Lessons from the Past

Stories about World-class Collaboration

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Into the Land of Legos: Denmark's Story

In the early 1990s, Denmark should be an economic disaster what with Europe 92, the dominance of Germany, and the imperatives of scale. Instead, Denmark is a boom economy, with the lowest inflation in the European Community.

In 1988, however, Denmark, the smallest nation in the European Community, a mere 1.5% of its 320 million population, is in crisis. According to McKinsey & Company's diagnosis, the Danes' declining economy is attributable to terminal "smallness." Almost all their industries are "traditional": textiles, wood and furniture, food processing, along with the usual assortment of tool, metalworking, and service industries. Most companies have 10-30 employees; there are few even semi-large firms in Denmark. The only really well known large company is the Danish maker of very small things: Legos.

Although some indicators looked good—GNP in the world's Top Ten and social services in the Top Three, the Danes can nevertheless see the danger signs in their economy, and all the trends are going the wrong way. Moreover, the recommended merger strategy is not working. Small business people hate giving up their independence. Then, when small companies do merge, all they manage to create are not-very-big (i.e., still small) companies compared with the multinational giants that populate Europe's successful economic machines.

Long one of the world's richest people, the Danes could see, and feel, disaster staring them in the face. Smallness puts them at a disadvantage in what seems to be an economy of giants:

- Marketing at an international level;
- Keeping up with innovation globally;

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- Utilizing full production capacity;
- Fading ability to compete with high value-added; and,
- Home markets threatened by international competition.

Until recently, experts prescribed mergers, mergers, and more mergers as the one basic economic development cure for the disease of smallness. While mergers are sometimes the right thing to do, the general prescription does not sit well with the Danes.

In the midst of the merger debate comes an emissary from Italy—ironically an American. C. Richard Hatch had lived the Emilia-Romagna experience first-hand as the manager of a metalworking firm. In a seminar for Niels Wilhjelm, Denmark's new Minister of Industry, and a group of Danish manufacturers, Hatch draws on the Italian experience: "It's not size that counts but competence. If individual small firms are weak and vulnerable, networks give them strength. Networks are, quite simply, collaborative efforts to escape from the limitations of size."[i]

Hatch's seminar sets other wheels in motion. Niels Christian Nielsen, then at the Jutland Technological Institute (JTI) and now an international consultant on networking at the Danish Technological Institute, suggests that a letter be sent to Minister Wilhjelm proposing a program to encourage cooperation among Denmark's small businesses. It meets with some hesitation because no one seems to believe it will work. "The basic attitude in the country was that there was no way to make a small company owner cooperate. He [stet] is fiercely independent. He created his own business to be able to make his own decisions. He is going to make his stand on independence till he dies.... And even talking about building next steps in the national economy on cooperation among small companies was made quite a laughing stock," Nielsen later tells a group of Oregon legislators.

But the Nielsen-Hatch letter convinces Minister Wilhjelm. He, in turn, sets up an industry steering committee to oversee the network project. The Ministry hires JTI to develop the program, and JTI hires Hatch. In March, 1989, the Danish Ministry of Trade and Industry announces "Strategy '92," the network plan. The government passes a bill in the Spring, and by August, the program is rolling. Within a year, networks involve 1554 firms, and just six months after that, almost half of Denmark's firms belong to networks, according to Nielsen's Oregon testimony.

How did the Danes accomplish this feat in such a short amount of time?

How Controversy Raises the Volume

Upon its announcement, Strategy '92 has a great good fortune. It unleashes a storm of opposition, sometimes the best thing that can happen with a new idea, better than being ignored. "By luck, the whole thing became quite controversial and that meant that media coverage was free," says Nielsen. While national trade associations oppose the idea, smaller sector trade associations support it as does the Federation of Crafts and Small Industries, one major group. These controversies keep the issue on the front page and TV news for two months, not the usual fate of economic development initiatives. Nor does Minister Wilhjelm shy away from the controversy. Rather, he works to see that the government approves legislation, with a three-year limit put on the experiment.

At the heart of the program is the feasibility study, what Nielsen later called the "tiny element that set the whole thing going at a large scale." The conditions are simple:

- Any group of three or more companies with an idea for a network can apply for a $10,000 grant to investigate its feasibility;
- The application form is only two-pages;
- Response time is usually in less than a month; and,
- The answer is almost always "yes."

Instead of requiring companies to call or write for application forms, the program distributes them in places where business people naturally go: banks, post offices, insurance offices. Banks, which have been losing money on small businesses, become among the strongest advocates of networks. Eventually forms are available in every bank in the country.

Another key part of the program is the multiplier effect provided by broker training. If grants are not highly competitive, broker training is. The Ministry sets high qualification levels and selects 40 from numerous applications, then charges $4,500 for seven two-day training sessions given six weeks apart.

The Ministry also finances lawyers to work up standard contracts for networks and to work out some of the product liability issues. Accountants and tax consultants work through other financial issues so each new network will not have to reinvent the cooperative wheel. Importantly, an evaluation process enables program administrators to learn quickly from their mistakes and take advantage of opportunities.

Denmark's initial program consists of:

- $22 million in development grants, including $3 million for feasibility studies, $5 million for detailed planning grants, and $14 million in operating awards to the networks; and,
- $3 million for creating the overall environment for networking, including promotion, technical support, evaluation, and broker training.

The $10,000 micro-grants, known as Phase 1, leverage great potential. There are enough of them—hundreds, each involving at least three companies—to create critical mass. They encourage companies to talk and to take the critical step of coming up with an explicit idea for what a network can achieve.

It is the process not the idea that is important. "Of course two-thirds of all the ideas that people came up with were miserable and unsound. But then in the process of paying someone to work on that idea, give them feedback, give them suggestions, and so on, 10 new ideas would come up and eventually...they ended up coming up with networks. Often, not the same networks that they started out with, but networks anyway," Nielsen says.

Phase 2 grants, which offer up to 50% of detailed planning costs, require participating firms to come up with matching investment. Here, grants are not virtually automatic, but the application process provides additional direction for successful networks. In Phase 3, grants cover up to 50% of the first year costs of establishing the network and up to 30% of the second year's costs. This start-up operating capital is critical, an innovative way to provide venture funds to groups of businesses.

Made in Denmark

To those involved with Denmark's economy, this abrupt success story is no accident. It came about because of a deliberate attempt to revitalize small business in the country by establishing networks of small firms in a variety of industries—and being creative about the business they do together.

Garments—Sewing Together a Line

CD (Corporate Design) Line, one of a number of Danish successes in the clothing industry, is the 14-company textile manufacturing network aimed at the job wear market, i.e., uniforms. Each company produces part of a complete collection: shirts, suits, skirts, women's knitwear, men's knitwear, ties and scarves, leather, and so on. Marketing an entire collection benefits all the firms. Together, they hire a quality manager, then set up sales agents in their three most promising markets—Sweden, Germany, and The Netherlands. They jointly contract with a famous clothing designer, bringing success and name identification in the upper-end of the market. Then they move into new markets hitherto closed to small firms. They discover that contracts with major customers, like Volkswagen, require "EDI," but they don't know what it means. After solving the mystery—it means electronic data interchange—one member firm who already has this capability in-house offers to provide it to the network on a cost-sharing basis. Through this and other lucky matches, CD Line now competes with very large companies. Jointly, they employ 900 people; 45% of sales are exports.

Danish Furniture—Made in Taiwan

In the 1950s and 60s, Denmark's furniture industry enjoys a reputation for fine design and exceptional quality. Then, it goes into decline. Foreign competitors, particularly the Taiwanese, begin turning out superior "Danish" furniture. In Denmark, the industry myth is that they lost US market share to big companies. In fact, Danish companies had lost the desired high-price end of the market to Italian companies even smaller than themselves, according to JTI. The important difference was that the Italian companies organized themselves in networks. So, Danish producers quickly assemble into "spectacularly creative networks," according to Nielsen. Together, they buy advanced equipment, hire design firms, fund export marketing, and jointly develop work processes.

In one case, when five firms get together to brainstorm other value-added options, a former contractor helps them spot a new business opportunity: subcontracting the interior furnishing of a major new facility—like a conference center, hotel, or government agency. Usually a madhouse of hundreds of individual subcontractors, they map out the whole job, noting requisite skills and products, and recruit the lamp, carpet, curtain, and, of course, furniture firms that allow them to bid on projects worldwide. They hire the best Danish designers and architects to give the network's products a common coherent look—and they name themselves Alphabetica.

Landscaping, Golf Courses and—Cemeteries!

New buildings mean work for landscapers; conversely, when construction is down, so is landscaping. With Denmark's weak economy and the building industry in decline, five landscapers get together to see what they can do. When a golf lover among them complains about the busloads of Swedes "invading" Denmark's courses, a light goes on. What about exporting golf courses? Which they proceed to do.

First, they research the best courses and construction practices, found in the world's only golf course industry—in the US. Then, they sponsor a US tour, sign contracts with US course builders, import specialized equipment, and hire sales people with reputations in the golf world. Within the first year, they have four golf courses under construction in Sweden. Then, someone has the bright idea to contact the Polish Minister of Tourism with this suggestion: "If you want to attract rich German tourists, you have to have golf courses." Presto! A contract for 15 courses in Poland.

There's an eerie twist to this lush story. Noticing how beautiful Danish graveyards are, one of the group's US partners spots a market opportunity going the other way. Soon the US firm begins to import Danish graveyard know-how and its specialized equipment. So the Danish golf course consortium eventually pays for its American knowledge of greens and fairways with graveyard beautification expertise.

A Special Ability in Disability Aids

Denmark's national health system has given rise to a craft industry that produces high-quality aids for the disability device market. To remain in the forefront, the industry needs to embed electronics in its products. But it is falling behind, which sends the industry into crisis. Small firms can neither afford to develop electronics expertise in-house nor to subcontract with the best engineering firms. Indeed, it isn't only the money. Larger electronic producers just cannot be bothered with small specialized disability device manufacturers with a yearly output of 18 units. However, when a network of 36 producers contacts the best electronics companies, it finds itself in a bidding war as the companies seek the network's business. Combined with international marketing and quality programs, this industry reestablishes its reputation for leadership in the field.

Even Lawyers

As small Danish firms in a wide range of businesses begin to form networks, the small-town lawyers and accountants have to respond. Used to local manufacturers serving nearby markets, the professional services community suddenly faces complex new situations involving a much higher degree of international activity. So the lawyers face a crisis. Unless they can expand their resources, they will lose their business to the large Copenhagen law firms. Their response? To form networks themselves, combining expertise in international law with knowledge of patents and experience in specific sectors as different client situations require.

Not to Mention Big Business

Even Denmark's most famous large firm, Legos, is intimately involved in the effort. Networks of small toy producers sell their products globally under the Legos name. In 1992, Legos launches its high quality, attractive children's clothing line, developed out of Denmark's excellent network of small garment producers who put the Legos logo on their products.

Results to the National Bottom Line

It doesn't take long for results to show. First, the evidence comes from within, the rapid spread of networks throughout Denmark. Then comes the impressive evidence from without.

Germany provides the test of excellence in European exports. It is a major magnet for Danish industry, concentrated as it is at the western edge of the country on Germany's border. Germany is always a difficult market to enter, and the economy seems to favor larger companies. In November, 1989, shortly after the August launch of Denmark's network grants program, the Berlin Wall comes down and the two Germanys hurdle toward reunification. Businesses all over Europe race to adapt to the changed, greatly enlarged, reunified German market that appears almost overnight. Denmark speeds across the finish line.

With the first returns in on the new market, Denmark's positive trade balance with Germany shows a remarkable performance, particularly since no other European country can say the same. The result is a first for Denmark.

The rest is an impressive array of statistics. "We have the highest per capita trade balance surplus of any country in the world. After 30 consecutive years, we reversed a negative balance of trade with Germany in 1991—the only country in Europe to do so," Nielsen says.[ii]

Not surprisingly, the Minister of Industry commissions a study to assess why Denmark did so well. The study finds that while Danish exports to pre-unification Germany were predominantly contributed by the country's biggest firms, now "smaller companies cooperating in networks had quite a penetration into the German market and contributed significantly to these new exports."

The Danish Government shows its faith in the practical results of networking by launching a second stage to the program. Already, the first $25 million had been appropriated against the tide, as the government was simultaneously abolishing all industry subsidies. A second $25 million extends the original grant program through 1992 to complete applications in process, targets tourism for network development, and supports networks in developing international subcontracting.

Small Can't Do the Job Alone

Denmark's "midterm evaluation" of its networking initiative, which interviewed 70 networks, reveals that:

- All increased employment;
- All reduced costs in one or more important areas;
- 40% introduced new products or new product ideas;
- 60% entered new markets; and,
- 90% planned to continue regardless of government funding.

Even with all these positive indicators, Nielsen can point to "no real trend, yet, to our solving the problem of unemployment." Not even small business can keep up with the pace at which big businesses and other institutions in Denmark are reducing jobs.

"Denmark has 15,000 new companies every year adding 25,000 jobs; 8000 die in the first five years, taking with them 25,000 jobs," he says. "Small firms in networks have a slightly higher growth and survival rate: 57% percent to 52%. Those five percentage points are very dramatic. They contribute 10,000 jobs but the individual never sees this."

On the US scale, Denmark is a state-size economy of small firms naturally pursuing a small business networking strategy to compete globally. The US economy as a whole is the world's largest and is a relatively even mix of small businesses and large. America's strategy for dealing with unrelenting change needs to address all levels, sizes, and types of business.

And Elsewhere in Europe

In the early 1990s, Denmark's other Scandinavian neighbors begin to experiment—regions of Sweden and Norway, and the government of Iceland, an island economy 75% dependent upon raw fish exports. In Spain, several regions now have networks. In Germany, 56 Chambers of Small Industries and Crafts undertake a major networking effort: *three quarters of a million small firms employing 4.7 million people have jointly trained 500,000 apprentices*.

"Portugal will surpass networking anywhere because of the readiness there. Everything is much more adolescent. They're enthusiastic and ready to conquer the world," Nielsen predicts.

Nielsen is an advisor to Albertino Jose Santana, manager of PEDIP—the European Community funded program to increase Portugal's competitiveness and raise its GDP to the level of other European countries. Jointly appointed by Portugal's President and Minister of Industry, Mr. Santana keeps a "very lean staff, just eight people who network. They spend money on people who can do it locally": $4 billion per year in industrial modernization in a country with just four and a half million people.

Nielsen's first encounter with Mr. Santana was not all that fortuitous. "The first time I met him was a Saturday morning in Copenhagen after a big company party. Let's just say I needed sleep, but at noon, I had to leave for Tanzania and he was on his way to India. So we walked in the sunshine together and agreed to do something.

"The next thing I knew I was at my laptop looking at Kilimanjaro, writing about what a network project could be in Portugal, and faxing it to him in India. Then I flew to Oregon to testify before a state committee, where Mr. Santana called and asked me to fly to Lisbon. So I arrived the next Sunday and we spent the morning together. Unfortunately, I had spilled orange juice on my shirt on the plane, so I felt a little silly. But we sat on the banks of the Tejo River in Lisbon and looked at the monuments to Portugal's explorers."

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[i] Hatch's 1991 CFED article

[ii] Interview with Niels Christian Nielsen, 5/7-8/92, Washington, DC.