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## DRIVERS OF DISTRIBUTION TRENDS AND SUCCESS: CONSUMERS, TECHNOLOGY, COMPETITION, EU

Hungary's domestic markets and export markets are growing. Entry into a unified European market is rapidly approaching. What are the things in the area of distribution to which Hungarian firms should be paying attention to enable them to prosper in these growing markets? This presentation will discuss: infrastructure drivers; consumer drivers; technology drivers including paperless systems for ordering, payment, and shipping; European integration; electronic commerce; structural changes, organization and competition in vertical distribution systems.

It may be helpful to begin by clarifying two terms that will appear in this paper: *distribution strategies and supply chain strategies*. In the literature the former is found in the marketing literature and deals with the organizational structure or organization of vertical channels of distribution and the managerial techniques used to manage those vertical distribution channels. The latter is found more commonly in the logistics literature and focuses on issues, often engineering issues, of physical distribution. This distinction is unfortunate because clearly in this age of rapid technological and economic change it is difficult to separate one from the other. Technology and global markets are drivers of changes in distribution strategies. Thus today, I will interweave these two terms and speak of them as if they were synonyms.

Supply chain management is concerned with the vertical coordination of business processes from end user through original suppliers of materials or product in order to add value for customers at less cost for the vertical supply chain system as a whole.

I begin with a brief introduction to some theories that you may find helpful. Next I want to talk about some infrastructure issues. Then I will identify some consumer drivers for change, followed by a discussion of some technological drivers for changes, followed by drivers created by integration into the EU. The last part of my talk will deal with structural and competitive changes that are occurring in Europe today as responses to these drivers.

### THREE HELPFUL THEORIES

There are three theories that help us understand how integration within supply chains should occur.

#### Transaction Costs Analysis

There are eight potential sources of competitive advantage. The top five are rather well understood. I want to focus on the bottom three, starting from the bottom up, because these are the sources of efficiency that are central to achieve successful supply chain strategies.

Transaction costs efficiencies focus on the contracting and coordination costs within the vertical channel. They tell us to analyze when it is more efficient for us to integrate a distribution function into our own firm and when it is more

efficient to contract with an outside firm to perform certain distribution functions. In the former case, we have to learn skills, we have to devote resources to performing the function, and we have to manage, i.e., coordinate, our employees who are performing these functions. In the latter case, we need to contract with the outside supplier and coordinate their activities with ours. This is what transaction cost analysis is all about.

### Network Analysis

Transaction costs analysis recognizes that the most important barriers are managerial. How can, in both arrangements, these coordination functions be done efficiently? Network analysis answers this question by saying that the emphasis must be placed on personal and social relations. The actors in the channel who are in different organizations work over the years to build strong trusting relationships with one another so as to make coordination seamless and efficient. So, the key to competitive advantage in this view is to develop strong trust relationships with your partners in the supply chain. Put another way, to develop external integration that is at least as efficient as would be internal integration.

An example of the need for these trusting relationships can be found in the ISO 9000 quality requirements manufacturers are working toward meeting. They require that you reach back to your supplier firms and ensure that they have quality programs in place that can guarantee the materials shipped to you are ready to use. You might think of this as a "value challenge" to your suppliers. The idea is not to beat your supplier down on price but to work with him to achieve the added value that justifies his present price.

### Human Resource and Dynamic Capabilities

Human capabilities theories tell us that managing our relationships in the supply chain won't do the job if *internally* we haven't developed the human resources that will allow us to out-perform competitors and to engender competitive innovation and change in our industry. Particularly in a transition economy like Hungary, it is important to look for imperfections and overlooked opportunities in the transition process that lead to competitive advantage and high returns. We need to develop those differential resources that will permit us to outperform others through adaptive innovation. Skills are difficult to duplicate. Thus developing supply chain efficiencies can lead to performance improvement and cost efficiencies that other firms may find difficult to follow. Perhaps one of the best global examples of this is Ikea. Their strategy has been to focus on the development of both internal skills and the development and management of external sources of supply that have placed them far ahead of competitors in the household furnishings industry.

Developing what we call "a learning organization" at Ikea didn't just happen. It was a conscious strategy implemented by the leaders of the organization. At its core are just a few elements.

- Staff, individually, place value on continuous learning and individual growth.
- Sharing of ideas and knowledge among staff helps in this process.
- Working in teams, usually interdisciplinary teams, on process improvements (as long as committee meeting time can be minimized). Physical distribution staff shouldn't see themselves as only pasting labels and moving boxes. They need to see themselves as a part of a system that holds great opportunities for improved efficiency.
- Management supports this continuous learning through internal and external training programs.

Now, these three theories are complementary, not competing. They simply emphasize different parts of the puzzle for success. In what follows, I hope you will see that all three are important to your thinking.

### INFRASTRUCTURE ISSUES

Without going into a great deal of detail on this point, let me tell you that transaction cost theory places great emphasis on asset specificity. When uncertainty is high and large amounts of fixed assets must be devoted to a function, vertical integration is probably a better organizational model than looser organizational forms. However, when we come to physical distribution, few companies can vertically integrate. Some Japanese automobile makers operate their own specially-designed ships to transport automobiles to the US. However, this is the exception rather than the rule.

Most companies in most industries rely on common carriers. Even for transporting goods by lorry, a shipper is dependent on the highway system. The fire in the Mount Blanc tunnel through the Alps and the debate over construction of a dedicated rail tunnel for goods movement is an example of how dependent physical distribution is on the assets of others – often government assets.

So, if physical distribution is not to be vertically integrated, what characteristics of the vertical system are most important for efficient system operation? I want to suggest six. There are certainly others.

- Flexibility – the need to be able to respond to special demands or breakdowns in the system. This implies channel-wide management of inventories.
- Control and Coordination – the need for a system leader who can coordinate the disparate relationships in the system, even in the absence of vertical integration.
- Goal Compatibility; Trust and Consistency; Shared Vision and Culture – agreement among members of the system on the factors for supply chain success: customer service and delivery dependability and trust that other partners are doing their best on these factors.
- Information Exchange – information flow among members of the network that is at least as great as it would be in an integrated organization.
- A goal of cost efficiency in the total supply chain.
- Reduced supplier base and focus on developing relationships with key suppliers.

With regard to Hungarian infrastructure, the proposed highway corridor – Venice, Ljubijana, Budapest, Kiev – will be a welcome addition not only for exports but for internal trade as well. However, you can count on substantial highway construction after EU membership. While your rail system needs substantial upgrading, my observation would be that the Hungarian transportation and communications infrastructure is moving ahead at a very satisfactory pace. The concern is that with congestion and environmental regulations placing constraints on trucking, other modes must be considered and used where possible. My focus here will be on other aspects of supply chain performance.

In a survey of approximately 1300 European and Pacific Basin firms, logistics professionals rated as most important, in this order, the following logistical capabilities for supply chain success: customer service, delivery dependability, information systems support, low logistics cost (Morash, 2000). Now, infrastructure capacity, condition, and congestion all impact on these four. Two other factors relating to infrastructure showed up as very important in this survey, improving network congestion, and intermodal connectivity. These areas need more attention in Hungary. Your country is gaining in importance both as a manufacturing location and as a market. Logistic capabilities must keep up and be harmonized with the rest of Europe. Indeed, Europe seems more concerned about its total infrastructure network than does North America. In the survey just mentioned, the only area where European respondents differed in their responses from those of North America and the Pacific Basin was that Europeans were more concerned about inefficiencies that were leading to excessive logistic cost.

But I want to focus on the first and most important factors for logistical success, customer satisfaction. Only three of the factors of customer satisfaction related to infrastructure including on-time delivery and delivery consistency. The others all related to supply chain management issues:

- Fill rate
- stock-outs
- shipping errors
- backorders
- response time to inquiries
- response accuracy
- complete order
- customer complaints
- sales force complaints
- reliability

These are the drivers of successful supply chain performance and they are all concerned with your skill to innovate, coordinate and change with customer demand, technology, EU integration, and other environmental drivers of change.

### CONSUMER DRIVERS

In this section on consumer drivers for competitive advantage and success, I don't want to bog down in statistics. The fact of the matter is that the Hungarian economy and business sector are doing quite well. In 2000, your GDP grew by over 5% and your GDP per capita by 4%; output was up by 20% and both inflation and unemployment were in the 7% range. Productivity and exports were both up. The World Economic Forum (2000) rated Hungary as the 32<sup>nd</sup> most competitive nation in world, up from 33<sup>rd</sup> and ahead of the Czech Republic, Slovak Republic, and Poland – to say nothing of your other former Soviet Bloc neighbors. Coupled with continuing improvements in the banking sector, Hungarian consumer tastes and habits are changing faster than most Hungarian business people I talk to seem to think they are.

You are rapidly changing from being a cash society; the structure of retailing is changing; customers are becoming more demanding of high levels of service; non-store retailing is going to continue to grow. All of these changes in consumer wants and demand need to be met with the new technologies that are exploding on the world. On those, I want to spend a bit more time.

### TECHNOLOGY DRIVERS

Some of these new technologies are required to meet the demands of the market; others are required in order to be as efficient as foreign firms with whom you are competing – not only for domestic markets but for export markets as well.

I will return with more on technological changes shortly. Here I want to just highlight that technological drivers are in the areas of consumer ordering, business ordering, supply chain partner ordering, shipping, stocking, point-of-sale information and inventory management. Note that these innovations at their root are being driven by demands for higher levels of customer service or improvements in logistics efficiency. At the retail level, information technology (IT) has led to major improvements in stock management through barcoding, point of sale entry, analysis of those data that can lead to more rational stock levels and major reductions in out-of-stock conditions. Electronic data exchange between branch stores, warehouses, and supply chain partners can reduce trans-shipment among branch stores as well as quicker supply response and more efficient handling, shipping, and inventory control. These "quick response" techniques are the retailing version of "just-in-time" methods used in manufacturing. While point-of-sale equipment is required, the major ingredients of these improvements lie in modelling and software. A software provider such as Manugistics provides supply chain management software in Europe that has been adopted in pharmaceuticals, motor vehicles and electronics.

As all of you probably know, picking the correct software provider is in itself a human resources skill that can lead to competitive advantage. Your western neighbors and competitors are quickly evaluating and implementing these new IT innovations. Do not get left behind.

### EU INTEGRATION DRIVERS

And that brings me to the point I want to emphasize regarding EU integration. Your need is to develop both export markets and the domestic market. Competitive strategies are likely to be different in the two. In the former, follower, supplier, and niche strategies are likely to be in order. Hungarian firms need to find things they can export to Western Europe which can be produced at a lower cost than can be achieved in the Western European countries. You cannot rely on low wages alone. Hungary is still the low-wage producer among your Central European transition economies. This won't last and even if it did, it would not be enough. You are going to have to work smarter as well. That requires developing the human resource dynamic capabilities to successfully identify and implement new technologies that are, at the very least, just as efficient as those used in the rest of Europe.

With regard to your domestic markets, you have ample evidence of the ability of western and global firms to out-compete Hungarian firms. So, when you join the EU and all the few remaining barriers to cross border trade are

removed, you have got to be more innovative and just as efficient as your neighbors in the global village. And that brings us to the topic of responses.

## STRUCTURAL CHANGES

What are the structural responses in distribution systems to these consumer, technological, competitive, and EU drivers? Nine will be mentioned: software and logistics exchanges; e-business fulfillment providers; catalogs and business to consumer (B2C) commerce; retail payment systems; wholesale payment systems; cash and carry wholesalers; free trade zones; increases in concentration; category killers.

### Software Suppliers and Logistics Exchanges

In an industry that has always had a large number of specialist firms performing part of the functions of the supply chain, the activities of, say, a traditional freight forwarder, have had to change. All three of the theories above are calling out for third-party logistics suppliers to innovate and do things better than they had been done in the past. Some of these innovations are simply in the area of software, i.e., all members of the supply chain buy their software from the same vendor and this software has the ability to access information anywhere in the distribution network. So, if you want to know where a shipment is, you do not have to contact the carrier, you simply log into his system and track your shipment on line.

A related, but different, concept is the *transportation exchange* where a shipper can log onto an exchange, post their shipping need, and receive price and delivery from any number of potential shippers. A carrier with space on a lorry can post the availability of this space on the exchange and be matched electronically with a shipper with a matching need. I think of these as electronic freight forwarders, because essentially they are performing much of the freight forwarders functions on the internet rather than with a telephone and a warehouse. The future of these exchanges is a matter of significant speculation, but they do respond to the characteristics of flexibility, control, and information exchange.

In a Northern European study done in 1998, these kinds of third-party logistics suppliers were used by more than half the firms for tracking and inventory management as well as for transport (Laarhoven, Berglund and Peters 2000). Interestingly, shippers expected to get cost savings through the use of third-party suppliers. Most did, but in addition they received higher quality service from these suppliers than they expected.

### E-business Fulfillment Providers

I'm going to say more about non-store retailing in a moment. Now I simply want to point out that the issue of dynamic capabilities comes to the fore here. It is one thing to design systems for selling by catalog or on the internet. It is another to fill those orders in an efficient manner without the need for investing in fixed assets as much as or more than a conventional retailer. This is where third-party e-business fulfillment providers play a role. They have the resource advantage to fill order efficiently and they are a variable cost that does not require fixed investment. Specialists in e-fulfillment can seamlessly integrate order processing, transaction processing, stock management, picking and packing, delivery, returns management, and customer service. Today in Europe fulfillment accounts for 24.6% of internet commerce costs; it will need to decrease at least 1% per year over the next five years for these retailers to survive. In term of volume, European outsourced fulfillment generates US\$ 244 million. That is one-third of all e-fulfillment. This volume is expected to grow during the next three years to be 15 times greater (Parker 2000).

### Catalogs and B2C Commerce

My conversations with Hungarians over the past decade about the promise of catalog and internet retailing have often reminded me of conversation about Hungary being a cash society and the unacceptability of plastic payment systems. In both cases, the diffusion rates are much greater than my Hungarian friends expected. The number of households in Hungary with a personal computer is not much over 10 %; as a comparison, Italy's penetration is about 45 %. No doubt, catalog sales will be used as a transition to internet sales. While there are retailers in Hungary selling through catalogs, it is certainly true that five years ago fulfillment issues were complex and costly, lists were nearly impossible to find, and the Post was not prepared to provide the necessary services. Indeed, the rest of Europe was only about five years ahead of you in these areas.

Today, things in Western Europe are very different. US direct retailers Lands' End, Viking Direct, Victoria's Secret, just to name a few, are now selling globally. French, German and British catalog sellers are marketing throughout Europe. Hungarian language catalogs from these foreign firms are not far behind.

Infrastructure improvements have kept pace. List brokers are more sophisticated and cost-efficient, thanks in part to the establishment of overseas divisions of U.S. firms. Above I suggested that third-party fulfillment has improved at warp speed. Postal systems across Europe have moved to much more business-oriented pricing and service packages, in some cases through privatized subsidiaries. Germany, the Netherlands, and the UK offer excellent models.

### Retail Payment Systems

Two obstacles to global direct selling are the need to work in local languages and the need to work in local currency. A US third-party fulfillment provider, Clientlogic, operates a European call center that will take orders and receive payment in the local language and currency. At the moment they only operate in countries converting to Euro currency. A Dutch company, ClobalCollect, will support payment in local currencies in 38 different countries, including Hungary. At the moment in Hungary, they cannot handle payment by credit card, but in most countries they can accommodate any of the most common and natural way to pay for a purchase in a seamless, transparent manner. In Western Europe as a whole, credit card is the first choice for payment of e-commerce purchases. However to be competitive, an internet seller must accommodate local preference which include check, debit card, chip card, giro, cash on delivery, as well as credit card payment.

### Wholesale Payment Systems

I spoke earlier about electronic transportation exchanges. B2B exchanges selling pharmaceuticals, food, non-food groceries, auto-parts, to name a few, have been the rage in 2000. It is not clear to me what the future of such B2B product exchanges will be, so I have not talked about them today. However with or without exchanges, international payment settlement transactions are on the rise and are rapidly becoming electronic. For me the best way to think of these is as an "electronic letter of credit." The Forrester Internet Research group estimated twelve months ago about 52% of firms and their banks offered paperless international payment options and something close to that percentage of all international transactions were actually settled electronically. They forecast that today that number will have risen to 98% (Handal 2001). I have no way of verifying these statistics, but they do reflect a growth rate that you should find impressive. Note that these statistics are percentages of transactions. If you instead look at the *percentage of firms* using e-letters of credit in May 2000, the percentage is down at about 5%. Remember too that a bank is still a partner in all these transactions, both retail and wholesale. The bank remains the ultimate arbiter regarding issuing, transaction fees, and timing of funds transfers. Even traditional letters of credit are far less standardized across countries and financial institutions than one might expect.

### Cash and Carry Wholesalers

Because of the large number of small retailers selling scrambled merchandise assortments in Hungary, cash and carry wholesale operations are an organizational form that is going to be vital for some years to come. As the scale of retailing gets larger, the share of business going to cash and carry wholesalers will decline – as it has in Italy. In other countries some predict that the B2B exchanges just mentioned will take over the functions that cash and carry wholesalers now perform. I doubt this will happen. However, cash and carry wholesalers need to develop ways to tie customers to them. Computer ordering is the obvious answer. Instead of catalogs and mailers, wholesalers can have an electronic catalog, retailers can place orders on-line, the orders can be picked and ready for delivery when the retailer arrives for pick-up and payment.

### Free Trade Zones

Free trade zones, I believe you use the Italian "puncto franco" for these, have been a very useful and successful export structural device during the 1990s. Restrictions on establishing and using such zones have been tightened up during the last couple of years and will essentially become unnecessary with EU membership. In addition to its competitive impacts, free trade has an impact on planning for plant location, warehouse location, and transport mode.

## Increases in Concentration

More of the structural changes discussed above are driven by technology with fewer driven by consumers or EU integration. Changes in the *structure* of industry result from all three drivers. The big structural change that isn't going away is an increase in concentration. The demands of consumers for broad assortments, convenience, service, value for money are all being met by increases in size and capturing scale economies through the use of technologies and the reduction in barriers brought about by European integration.

Let me give just one example not talked about above – retail store size. In order to give broad assortments and value for money, retailers selling frequently purchased products have gone to very large stores – in Europe you think of hypermarkets. But in Europe real estate is scarce. There simply isn't enough real estate for four or five companies to have superstores with the necessary parking. The result is fewer firms. Europe is quickly moving to a structure where a few giant retailers will survive in each segment of retailing, i.e., grocery, pharmacy, soft goods, consumer electronics, in each geographic area. The Dutch grocery retailer Royal Ahold is the best global example; Tengelmann would be an example more familiar to you. This concentration may provide room for niche retailers and niche retailers may be able to support a few independent wholesalers. However, any surviving wholesaler will have to be extremely quick and up to date with the technology drivers mentioned above.

The previous paragraph makes it sound as if capturing scale economies is easy. It isn't. This is where human dynamic capabilities comes in. Technology doesn't achieve efficiencies, they only make it possible for human beings to take advantage of their capabilities. There has been a debate in the marketing literature for about two decades now as to how and how much to customize offerings to local conditions as contrasted with standardization of products and brands globally. This debate clearly has something to do with customizing to local demand preferences. However, it also has a great deal to do with how giant manufacturing and distribution companies manage globally.

*The key is delegation and empowering local managers to make those adjustments to local conditions they feel are necessary.* A part of this can be accomplished through the incentive programs offered local managers and staff. But it also must be accomplished through the training and culture infusion of staff so that they have the skills and motivation to operate and grow a successful local business. This is just as true for local physical distribution managers as it is for retail store managers. Without success in delegation, giant firms are not going to be able to dominate local firms who are devoted to value-adding adaptive innovations.

## Category Killers

Category killers that carry very broad offerings in a single category of merchandise have grown in Europe, including Central Europe, to a greater extent than I would have forecast. This is mainly because the US operators have gained significant know-how, i.e., *dynamic capabilities*, during their U.S. implementation. You probably have seen them in furniture, toys, consumer electronics, and sporting goods. Hungarian firms who want to compete against these loud, pushy intruders are going to have to find value-adding adaptive innovative strategies for success. These innovations are likely to be in the area of customizing customer services in ways that are perceived by Hungarian consumers as adding great value.

## CONCLUSION

For a conclusion, you may be expecting me to give you a formula for a proper competitive response to these drivers and structural responses to change. You may be disappointed by what you get. In my view, the answer lies in the three theories. First, pay more attention to the transactions and coordination costs in your business. Look there for efficiency gains. Second in your supply chain alliances, look to building trusting relationships through shared values as a way to achieve transaction efficiencies. Third and most important, ensure that your organization is a learning organization where knowledge acquisition and dissemination is seen as everyone's responsibility.

There are two analogies here that may help, universities and physical distribution. Universities store knowledge in warehouses called "libraries and faculty brains". Your firms stores knowledge in "technical experts" on your staff. University faculty distribute the knowledge to students. In your firm you rely on technical experts to make knowledge-based recommendations to management. That was certainly the knowledge-based learning model of the past. It isn't entirely appropriate for today's world of rapid knowledge development and dissemination.

Information is coming from all directions. It is a simple matter for any of us to get overloaded with information in a very short period of time. We would like the culture in our organizations to be such that all staff are reaching out for knowledge as it applies to their worklife. In global firms particularly, this takes the form of sharing information across the local delegated units.

Ford Motor Company, for example, has a "best practice replication" program whereby a few practices a week are sent by intranet to all relevant parties in all plants. An example might be a new way to install a front bumper on a car. The practice doesn't have to pass someone's "best practice" test. Any manager who has what appears to be a good idea is encouraged to share it.

Lockheed-Martin calls their program the "transfer team" program. Managers regularly report on functions or processes where they are having operating problems. These are distributed broadly. If another unit feels it has experienced this problem and solved it, a transfer team is formed from all interested units of the firm. The team tries to develop a best practice and share it among all units.

Now these examples are across divisions, but the same concepts can be used across departments within one operating division or with upstream or downstream supply chain partners. The key ingredients are:

- individuals are constantly challenged to find better ways to do their job;
- each member and each team is both a giver and a receiver;
- reciprocity is built into the exchange;
- existing knowledge is transferred;
- new knowledge is developed through the transfer process.

This is the way to ensure your organization is building dynamic human resources capabilities. ■

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