VIDEOTON:

THE GROWTH OF ENTERPRISE THROUGH

ENTREPRENEURSHIP AND NETWORK ALIGNMENT[♣]

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‘The success stories will not be the vast government organisations that are easy to identify - Robotron in what was once East Germany, Videoton in Hungary, Iskra in Yugoslavia - but companies founded by men and women whose names are as yet unfamiliar’

Harvard Business Review, January – February 1991, p. 26

‘Micro Capitalism: Eastern Europe’s Computer Future’ by Esther Dyson

This quotation from 1991 Harvard Business Review illustrates the mainstream perspective on entrepreneurship in central and eastern Europe. New small firms led by unknown entrepreneurs will grow through generic expansion while large ex-socialist conglomerates are doomed to bankruptcy. Indeed, this picture reflects to a great extent what has happened to a large number of firms and sectors in Central and Eastern Europe (CEE). However this metaphor is also excessively simplistic, as the case of Videoton shows. It abstracts from the institutional and networks context in which restructuring and entrepreneurship takes place. The case of Videoton shows how growth of enterprises in CEE inevitably rests on entrepreneurship but also on the existence and alignment of several other factors. A business model that has been developed through Videoton has a larger relevance for understanding the growth of enterprises as well as modes of integration of the CEE into global economy. It shows that the restructuring and subsequent growth of Videoton cannot be explained only as a case of individual entrepreneurship without taking into account that its success is also based on alignment of several networks.

In the first section we briefly present company’s history and profile. Second section focused on the key restructuring aspect Videoton: a shift to contract manufacturing. Section 3 describes Videoton’s first outward investment. Section 4 addresses the fact that Videoton has managed to survive and grow through a holding structure. Local networks and industrial parks are important factors in explaining Videoton strategy (section 5). It relationships to government is addressed in section 6. The price paid for success is retreat from being producer of final products to contract manufacturer. Whether this step back enables further growth is discussed in section 7. The key strategic problem of contract manufacturer like Videoton is how to avoid dependent and low value added subcontracting (section 8). Finally, growth of Videoton

has led to several relocations of investments and contracts to Hungary (section 9). Our main conclusion is that growth of Videoton is best explained through entrepreneurship and alignment of networks perspective.

1. HISTORY AND PROFILE

Videoton was founded in 1938 under the name of the Hungarian Cartridge Factory. Immediately after the war it was nationalised. Since then Videoton has developed into the Hungary's biggest state owned enterprise (SOE) that supplied consumer electronics (TVs, radios and cassette players), defence communication and computer technology to East Bloc. During that period defence electronics and computer electronics, was providing 70% of the company's turnover and 95% of its profit [Videoton, 1999 #49][1]. In 1989, Videoton's turnover was Ft30bn ($418.6m) with hard currency exports accounting for 20% of sales. [European, June 1993 #48]. In socialist period Videoton was one of the drivers of Hungarian economy accounting for 4-5% of Hungary's GDP [European, June 1993 #48]. It was highly vertically integrated firm but also one with considerable product diversity [Young, 1993 #54].

Since most of its products were sold in the countries of the Eastern Bloc, Videoton faced a difficult situation when these markets went through substantial restructuring. As a result of the loss of COMECON markets in defence electronics and computer technology it has almost bankrupted in 1991. However, it has managed to shift to civilian sector and has grew since than into a successful private company.

In 1989 Videoton had five main civil production divisions: loud speakers, compact discs, printed circuit boards, television production and computers. Before its liquidation procedure in 1991 only the loud speakers unit was profitable.

Hungarian economic reforms allowed relatively more freedom to enterprises than in the case of other COMECON countries. As a result Videoton was effectively in control

of its foreign trade organisation. This enabled it to accumulate some experience of working with foreigners during the socialist period. In 1990, it had 5 joint ventures and 2 licence agreements [Young, 1993 #54]. In 1988, it started to make TV sets near Budapest with French Thomson through joint venture [Dawkins, 1989 #30]. Also, Akai had OEM co-operation with Videoton since the end of the 1980s which still continues [Cane, 1988 #31]. The knowledge gained through these relationships was an important technical input for all its non-military products.

In 1989-90 period management of the company tried to restructure company but basically focused only on filling capacity left by the collapse of Comecon market. As described by [Young, 1993 #54] the restructuring proved unworkable mainly due to complex transfer pricing between units, prime motivation for units were tax reasons not strategy, company lacked an effective profit centre reporting, and there was not effective co-ordinated managerial control in place. Although effectively failed Videoton management was reluctant to break up company into small units despite the fact that the necessary reorganisation of the company into business units had already been accomplished. In addition, State and state banks were not willing to take risk to initiate break up. Its main creditor, Hungarian Credit Bank (HCB), was dependent on large firms including Videoton. State which was concerned with employment and tax collection problem was also unwilling to risk much. In addition, the unclear responsibilities between State Privatisation Agency and Ministry further delayed decisions. As [Young, 1993 #54] in its detailed account of Videoton in that period explains the three principal constituencies (managers, bank and state) had conflicting or unclear agendas. The groups management was never forced to make the difficult decision required to initiate the process.

In 1991, the Hungarian government hired UK broker to help privatise the company. However, Videoton's management wanted to keep the company intact and rejected its recommendations that company units be sold individually [European, June 1993 #48]. Videoton's financial situation deteriorated and it was placed in the hands of state liquidators with debts of Ft110bn ($14.7m). A further Ft6bn ($?) was owed to

[1] Videoton was supplying Soviet army with battlefield radios in Afghanistan [Carrington, October 11-12, 1991 #42].

suppliers. The liquidators eventually sold the company's assets to a consortium comprising state-owned HCB (70%), a consulting firm Euroinvest (20%) and three senior managers (10%) from private computer and telecom company Muszertechnika Holding. [European, June 1993 #48]. These managers were Videoton's current team: Gabor Szeles (President and CEO) and two vice-pesidents Peter Lakatos and Otto Sinko. Mr Szeles is also President of the Federation of Hungarian Industrialists. In 1996, Videoton management undertook its own leveraged buy-out, at market rates of the HCB and acquired a majority stake [Videoton, 1999 #49]. Subsequently their share has increased to 79% [Gazdasag, 23. November 1999 #35]. Videoton is not listed on stock exchange.

New owners faced with a formidable task of restructuring a large electronic company. Similar companies across CEE were in a hopeless position and there was little reason to assume why Videoton's future would be different. The original 10 layers of decision making were reduced to three at company management, division management and production plant level. A number of employees were halved during the restructuring stalemate between 1988 and 1991. A new management further reduced employment by 20%, but this was far less than decreases in earlier years. Moreover, the new strategy was dependent and resulted in great increases in employment. In 1999, its employment came close to its peak level from the eighties.

Table 1
Videoton: employment

Year	Number of employees
1988	20,000
1991	10,000
1992	5,7000
1993	4,958
1994	6,319
1995	8,515
1996	9,867
1998	16,000
1999	17,000

Source: [Szalavetz, 1997 #55] [Finczicki, 1999 #6].

Today, Videoton is Hungary's largest domestically owned private consumer electronics company. It is Hungary's fifth biggest employer with more than 16,000

employees in Hungary plus 1000 in newly acquired company in Bulgaria, trailing Hungarian State Railways Rt (MAV), Magyar Posta Rt, MOL Rt and Matav Rt. [Finczicki, 1999 #6]. In 1998, Videoton had Ft34bn in sales ($150m) revenue [Agency, 19. May 1998 #39]. In 1999, Videoton's turnover was Ft58bn (DEM415m)(check and convert) and plan for 2000 is DEM490 or Ft65bn.

Videoton's headquarters are in Szekesfehervar, a town of 108,000 inhabitants located 70 km from Budapest in Southwest of Hungary. Company is located on 10 production facilities in Hungary and 1 in Bulgaria. In total Videoton has 360,000 square meters manufacturing area. It is a holding company with 33 business units organised in 13 subsidiaries. Videoton's mission statement is to be 'the most competitive Central European integrated manufacturer in electronics and mechanics' [Videoton, 1999 #49].

Before 1989 Videoton was a producer of numerous final products in the area of electronics. When faced with the survival it had to close most of its lines and after privatisation it has continued only with manufacturing of loudspeaker systems, colour TVs and defence equipment. In addition, it has started with the production of CDs. However, the major strategic shift undertaken is the expansion of contract manufacturing which today forms the majority of Videoton's revenues. Export based on contract manufacturing arrangements makes 80% in total sales. Videoton's main areas are electronics, electrical appliances and automotive supplies.

Table 2
Videoton: Sectoral distribution of turnover

Informatics	28%
Automotive industry	24%
Consumer electronics	24%
White goods industry	4%
Others	20%

Source: [Videoton, 1999 #49]

2. CONTRACT MANUFACTURING: A BASIS FOR SURVIVAL AND GROWTH

The main change introduced by new management was to abandon the manufacture of complex end product [Szalavetz, 1997 #55] and to become subcontractor in several areas, especially in electronic assembly. In principle, the business formula was very simple. Otto Sink, a Videoton vice president describes it in the following way:

'This was a dead company. (…) Its revival was based on a simple plan. Downsize radically, stop develop new products, and focus on labour intensive manufacturing to serve a hungry crop of multinational investors. [Beck, March 1996 #43]

Videoton has managed to establish itself as the main contracting manufacturing company in the electronics industry in central Europe. During the past 6-7 years, it more than doubled its output with an annual increase of 20%. This has been achieved through 30 contract-manufacturing projects for the supply network of MNCs. Some of subcontracting arrangements have been in practice since the end of 1980s, especially with Akai[2].

Videoton's 'engine of development' is strategic development of contract manufacturing through creation of new projects and businesses, from initial contract through to technical analysis and feasibility studies [Videoton, 1999 #49]. Videoton operates as a facilitator of foreign projects by lowering transfer costs, especially management costs of transfer projects. Three of the 9 Hungarian sites of Videoton also hold the official industrial park title, granted by the Government of Hungary [Report, May 5, 1999 #37]. The innovative aspect of Videoton' strategy is the use of parks not only for Group operations, but also to provide an infrastructure for partners' subsidiaries – whether or not these utilise Videoton's existing facilities or require greenfield investment. By providing a structure according to requirements, by assisting in recruiting personnel, solving legal issues and providing accounting, logistics and infrastructural services Videoton is able to enhance interaction with foreign partners and thus benefit in future

[2] Videoton Audio provides wooden and plastic cabinets for television sets and loudspeakers to world-wide manufacturer such as Akai, Fischer and JVC [European, June 1993 #48].

projects. In projects with Emerson Electric Group and Alcoa Closure System International (CSI Hungary), which operate in Videoton industrial park, and IBM Storage system, which is operating as greenfield investment, Videoton supplied these services through turn-key projects [Videoton, 1999 #49].

Videoton names its strategy an 'integrated manufacturing services'. This is a combination of its own parts and component suppliers (background industries) and manufacturing related services to its foreign partners under contract relationships. It seems that the company has been successful in using Industry Park as a backbone of its expansion for contract manufacturing activities. For example, Motorola representative, said the company picked Hungary for the site rather than the Czech Republic or Poland because of its central location and other factors. "What Videoton could offer us as a facility and a professional partner, … nobody really has in any of the other countries," he said.[Sereny, 1998 #4]

Videoton's strategy is to establish contract manufacturing based co-operations providing to foreign partners:

- Qualified middle management and labour
- Flexible technological base and facilities
- Reduced investment risks and costs
- Quick project start up time
- Openness towards innovation for strategic partners [Videoton, 1999 #49]

This business model is partly the result of inventiveness of managers but also partly the result of constraints in which company found itself in the begging of the 1990s. A continuation of own branded products in electronics where Videoton's finance, technology and market gaps are huge was non-viable. Antal Szabo, manager at the Szekesfehervar plant, describes this step back from the own brand manufacturer (OBM) to original equipment subcontractor (OEM) status in the following way:

"We don't want the high cost and risk of marketing our own products. Our principle now is to go for low risk production until we are stronger, financially and technically. But in 10-15 years, I hope we will be making our own products again." [FT, 1997 #56].

Currently Videoton is involved in the following three basic types of activities:
a) Contract manufacturing among which the most important are:

batteries - SANYO
household machines – PHILIPS
control units for photocopiers – SHARP (F)
control units for microwave ovens – SHARP (UK)

b) Electronics manufacturing
c) Tools and plastic part manufacturing

Videoton's expansion in contract manufacturing requires regular auditing by its buyers as well as by quality examining organisations. The company had ISO 9001 certifications in 1991, 1994, and 1997. In 1998, they also introduced ISO 9002 in Sanyo and Philips projects. The company has plans to introduce ISO 14000 standard series into its production line in 2000, which will serve to the natural environment protection purposes.

In continuation we will briefly overview some of the most important projects (subcontracting agreements).

Dutch Philips is among the few MNCs that have quickly grasped the opportunities that the opening of the Berlin Wall was offering. In 1990, Philips entered into Hungary by subcontracting semi-finished parts and components from Videoton videocassette recorders facility. From 1990 – 1997 it constructed 12 production facilities in Hungary by investing a total of $78million, created 5200 jobs and became one of the country's largest exporters. Its Szekesfehevar plant is European product mandate supplier for video combis for the entire European market.[Robinson, 1997 #28]. Philips invested in Hungary primary as a low-cost production base. In 1998, Videoton MBKE Elektronikai Kft has lunched production lines for assembling electric kitchen appliances for Philips. This Ft300m plant is located in the Videoton Industrial Park in Kaposvar, South West Hungary [MTI-EcoNews, 1998 #14].

In 1995, IBM has started with subcontracting magnetic heads for hard disk drives from Videoton- Mechatronika. In 1996, it expanded further its hard disk drive manufacturing into assembly of the whole hard disk drives through arrangement with

Videoton, who built a new plant to IBM's specifications. The new plant is close to Budapest and is leased by IBM. In this new plant, the staff is IBM staff whereas in the existing Szekesfehervar plant the staff is under contract to Videoton-Mechatronics[3]. A new plant, the largest in Europe, produces more than three million-drive units of 2.5 inches drives for laptops [International, April 17, 1996 #40]. The name of IBM convinced lots of companies to start negotiations with Videoton [Lee, 1996 #52].

In 1996, Kenwood Electronics Brittany (KEB)(France) shifted a part of its production of car audio to Videoton through subcontracting with the agreement that KEB would provide the major components for assembly. The starting monthly allotment was decided as 20,000 tape decks. This move allowed KEB to widen sales throughout Europe, especially in Eastern Europe and Russia.

Videoton manufactures Panasonic (Panasonic Magyarorszag Kft)[4] music centres under a contract. Panasonic does not have production site in Hungary..

The relationship between Texas Instruments (TI) and Videoton Holding started in 1996. The initial production of parts for TI started with 70 employees. In December 1999, Videoton Holding Rt opened a new production facility in Szekesfehervar. When in full operation 400 workers produce 47 million components per year [Finczicki, 1999 #6].

In February 1999, Videoton opened a new plant in Kunhegyes to produce loudspeakers for the automotive industry. Videoton owns the company 100%, but it is jointly built with British Goodmans Loudspeaker Ltd. who provided the production lines. Videoton has invested Ft100m in its construction. The plant is producing 4 million loudspeakers, but this amount may increase with the revival of the Russian automotive industry [Reports, 1999 #19].

In cooperation with Videoton, Motorola opened a regional service centre in Budapest to serve the whole of CEE, except Russia. The centre aims to repair Motorola products in maximum four days including the delivery time. Besides Motorola radios,

[3] IBM Storage Products Kft, is Hungary's second-largest company by sales with annual export revenue of $1.5 billion, manufactures IBM hard disk drives at its Szekesfehervar plant [Dalnoki, 1998 #3].
[4] Panasonic Magyarorszag Kft, a wholly-owned subsidiary of Panasonic Central Europe (Vienna-based), sells telecommunications equipment, telephone sub-exchanges, mobile telephones, office technology, as well as professional products such as closed-circuit video networks.

mobile phones and pagers, modules and software will be repaired and systems integration will be dealt with.[5]

Japanese Electronics Company Matsushita also has subcontracting arrangements with Videoton. Since 1996, all CD player sub-assemblies, and most of the VCR sub-assemblies for the European market are being made in Videoton. [Videoton, 1999 #49]

Videoton is also one among 8-10 Hungarian component suppliers to VW with annual purchases worth DEM15m[6].

Sanyo's subsidiary Sanyo Energy in Germany is in subcontracting agreement with Videoton MBKE Electronics Kft, which assembles battery packs for Sanyo at a plant in Kaposvar[7]. Currently, 250 to 300 employees at the Videoton subsidiary are working exclusively on the Sanyo product, and in 1999 they supplied 35 million battery-pack units, according to company information [Washio, 1999#8][Agency, 1998 #12]. Sanyo provided the raw materials and the technology, and Videoton MBKE infrastructure and labour.

Videoton is producing loudspeakers for Sony. In 1998, Videoton produced 500 000th speaker for Sony (www.globalarchive.ft.com).

A full list of Videoton's foreign partners and related products is given in Annex 1.

3. VIDEOTON GOES EAST EUROPEAN?[8]

[5] This investment is a part of a broader trend. Swedish-based Ericsson Telecommunications established a 12-country regional repair and service center in Hungary in 1992 that employs 200 people. Finnish-based Nokia also is considering making Hungary its service center for the region. Nokia has no Eastern European regional repair facility for now [Sereny, 1998 #4].

[6] VW group purchases from Hungarian suppliers more than DEM 200m of the groups' total annual purchases of DEM 13bn. The ISO 9000-9004 quality certificates is a basic requirements for the group's suppliers [Agency, 1998 #9].

[7] In Europe, Sanyo Energy is a leading manufacturer of long-life nickel-cadmium and nickel-metal hydride batteries, as well as lithium-ion batteries used in such products as cordless phones. It holds a 30% market share in Europe.[Washio, 1999 #8].

[8] Videoton is not the first Hungarian Company to enter into outward investment. Probably, the first Hungarian controlled company that went abroad is *Ikarus*, a bus producer, who in April 1998 established a joint venture in Brasov, Romania [Mohorovic, 1999 #1]. The operation allows the company to sidestep a 20% import tax. Also, MOL, Hungarian oil and gas company, has partially bought Slovakian refinery Slovnaft. In 1998, drug maker Richter established joint ventures in Ukraine, Romania and Russia. These events seems to be a part of a growing trend amongst Hungarian exporters to take advantage of western's firms reluctance to target eastern markets as well as saturation of domestic market.

Videoton's first foreign investment is partial take-over of Bulgarian social-era Electronics Company DZU-Disk Memory Devices of Stara Zagora **(**South Central Bulgaria). In June 1999, Videoton bought 48% stake, which it then increased to 51%. Co-owner is Bulgarian *Multigroup* conglomerate that holds 31% of shares. Videoton was the only one out of the eight potential buyers that had actually submitted an offer.
DZU has been wholly decapitalised. Its tangible assets have been evaluated at BGL23, 000 million (? $), whereas debts exceed BGL120, 000 million (? $)[News, 1998 #21]. DZU has stakes in 20 foreign companies and all of them are included in the works' consolidated balance sheet [Daily, 1998 #16][9].

Videoton bought 48% stake for $54,200 but is obliged to invest a further $645,000 into the company and clear $484,000 of DZU's debts. It also agreed to retain 1000 workers. The sale of DZU to Videoton was facilitated by the Bulgarian government which accepted to partially repay DZU's debt from the special reserve for structural reform from which government allocated 2,045m leva ($?) [Services, 1999 #25][Report, 10. June 1999 #36].

The basic Videoton's motive for this investment is to take advantage of Bulgaria's highly competitive labour costs and to use it as a cheap assembly plant for its contract manufacturing for Western firms [Mohorovic, 1999 #1]. Videoton will also introduce a new production line that is expected to increase the standards of DZU to Videoton's level.

By going abroad Videoton takes risk of uncertain eastern markets in order to grow. A business press warns that the *Multigroup* conglomerate, Bulgarian co-owner, may prevent the plans to increase capital, since it has enough power with 31% shares. On the other hand, the opportunities for growth for a company like Videoton seems to be much better on eastern than on western markets. Videoton also expects to acquire a majority stake in another Bulgarian company - Microprocessing Systems – Pravets as well as to enter into Romanian market.

[9] According to *Business Central Europe* "Under Communism DZU sold hard drives to Comecon, and (via a network of discrete subsidiaries) abroad was a key player in the bloc's efforts to filch high-tech firms from the West. When the Wall collapsed, so did DZU's secure markets. So it ruined its hand to making CDs-some with pirated recordings' [, 2000 #46]. DZU started to produce and export CDs, and recently its CD production licence was cancelled because of the illegal recordings of CDs that were exported to Turkey.

4. VIDEOTON HOLDING AS A NETWORK ORGANISER

The important factor that played the role in the emergence and than growth of Videoton is that the company was not broken up before privatisation. Videoton continued to operate as a holding that enabled it to develop the strategy based on building diverse production activities and synergies among them.

If Videoton had been broken up its individual units would have been fully exposed to exogenous circumstance. As a part of holding their exposure to exogenous circumstances is controlled by parent company. In 1991, a liquidator appointed for the six major Videoton companies determined that the interests of the creditors would be best served by maintaining parts of the business as a going concern [Young, 1993 #54]. The advice by consultants was to break it up and re-establish links through long term contracts. It was thanks to the inability or unwillingness of the State Privatisation Agency and the Ministry to impose the plan recommended by consultants that the break up did not take place. As [Young, 1993 #54] points out 'if the plan had been adopted, the restructuring would require parallel efforts to promote small and SMEs that could than take power many of the production and distribution functions performed under the Videoton umbrella'. However, once these newly formed SMEs enter into arm's length relationship with each other the whole restructuring process becomes very much dependent on the external availability of finance, infrastructural support as well as on the effective co-ordination among them. One would expect that many of them would fail and the outcome of the entire process on local economy would be highly uncertain. Some of units would growth but several of units could not survive without the Videoton umbrella to sustain them [Young, 1993 #54].

[Szalavetz, 1997 #55] also highlights this issue in her extremely valuable analysis of Videoton:

However, Videoton will not continue CD production since it can be produced more cheaply in its Hungarian plants.

‘According to one manager, blue chip multinationals like JVC, Matsushita, Philips or Siemens would never have negotiated with an unknown, medium sized company in the Hungarian provinces, regardless of how creative the management or developed the technological abilities and capacities: ‘It makes a qualitative difference to belong to Videoton Holding. The VT prefix to the company’s name is in itself a pledge of the company’s abilities and reliability as a co-operation partner’ [Szalavetz, 1997 #55]

By belonging to holding individual firms may expect beneficial payment terms that suppliers will grant to the group. [Szalavetz, 1997 #55] also highlights the problem of power in bargaining with foreign companies as well as of credibility.

‘Most of Hungarian subcontractors remain exposed to their foreign customers because they cannot afford to procure their material inputs for themselves. The short payment period stipulated would place an extra load on their current assets position. Videoton can arrange favourable commercial credit for its subsidiaries (…) There are few other companies in Hungary to which foreign partner would deliver products worth more than DEM 100,000 on an open delivery contact with payment at 60 says’ [Szalavetz, 1997 #55]

Break up would have exposed serious weaknesses that individual firms had in marketing, finance and production[10]. They were basically production, not business units. Concentration of strategic functions at holding level enabled Videoton centralised search for partners, building of brand name, easier access to finance as well as reallocation of investment funds within the holding. Also, Holding could cope with orders of much larger size than any individual company would have been able.

At holding level, Videoton managers have learned to co-operate effectively with foreign partners in contract manufacturing. As a result set up times for new lines within 6 months after the first contact.

[10] This is especially important given the inherited weaknesses of ex-socialist enterprises in marketing and finance. *Business Central Europe* reporter put it this way: ‘Videoton was good at manufacturing. It was not good at sales and marketing’. It did not have to be: marketing consisted of hosting Soviet customers during annual visits to renews contracts [European, June 1993 #48].

All purchasing, sales and marketing activities are at operating company level. This enables customers' feedback and close communication between sales and production. However, the marketing & sales department in the holding organisation provides significant assistance in setting up initial contacts, negotiating general terms and conditions until day to day business communication. Videoton Foreign Trade company co-ordinates the foreign, primarily Eastern European and Asian activities of the Videoton group. [Videoton, 1999 #49].

In 1993, the 26 Videoton companies have been reorganised into 18 profit centres, concentrating on four major areas of business: consumer electronics; subcontracting; defence manufacturing, and domestic and international sales and services [European, June 1993 #48]. The Holding Company manages the profit centres until they become viable entities, then spins them off into independent companies. The long-term goal is for the holding company to act only as a financial controlling group, with independent companies responsible for their own management. The holding group will continue to co-ordinate the activities of companies in the conglomerate to seek out new markets and consolidate manufacturing processes [European, June 1993 #48]. In this way holding operates as a restructuring agent which actively assist restructuring and growth of companies.

The organisation into profits centres enabled Videoton to significantly improve its operational efficiency. For example, its televisions production division used to employ 1000 workers to make 140,000 television sets a year. Videoton Television now produces the same number of. units with 600 staff [European, June 1993 #48]

However advantageous holding organisation seems to be for Videoton it cannot resolve the long-term issues of its growth. As [Szalavetz, 1997 #55] points out these are the lack of own products and relatively underdeveloped capacities for independent marketing. Sales from own brand products account for less than 5% of turnover while the profitability of manufacturing under contract greatly exceeds the profit on its own brand products (ibid). Also, the vast majority of the necessary parts are supplied from abroad [Videoton, 1999 #49] which suggests that the local content is still low. Videoton claims that most of them could be manufactured at Videoton or at other Hungarian manufacturers at a more competitive price levels. That is why the local procurement is an

issue of great importance and Videoton has been playing a pioneering role in creating local supply of parts and components. Its future will depend on the extent to which it will strengthen its role as an organiser of supply network and the degree to which it will expand from assembly activities to part manufacturing. This should be done through supply contracts or acquiring partners from the medium and small sized, not just large companies [Videoton, 1999 #49].

5. INDUSTRIAL PARKS AND LOCAL NETWORKS

Industrial parks are integral part of Videoton' strategy. Three of ten Videoton's locations in Hungary have status of industrial parks awarded by the state. These are industrial parks in Szekesfehervar (electronics, founded in 1993 and awarded in 1997), Veszprem (component manufacturing, awarded in 1998) and Kaposvar (electronics and plastics manufacturing, awarded in 1997)[11]. Their successful integration into Videoton's strategy is based on synergies among Videoton units as well as between them and foreign operations.

As intermediaries between foreign company and local and central government industry parks are reducing transaction costs of business [Jelinek, 1998 #5]. Unlike many other cases of industrial or S&T parks in CEE which offer only land and tax incentives Videoton, in co-operation with local government, tries to facilitate the entire process of setting up business. IBM representative Gal expressed this in the following way: "We have 200 ISDN lines in the plant, which is rare even in Western Europe," (…) "When we began the investment in 1995, the first phase was completed in just six months. … That is nearly impossible anywhere else. When the local government makes it easy to go through

[11] The award of the status means that the title holder of the park and the businesses choosing the park as the site of their operation will be granted special benefits from the Targeted Allocation Funds for Economic Development and Rural Development. The infrastructure development projects launched in 31 industrial parks with support from the Targeted Allocation Funds for Economic and Rural Development will involve new investments worth some Ft 7,000 million ($?) to be completed until 2001.
The "Industrial Park" title has been awarded to a total of 75 applicants so far. Some 60,000 people (i.e. 8% of the processing industry workforce in Hungary) are employed by the businesses operating in 55 industrial parks. In 1998, they produced almost 13% of the total manufactruing industry output, with the average share of exports of 74%. (See www.gm.hu/ippark).

the bureaucracy, it saves time. And saving time is essential in the information technology business." [Greene, 1999 #2]

There are a number of foreign investments (subsidiaries of IBM, Philips, and Sanyo) in two of the industrial parks of Videoton. Unlike the two other Videoton industrial parks, Kaposvar Industrial Park, established in the area of VT MBKE Elektronikai Kft, accepts only the small and medium sized firms.

Videoton industrial park in Szekesfehervar has 63 companies and plays an important role in the company activities. A favourable local support undoubtedly plays an important role in it. For example, in 1992, when Philips showed interest to invest in Hungary its representative commented that 'the support of the local council was an important factor in the company's decision to build a greenfield television and VCR plant in Szekesfehervar. The council helped Philips to find and buy location for the plant and to secure state subsidies to pay for its infrastructure. It also administered the deal and issued the necessary paperwork and permits as quickly as possible.'[Marsh, 1995 #27]

The idea of industrial park business in Szekesfehervar emerged when Ford made its investment in 1991. Ford needed a 6,000-sqaure mere building. The only building of that size at favorable place was a former Soviet military base of 250-hectares with 125 buildings. While everybody else was negotiating with town how to buy that building Mr Georg Loranger, an American entrepreneur wanted to buy the entire former military base. As a result a joint venture was set up which was the first Western business that made a joint venture with the government [Jelinek, 1998 #5][12]. This was in line with the strategy of local government who decided to do all they could to attract foreign investors, to help provide land and utilities and to promote retraining for the people. A decisive role in that process belong to Szekesfehervar visionary mayor at the time Istvan Balsay. As director at Ford Hungaria describes 'He created a vision of what this city can become' [Miller, 1995 #44]. Balsay twisted the arms of 40 authorities, including gas and electricity

[12] Mr George Loranger, an American entrepreneur whose Pennsylvania –based family business supplies components to Ford Motor Company, originally came to Szekesfehervar to search for a site for his company's first overseas venture. His company has taken over one of the building vacated by the Russians, and through joint venture with the state, is developing the rest of the base into an industrial park. The joint venture offers land, buildings and advice on how to get started in business in Hungary and help companies secure state grants for development and infrastructure [Marsh, 1995 #27].

officials, to push through the approvals for the new facilities within 30 days instead of the usual months [Miller, 1995 #44]. In addition, town offered favorable tax conditions[13].
The three industrial parks have become the drivers of development of the whole town [Greene, 1999 #2]. Until 1995, Szekesfehervar has attracted more than $1bn in foreign investments.[Marsh, 1995 #27]. Town has 21 major foreign and 7 domestic companies operating. The concentration of FDI in town of 108,000 people has attracted 16 banks and 10 insurance companies.[14]

6. PRODUCTIVE RENTS, ENTREPRENURSHIP AND NETWORKS

Relations of Videoton with government played an important role in enabling entrepreneurship as well as links to foreign companies.

First, the state gave new owners a head start. All Videoton's liabilities were forgiven and the consortium inherited a shrunken workforce of only 6,000 [European, June 1993 #48]. The consortium won the open tender for sizeable assets with a bid of Ft114bn ($52m at the historical exchange rate). Details of bid are confidential but new owners disclosed that the consortium was required to put up 'a fraction of the purchase price' [European, June 1993 #48].

Second, Videoton took part in industrial park development program of the Ministry of Economy; and in the 'Mentor' supplier program of the Hungarian enterprise-developing foundation. In addition, Videoton was exempt from profit taxes from 1992 until 1999 for new job openings [Bulgaria, 1998 #23].

The Videoton privatisation deal was a prototype for Hungary's preferential – loan privatisation programme. Under the programme, Hungarian citizens can purchase state property with loans funded through the National Bank of Hungary at interest rates of 16-

[13] Local taxes are 1.7%. Entrepreneurs finishing investments with a value of at least Ft500m within a tax year receive a 50% tax break from the business rates payable after the new investment for three years from the first day they are put into service. The local government provides a further reduction of the business rates on a individual basis after the activities are started. Enterprises manufacturing products or offering services enjoy a further 10% tax break in 1999.
[14] In encouraging development, press reports that the city may be a bit too accommodating to corporate citizens and less sensitive to residents [Greene, 1999 #2]

17%, substantially lower than the normal 30% interest charged by banks. Assets of the company being purchased served as a collateral [European, June 1993 #48]

Rents similar to these have been offered and subsequently squandered in many CEE countries as well as in Hungary. However, it happened that in the case of Videoton these rents have been used productively. In January 1992, the new owners formed Videoton Holding Company with Gabor Szeles the founder and president of Muzertechnika, at the helm, Peter Lakatos and Otto Sinko, who also came from Muszertechnika, formed the new management team. Their enterpreneurship led to generation of substantial new employment and sustainable growth.

Reviving Videoton was not small challenge and undoubtedly Mr Szeles's political cronies helped it by erasing the bankrupt company's debts. However, these rents were subsequently used productively thanks to the entrepreneurship, which involved networking skills as well.

Turning around Videoton required courage and skills acquired in private sector. Vice-president Sinko described it in the following way:

'I think the fact that we basically grew up in the private sector – in the most competitive part of the Hungarian market – definitely helps us. State owned companies like Videoton missed that chance' [European, June 1993 #48].

On the other hand, restructuring also requires good networking with government, and local community. This has become even more visible in new ventures of Videoton's CEO Gabor Szeles. He is a shareholder in both Videoton and Muszertechnika, a local PC assembler and telecom company, and directly and indirectly holds a stake of less than 10% in Ikarus, a troubled Hungarian bus maker, and is also his CEO[15][16][17].

[15] For example, *Business Central Europe* reports: "In the course of his attempts to restructure Ikarus Szeles persuaded the government 'to give more than 80% of the country's entire export financing for 1997 to Ikarus, which promptly announced massively increased Russian sales and its first profits since the fall of communism. Mr Szeles was hailed as a hero and allowed to buy a controlling stake in the company it seemed to have rescued. But Russia default in 1998 meant that Hungary's government was left with the bill for several hundred unpaid buses" [, 1999 #47].

[16] Mr Szeles has also become co-president of the National Association of Employers and Industrialists [Agency, 22. July 1998 #38].

[17] Ikarus shareholders are: MtLiz 53.9%, Atex Russian State foreign trade organisation 33%, employees 10% and other Hungarian companies 3.4%. MT-Liz Kft. is founded by Videoton and Muszertechnika in 1998 in which each of them have 49% of the stakes. The rest 2% is held by 15 private investors [Agency, 1998 #11]

So far, it is not clear what effects, positive or negative, these ownership linkages may have on Videoton. In one case these linkages turned out to be positive. Videoton has been able to employ the redundant employees (around 700-1000) of Ikarus, the bus company whose main market is Russia. Under the regulations, employers are allowed to this for a maximum of two months [Agency, 1998 #15]. Ikarus will follow the same path and establish an industrial park to attract strategic partners and contract work as Videoton does.

7. ONE STEP BACK TWO STEP FORWARD ?

During the socialist period Videoton was a producer of complex end products. In the period from 1950/60s until 1989 Videoton was producing under its own brand consumer radio sets, black & white television sets, military radio transceivers, car stereo systems, computer terminals, office automation, and line printers. The production of these products had ceased either earlier or in the early 1990s.

This retreat into contract manufacturing led to abandonment of R&D. Videoton lost most of its R&D workforce in the period around 1989. However, even in its heydays Videoton, as [Young, 1993 #54] explains '(…) did not have the R&D potential to innovate in product design. Instead, the 2000 employees in the company's various R&D departments devised processes for manufacturing other company's products and also served as a 'fire fighting force' to finds solutions to problems that threatened the meeting of deadlines'. Videoton had developed imitative capabilities in product design and product engineering which was sufficient for being a product leader within COMECON market.

A bulk of its activities since 1989 has been through contract manufacturing. From old products Videoton continued to produce loudspeaker systems, colour TVs and defence communication systems. Most of these products Videoton is selling under other companies name. According to [Szalavetz, 1997 #55] Videoton has a foreign trade company and several sales offices abroad but its independent distribution activity is marginal.

The step back to a position of contract manufacturer and abandonment of its own brand products meant a huge decrease in profit margins. Given the sizes of its finance, market and technology gaps that it faced after 1989 this was probably the only solution for Videoton. A contract manufacturing strategy enabled Videoton to apply new technologies and to manufacture new products without making investment commitment. The company has become financially stable and has even succeed in revising its existing technological background on a step by step basis and using its own resources [Videoton, 1999 #49]

Although Videoton documents highlights intention and plans to produce own export brands this still seems a bit premature. Margins in OEM assembly of parts and final products are low but the investments needed in both independent manufacturing and selling for exports are still probably beyond Videoton's current capabilities. The wish to get into own brand manufacturing and distribution is logical given the dangers of subcontracting trap. While contract manufacturing seemed to be the most effective in implementing the recovery of a company with such limited resources there is danger that Videoton may be trapped into a position of competent assembler but whose market position eventually depends on the price of its labour.

How to go upward the value chain after company had made inevitable step back will greatly depend on the breadth and depth of technology mastery. This depends to a great extent on realising synergies among its different businesses. We address this issue in the next section. Here we analyse the breadth of technologies that Videoton has acquired through its background industry, single product manufacturing and own brand activities. Table 3 shows the organisational structure of Videoton group based on this classification. We observe that the number of firms that are active in own brand manufacturing is small compared to the total number of firms.

Table 3: Organisational structure of Videoton

Type of activities	**Number of firms**
Single product manufacturing	7
Background industry	6
Background industry/Own brand manufacturing	4
Own brand manufacturing	3 (manufacturing / software)*
Single product manufacturing/Own brand manufacturing	1

* Three trade and service firms excluded
Source: Calculated based on Videoton, 1999

Table 4: Number of acquired technologies across types of firms

Type of activities	Number of technologies
Background industry	19
Background industry/Own brand manufacturing	18
Single product manufacturing	10
Single product manufacturing/Own brand manufacturing	4
Own brand manufacturing	0

Source: Calculated based on Videoton, 1999

The biggest number of technologies has been acquired in background industry and in firms that combine background industry activities with its own brands (Table 4). No technologies that have been mastered solely in own brand product manufacturing. Ten technologies have been mastered through production for individual foreign clients and relatively few (4) in activities where experience from single product manufacturing could be used in own brand products.

Table 5: Number of technological references (partners) across mastered technologies

Technological areas	Number of references	Partners
Electronic assembly	15	Philips, MB Video, ABB, Evic, Mars Electronics, IVO, Tekmar, Mercedes, BMW, VW, Audi, Volvo, Porsche, MAN
Wood processing technology	6	Akai, Philips, Canton, MB Quart, Magnet, Quadral
Mechanical assembly	5	Philips, SHW, Alcoa, Wagner, TI
Plastic technology	4	MB Video, Philips, Berolina, Kenwood
Machining technology	4	Metabo, SHW, SEM, ITT Cannon
Tool manufacturing	4	Plastro M, Starmix, Kenwood, Akai
Sheet metal processing	3	Dahle, Suzuki, RUF
Printed circuit board manufacturing	3	Siemens, Mars Eelectronics, Alcoa F.
Chemical technology	3	Koloman H., Knall B, MB Video
Casting technology	2	SHW, ITT Cannon
High precision processing	1	IBM
Compact disk mastery & management	1	Sony

Source: Calculated based on Videton, 1999

The majority of technological references have been acquired in the area of electronic assembly (table 5). Other references are not directly related to electronics (wood processing technology, plastic, machining and tools). Although this table cannot tell us much about the depth of acquired technologies it does show that in terms of breadth of technologies Videoton may be still far from moving into independent component manufacturing in electronics.

The learning path of Videoton proceeds from assembly to quality control, process/technical maintenance, process engineering, procurement, logistics, product engineering, towards product design, sales and marketing [Videoton, 1999 #49]. These stages correspond to increases in added value and hence there is a clear commercial interest of company to progress along this learning path. This learning pattern resembles the pattern of east Asian electronics companies as described by Hobday (1994). A great number of partners in electronic assembly is the first step in this process which is then followed by own quality control systems. In 9 out of its 12 major firms Videoton has ISO 9001, 9002 and QS9000 quality assurances [Videoton, 1999 #49]. There are signs that in some areas it is starting to take over procurement functions and logistics [Szalavetz, 1997 #55]. Also, the impression is that the operational efficiency through Videoton Manufacturing Method (MVM) which standardised the operational and management experience built up by subcontracting for multinationals is on a high level (ibid.).

8. STRATEGIC CHALLENGE: HOW TO AVOID SUBCONTRACTING TRAP ?

Videoton case shows that subcontracting is a very good way to get access to market, technology and finance. However, its drawback is that subcontractor often ends up tying down production capacity for the client and neglects his own R&D or product design. In addition, subcontractor can become divorced from market trends with no marketing or sourcing activities of its own.

The strategic challenge is how to get out of subcontracting trap that creates dependence and low value added. In order to cope with this Videoton’s strategy takes into account three dimensions:

1. Expansion of number of contracts

This objective is explicitly stated in the following way: "Videoton is striving for horizontal expansion by attracting more and more subcontracting activity, appealing to large MNCs to outsource their manufacturing to Videoton until the existing infrastructure is completely utilised (…)". [Videoton, 1999 #49]

2. Forward integration

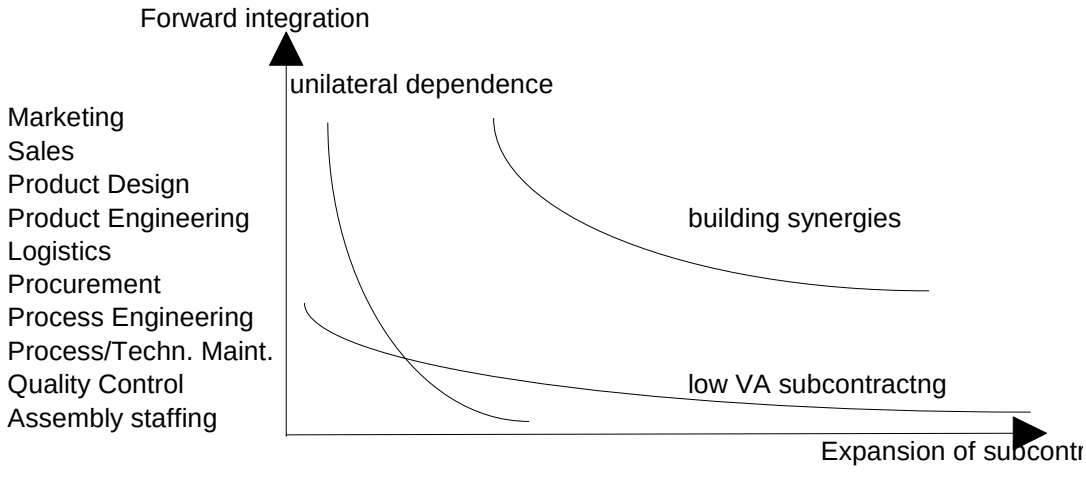
Videoton's goal is to move forward in the added value chain by moving through different stages as depicted in graph 1.

3. Synergy

This objective is also explicitly started in the following way: "Videoton is building up synergies among the group companies including own – product manufacturing, single partner manufacturing and background industry both in communication and technology by means of:

* Better assets utilisation and sharing information on all levels of production
* Moving workers between projects according to the needs, resulting lower sensitivity to fluctuation and seasonality
* Creating co-operation, subcontracting within the Company and throughout Hungary" [Videoton, 1999 #49]

We present these three strategic dimensions in graph 1. The picture depicts that the key strategic challenge is to generate synergies among individual contracts. Alternatives, expansion of contracts without progression in value added as well as progresses in value



added but for a limited number of partners, have their drawbacks.

In the first case, the value added generated is small and company is very sensitive to labor costs. In the second case, unilateral dependence generates uncertainty and may threaten independent growth. Building synergies through different projects is the solution with the best growth opportunities. Know-how acquired from subcontracting for one customer can be useful in subcontracting for another customer. However, this is not a simple strategy as the dependence on one partner may clash with the interests of another partner. Hence, a large number of single partner manufacturing agreements does not necessarily ensure synergies among them. Especially in terms of intra-group sales the linkages are still very limited [Szalavetz, 1997 #55] reports that in 1996 intra group sales to total sales were 2.5% but in relation to total domestic sales were 45%. This suggests that in domestic sales, where own-brand products are sold, linkages do exist. However, as the bulk of Videoton sales come from exports (80%) intra-group linkages are still small, especially given the high share of single product manufacturing agreements.

It seems that company is not able to generate synergies through direct technology transfer between different single partner manufacturing agreements as that would probably lead to withdrawal of a partner and would threaten Videoton's long-term future. It is our impression that synergies are build through offering a more complex service which Videoton calls Integrated Manufacturing Services (IMS) which involves a wide range of background industry and manufacturing related services [Videoton, 2000 #50]. This move from the traditional contracting in electronics involves in addition to production quality, procurement, engineering, logistics, technology and financing (ibid.)

Videoton has accumulated $20m of cash, which it can now invest in new products and acquisitions or in developing sophisticated manufacturing services for foreign partners [Gazdasag, 1999 #34]. Sourcing department of the holding is continuously searching Hungary for new suppliers and they are making the first steps towards realising a global initial purchase function as well. A realisation that costs and delivery are not any more sufficient forces Videoton to search for new solutions. One of its long-range goals is to expand in the field of part manufacturing through acquiring partners from not only

large but also small and medium sized firms and through establishing co-operations with foreign or Hungarian firms that operate as suppliers. By following this route, Videoton may become much more active as an organiser of subcontracting networks than as a producer.

9. EFFECTS OF VIDEOTON GROWTH: RELOCATIONS AND CLUSTERING ?

Videoton has become an important, if not the most important, contract manufacturer in electronics in CEE. A large number of its foreign partners relocated their activities to Videoton. Below we list several cases which are either directly or indirectly linked to Videoton.

- As a result of 1998 Texas Instruments and Videoton seven-year subcontract deal, TI moved its parts production from Aversa, Italy to Hungary [Finczicki, 1999 #6].

- From April 1996 a portion of car audio production by France based Kenwood Electronics Brittany (KEB) is consigned to Videoton. KEB also shifted a portion of home audio and communication equipment to Hungary [Comline, April 17, 19996 #17].

- IBM moves its production of hard disk drives from Havant in Hampshire (UK) to Hungary [Schonfield, 1995 #32]

- Matsushita moved its hi-fi manufacturing plant from Singapore and brought it to Szekesfehervar at a cost of $25m ([Strauss, November 1996 #41]

- Philips shifted production from its plants in Nuremberg and Vienna to the new factory in Hungary, Philips Bundling, which is Videoton contractor[18].

[18] This factory has regional product mandate, the sole European production and distribution center for Philips VCRs and TV-Video combis – television sets with a built in video player.

Finally, Videoton itself has expanded to Bulgaria and has plans for expansion to Romania. Although very limited in scope these moves nevertheless suggest the emergence of a new industrial architecture of the wider Europe.

A further effect of relocations is the emergence of investments, which are oriented towards foreign companies in Hungary, and not any more only towards exports. Two examples illustrate the point.

- Videoton Holding Rt opened a new production facility in Szekesfehervar in December 1999, which will supply parts for refrigerator and automotive engines to U.S.-based electronics manufacturer Texas Instruments Inc. The new plant will provide parts for at least 16 multinational end-users and producers such as Ford, Audi, Renault, Philips, AEG and Zanussi.

- A new investment by Sanyo Electric Co. for the production of lithium ion and nickel metal hydride batteries, mainly used for mobile phones will be sold in Hungary, mainly to Nokia[19] [Washio, 1999 #8]

Although the number of cases of this type is still very limited it is an encouraging sign for Hungarian industrial policy.

10. CONCLUSIONS

The restructuring and subsequent growth of Videoton cannot be explained only as a case of individual entrepreneurship without taking into account that its success is also based on alignment of several networks[20]. The presence of foreign demand through

[19] The new plant would not affect Sanyo's subcontracting agreement with Videoton MBKE Electronics Kft, since the battery market is growing rapidly and because Videoton is making a slightly different product. The type of battery cells to be manufactured in Hungary is currently produced only in Japan [Washio, 1999 #7].

[20] Kim and Von Tunzelmann develop this notion in the analysis of globalization of Taiwanese IT sector.

MNCs that came to Hungary supported by stimulative government policy played both an essential role. Local initiatives to attract foreign companies and facilitate their settling through industrial parks further enhanced actions of other actors. Prospects of EU entry and proximity to EU market have further stimulated entry of foreign companies. The simultaneous presence of these factors is essential to understand why Videoton has succeeded. The success is not only the result of developed individual networks, in particular of Videoton Holding as a restructuring agent, but also of integrating Videoton and local networks with global company networks.

The entrepreneurship alone cannot explain why most of the other ex-socialist electronics companies failed? However, if we take into account the quality of networks and their (non)alignment as factors behind failures and successes the individual cases become clear.

Finally, Videoton shows that domestically controlled modernisation is possible. The transformation of Videoton took place without any considerable foreign direct investment. Yet, even domestically controlled modernization also has to rely on foreign partners in most of its strategic aspects, especially in accessing market and finance. The combination of entrepreneurship and several factors of local, national and global level raises an issue whether Videoton's model can be replicated at all. Irrespective of that Videoton case offers many valuable lessons for CEECs latecomers faced with similar challenges.

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