Hong Kong Manufacturing SMEs: Preparing for the Future

Industry Situation Report

MOULD & DIE MANUFACTURING

Funded by SME Development Fund

Made in PRD Research Series III
The Mould and Die Industry

Moulds and dies are used to turn metal, plastics, glass, rubber, and other source materials into standardised components. Moulds and dies are therefore important to a very wide range of industries including plastics, hardware, electric equipment, toys, home appliances, watches and clocks, auto parts, communication equipment, office instruments, optical instruments, consumer electronics, and other products. The mould and die sector is dominated mostly by firms from developed countries including Japan, Germany, the US, and Italy. China is the only developing country that has a strong presence in the sector. The developed countries lead the sector in technology.

Hong Kong’s mould and die industry started with a world-level production system borrowed from the US. Hong Kong firms have been gaining competitive strength since the 1980s when they started to move their production facilities to Guangdong. Today they have the capacity to produce world quality moulds and dies at a moderate price. The mould and die industry in Guangdong developed mainly as a result of investment by Hong Kong firms. An estimate for 2003 shows that there were over 10,000 Hong Kong invested firms in the PRD producing moulds and dies employing about 81,000 Hong Kong staff. Hong Kong firms currently lead their Mainland competitors in expertise and technology, but the gap has been closing. Chinese firms often target experienced engineers and technicians from foreign-invested firms to improve their knowledge and competitiveness.

Industry players are confident that the Chinese Mainland market will keep growing and they see strong opportunities in the automobile, machinery, and electronic industries. For instance, to produce one model of car requires 1,500 mould and die sets. With China selling 13.64 million motor vehicles in 2009 alone, this is a large and growing market. This should provide ample opportunity for Hong Kong companies that can find the right niches going forward. However, Hong Kong’s position in this industry is one that could come under significant competitive threat even as market opportunities expand.

Basic Facts about the Industry

The Gross Industrial Output (GIO) for Hong Kong was HK$5.4 billion in 2008 for the “Machinery, equipment, apparatus parts and components” sector which includes moulds and dies. There were 5,591 employees in the sector in Hong Kong with an estimated average annual wage of HK$156,680. Wages were approximately 20 per cent of total costs for the sector. Wages for the sector in Hong Kong are five times those for the sector in China as a whole. This is likely explained by general wage disparities between Hong Kong and China, the employment of more senior staff in Hong Kong, and the fact that higher value end products are produced in Hong Kong with corresponding higher quality and more costly labour inputs.

2. Interview with Hong Kong Mould & Die Council, 9 April 2010.
7. Hong Kong Census and Statistics Department data on “Machinery, equipment, apparatus, parts and components, n.e.c”, 2009.
Hong Kong’s total domestic exports for moulds and dies in 2009 were HK$188 million, a 13 per cent decrease from the previous year. Re-exports from Hong Kong were HK$2.9 billion or 0.12 per cent of total re-exports. No data is available for Mainland China based processing and non-processing trade companies.\(^8\) Japan was the world’s largest mould and die exporter from 1991 to 2008, while China has been among the top three since 2007. The largest importers of moulds and dies are the US, China, and Mexico.

<table>
<thead>
<tr>
<th>Region</th>
<th>Average Monthly Wages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hong Kong</td>
<td>11,489</td>
</tr>
<tr>
<td>YRD</td>
<td>1,881</td>
</tr>
<tr>
<td>PRD</td>
<td>2,439</td>
</tr>
<tr>
<td>China</td>
<td>2,200</td>
</tr>
</tbody>
</table>


In recent years, China has grown into a major producer in the sector. In 2009, in the absence of Japan’s statistics, China reported higher imports and exports for moulds and dies than any other country, with exports of US$1.7 billion and imports of US$1.2 billion.\(^9\) The Pearl River Delta and Yangtze River Delta regions accounted for two thirds of China’s total mould and die output in 2007.\(^10\) The largest producer, exporter, and importer of mould and die products in China is Guangdong. In 2009, Guangdong exported US$756 million of moulds and dies, 42 per cent of China’s total, and imported US$368 million moulds and dies, 19 per cent of China’s total.\(^11\)

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**Exhibit 1. Average Monthly Wages for the Sector in RMB**

8. Hong Kong Census and Statistics Department, Hong Kong Merchandise Trade Statistics 2009, Domestic Exports and Re-exports, Trade category UN SITC rev.3 code 7491 – Moulding boxes for metal foundry; mould bases; moulding patterns; moulds for metal (other than ingot moulds), metal carbides, glass, mineral materials, rubber or plastics.


11. Trade statistics the mould and die sector for individual provinces of China may not all fall exactly into the UN SITC category of 7491 due to anomalies in the compiling of China’s statistics.
### Exhibit 3. Top Mould and Die Importers in the World and Hong Kong, US$ millions

<table>
<thead>
<tr>
<th>Importer</th>
<th>2007 Value</th>
<th>2008 Importer</th>
<th>2008 Value</th>
<th>2009 Importer</th>
<th>2009 Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>1,593</td>
<td>US</td>
<td>1,533</td>
<td>Mainland China</td>
<td>1,210</td>
</tr>
<tr>
<td>Mainland China</td>
<td>1,288</td>
<td>Mainland China</td>
<td>1,442</td>
<td>Mexico</td>
<td>1,143</td>
</tr>
<tr>
<td>Mexico</td>
<td>1,061</td>
<td>Mexico</td>
<td>1,212</td>
<td>US</td>
<td>1,141</td>
</tr>
<tr>
<td>Germany</td>
<td>694</td>
<td>Germany</td>
<td>841</td>
<td>Germany</td>
<td>735</td>
</tr>
<tr>
<td>Japan</td>
<td>670</td>
<td>Japan</td>
<td>724</td>
<td>Japan</td>
<td>-</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>406</td>
<td>Hong Kong</td>
<td>454</td>
<td>Hong Kong</td>
<td>414</td>
</tr>
</tbody>
</table>

Sources: UN Commodity Trade Statistics Database 2009, Trade category UN SITC rev.3 code 7491.

### Exhibit 4. Mould and Die Exports from Hong Kong, HK$ millions

<table>
<thead>
<tr>
<th></th>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3,523</td>
<td>1.3</td>
<td>3,635</td>
<td>3.0</td>
<td>3,187</td>
<td>-12.3</td>
</tr>
<tr>
<td>Mainland China</td>
<td>1,486</td>
<td>-10.0</td>
<td>1,376</td>
<td>-7.4</td>
<td>1,294</td>
<td>-6.0</td>
</tr>
<tr>
<td>US</td>
<td>420</td>
<td>-5.1</td>
<td>460</td>
<td>9.6</td>
<td>351</td>
<td>-23.8</td>
</tr>
<tr>
<td>Vietnam</td>
<td>194</td>
<td>135.0</td>
<td>154</td>
<td>-20.8</td>
<td>219</td>
<td>42.6</td>
</tr>
<tr>
<td>Germany</td>
<td>144</td>
<td>42.05</td>
<td>199</td>
<td>38.2</td>
<td>172</td>
<td>-13.8</td>
</tr>
</tbody>
</table>

Notes: The major trade partners are based on the ranking in 2009.
Source: UN Commodity Trade Statistics Database 2006-2009, Trade category UN SITC rev.3 code 7491.

### Exhibit 5. Mould and Die Imports to Hong Kong, HK$ millions

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3,164</td>
<td>-0.9</td>
<td>3,534</td>
<td>11.7</td>
<td>3,213</td>
<td>-9.1</td>
</tr>
<tr>
<td>Mainland China</td>
<td>2,116</td>
<td>9.9</td>
<td>2,516</td>
<td>18.9</td>
<td>2,385</td>
<td>-5.2</td>
</tr>
<tr>
<td>Japan</td>
<td>442</td>
<td>-27.8</td>
<td>488</td>
<td>10.4</td>
<td>384</td>
<td>-21.3</td>
</tr>
<tr>
<td>US</td>
<td>64</td>
<td>-28.6</td>
<td>70</td>
<td>10.1</td>
<td>110</td>
<td>57.5</td>
</tr>
<tr>
<td>Korea</td>
<td>190</td>
<td>84.5</td>
<td>158</td>
<td>-16.6</td>
<td>71</td>
<td>-55.5</td>
</tr>
</tbody>
</table>

Source: UN Commodity Trade Statistics Database 2006-2009, Trade category UN SITC rev.3 code 7491.

### Exhibit 6. The Mould and Die Sector of Top Three Provinces (January-November 2008)

<table>
<thead>
<tr>
<th>Province</th>
<th>Establishments</th>
<th>Employment</th>
<th>GIO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Value</td>
<td>Percentage (%)</td>
<td>Value</td>
</tr>
<tr>
<td>China</td>
<td>1,932</td>
<td>100.0</td>
<td>348,065</td>
</tr>
<tr>
<td>Guangdong</td>
<td>456</td>
<td>23.6</td>
<td>126,025</td>
</tr>
<tr>
<td>Jiangsu</td>
<td>302</td>
<td>15.6</td>
<td>43,112</td>
</tr>
<tr>
<td>Zhejiang</td>
<td>379</td>
<td>19.6</td>
<td>81,624</td>
</tr>
</tbody>
</table>

Notes: Figures are of state-owned enterprises and non-state-owned enterprises with annual sales of RMB 5 million. Figures are preliminary.
Sources: National Bureau of Statistics of China; China Mechanical Electrical Data Online.
Domestic and export sales of mould and die products for Mainland China grew at an annual rate of 20 per cent from 2000 to 2007, but growth slowed in 2008 to 2009 as a result of the global financial crisis. Sales in 2009 totalled RMB 100 billion, but sales in the first four months of 2010 reached just under RMB 100 billion. The domestic market is approximately seven times the size of the export market.

Issues for Hong Kong Mould and Die Manufacturers

Hong Kong owned mould and die firms that manufacture in the Chinese Mainland have advantages in marketing, in implementing international business practices, and in maintaining good customer relationships over the long term versus Mainland competitors. They also tend to be more flexible, make decisions faster, be quicker to adopt new and suitable technologies, and respond to market changes rapidly. However, Hong Kong owned firms that manufacture in the Mainland have relatively high costs, are less aggressive than Mainland Chinese firms, and find it harder to obtain financing in the Mainland than their Chinese peers.

Buyers in the mould and die industry are highly price sensitive and competition from Mainland China owned mould and die companies has intensified. The global financial crisis affected Hong Kong mould and die firms supplying traditional export sectors like toys, home appliances, electronics, and computer peripherals. With lower exports in these markets, mould and die firms were put under pressure to reduce prices. During the worst period in 2009, demand fell by 40 to 45 per cent from its peak. By 2010, prices were around 20 per cent lower than the peak and profit margins for larger companies down from 12 per cent to five per cent. Firms that were small, could not offer special technological advantages, or offer a niche product, were more vulnerable to the downturn and many closed down.

Growth in the sector is becoming more difficult for Hong Kong SMEs because they are less likely to receive the sort of capital allocations that are being given to Mainland China companies. Often large investments of up to RMB 100 million are made into Mainland China companies. Several of the large Chinese mould and die companies have acquired advanced equipment and technologies from Germany, Japan, and the US, that has given them the capability to develop high quality moulds. These companies are encroaching on the market share held by Hong Kong owned mould and die companies.

Since the mould and die industry is less labour-intensive than many other industries in the Pearl River Delta, it is less vulnerable to labour cost increases and costs associated with administering the Labour Contract Law than in many other industries. However, the industry uses specialised labour in the form of highly trained technicians and this category of labour is often in short supply. Hong Kong firms find that their Mainland Chinese personnel sometimes leave to start their own companies once they have received sufficient training. This creates additional competitive pressure.
Local protectionism in Mainland China is an important issue affecting Hong Kong mould and die companies. The mould and die industry is the basis of the machinery sector, providing essential products to its downstream industries. In order to develop their own industries, many Chinese provinces treat the mould and die industry as a strategic industry and offer favourable policies to support and develop indigenous companies. YRD governments have been particularly aggressive in their attempts to compete with the PRD and this is having a significant impact on Hong Kong owned companies. The Guangdong Government also offers favourable policies to local mould and die companies, but applies stricter criteria when assessing the eligibility of firms that are not fully owned by Mainland interests, so companies from Hong Kong lose out both ways.

The Central Government has implemented a two-year plan (2009-2011) for restructuring and revitalising 10 key industries. This may result in an increase in demand for mould and die products, which would improve the long-term potential of the sector. The Guangdong Government has tabled its own restructuring and revitalisation plans for 11 key industries. The plan for the equipment manufacturing industry\(^\text{18}\) will have the greatest direct impact on the mould and die sector and is designed to encourage its development so as to support other industries that have been identified as value-adding.

It is further expected that the time extension of the “Home appliance and motor vehicles to the countryside” and the “Motor vehicle and home appliance replacement” policies will boost the sales growth of motor vehicles and home appliances in 2010.\(^\text{19}\) In 2009 alone, the Central Government provided RMB 45 billion in subsidies for vehicle and appliance trade-ins and for rural residents to purchase home appliances and motor vehicles, including motorbikes.\(^\text{20}\)

The mould and die sector is not limited by any export processing restrictions, it is also not likely that suppliers to the sector are limited because the restricted categories cover processed metals and not the raw unprocessed metals that are used in mould and die production. In July 2010, export rebates on 406 products including key steel products, and semi-finished nonferrous metals were eliminated. Steel is a key input for mould and die sector. In June 2010, the State Council announced a restructuring of the industry by closing smaller less efficient plants, consolidating towards larger plants, and upgrading the production and energy efficiency of the plants. These moves may have a short-term impact on supply for the mould and die sector.

Policy support for the industry as well as increased overall need for mould and die operations has led some large customer companies to set up their own mould and die shops. The nature of the industry is that many customers are large, have sufficient internal demand, are financially secure, and can obtain the capital needed to take mould and die manufacturing in-house. Consequently, a number of firms in the sector have seen orders from longstanding customers go to nil in a relatively short period of time.


\(^{19}\) The “Vehicles to the Countryside” policy has been extended until 31 December 2010 and the “Motorcycles to the Countryside” policy until 31 January 2013. The current “Home appliance replacement” policy has been extended until 31 December 2011.

Response Strategies of Hong Kong SMEs
Larger companies that survived the global financial crisis scaled back new product launches and focused more on maintaining and improving the quality of their existing product range.21

One response to lower operating margins has been to improve efficiency through the use of innovative technology or automation that will bring about long-term efficiencies and cost reductions.

Another approach has been to identify attributes that customers value enough to justify a price premium such as new product features, creative designs, or faster response times. In this way, the Hong Kong firms are playing to their advantages of modern equipment, advanced technology, good design, tightly controlled production, and strict quality control.

Some Hong Kong firms are differentiating on the basis of technology, which requires significant investment that might be challenging for Hong Kong’s SMEs given their small size. However, it appears that in this sector companies which focus on research and development, technology adoption, and innovation to the extent that they are able may face the best prospects of doing well in the future. Some firms are investing a proportion of their revenues into ongoing research and development, while others have formed joint-venture partnerships or entered into other business arrangements with technology providers that keep them at the front of advances in manufacturing technology.

To combat the problem of obtaining sufficient capital, Hong Kong SMEs in the sector have made efforts to communicate their advantages to investors from the region or from overseas. For global investors, these advantages go beyond those already mentioned to include an ability to better communicate in English, as well as better social and physical infrastructure that attract potential foreign-firm investors during their visits to the PRD via Hong Kong. Firms in the sector have also taken to partnering with firms in the Chinese Mainland to tap into the funds that those firms can access.

Hong Kong firms have been limiting the number of employees they have outside low-cost environments to try to maintain cost parity with Mainland firms. Moving to the YRD is also a strategy that Hong Kong firms in the sector are considering in order to obtain workers they need and to compete against other lower-cost manufacturers who operate in the YRD.

Some Hong Kong firms are finding ways to partner with customers to ensure their customers do not establish in-house mould and die activities. There are several ways in which this type of deep collaboration could take place with the main points for agreement being which firm takes on the capital risk by investing in the equipment, and what guarantees are put in place to ensure that outsourcing remains more beneficial to the customer than bringing the mould and die activities under its own control. Deeper collaboration that does not involve in-house manufacturing is also being achieved by locating next to the factories of major customers.

21 Interview with Hong Kong Mould and Die Council, 9 April 2010.
Hong Kong firms are responding to protectionism in China by lobbying, but this is being done with an understanding that little is likely to be achieved. Some Hong Kong mould and die manufacturers hope to overcome possible policy bias by demonstrating that due to their experience, managerial capabilities, and capacity to innovate, they have more value to add to the industry than indigenous firms, and to underscore the belief that they are important to the downstream activities that remain attractive to provincial governments in China.

Case Study – Datamatic CNC Engineering Company Limited

Established in 1983, Datamatic CNC Engineering Company Limited (Datamatic) is a mould and die manufacturing company headquartered in Hong Kong. After a few years of sub-contracting CNC jobs, Datamatic acquired the International Mould Factory Company Limited in 1985 to provide complete sets of injection moulds. Datamatic commenced business with five employees and the company now has approximately 190 employees with all except six being located in the Chinese Mainland.

In 1995, Datamatic shifted its production from Hong Kong to the PRD where it set up a Sino-Hong Kong joint venture named Datamatic Guangzhou Injection Mould Company Limited (Datamatic Guangzhou). The joint venture built a workshop of 3,000 square metres in Guangzhou to provide turnkey mould making and pilot moulding solutions. In 2005, Datamatic Guangzhou expanded its workshop and installed an advanced moulding machine. At first, Datamatic relocated all of its manufacturing but kept its engineering activities in Hong Kong. After about two to three years, Datamatic moved its engineering activities to Guangzhou as well. These days, Hong Kong acts as a liaison office and takes care of the coordination and planning of activities such as marketing and shipping.

When Datamatic first moved to China business was slow. To try and develop new business, Datamatic engaged in marketing and promotion activities in major potential customer markets. This involved doing exhibitions, sending company catalogues out, ensuring that the website was up-to-date, and a range of similar activities. At one of the exhibitions a German company making automotive lighting (Hella) placed a trial order with Datamatic. The firm took the trial order very seriously, the order went very well, and Datamatic got a foothold in the automotive lighting industry, an industry that has become its main market.

Datamatic sells its products all over the world with major markets in China, the US, France, Germany, Spain, Mexico, and Brazil. Its major direct clients are car component manufacturers such as Hella, Valeo, AL, Decoma, CML, ARTEB, Stanley, and Koito. Approximately 50 per cent of Datamatic’s production stays in the Chinese Mainland and the other 50 per cent is shipped to other places.

Issues and Challenges

Dealing with cost-driven competition from Mainland China owned mould and die companies is one of Datamatic’s major challenges. Steadily decreasing prices for mould and die manufacturing is a further challenge for Datamatic. Although the turnover in the mould and die industry in Mainland China is increasing, average product prices are dropping.

The industry is relatively capital intensive and the technology used in the industry is fast evolving, meaning that regular investments in technology must be made. Smaller firms like Datamatic face relatively large costs if they try to pioneer new technology.
There is a shortage of skilled technicians for the sector in the PRD. The entry and growth of firms from the Chinese Mainland has increased demand for trained engineers and technicians. Many Datamatic employees have been offered attractive packages by Chinese firms and a number have left to start companies of their own.

China’s regulatory environment is viewed as more onerous than Hong Kong’s. Performing routine tasks in China takes far longer than it takes in more developed and less heavily regulated markets. However, the actions taken by the Chinese Government occasionally work in Datamatic’s favour. For instance, when Datamatic moved to Guangzhou in the 1990s the company was given a tax holiday on company tax for three years at half-tax and for two years entirely free of tax.

Early on, Datamatic met with a significant challenge when its partner in the Mainland did not buy nearly as much from Datamatic as was initially projected. Datamatic had already invested in additional staff and facilities with the expectation that significant internal demand from within the group of companies controlled by the Mainland Chinese partner would be forthcoming. When this did not occur, Datamatic had to reassess its business aspirations and accept several loss-making years.

**Company Strategy**

Datamatic’s key response to its various challenges has been to focus on developing a niche market in automobile lens moulds. This niche feeds into the automobile market in the Chinese Mainland, a market that is projected to grow rapidly. Presently the niche strategy is paying off and approximately 95 per cent Datamatic’s sales are related to automotive lighting. Being a smaller and more nimble operator allows Datamatic to be more flexible, to make decisions faster, to more quickly adopt new and suitable technologies, and to rapidly respond to market changes. This enables Datamatic to create advantages that are hard for the large Mainland owned mould and die manufacturers to match.

Datamatic’s focus is to continuously improve its operations and its business step-by-step. Being a smaller operator the company does not have the money to spend to make quantum leaps in the development of technology, but it makes targeted investments in research and development to keep the company at the leading edge of technology and to improve the precision and efficiency of its operations. It also applies new affordable technology developed by others. For example, Datamatic was the first company in Hong Kong that provided Computer Number Control (CNC), Electrical Discharge Machining (EDM), Wire-EDM, and CNC services. Datamatic was one of the first to start to fully computerise its equipment in 1988. Datamatic regularly teams up with professional organisations such as the Hong Kong Productivity Council and strategic partners to explore more business and technology advancement. Datamatic also takes part in activities that are organised by the Hong Kong Mould & Die Council to get the latest industry information which it then uses to make continuous improvements to its business.
Datamatic has worked hard to develop a good reputation and a good client network. Through these assets, Datamatic has advantages over Mainland China owned competitors in obtaining business, in implementing international business practices, and in maintaining good customer relationships over the long-term.

Datamatic moved into China to follow major clients who began setting up significant manufacturing operations in the PRD. The company identified a possible partner in Guangzhou and formed a joint venture in 1995. This helped reduce land and labour costs and improved access to labour. Datamatic has found that workers from Guangzhou are less likely to leave the company and set up as competitors than workers who come from other parts of China. Knowing them to be more stable, Datamatic targets workers from Guangzhou. Increasingly however, Datamatic is finding that it is difficult to attract workers from Guangzhou. In recent times, this means that Datamatic has had to look to recruit staff from the Northern part of China.

The company knows that its staff make the decisions and take the actions that will help it remain competitive. This means that the staff have to be well trained so that they are capable of making decisions and taking action as required. To this end, Datamatic has in collaboration with several universities implemented a number of training and educational programmes aimed at developing its staff.

Quality accreditation is important to Datamatic as a signal to its customers that the company is committed to quality, and as a means of driving internal improvements. Datamatic has ISO 9001:2000 accreditation and has adopted elements of ISO 16949 in its manufacturing system. The company has also instituted a Quality Improvement Committee to help review and improve product standards. Datamatic has received an “Operation Excellence Award” as well as awards for “mould design” several times from the Hong Kong Mould & Die Council.

Datamatic does no direct marketing these days, because it operates in a niche market in which all the key players in the industry know one another. The number of major clients is “less than ten” and the number of firms that Datamatic counts as serious competitors globally in its niche is between 10 and 15. Datamatic has a smaller capital base than all the companies it considers competitors. If competition was based purely on financial strength rather than on other factors like quality, innovation, and reliability, then Datamatic would have to fight hard to survive.

The General Manager of Datamatic, Mr Leton Lee, thinks that the most important element of success is being aware of changes in market, technology, business environment, the industry, and other changes in general. Companies have to learn how to manage changes and how to respond quickly to shifts in the factors that affect the business. Datamatic has adapted to the need to deal with change by finding an “optimum size” and sticking to it. Datamatic’s business is set up to afford maximum flexibility. The production line, in particular, is designed to be as compact as possible to enable Datamatic to be more flexible and responsive to client needs.
Future Plans
Datamatic plans to maintain stable and steady growth into the future and does not intend doing anything “too aggressive.” This translates into expectations of revenue growth of around five per cent each year for the coming five years, greater than five per cent increases in profit, and double digit salary increases for staff.

The company will invest in research and development, concentrating particularly on the development of new manufacturing methodology and on improved machine facilities. Datamatic plans to install more new facilities and more high-end milling machines. The investment pattern during the last few years has been to reinvest a percentage of company sales revenue into research and development and the establishment of new facilities. This practice will continue into the future since the old machines depreciate fast and the technology changes fast.

Datamatic is considering setting up a subsidiary in the YRD to support its clients in that part of China. The company does not envision moving manufacturing wholesale to the YRD, but it can see the merit in considering expanding into the YRD so as to have a presence there alongside major clients. Datamatic does not plan to manufacture outside of China. The company is optimistic about the Chinese automobile market and the opportunities for growth in its niche. Datamatic enlarged the size of its plant in 2005 and purchased more equipment. These changes allow for further product diversification which will make Datamatic more competitive. The Company plans to stay at the forefront of advances in technology and will continue to focus on manufacturing high-end products for automobile lighting components.

Datamatic aims to be a sustainable manufacturer and to maintain a harmonious relationship with the communities in which it operates. The company is committed to environmental protection so as to provide for a better future for all people and to this end it has invested in a waste recycling system to reduce pollution and to be able to claim status as an environmentally friendly firm.

Lessons from the Datamatic Case
There are a number of lessons that can be learned from the Datamatic case.

- Firms in the sector need to learn to expect and anticipate changes in market, technology, and business environment, and be ready to adapt quickly in the ways that are needed to survive.
- Hong Kong firms must demonstrate their value to customers that are considering taking their mould and die work in-house by emphasising the advantages that accompany sourcing externally, the expertise that a specialist company can provide, a willingness to better understand and anticipate customer needs, and opportunities to engage in forms of business collaboration.
- Firms should diversify customer risk by developing relationships with more multiple customers in multiple geographic markets and in multiple industries.
- Hong Kong firms operating in the PRD face higher materials costs than many of their Mainland competitors as well as potential material shortages because non-local companies are required to import some of the critical materials that are used in production.
- Since SMEs in the mould and die industry use specialised labour that can be attracted away by competitors or can leave to set up firms of their own, the SMEs need to have means of attracting and retaining key personnel.
- Firms can combat labour shortages by paying higher wages and offering better conditions and benefits to workers than competing firms.
• SMEs may consider moving their manufacturing operations to other locations, such as the YRD, where competition for skilled workers is less intense at present and where costs are lower in general.

• SMEs should identify and take advantage of incentives and policy measures that are put in place by authorities in Mainland China. These will be different across different locations and will have time-limits. SMEs will need to do their homework to figure out which incentives best suit them.

• Companies that try to compete based purely on financial strength rather than on other factors like quality, innovation, flexibility, and reliability, will have to fight hard to survive.

• SMEs should focus on developing a niche market. Being a niche operator allows an SME to be more flexible, to make decisions faster, to more quickly adopt new and suitable technologies, and to rapidly respond to market changes. This creates advantages that are hard for the large Mainland mould and die manufacturers to compete against.

• The mould and die industry is capital intensive and the technology is fast evolving. To remain competitive, firms should consider how they will fund ongoing investments in research and development and facilities.

• Increased environmental and pollution concerns mean that a firm that can claim status as being environmentally friendly is likely to improve its chances of securing business and developing new business relationships.

• SMEs won’t have the money to spend to make quantum leaps in the development of technology, but they can be alert to advances in technology and apply new technology when others develop it.

• Quality accreditation is an important signal to customers that the company is committed to quality and is a means of driving internal improvements.
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