exporting to Denmark, Finland and Norway. In Denmark the price of float glass (with the same dimensions as window glass) was 30% under the price of Scanglas'. Low price had been one of the main selling arguments. The British pound lost value (35-40% in 1973-76) against Scandinavian currencies, which also helped Pilkington's export. In 1975 the Danish investors sold their Scanglas' holdings with one crown to Gränges. Only 18 months earlier the value of their 30% stake was worth DKK 35 million (\$3 million). In 1976-78 St. Gobain acquired Emmaboda, Drammen and Scanglas. Thus, it controlled three main distributors in Sweden.

Table 1. The MGU Market in Scandinavia in 1967-76 (in millions)

	Finland	Sweden	Denmark	Norway
	FIM	SEK	DKK	NOK
1967	3,5	21	66	44
1968	4,0	20	74	47
1969	5,5	22	99	54
1970	7,0	28	123	64
1971	8,5	36	108	64
1972	10	26	119	67
1973	15	29	156	70
1974	30	34	110	69
1975	35	43	155	76
1976	42	67	216	99

Belgium, West -Germany and Great Britain were the largest exporters from Europe.
 Rough currency rates were 1 SEK=.84FIM; 1 DKK=.60 FIM and 1 NOK=.64 FIM.

In 1973 Finland made an agreement with EC (Benelux, Denmark, France, Germany, Italy and the UK since 1973) to lift (poistaa) duties in a settled time schedule. There were no import duties for EFTA (Austria, Iceland, Liechtenstein, Norway, Sweden, Switzerland, Finland and the UK until 1973) countries since the end of 1967. The UK when joining the EU maintained its status in trade with remaining EFTA countries. Two other Finnish manufacturers, Riihimäki and Valke, ceased their window glass production in the mid 1970s. Lasitukku, a wholesaler owned by Finnish glaziers, imported huge amounts of Pilkington's float glass (see Figure 2). Lasitukku itself delivered 40% of flat glass sold in Finland. In 1973 Lasitukku acquired 20% of Lahti's production and it was not able to buy directly.

Lasitukku started importing because of the dictating marketing policy of local flat glass manufacturers and its own interests to act as an importer. As was mentioned flat glass was sold via wholesalers and producers were not willing to sell directly. Lahti had also denied delivering window glass to some of its competitors in the MGU-industry. The joint Scandinavian production unit (Lahti as one member) would have in any case meant import of float glass into Finland. Over capacity in the market presaged a price war. Large investments, warehouses full of window glass and rapidly changed market conditions put Lahti (turnover \$15 million) to the gate of bankrupt. In 1976 Lahti made an agreement with Pilkington according to which Lahti would terminate window glass production and concentrate only on MGU production.

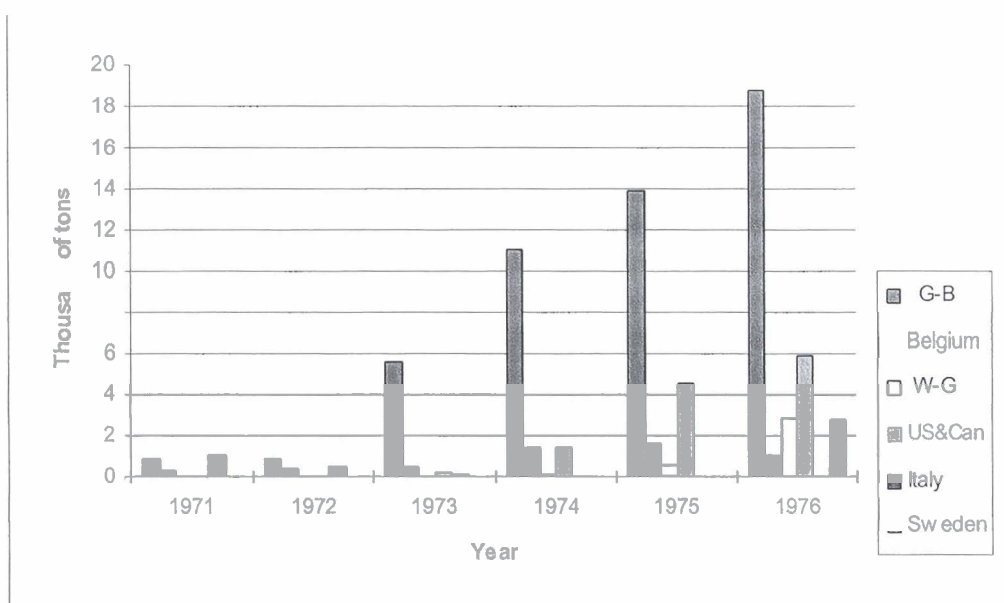


Figure 2. Float glass import into Finland.

Events in the MGU industry in the early 1970s:

The MGU-glass became an important user of flat glass in the late 1960s (Table 1). In Norway Drammen was for a long time alone in the MGU business. However, after new materials (clues silicon, limstoffs etc.) and the availability of flat glass the fabrication of MGU products became so easy that many small companies could produce them. In the early 1970s there were about 30 MGU producers in local markets in Norway. In Finland the MGU (Table 2) product market expanded at the beginning of the 1970s. Lahti had played a leading role in this industry since the company had introduced its licensed products on the Finnish market in the mid-1960s. Through advertisements and promotion campaigns, Lahti created demand for MGU-products. However, Lasitukku and many glaziers, Lahti's customers, and other companies also entered the MGU-industry. Lahti found itself competing in MGU-products with its customers. In 1974 Lahti acquired Autolasi, a local MGU and safety glass manufacturer.

Table 2. Largest MGU-producers in Finland in 1975-76

	Capacity (thousand m ²)	
	1975	1976
Lahti	300	300
Metsäliitto	100	100
Lasitukku/Glasson	120	20
Tähtilasi	75	50
Autolasi	45	45
Rest	135	185
TOTAL	775	900
Increase		16%