

# Case Study: Doppelmayr— A Representative European Multinational Firm

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## INTRODUCTION

The following paper presents the Doppelmayr company from Vorarlberg (Austria). Doppelmayr produces and installs aerial transport systems (ski-lifts and cable cars) and is the market leader in its sector of industry.

If you speak of international business activity people often think of giant multinational companies with a sales volume of several billion dollars. With this fact in mind, the selection of Doppelmayr may seem a little unusual. But a giant multinational company would be a rather atypical example for an Austrian company with international activities.<sup>1</sup> The Doppelmayr company, which will be described in the following, can be seen as a typical medium-sized business according to its number of employees and its sales volume; however, such a ranking may be misleading when applied to an Austrian firm. If its power and its share of the global market are considered, Doppelmayr may be regarded quite differently. Austrian companies with international activities are often surprisingly small-sized, e.g. according to their number of persons employed. These companies expand into other countries because of the small Austrian domestic

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<sup>1</sup>Big companies in Austria are mainly located in the Eastern part of the country and many of them are owned by the state or have been so until recently.

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market as well as the closeness of foreign countries and the opportunities which present themselves there.

Although Doppelmayr is active in both neighboring countries and in ones farther away, it does not fit the image of a typical multinational business and especially would not fit the definition of a polycentric multinational business. However, if you think of an international business when talking about a company whose success strongly depends on its performance in foreign markets, then Doppelmayr meets this criterion. Logically, rather small companies with international activities have very different biographies from the large multinational enterprises that are the subject of most case studies. But Doppelmayr is a good example of a small company with international activity because its development shows the need of a company which cannot exert a great deal of influence on its surroundings (laws etc.), to be able to take advantage of existing opportunities and to operate effectively in a climate which it cannot shape.

The main business of the Doppelmayr company is located in a sector of industry where you expect the presence of Austrian companies. The company, led by Michael Doppelmayr since 1992, produces and installs aerial transport systems (cable cars and ski-lifts).

Changes in its market opened new opportunities for Doppelmayr and at the same time forced it to adjust to the new circumstances. The examination of the operation of the company shows the interaction between company and its surroundings: When the company was founded in the last century, it produced machines for farming and textile industry, which were the most important sectors of industry in the region at that time. Gradually, however, Doppelmayr became involved as a producer of machines for skiing as well.

The Arlberg region, near where Doppelmayr started, is regarded as the cradle of skiing. The exclusive winter sport resorts, such as Lech, Zürs, and St. Anton, as well as traditions like the 100 year old Kandahar Race, are evidence enough of the long history of winter tourism in that region. The geographic closeness to an area where the first ski-lifts were installed, also explains, why Doppelmayr was a leading producer of ski-lifts long before the beginning of the ski-lift boom in the post-war period.

The growing demand for ski-lifts resulted from drastic social changes in the post-war period. The economic upswing, which started in the fifties in Europe combined with more generous vacation entitlements, enabled a great part of the European population to enjoy holidays (Think of the caption "leisure society"). The rather new sport of skiing gained significantly from these changes. A wider part of the public gained access to this sport, which had been restricted to a few affluent holiday-makers and the inhabitants of ski resorts. Mass tourism during the winter in the ski resorts—a lot of them de-

veloped in Austria—triggered new industries, such as the production of skis and ski-lifts.

In the post-war period, the accelerated development of the post-industrial society in Austria generated a great number of service jobs in tourism and related industries. Doppelmayr managed a smooth transition from being a supplier to agriculture and to the textile industry, which began to slide into an economic crisis, to a producer of ski-lifts.<sup>2</sup> Because Doppelmayr was already in the market when the demand for ski-lifts accelerated, the company was rather fast to internationalize, which is absolutely indispensable today. The domestic market offered an enormous sales potential in the early boom period, but today, conditions have changed seriously. A visible sign for the changed circumstances is the fact that today Doppelmayr gains far less than half of its turnover from the sale of ski-lifts in Austria. Now the Asian market is gradually supplanting the former main sales territories.

The interaction of a number of factors led to the stagnation of demand on the domestic market, and the situation may even get worse in the future. A change of social values to the new idea of post-materialism has led to the development of a conservationist movement and a generally more environment-friendly consciousness. Approval of ski areas, new ski-lifts or snow canons is far more difficult today. Moreover, for some years now, Austrian ski resorts face have had a declining number of guests.

Long before the crisis, Doppelmayr had already achieved a leading position in a number of foreign markets, a fact which is very important for the company today. Furthermore, the firm also recognized opportunities in the sector of aerial transport systems in recent times, such as the potential market in China, and made the most of them.

Now we come to the recent history of the Doppelmayr company. But before describing how the company has responded to current circumstances and how it has adapted, it seems sensible to examine the national and regional surroundings of the company.

### **National and Regional Surroundings**

While Austria had been one of the poorest European countries before the Second World War, with high unemployment and hyperinflation,

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<sup>2</sup>The abandonment of the formerly most important sectors of industry can still be observed today. With the discussion about the membership in the European Union these problems gained new relevance. For example, the textile industry strongly supported the accession in order to avoid duties for their exports, while farmers were rather skeptical about the application for membership. Anyway, the loss of jobs in the sectors of agriculture and the textile industry continued after the accession to the European Union.

it experienced a rapid economic upswing after the war and achieved a prosperity until then unknown. Decisive support for reconstruction came from the financial aid of the Marshall Plan. Furthermore, the social climate was conducive for the economic development. In spite of the division of the population between bourgeoisie and socialists, the Austrian elite reached a consensus on reconstruction. Among other things, this consensus led to the development of the corporatist economic partnership of management and labor.<sup>3</sup> Although sometimes criticized today, the social partnership and similar organs, committees etc. succeeded in guaranteeing social peace in Austria. This, in turn, contributed to stability and a growth-oriented economy. An expansive fiscal policy combined with a restrictive monetary policy and a virtual tying of the Austrian shilling to the hard currency German mark are other important characteristics of Austrian economic policy.

Wolfurt (in the Austrian region of Vorarlberg) is the site of the company headquarters. The city is located in the westernmost part of Austria near the German and the Swiss border. Prior to the construction of a railway tunnel at the turn of the century, the Vorarlberg region was isolated from the rest of Austria during the winter. Consequently, it had always been necessary for a firm in the region to trade with its neighbors across the borders.

Small to medium-sized companies are the typical businesses of this economic region. Some of them have become successful international firms for example Wolford (producer of high-quality stockings and underwear), Huber Holding AG (producer of underwear), Omnicon (software producer), Rauch Fruchtsäfte GmbH (a producer of fruit juices), Julius Blum GmbH (a producer of hinges), Zumtobel AG (a manufacturer of lighting-equipment). In 1988, 759 new companies were established in Vorarlberg, a growth of 10 percent (Vorarlberg, 1995a: 5). The per capita export ratio of Vorarlberg is three times the ratio of Japan and six times the one of the USA. The employment level has grown by nine percent since 1988; the unemployment rate is four percent compared with the more than 10 percent average in all over the European Union (Vorarlberg, 1995b: 4).

There is no doubt that the accession of Austria to the European Union had its positive effects on the economy of Vorarlberg. Before the plebiscite on membership in June 1994, 42% of industrial companies in Vorarlberg had been planning to relocate their production,

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<sup>3</sup>Important income questions are jointly considered by employers' associations, employees' associations, civil servants' and politicians' associations. (Kirchberger, 1990: 59) Of special significance is the parity committee for wages and prices of the partnership formed by the management and labor.

or at least part of it, into the countries of the European Union. Between July 1994 and July 1995, 64 new companies were established in Vorarlberg—most of them with foreign investment. Thirty-one of the investors came from Switzerland, 16 from Liechtenstein, and 15 from Germany (Vorarlberg, 1995b: 4).

The regional proverb “schaffa, schaffa, hüsle bauer” (work hard and build your own house) is characteristic for the population of this region, which is known for its industriousness and its skilled craftsmanship. There is also a high educational level among employees. Altogether, these are good prerequisites for an enterprise in Vorarlberg. A company like Doppelmayr, which is subject to seasonal ups and downs, depends on a workforce that understands the needs of the company and is willing to work overtime—especially during summer and fall.

## CORPORATE HISTORY

The company, which had been founded in 1892 by Konrad Doppelmayr, started with the production of gear wheels, presses for wine and cider as well as forging and metalworking for agriculture. After the turn of the century, Emil Doppelmayr, the son of Konrad Doppelmayr, joined the company. As early as 1913, Doppelmayr developed and built its first freight elevator. After the First World War, the company began to produce gears and machines for the textile industry and to cooperate with the Swiss company Schindler in an effort to construct elevators.

In the mid-thirties Doppelmayr constructed the first circulating drag lift in Austria (Zürs am Arlberg). But further development in the field of ski-lifts and cable cars came to a standstill during the Second World War. Circumstances in Austria prevented Doppelmayr from returning to production after 1945 in contrast to its competitors in France and Italy. The reasons for this delay were the occupation of Austria, the shortage of iron/steel and the lack of workers. Therefore, it was not possible for Doppelmayr to restart the production of elevators and cranes or the development of new drag lifts before the end of the forties.

During the 1950s, winter tourism brought skiers from Canada, the US, Australia, New Zealand, Germany, Scandinavia and Iceland as well as Argentina and Chile to the Austrian ski resorts. Artur Doppelmayr, who joined the company in 1955, was able to take the opportunity and, with a lot of personal dedication, established a worldwide clientele. That clientele provided the basis for the internationalization of Doppelmayr.

Doppelmayr mainly employs people with technical education (Mechanical Engineering School, technical apprenticeship). Consequently the products had always been of very high quality, but the managers lacked experience in dealing with foreign markets. The lack of experience hindered internationalization especially in the United States which was a big potential market. According to Artur Doppelmayr, managers of Doppelmayr did not succeed when they entered the United States market because they treated it as one market rather than segmenting the market.

The demand for aerial transport systems continued to increase until the mid-sixties. For example in the year 1965, 247 systems had been installed in North America alone (compared with only 41 systems 1995). At the beginning of the seventies, demand rose sharply once again. In 1972, 220 new systems were installed in North America.

At the end of this boom of the whole industry of ski-lifts and cable cars, Doppelmayr was forced to intensify its marketing activities and open up new markets, such as Japan. Artur Doppelmayr led the very difficult Japanese negotiations—because of the cultural differences—which lasted for six years until he finally succeeded in working out a 20 year contract. With these prolonged negotiations, Doppelmayr was able to achieve a share of 60 percent on the Japanese market with Japanese licensee Nippon Cable—an outstanding and unique result for an Austrian company.

### **Leading Technology**

Doppelmayr always endeavors to adapt lifts and cable cars to their natural environment and gently integrate them into the respective area. Furthermore, safety, comfort, easy operation, and little maintenance are the most important criteria when building a system. Step by step Doppelmayr managed to become the technological leader of the sector. Doppelmayr's engineers constantly developed and realized innovative ideas and special solutions.

The following list of the technical achievements of the Doppelmayr company gives evidence to the fact that Doppelmayr was the technical leader in the whole field of aerial transport systems:

- 1964 the first glacier ski-lift
- 1973 the first 4-passenger monocable gondola and the first triple chairlift
- 1975 the first cable car for blasting avalanches
- 1981 the first detachable 4-passenger chairlift of the world and the first detachable 6-passenger monocable gondola in the world with 5,0 m/s

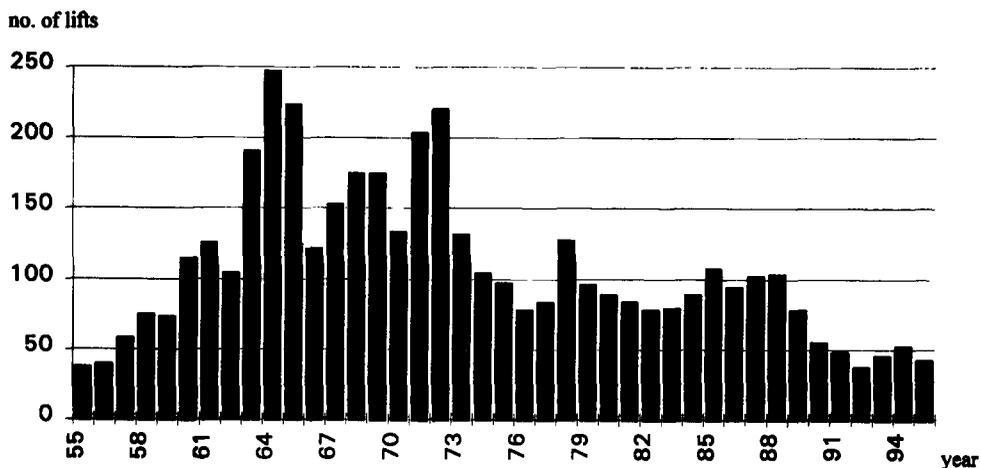
- 1986 the first detachable 8-passenger monocable gondola in the world
- 1988 the biggest detachable cable car in the world
- 1989 the first cable car on rails
- 1991 the first detachable 6-passenger chairlift in the world
- 1994 the first 80-seat large scale cabin reversible tramway
- 1995 the first 6-passenger fixed grip chairlift
- 1996 a new drag lift T-bar for snowboarders, the first Doppelmayr Funitel for 24 persons and the first Doppelmayr CABLE Liner at the test area

Because of its technical dominance, Doppelmayr was also able to determine the prices in its sector. Doppelmayr has always been able to convince its customers with its quality and innovations, and therefore had a strong competitive position.

### Development of the Global Market since 1955

Figure 1 shows the number of newly installed systems per year in North America from 1955 to 1995. All clear-cut trends are also valid for the global market.

Figure 1 shows that today the sector of ski-lifts and cable cars, after several booms, is facing a stagnating market. The volume of the global market for aerial transport systems will find its level at approximately 6 billion Austrian shillings. Doppelmayr's market share amounts to approximately 25 percent.



**Figure 1** Development in North America (1955–1995)

Source: Ski Area Management (1996)

## **Sales Volume**

The sales volume of aerial transport systems of the Doppelmayr company was 1.364 billion Austrian shillings in the accounting year 1995/96, which means a large increase from the year before. Due to decreasing investment in new and replaced cable cars, the sales volume in the domestic market of Austria tumbled 16 percent in the year 1994/95. The domestic market was hit by changes of the fiscal treatment of investments in Austria and delays with the granting of building approvals for the next year. But the decline in the domestic market in 1994/95 was widely compensated for by increasing export orders (see Figure 2).

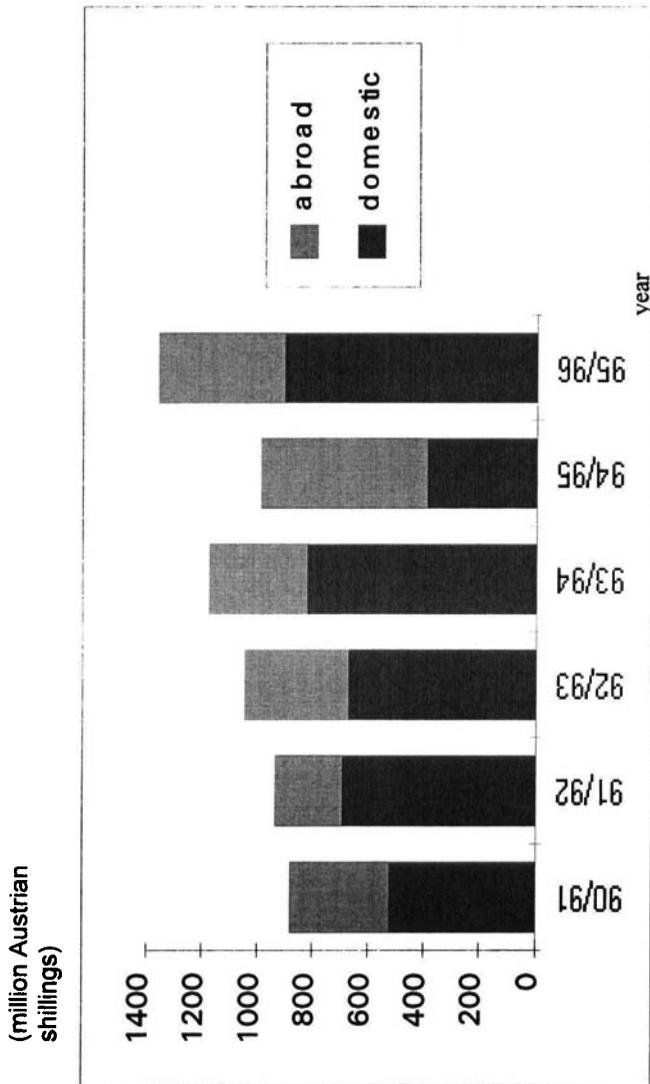
## **COMPETITION**

It has already been mentioned that the main boom in the cable car market took place in the sixties and smaller ones in the seventies. Today the market is stagnating, and there is a smaller number of competitors. For example, in the year 1965 there had been 17 suppliers in the North American market by 1995 there are only five left. Apart from four international competitors in the global market, there is a great number of national (niche) producers operating with surplus capacity. Predatory competition is working in full swing. Only companies with enough financial reserves can stay competitive in a market characterized by decreasing sales volumes and prices.

But the lion's share of the global sales volume of 6 billion Austrian shillings is divided among four big companies (see Figure 3).

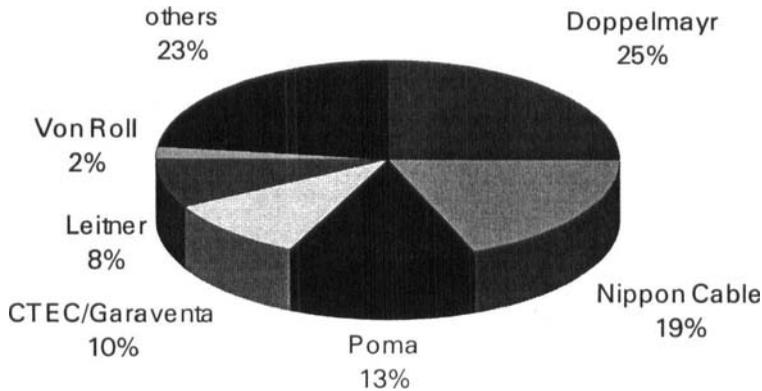
All of the world's biggest and most important competitors are located in the Alpine region. Garaventa (10%) is a Swiss company, Poma (13%) is located in France and Leitner (8%) comes from Italy and therefore profits from the low exchange rate of the Lira at the moment. Doppelmayr (25%) has a globally significant market position. In July 1996 Doppelmayr took over the Swiss company Von Roll Seilbahn GmbH (2%). With this acquisition, the Austrian company further strengthened its market position. Nippon Cable, the Japanese licensee, owns a market share of 19 percent.

In the USA and in Canada, Doppelmayr is the absolute market leader (see Table 1). In 1995 Doppelmayr was able to expand this position significantly with a share of 44 percent. In an analysis, Jim Fletcher (1993) describes the North American market as follows: "Both CTEC—Garaventa and Poma are now perceived to provide an equivalent product to Doppelmayr even though careful analysis shows the Doppelmayr electronics to be superior. With CTEC's merg-



**Figure 2** Development of Doppelmayr's Sales Volume.

Source: Doppelmayr Statistik.



**Figure 3** Division of Global Sales Volume 1993 in %.  
Source: Doppelmayr Statistik.

er in North America with Garaventa, the future to this organization could potentially be quite good. LE will not be a major competitor, in the near future, in the detachable market. Poma of America has positioned themselves well for the detachable market.”

### **Purchase Decision**

The purchase decision more and more becomes a price decision. Therefore the intensity of the competition is increasing. A study to determine the factors that determine the purchase decision in the markets of Austria, Switzerland, Italy, and France, carried out by Doppelmayr in 1994, showed the following result:

- the completion of projects, faithfulness to deadlines and the performance of a contract (20.6 percent),
  - follow-up costs/maintenance and easy assembly (14.2 percent),
  - image and future reliability (10.7 percent),
  - safety against damages (10 percent), and
  - the availability of the systems (9.9 percent) were classified as very important.
- Easy operation,
  - after-sales service, and
  - personal contact got the classification important.

Less important were the degree of innovation, design and appearance as well as the required area for the station building.

Table 1. Market Shares in North America in %

|                   | 1985         | 1986         | 1987         | 1988         | 1989         | 1990         | 1991         | 1992         | 5-yr         | 10-yr        |
|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| LE                | 13.20        | 8.00         | 13.40        | 17.80        | 18.30        | 16.00        | 28.40        | 6.70         | 17.80        | 17.90        |
| CTEC              | 12.90        | 10.80        | 14.00        | 8.90         | 8.90         | 10.80        | 21.90        | 20.60        | 12.80        | 12.80        |
| POMA              | 27.90        | 23.10        | 17.80        | 25.40        | 24.10        | 28.50        | 13.80        | 26.50        | 23.90        | 20.90        |
| <b>Doppelmayr</b> | <b>33.40</b> | <b>31.50</b> | <b>40.00</b> | <b>30.20</b> | <b>35.40</b> | <b>27.50</b> | <b>30.40</b> | <b>38.40</b> | <b>32.30</b> | <b>30.90</b> |
| Others            | 12.60        | 26.60        | 14.80        | 17.70        | 13.30        | 17.20        | 5.50         | 7.80         | 13.20        | 17.60        |

Source: Fletcher (1988): p27.

Others: Stadel, Blue Mountain, Borvig, Mueller, Riblet, Von Roll, BM Lifts and Samson. LE means Lift Engineering.

The price criterion was left out in this study. But it is assumed that the price criterion counts for 40% and the product and service characteristics mentioned above for 60% of the purchase decision.

For a long time Doppelmayr was able to delimit itself from its competitors, in spite of higher prices, due to the use of progressive technology. However, the competitors were able to catch up. Today technical distinction is only possible to a very limited extent because of the maturity of the cable car technology. Anyway, the degree of innovation is not very significant for customers—in the study above, the assessment of this product and service characteristic was only 5%.

In most markets no growth trends are expected. Therefore the challenge to penetrate the competitors' markets becomes very important. In the past, all suppliers dominated their own domestic market. This is no longer the case. The reduction of national barriers to entry and the standardization of technical norms have made the ski-lift and cable car market a global market (McKinsey, 1994).

### **Barriers of Entry**

In a market with an overall sales volume of 6 billion Austrian shillings, which is controlled by four big established competitors and a few small national suppliers, it is not profitable to establish active barriers to entry. New entrants into the market face barriers associated with the industry. There is the problem of a very specific technical know-how, high capital intensity, and high risk of advance production. The latter arises from the fact that contracts are generally concluded "subject to a positive result of the construction hearing. An order placed in spring-time with a construction hearing not before autumn requires that the system be produced in advance. Aside from the high storage costs, there is the risk for the company that the construction hearing may have a negative outcome. Only a company with enough financial reserves or an appropriate volume of production can operate in this system. Given the lack of growth in the market of aerial transport systems the crowding-out of competitors is the only chance for survival. The market is not attractive for newcomers.

### **PROBLEMS & PROSPECTS**

The current high level of environmental awareness in Austria aggravates or stops the development of new ski resorts. For example,

in the Austrian regions of Tyrol and Salzburg, there was an absolute ban on the development of new ski areas for more than five years—the “reflection break.” Such bans are the result of environment protection initiatives that are designed to protect the environment from the damage caused by the construction of rope hauling systems (poles and stations), ski-runs, snow canons, and the surrounding infrastructure (hotels, restaurants, parking areas, and so on). These initiatives are opposed by interests associated with the lift companies and with tourism. The lift-operating corporations want a high volume of traffic and the highest possible turnover. (Härting, 1988: 7)

Changes in the industry have forced lift operators to raise the prices for lift tickets making ski holidays more expensive. Winter tourism, which has to compete with cut-price air travel, has become less attractive, and the numbers of tourists has stagnated and even decreased.

Owing to the standardization of technology, quality features can no longer be used to distinguish between the various suppliers, as it was in the past. Overcapacities in the plants of the lift manufacturers and the stagnation of the market lead to price competition and new contracts must almost always be attained by aggressive pricing. The climatic changes have also affected the industry. Lower regions no longer have an adequate snow base. This requires the development of higher regions and glacier ski areas.

The problems in the industry have intensified competition among producers. For years Doppelmayr invested to build up its global presence and therefore it has a good starting position for follow-up orders. The reputation of the company as well as the high level of expertise in its workforce and the high quality of its systems strengthen this market position. The upward pressure on costs is defused by Doppelmayr by using its productivity reserve (increased standardization, modular product systems) as well as by the purchase of components from low-cost suppliers in Italy and Spain. The company also tries to adjust its product policy to the different market segments.

Marvin Kottke, an authority on the industry, segments the market into two kinds of ski areas: “One sector is made up of larger, commercialized, technologically advanced, generally progressive, growth-oriented ski resorts. The other sector is made up of smaller, less commercialized, neighborhood-oriented, less technologically advanced, capital limited ski areas.” The target group for Doppelmayr comprises the first sector.<sup>4</sup>

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<sup>4</sup>This segmentation between high-comfort and standard has to be made for lift manufacturers as well as lift operating corporations.

In a stagnating market the replacement of old systems with new and superior technology and higher transport capacity is of great significance. Out-of-date aerial transport systems and drag lifts are replaced by more comfortable and safer lifts. Detachable 4-passenger and 6-passenger chairlifts are used as an alternative. Compared with cable cars, detachable chairlifts have the advantage of being a cheaper means of transport with nearly the same transport capacity. The comfort of modern chairlifts with their bubbles (protection against wind and precipitation) and the easier entry for skiers (They don't have to unfasten their skies) make chairlifts even more attractive.

With the acquisition of the Swiss company, Von Roll Seilbahn GmbH, Doppelmayr secured a large number of obsolete systems which will have to be replaced in the near future. Nevertheless the company must search for alternative uses for aerial transport systems and find new markets, such as China. Doppelmayr has a satisfactory position in the market and good chances for follow-up, replacement, and totally new contracts. And not least thanks to its sound financial situation, Doppelmayr is able to increase its value in the current difficult market.

## **DOPPELMAYR AND ITS MARKETS IN INDIVIDUAL COUNTRIES**

The search for new projects, their preparation, and the sale of ski-lifts and cable cars are the responsibility of the salesmen of the Doppelmayr company. They carry out profitability analyses, offer the customers various types of financing for the products, search for investors, and so on. According to the sales volume of a specific market, Doppelmayr conducts its own marketing or is represented by a local company.

Doppelmayr guarantees an optimal service for its customers by means of its worldwide service and marketing network. In this industry, it is important to be on the spot. Doppelmayr is represented in more than 40 countries with approximately 6,000 installed systems.

Doppelmayr had a sales volume of 458 million Austrian shillings in the fiscal year 1995/96, about one third of which came from its foreign activities. Export sales were apportioned to the main markets as follows:

- Asia and Oceania ATS 137.40 million (without Japan)
- Scandinavia ATS 101.00 million

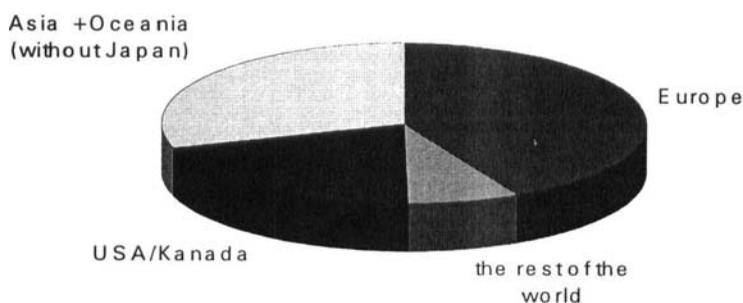
- USA/Canada ATS 92.50 million
- Switzerland ATS 48.70 million
- the rest of Europe ATS 44.20 million
- the rest of the world ATS 34.20 million

### Asia and Oceania

This is the market with the strongest tendencies for growth as can be seen from the division of export sales volumes above. Market conditions in Asia and Oceania are characterized by intensive competition. But Doppelmayr was able to widen its market presence in spite of the strong competition. Of the 5,944 systems sold by Doppelmayr until 1993, more than 60 percent were sold to Europe and 28 percent to Asia and Oceania. However, in the period from 1988 to 1993 alone, 53.7 percent of all systems sold went to the rapidly growing Asian market, whereas only 38.5 percent found their buyers in Europe.

In Japan the Doppelmayr company is represented by a Japanese licensee (Nippon Cable), which makes it easier to deal with this market. The activities of Nippon Cable are principally restricted to the domestic market of Japan. In spite of downward tendencies, the Japanese market offers a great potential. By the end of 1995, a total of 1510 systems had been delivered to this country.

One of the regions with the greatest hope of future development in the industry is China. The young urban population, with its increasing prosperity, is looking for new ways of spending leisure time. However, the market in China has some distinctive features. Most of the new cable cars are not used for the development of ski resorts. Aerial transport systems serve as a rapid and comfortable means of transport, e.g. to holy mountains or monasteries, but also for toboggan-runs.



**Figure 4** Doppelmayr's markets in individual countries 1995/1996

Source: Doppelmayr Statistik

Although the competitors are already there, the Doppelmayr company regards China as an extremely important market for the future. In the province of Hebei, Doppelmayr obtained the license to lead a company, which is 100 percent owned by foreign investors, for the next 50 years. The first sod has already been turned for the construction of a manufacturing plant. For a start, 60 people will be employed there. For the moment only technologically less complicated, fixed grip chairlifts will be produced for the local Chinese market only.

In New Zealand and Australia, Doppelmayr conducts its own marketing company (as well as a manufacturing plant for components in New Zealand) because it is indispensable to be on the spot. At the end of 1995, 102 systems had been built by Doppelmayr in Australia and 74 in New Zealand.

### **USA/Canada**

In the last fiscal year, Doppelmayr succeeded in strengthening its leading market position in the USA and Canada. It was responsible for 18 of 41 newly built systems, achieving a 44 percent market share. At the moment the market is experiencing a period of falling orders. The 41 new systems with 79,872.9 VTFH (vertical transport feet per hour—ski-lift size comparisons are made on the basis of VTFH, the number of passengers transported 1000 vertical feet per hour. VTFH reflects the amount of investment dollars in comparison) are the second-worst result of the last 35 years. Regarding the number of pieces in 1992 the fewest number of new ski-lifts (36) had been constructed (76,587.30 VTFH) (Rowan, 1996: 74). 1993 only 41 systems were constructed (as in 1995). The lower VTFH means that in 1993 fewer systems had been installed.

As mentioned earlier in this article, the non-segmentation of the North American market was a big problem for the Doppelmayr company when it entered the market. Today North America is divided into four parts: East, Midwest, West, and Canada. "If the entire North American market is divided between East (including the Midwest) and the West, during the last seven years, the West produces more than 50%." (Fletcher, 1993: 28) The different geographic conditions require product adjustments. While the hilly landscape in the East requires lighter constructions, stronger systems are constructed for the Rocky Mountains.

An essential difference between the US market and markets in other countries is the problem of product liability; however, this is only true for a few states. Aside from the high damage claims, there is the cost of handling a case and the long legal proceedings. The

Table 2. VTFH—Development in Various Regions

| Region  | 1995      | 1994       | 1993      | 1992      | 1991      | 1990      |
|---------|-----------|------------|-----------|-----------|-----------|-----------|
| East    | 31,780.60 | 31,604.20  | 10,439.10 | 9,129.00  | 19,775.50 | 14,823.10 |
| Midwest | 1,069.70  | 866.40     | 1,555.30  | 3,083.70  | 3,622.80  | 2,779.80  |
| West    | 31,592.20 | 51,417.30  | 52,152.00 | 47,954.80 | 31,423.00 | 45,453.80 |
| Canada  | 15,430.40 | 24,033.60  | 10,855.30 | 16,419.80 | 33,821.10 | 30,760.50 |
| Total   | 79,872.90 | 107,921.50 | 75,001.70 | 76,587.30 | 88,642.40 | 93,817.20 |

Source: Rowan (1996): p76.

main problem is how the burden of proof is handled in the United States—a possible resale of the system makes no difference in liability cases.

## Europe

The market for cable cars in Europe is still stagnant with falling prices. Only Scandinavia shows some signs of an economic recovery in the sector after long and difficult years of recession. To get a better position in the Swiss market, Doppelmayr bought the Swiss company, Von Roll Seilbahn GmbH, as mentioned above. Von Roll specializes in extraordinary constructions, which complements the Doppelmayr production process.

Doppelmayr owns special manufacturing plants in various European countries, e.g., in France (only assembly) and component manufacturing plants in Spain and Italy. This has enabled Doppelmayr to profit from the low exchange rate of the lira.

Doppelmayr always tries to adjust lifts and cable cars to their natural environment and integrate them as gently as possible. Ski-lifts have to be adapted individually to the respective area and its climatic conditions (heat, glaciers, hurricanes, volcanoes). But also cultural differences have to be taken into account. It may sound surprising that the latter makes product adaptations necessary even inside Europe. There is a plate lift–drag lift border in Europe. Initially, Doppelmayr had no success with the sale of drag lifts in France. In France plate lifts are preferred—allegedly because of social reasons. It is said that French women do not like the direct contact with other skiers, which cannot be avoided with normal drag-lifts with a T-bar. Therefore Doppelmayr was forced to offer plate lifts in France.

***The European Union.*** Doppelmayr is beginning to experience the effects of the Austrian membership in the European Union, which Austria joined in 1995. Non-tariff barriers between Austria and the other members of the Union are being striped away. This should have occurred under the earlier agreement of association; however, it did not. An example from Italy illustrates how non-tariff-barriers protected local enterprises. In Italy the clamps used by Doppelmayr—tried and tested and accepted as very reliable in other countries—were rejected because of the welding seams. Doppelmayr was forced to develop a new clamp especially for Italy.

The European Union has made the alignment of technical standards among the individual member states a priority because different standards constitute a significant non-tariff barrier. Much of the work on the harmonization of standards is entrusted to private

organizations like CEN (Centre Européen de Normalisation) and CENELEC (Centre Européen de Normalisation Électrotechnique). The membership of CEN and CENELEC consists of the national standardization bodies from the European Union and the European Free Trade Area. (Tsoukalis, 1993: 144) Doppelmayr participates in the task groups and tries to influence the development of new standards.

The European steel industry needs to be restructured because it is in deep crisis at the moment. "The Community has opted for an orderly run-down of obsolete and unprofitable production capacity. . . ." (Emerson, 1991: 91) Production quotas and voluntarily limited imports make it difficult for the Doppelmayr company to plan its acquisition of raw material. In addition, the public policy affects prices: ". . .one direct effect of the restrictions on Community output and imports into the Community has been the maintenance of a price level higher than the equilibrium price under the conditions of unfettered competition, and, in any case, higher than the world price . . ." (Emerson, 1991: 92)

## **MARKETING ACTIVITIES**

During a period of stagnation, it is extremely important for an enterprise to have sound customer relations. This is why Doppelmayr started a number of activities to intensify its customer contacts. It has a training program to ensure appropriate maintenance (and therefore the safety of the systems). This service also helps Doppelmayr to understand problems and get ideas for improvements. Doppelmayr has a well-established 24-hour hot-line. The winter season only comprises three or four months and peak business is restricted to a few weekends—depending on snow conditions and weather situation. Therefore the breakdown of a system in this period causes a very serious drop in sales for ski-lift operators. This is why the 24-hour hot-line has been installed. During the main season a task force of the Doppelmayr company is available for the rapid repair of a possible technical breakdown. A hot-line exists in each country in which Doppelmayr is working.

Furthermore, Doppelmayr is organizing "Incentive Travel," in which customers are invited to participate in trips to other countries where Doppelmayr operates. (Participants only have to pay a contribution towards expenses.) These trips are organized to illustrate new developments of the Doppelmayr company, e.g., in China.

The Doppelmayr company can look back on a very long tradition of personal customer service. Foreign customers are not only invited

to business meetings in Austria, but also to learn about Austrian cultural activities. (Every year Doppelmayr invites customers to the Bregenz Theater Festival, which takes place on the world's largest stage on a lake.) There are various guest houses for the visitors with a total of 50 beds and also two restaurants for Doppelmayr's visitors only. The customers are looked after by employees and members of the Doppelmayr family.

It is more difficult for Doppelmayr to reach the actual user—the skier himself. Here some measures (flyers, advertising posters near ski-lifts) have to be used to strengthen the identification of the skier with the systems of the Doppelmayr company.

## **SUCCESSFUL SUBSIDIARIES**

The construction of ski-lifts and cable cars is the most important economic activity of the Doppelmayr company; however, Doppelmayr has other enterprises beside its core business of aerial transport systems. Aside from the Seilbahn-Vertriebs GmbH (cable car marketing company) other subsidiaries engage in businesses related to the core competence of Doppelmayr. The company defines its core competence as follows:

*The core competence of Doppelmayr is a combination of technology, service, marketing, and information systems related to the transport of persons and freight of all kind as well as to warehousing systems.*

During its long corporate history, Doppelmayr's success has depended, in part, on the fact that it has not restricted business to one specific field. Aside from the aerial transport systems, its core competence extends to the following sectors:

### **Elevators for Persons and Freight and Staircase Elevators**

In the year 1912 Doppelmayr installed its first freight elevator. Doppelmayr Aufzüge AG (Doppelmayr elevator company) operates today with a reputation based on the functioning of its products and their design. The range of products includes panorama elevators for office buildings and department stores, freight elevators and service lifts as well as staircase elevators and escalators. In spite of a recession in the building sector, the subsidiary increased sales volume by eight percent to 143 million Austrian shillings for the fiscal year 1995/96. Distribution is mainly oriented towards West Austria.

## **Fully Automatic Stacker Cranes**

Lagertechnik Wolfurt GmbH (LTW) company for warehousing systems) was founded in 1981. It provides efficient and thrifty warehousing with its rail-mounted fully-automatic stacker cranes as well as its winding systems for high-bay-storage. Turn-key materials management systems are individually adjusted to the wishes of the customer. Sales volume of LTW was 156 million Austrian shillings for the year 1995, with 91 million shillings in foreign sales.

## **Mechanical Car Parks**

Parkgaragen-Technik GmbH (Parktec) (company for the construction of car-parks) is a new subsidiary of Doppelmayr. With mechanical car-parks, it is possible to develop large parking capacities using only a small site. After seven years of operation, Parktec has its first orders.

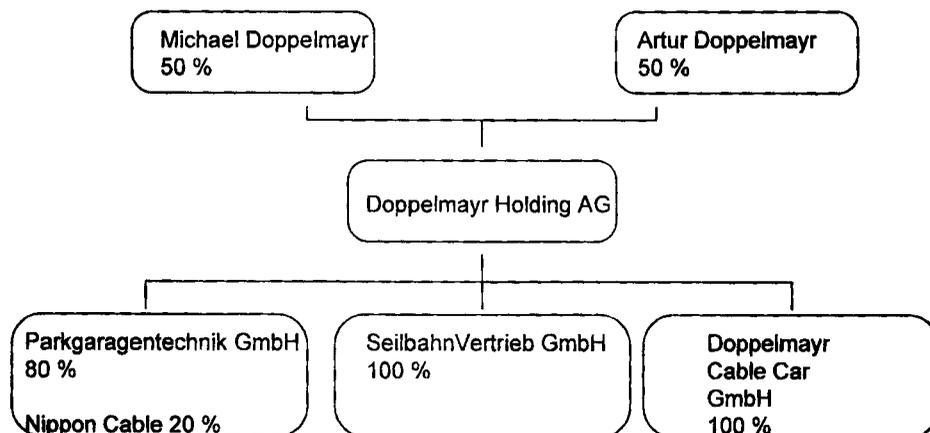
## **Cable Liner**

Besides Parktec, another subsidiary of Doppelmayr, DCC—Doppelmayr Cable Car GmbH, tries to find and offer solutions for local public transport. The CABLE Liner—constructed on the basis of a cable railroad—moves with a velocity of 8 m/s. A high transport capacity is guaranteed by an interval of 30 seconds. The track can be between 0.5 and 4 km (0.3 to 2.5 miles) long. The CABLE Liner is environmentally-friendly, operating without noise, exhaust fumes, and emissions and it can be integrated with the existing infrastructure of delicate districts or pedestrian precincts.

## **Property Situation**

Since 1892, the Doppelmayr company has operated as a family business. In 1992, Michael Doppelmayr took over leadership from Artur Doppelmayr at the one hundred year anniversary. The share of equity is shown in Figure 5 (the individual marketing companies are not included in the illustration):

Aside from the holding company, which was converted from a limited liability company to a stock corporation in 1994, there are two other companies owned by the family. Artur and Michael Doppelmayr are shareholders (50 percent each) of the Aufzüge AG (elevator company). Peter Malin (managing director of LTW) shares 20 percent of equity capital, Artur Doppelmayr has 78 percent and Michael Doppelmayr holds 2 percent of the Lagertechnik Wolfurt GmbH (warehousing systems).



**Figure 5** Share of equity

Source: Doppelmayr Statistik

## CONCLUDING REMARKS

Doppelmayr—although a major player in its markets—is only one of several successful medium-sized companies in its region in Austria. Although Doppelmayr is a significant employer in the region, its influence and power are on a rather modest level.

Winter tourism is one of the most important employers and foreign exchange earners in Austria. Therefore, the government gives it a high priority. Assistance measures (e.g. subsidies for companies in the sector of tourism, reasonable loans, and so on) are of indirect help to Doppelmayr. On the other hand, the sector of aerial transport systems cannot count on direct support. The tourist industry has a great deal of influence in Austria, but Doppelmayr is just a small part of it.

Doppelmayr has made a great effort to ensure that it continues to be a leader in its core business—the aerial transport system. In addition, Doppelmayr has used the technology of its core business for solutions of problems in totally different fields (Parktec, DCC). Doppelmayr has reduced its dependence on the development of one single sector. This dual approach is the essence of its long-term strategic orientation. Success depends on judicious management.

Doppelmayr is an example of a medium-sized company that has been able to play a successful role on a worldwide basis without special support from its government. Such companies succeed by means of adaptability and flexibility.

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