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1 Theoretical Review

Ducati has manufactured its core products in Bologna, Italy since 1926 (Lerro & Schiuma, 2005); however, Ducati habituates a global market; therefore, it is logical to analyse Ducati utilising analytical frameworks that consider Ducati’s situation: (1) Resources and strategic capability analysis; (2) international strategy analysis.

Scholars determine that strategic approaches to organisational analysis belong to schools of strategy (Mintzberg et al. 1998; Whittington, 1993; White, 2004). Mintzberg et al.’s (1998) Ten Schools of Strategy (appendix A) detail that theoretical schools of study should be considered when undertaking organisational analysis.

Mintzberg et al. (1998) expanded the model further by grouping the ten schools into two sub schools (appendix B): ‘Prescriptive schools’ that focuses on hard processes where analytical outcomes are predictable; ‘Descriptive schools’ that concentrate on the more unpredictable soft socio cultural influences on the internal and external organisation.

Ward & Rivani, (2005) argued that the results achieved through application of conceptual models are influenced not only by the outcomes of the models applied, but also by the personal experiences of the analyst.

Considering these findings the resultant strategies will be subjectively determined by the models applied and by the person performing the analysis. Intrinsically, according to Ward & Rivani (2005) the strategic conclusions drawn from this study will therefore be driven by the same values.

The analysis of Ducati will use aspects of Mintzberg et al.’s (1998) theoretical approach to scrutinise the resources and strategic capability of Ducati in detail; however, alternative models will be used to consider international strategy analysis within the macro environment that Ducati habituates.

SWOT (Humphrey, 2004; Appendix C); PESTEL (J & S quoted by, Mswaka, 2012; appendix D) and Porter’s five forces (2008; appendix E) will be employed to gain perspective on the macro environment; however, the models are not without criticism: Agyapong and kwamena (2011) found the SWOT model superficial due to a lack of detailed analysis; whereas, Hill and Westbrook (1997) concluded the model merely facilitated discussion on strategic awareness without delivering worthwhile outcomes.

Prahalad and Hamel (quoted by Kodama, 2006) determined that Porter’s five forces (2008) works well in stable market conditions, but is not reactive to market dynamics. In addition Kodama (2006) continued to state that Porter’s five forces (2008) is incomplete in the sense that the model has gaps. Kodama (2006) argues that the model fails to adequately consider organisational resources and capabilities; therefore the model is better employed in conjunction with the resource based view (RBV; Amoo, 2012; appendix F) defined as spanning the ‘culture school’ and the Learning school’ (Hurtado, 2008).
The Greiner Curve (Greiner, 1972; appendix H) will be used to reference Ducati’s evolutionary growth and Ansoff’s Product Market Grid (1957; appendix I) will be used to determine the strategic options open to Ducati.

The RBV concentrates upon the particular resources organisations own that gain competitive advantage by focusing internally and testing for core competencies within the organisation that achieve value for customers and lead to differentiation from competitors; whereas, SWOT; PESTEL and Five Forces focus on market positioning and the environment (Anon, 2012). According to Barney (1991: 102, quoted by Foss and Ishikawa, 2006) competitive advantage is achieved through the implementation of value creating strategies unique to the individual firm and unavailable to competitors.

The value chain (Porter, 1985; appendix G) will be employed to study Ducati’s: operations; procurement; technological developments and infrastructure, in conjunction with the VRIN model (Barney, 1991)

Statistics will underpin the study and further scrutiny should uncover transformation dynamics and emergent strategies; a concise examination of the organisational: type; structure and leadership will be incorporated.

Using the models should provide foundations for performing strategic analysis on ‘hard’ and ‘soft’ organisational factors. Secondary research will aim to define Ducati’s: purpose; aims; objectives and strategy in the short and long term futures.
2 A: International strategy analysis

The next section of the paper applies theoretical models to frame research on Ducati from dual perspectives (A; B) laying the foundations for conclusions to be made.

Section A of the case study will analyse Ducati’s international market positioning and strategy through the application of PESTEL and Five Forces combined; Section B will concentrate on the knowledge management and operations from the cognitive and learning schools (Mintzberg et al., 1998; appendix A).

2A: SWOT

In the late nineties Ducati was near bankruptcy until the acquisition of Ducati by the Texas Pacific Group (Lerro & Schiuma, 2005). A radical change of strategy was led by a situational leader (Schermerhorn, 2004), Federico Minoli. A functional organisational structure (Webber, 1922) was employed, turning around Ducati’s crisis situation, making Ducati into world beaters again on and off the race track (Lerro & Schiuma, 2005).

Strengths

Ducati’s recent sporting pedigree is second to none; since 1990 Ducati has won 14 world superbike championships and one Moto GP world title as well as numerous global domestic championship crowns (WorldSBK.com, 2012; motogp.com, 2012); this has earned Ducati strong brand loyalty.

5 Forces; appendix E: 4: Geographically, Ducati is situated within a high concentration of suppliers with which Ducati employs short term contracts; this: drives costs down; increases bargaining power with suppliers and increasing access to knowledge while delivering stability in the resource chain.

Weaknesses

Ducati’s primary product targets a narrow target audience (Anon, 2012); in hand with social trends and the pace of technological change each product has a short lifecycle.

5 Forces; appendix E: 3: Ducati operates in a niche sports market built around the ‘Ducati Community’, collectors and a loyal following; therefore, Ducati does not enjoy high economies of scale. Ducati’s pricing strategy is influenced by exchange rates which impacts pricing (Enrico D’Onofrio, quoted by (Bertacche & Ebhardt, 2010). Particularly in the US market; this factor along with the cheaper prices of the large volume competition increases the bargaining power of buyers.

Opportunities

Ducati operates in the sports section of the world motorcycle market; in evolutionary terms, Ducati is at ‘phase five’ of the Greiner curve, ‘growth through collaboration’ (see appendix H). Ducati has considered engaging the highly profitable sports cruiser market; an option that remains open (Andrea, 2012.)

At the point of transformation several strategic directions were available to Ducati (Ansoff, 1957); Using Ansoff’s ‘Product/ Market’ Grid (1957) Ducati chose to pursue every product strategy in new and existing markets (see appendix I.).
Ducati proceeded to implement a user led knowledge based strategy built upon an innovative internet platform that saw Ducati the MH900e become the first motorcycle sold over the internet; the MH900e sold out in 31 minutes (Jelassi & Leenen, 2003). Partnerships were forged with complimentary brands (Oakley; DKNY) leading to new merchandising opportunities.

**Threats**

*5 Forces; appendix E: 5* Ducat’s principal competitive rivals in the sports bike sector are: Honda, Yamaha and Suzuki. Each enjoys large economies of scale compared to Ducati and therefore incurs lower production and logistical costs that are reflected in end user prices; however, Ducati enjoys superior brand loyalty (Gavetti, 2004).

*5 Forces; appendix E: 1 & 2* With regard to threat of new entrants: the sports bike market is competitive; however, Ducati has established brand loyalty, racing pedigree and a sound production and sales platform; therefore, entry to the market is difficult as is product substitution.

**2A: 2 PESTEL**

Using PESTEL (appendix D) the environment that Ducati operates within will become clearer.

A: 2.1 Political

The financial markets did not react well to recent turmoil regarding the status of the ex Italian Prime Minister Silvio Berluscon (Faris, 2011); interest rates rose which impacted organisational operating costs and profits; the resulting weak euro against the US dollar exchange rate (mdn.mainichi.jp, 2012) leaves Ducat’s global marketing strategy vulnerable; Ducat’s largest presence is in the USA (motorcycle.com, 2012).

A: 3.3 Economic

In response to the political situation, inherent increased operating costs and falling sales in the US Ducati had to increase prices by 6% (Bertacche & Ebhardt, 2010); Ducati’s chief financial officer commented “The euro's strength against the dollar is a real worry” (Enrico D’Onofrio, quoted by Bertacche & Ebhardt, 2010).

A: 3.3 Social

Motorcycles are enjoying a golden era. On television the number of dedicated sports and enthusiast programmes are rising; spectator’s numbers at race tracks are growing, as is merchandising (britishsuperbike.com, 2012).

Ducati facilitated the growth of Ducati’s online dedicated community ‘Ducatiisti’; linking the external with the internal community and creating new alliances with customers and enthusiasts leading to new knowledge and increased brand loyalty (Lerro & Schiuma, 2005).

A: 3.4 Technological

Ducati’s racing DNA is fundamental to technical progression and brand success; however, lack of on track success could deteriorate the Ducati’s association with winning and negatively impact brand image.

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Integrating customers into design through online communities has led to market success and built a detailed insight into customer’s needs. Ducati has exploited integrated web based technologies to directly link Ducati with dealers, suppliers and customers to deliver added value in the resource chain, at the point of sale and in after sales service, strengthening the relationship with customers; but making Ducati reliant on IT (Lerro & Schiuma, 2005).

A: 3.5 Environmental
The low road taxation charges reflect that motorcycles are ‘greener’ options than cars; however, it cannot be ignored that accident death rates on motorcycles compared to cars across all sources are higher.

A: 3.6 Legal
Motor highway control is increasingly regulated; Ducati’s competitive advantage lies in performance (Coffman and Odlyzko, 1998); therefore, further regulation could be a concern.

3 Resources and strategic capability analysis

B: 1 RBV
The resource based view of resources and strategic capability analysis determines that two strategy schools should be engaged in the study: learning school; culture school (appendix F). To facilitate further analysis the RBV approach has been adapted to focusing on Ducati’s resources and strategic capability through the period of turnaround.

B: 1.1 Learning School
Buchanan and Huczinski (2004) defined that organisational change should be supported with internal processes change. Through turnaround Ducati management recognised that knowledge would be a critical resource and ‘lever’ on successful financial results (Lerro & Schiuma, 2005).

Focusing on the value chain (Porter, 1985) to underpin strategy Ducati developed online relationships with suppliers, dealers and customers including feedback loops providing Ducati with valuable access to customer’s needs and behavioural data allowing Ducati to predict change fast; this soon became an emergent strategy.
Ducati used LEAN six sigma business process reengineering (BPR) to ingrain best practice and quality into the ‘hard’ aspects of production (Lerro & Schiuma, 2005).

Ducati embarked upon divestiture as opposed to backward vertical integration through outsourcing production of non core components passing R&D onto the supplier (themanufacturer.com, 2012). Fulfilment was handed over to dealers at 1% commission rates as Ducati performed all the marketing and production; two suppliers for each component was sourced increasing the knowledge pool and reducing the need for warehousing to deliver ‘just in time’ products (Lerro & Schiuma, 2005).

B: 1.2 Culture School
Transformational management (Schermerhorn, 2004) embedded new ideas and behaviors into the culture of producing motorcycles at Ducati. Transformational change embodied in ‘Ducati World’ synthesised the vision and innovated change and developed organisational knowledge as Ducati was brought closer to suppliers and users through a new software platform.

Ducati’s expansion in merchandising through partnerships with fashionable brands like Oakley and DKNY ensures valuable merchandising R&D knowledge is gained, keeping the brand merchandise ‘on vogue’.

4 Conclusions

The application of SWOT; PESTEL and Porter’s 5 Forces (2008) to analyse the industry environment determined that Ducati is vulnerable to two major threats: large volume competition and Ducati’s own success.

Using The Greiner Curve (1972: appendix H) for reference most stages of growth open to Ducati have been explored; intangible resources such as knowledge gained through the online community and relationships with the race team and dealer network leading to innovation remain Ducati’s key assets.

A dealer and supplier network that had grown to support Ducati had become over burdening. From the late nineties management began has turned around Ducati’s fortunes; Ducati embraced change to recover performance and market share; Ducati is back to a position of strength.

Growth in all product ranges increased net profit for 2009 by 63%; North America and the Far-East sales increased by 64%; market share is 8.6% and registrations increased by 5% in 2010 (Del Torchio, 2012); Ducati is growing in all markets.

The global economic instability has stripped Ducati’s prime sports market sector by 12.1% since 2008; however, Ducati sales and profits were up at home (Del Torchio, 2012) and in emergent markets like Asia and North America Ducati sold 63% more bikes in a deflated market (Bureau, 2011; webbikeworld, 2012).

Ducati sales Assets have decreased over the same period however, adding perspective (robotdough.com, 2012); as have Ducati stocks (Ducti Motor Holding S.p.A., 2012). Competitive advantage in the sports bike sector remains strong through.
A continuing commitment to the world sports bike championships and attainment of world titles has driven product differentiation and provided strong branding; although, exchange rates still continue to impact profits. Keeping Ducati strong against the threat high volume producers in this sector remains critical. Technological and racing pedigree gives strategic direction to Ducati; this must be maintained and capitalised upon.

The internet reduced barriers to entry for Ducati enabling Ducati to move from a product to market focus. Ducati’s expansion into merchandising through partnerships with fashionable brands like Oakley and DKNY ensures valuable merchandising R&D expertise is maintained at no cost. This activity keeps the brand merchandise in fashion through clever use of the brand.

Ducati could exploit openings in the cruiser market; however, this would not be recommended until global growth in the key cruiser markets increases and end user’s have more disposable income as the global economic situation stabilises.

Ducati should continue to exploit cleverly outsourced R&D and supply chains. Continuous feedback from Ducati’s online community adds value and drives product development forward creating new growth through innovation and process effectiveness; this should be continued.

Ducati are better concentrating on the internet market as well as the dealer networks; return on profits from manufacture to the point of sale on internet marketed products is dramatically increased due to low dealer commissions paid.

In spite of the economic climate Ducati has increased sales from 12,000 units in 2001 (Lerro & Schiuma, 2005) to a record 40,761 units in 2010 (Bertacche & Ebhardt, 2010).

Ducati should continue to gather knowledge on users through online communities to aid production design and sales. Further exploitation of Ducati’s encompassing software platform should be explored; as should opportunities in branded merchandise.
5 References


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7. White, C., Strategic Management, Palgrave, McMillan, New York, 2004


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7 Appendices

Appendix A

Ten Schools of Strategy (Mintzberg et al, 2009)

1. Design - *A process of conception*
2. Planning - *a formal process*
3. Positioning - *an analytical process*
4. Entrepreneurial - *a visionary process*
5. Cognitive - *a mental process*
6. Learning - *an emergent process*
7. Power - *a process of negotiation*
8. Culture - *a social process rooted in culture*
9. Environmental - *a reactive process*
10. Configuration - *a process of transformation*

Appendix B

Prescriptive schools (3):

- Design
- Planning
- Positioning

Descriptive schools (7):

- Entrepreneurial
- Cognitive
- Learning
- Power
- Cultural
- Environmental
- Configuration

(Ward and Rivani, 2005)
Appendix C:

Definition of SWOT
A process generates information that is helpful in matching an organization or group’s goals, programs, and capacities to the social environment in which it operates. Note that in itself is only a data capture – the analysis follows:

Strengths
- Positive tangible and intangible attributes, internal to an organization.
- They are within the organization’s control.

Weakness
- Factors that are within an organization’s control that detract from its ability to attain the desired goal.
- Which areas might the organization improve?

Opportunities
- External attractive factors that represent the reason for an organization to exist and develop.
- What opportunities exist in the environment, which will propel the organization? Identify them by their “time frames”

Threats
- External factors, beyond an organization’s control, which could place the organization mission or operation at risk.
- The organization may benefit by having contingency plans to address them if they should occur.
- Classify them by their “seriousness” and “probability of occurrence”.

Appendix D:

The PESTEL framework (1)

The PESTEL framework categorises environmental influences into six main types:

Political
Economic
Social
Technological
Environmental
Legal

Thus PESTEL provides a comprehensive list of influences on the possible success or failure of particular strategies J & S (2011)

The PESTEL framework (2)

• Political Factors: For example, Government policies, taxation changes, foreign trade regulations, political risk in foreign markets, changes in trade blocks (EU).

• Economic Factors: For example, business cycles, interest rates, personal disposable income, exchange rates, unemployment rates, GDP trends.

• Socio-cultural Factors: For example, population changes, income distribution, lifestyle changes, consumerism, changes in culture and fashion.

The PESTEL framework (3)

• Technological Factors: For example, new discoveries and technology developments, ICT innovations, rates of obsolescence, increased spending on R&D.

• Environmental ('Green') Factors: For example, environmental protection regulations, energy consumption, global warming, waste disposal and re-cycling.

• Legal Factors: For example, competition laws, health and safety laws, employment laws, licensing laws etc.
Appendix E:

5 Forces Analysis (Porter, 1978)


Porter’s five forces framework; Porter’s five forces framework helps identify the attractiveness of an industry in terms of five competitive forces:

1. The threat of entry,
2. The threat of substitutes,
3. The bargaining power of buyers,
4. The bargaining power of suppliers and
5. The extent of rivalry between competitors.


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Appendix F:

Resource based view (RBV)
Fairy recent approach
Originated from the Chicago School
Associated with the work of Prahalad and Hamel
Superior performance over competitors can be achieved by better use of resources
Focus is innovation, creativity, value chains, knowledge and dynamic capabilities

Strategy Lenses
Design
Ideas
Experience

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<th>Application of strategy schools</th>
<th>Approach to strategy formation</th>
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<tr>
<td>Dynamic capability</td>
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<td>Cultural, Learning</td>
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<td>Planning, Learning or Power</td>
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<td>Constructionism</td>
<td>Cognitive, Cultural</td>
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<td>Chaos and evolutionary theory</td>
<td>Learning, Environmental</td>
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<td>Institutional theory</td>
<td>Environmental, Power or Cognitive</td>
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<td>Entrepreneurship (venturing)</td>
<td>Environmental, Entrepreneurial</td>
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<td>Configuration, Entrepreneurial</td>
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<td>Power, Positioning</td>
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<td>Strategic manoeuvring</td>
<td>Positioning, Power</td>
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Appendix G:

Porter's Value Chain

The idea of the value chain is based on the process view of organisations, the idea of seeing a manufacturing (or service) organisation as a system, made up of subsystems each with inputs, transformation processes and outputs. Inputs, transformation processes, and outputs involve the acquisition and consumption of resources - money, labour, materials, equipment, buildings, land, administration and management. How value chain activities are carried out determines costs and affects profits.

Most organisations engage in hundreds, even thousands, of activities in the process of converting inputs to outputs. These activities can be classified generally as either primary or support activities that all businesses must undertake in some form.

According to Porter (1985), the primary activities are:

1. **Inbound Logistics** - involve relationships with suppliers and include all the activities required to receive, store, and disseminate inputs.
2. **Operations** - are all the activities required to transform inputs into outputs (products and services).
3. **Outbound Logistics** - include all the activities required to collect, store, and distribute the output.
4. **Marketing and Sales** - activities inform buyers about products and services, induce buyers to purchase them, and facilitate their purchase.
5. **Service** - includes all the activities required to keep the product or service working effectively for the buyer after it is sold and delivered.

Secondary activities are:

1. **Procurement** - is the acquisition of inputs, or resources, for the firm.
2. **Human Resource management** - consists of all activities involved in recruiting, hiring, training, developing, compensating and (if necessary) dismissing or laying off personnel.
3. **Technological Development** - pertains to the equipment, hardware, software, procedures and technical knowledge brought to bear in the firm's transformation of inputs into outputs.

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4. **Infrastructure** - serves the company's needs and ties its various parts together, it consists of functions or departments such as accounting, legal, finance, planning, public affairs, government relations, quality assurance and general management

Appendix H: The Greiner Curve (Greiner, 1972)


## Appendix I: Ansoff’s Product - Market Grid (Ansoff, 1957)

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<tr>
<th>Ansoff’s Product-Market Grid</th>
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<td>PRODUCTS</td>
<td>A. Operating plans</td>
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<td>C. Product development</td>
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Appendix J:

**VRIN Model**

The four key criteria by which capabilities can be assessed in terms of providing a basis for achieving *sustainable* competitive advantage are:

- **value,**
- **rarity,**
- **inimitability** and
- **non-substitutability**


VRIN (1)

**V – Value of strategic capabilities**

Strategic capabilities are of value when they:

- take advantage of opportunities and neutralise threats,
- provide value to customers
- provide potential competitive advantage
- at a cost that allows an organisation to realise acceptable levels of return

VRIN (2)

**R – Rarity**

- Rare capabilities are those possessed uniquely by one organisation or by a few others only. (E.g. a company may have patented products, have supremely talented people or a powerful brand.)
- Rarity could be temporary. (E.g: Patents expire, key individuals can leave or brands can be de-valued by adverse publicity.)

VRIN (3)

**I – Inimitability**

Inimitable capabilities are those that competitors find difficult to imitate or obtain.

- Competitive advantage can be built on unique resources (a key individual or IT system) but these may not be sustainable (key people leave or others acquire the same systems).
- Sustainable advantage is more often found in competences (the way resources are managed, developed and deployed) and the way competences are linked together and integrated.
VRIN (4)

N - Non-substitutability

Competitive advantage may not be sustainable if there is a threat of substitution.
- Product or service substitution from a different industry/market. For example, postal services partly substituted by e-mail.
- Competence substitution. For example, a skill substituted by expert systems or IT solutions