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The Strategic Engine Model: Redefined Strategy Structure, as per Market-and Resource-Based Theory Application, Tested in the Automotive Industry

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***Abstract*—**The purpose of the paper is to redefine the levels of structure of corporate, business and functional strategies that were established over the past several decades, to a conceptual model, consisting of corporate, business and operations strategies, that are reinforced by functional strategies. We will propose a conceptual framework of different perspectives in the role of strategic operations as a separate strategic place and reposition the remaining functional strategies as supporting tools, existing at all three levels. The proposed model is called 'the strategic engine', since the mutual relationships of its ingredients are identical with main elements and working principle of the internal combustion engine. Based on theoretical essence, related to every strategic level, we will prove that the strategic engine model is useful for managers seeking to safeguard the competitive advantage of their companies. Each strategy level is researched through its basic elements. At the corporate level we examine the scope of firm's product, the vertical and geographical coverage. At the business level, the point of interest is limited to the SWOT analysis' basic elements. While at operations level, the key research issue relates to the scope of the following performance indicators: cost, quality, speed, flexibility and dependability. In this relationship, the paper provides a different view for the role of operations strategy within the overall strategy concept. We will prove that the theoretical essence of operations goes far beyond the scope of traditionally accepted business functions. Exploring the applications of Resource-based theory and Market-based theory within the strategic levels framework, we will prove that there is a logical consequence of the theoretical impact in corporate, business and operations strategy – at every strategic level, the validity of one theory is substituted to the level of the other. Practical application of the conceptual model is tested in automotive industry. Actually, the proposed theoretical concept is inspired by a leading global automotive group – Inchcape PLC, listed on the London Stock Exchange, and constituent of the FTSE 250 Index.

***Keywords*—**Business strategy, corporate strategy, functional strategies, operations strategy.

I. Introduction

STRATEGY represents one of the key major topics within the management literature. Most seminal definitions reveal its essence as the "determination of long-run objectives, adoption of action courses and allocation of resources necessary for carrying out these goals" [1], "a pattern of objectives, purposes, or goals and the major policies and plans, stated in such a way as to define what business the company is in or is to be in and the kind of company it is or is to be" [2], "defining unique and valuable company's position, making trade-offs – choosing what not to do and forging fit among activities" [3].

Looking from different perspective, operations management discipline deals with rather technical aspects of manufacturing and servicing processes, optimization technics, continuous improvement methods, but rarely ends up with operations strategy (OS) and its vital role in the whole strategy formulation and execution process. Perhaps most authors of operations management prefer not to leave the comfort and convenience of articulating research outside the boundaries of their own organization. In its core definition, OS has mentioned some market requirements or market-driven concerns [4], but these are exceptions rather than the rule. Strategically, opportunities to establish a potential link between both academic disciplines has been eschewed: it was claimed that "operational effectiveness is not strategy" [5], or even "strategy must never be confused with operational efficiency" [6].

II. The Conceptual Model at Glance

The purpose of the strategy is to ensure advantage among others, through driving momentum, in the same way the automotive engine does for the wheels:

- Corporate strategy (CS) is to create corporate advantage through adding up value to corporate whole more than the sum of its business unit parts [7],
- Business strategy (BS) is to create competitive advantage through increasing the difference between buyer's willingness-to-pay and supplier's willingness-to-sell, and at the same time being greater that same competitor's difference [8] and
- OS is to create operations advantage through achieving optimal combination of all five performance objectives – quality, cost, dependability, flexibility and speed.

In this sense, the mission of CS is to achieve economy of scope – being effective; OS – to achieve economy of scale – being efficient, while BS is just striving to be different. The conceptual model (Fig. 1) comprises three levels of strategy which are interrelated through a specific dual integration, built through a vertical orientation.

Top-down direction: The whole process commences with establishing CS goals, posing questions about business portfolios and investment decisions, such as "Where?", "How much?" and "What kind of?". Then it tfollows the BS, identifying how to compete in specific markets and industries,

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trying to find a coherent answer to a generic question "How?", and with which generic strategy to compete. And finally the OC comes that should provide the right answer to a specific question "How?" ("Which way to compete?"), to deliver the highest result from the sum of basic performance objectives - speed, quality, dependability and flexibility at appropriate cost level.

Bottom up perspective: OS strives to improve these objectives, supports and reinforces the final outcome of BS – to achieve sustainable competitive advantage that in turn, contributes to achieve superior economic returns on a corporate level. Based on results of BS, corporate strategists decide on entering/leaving markets, enlarging/shortening the value chains or pursuing business diversification. Once the dyadic information flow is completed, further refinement of the whole process might start again, based on the outcome of this process.

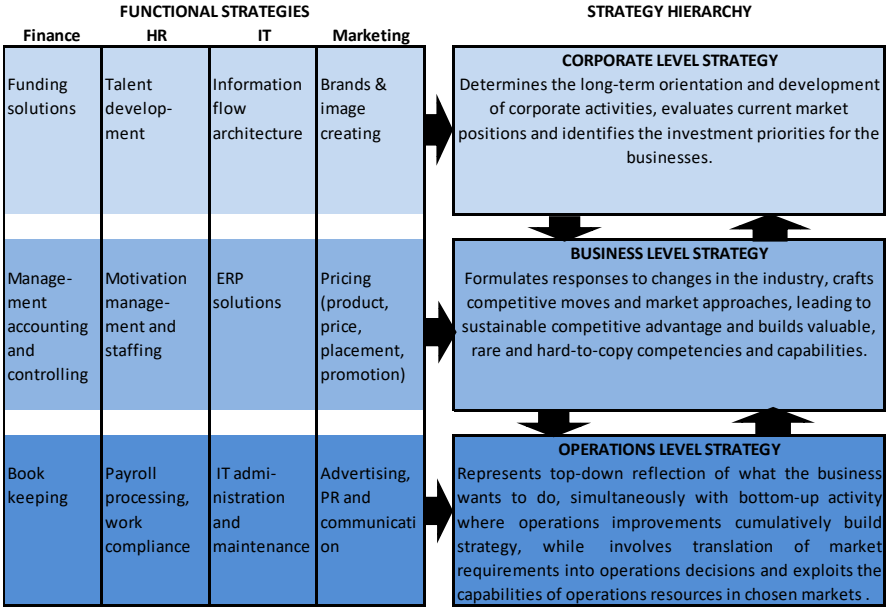


Fig. 1 The strategic engine

A. Practical Application of the New Concept

The traditional set of strategy levels: CS, BS and FS are a precondition for the success of every organization. Both CS and BS provide the right scope and direction for strategy formulation and execution. However details for the right implementation and establishment of right processes are often underestimated. Actually those ingredients become a vital part of the strategic process and in fact represent a core success factor.

The unique combination of top-down (CS and BS) with bottom-up (OS and BS) approaches ensures the right fit of strategy levels. It provides an intersection between vision and details, a crossing point between long-term and short-term objectives. The success of both approaches is reinforced by marketing, finance, HR and IT functions that appear simultaneously at all three levels. Different strategy levels should not be artificially segmented between different scientific disciplines: operations management and strategic management. Rather, this paper argues that they have to be researched as an inseparable duo.

From a practitioner's perspective, the strategy model may prove useful to managers seeking to understand, safeguard and enlarge their company's potential sources of competitive advantage. These advantages can be found on three levels – corporate, business and operations level. Understanding the importance of operations thus becomes a milestone for business success. This may prevent cases where outstandingly formulated CS and BS do not achieve their stated objectives since they fail to set up underlying operations principles of performance objectives that correspond with OS.

B. Model Similarity with a Vehicle Engine

The principle of work of a four cylinder internal combustion engine is presented in Fig. 2, along with its correlated ingredients. For comparison purposes, to every separate complex component corresponds the related strategic level from the conceptual model: the automotive camshafts in management sense represents the CS, pistons in cylinders with valves are equal to BS and the crankshaft plays the same role in the automotive motion in the same way OS does across the whole strategic process. The work of engine components is additionally synchronized by the timing system, in the same way the FS support OS, BS and CS to provide resources and capabilities (competencies) from IT, HR, Finance and Marketing. Detailed comparison between the fundaments of the different stages in the internal combustion engine and the corresponding core statements supports similarities from the relevant strategic levels within the conceptual model. This is summarized by leading academic researchers and is articulated on Fig. 3.

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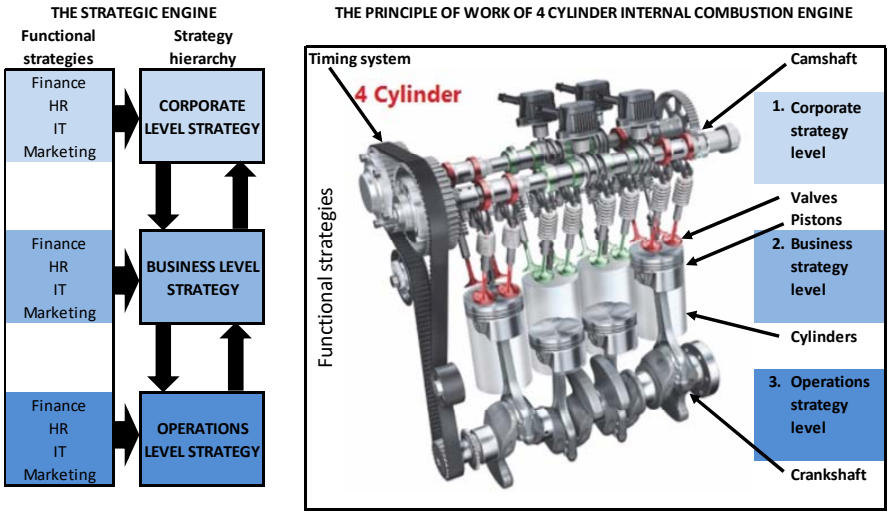


Fig. 2 Comparison of information flow of the strategic engine model with the principle of work of internal combustion engine

THE INTERNAL COMBUSTINE ENGINE		THE STRATEGIC ENGINE MODEL	
Camshaft	The camshaft is the brain of the engine. It works in conjunction with the crankshaft via a timing belt to make sure intake and outtake valves open and close at just the right time for optimal engine performance.	Corporate level	Definitions that emphasize mission and objectives are focused at the highest level of management and are designated as corporate strategy. In term of complexity of business, CS matters over and above BS.CS deals with three dimensions of a firm's scope: product, vertical and geographical.
Cylinders with pistons	Pistons move up and down the cylinders. Every cylinder embraces one piston. When fuel ignites in the combustion chamber, the force pushes the piston downward, which in turn moves the crankshaft.	Business level	Business strategy is concerned with how the firm competes within a particular industry or market. If the firm is to prosper within an industry, it must establish a competitive advantage over its rivals. The basic element of business level strategy is the strategic business unit.
Crankshaft	The crankshaft is what converts the up and down motion of the pistons into a rotational motion that allows the car to move. The crankshaft typically fits lengthwise in the engine block near the bottom. At the front of the end of the engine, the crankshaft connects to rubber belts which connect to the camshaft and delivers power to other parts of the car; at the back end of the engine, the camshaft connects to the drive train, which transfers power to the wheels.	Operations level	Operations strategy ensures four perspectives of scope and coverage: (vertical) a top-down reflection of what the whole group or business wants to do, a bottom-up activity where operations improvements cumulatively build strategy; (horizontal) involves translating market requirements into operations decisions and involves exploiting the capabilities of operations resources in chosen markets.
Timing system	The camshaft and crankshaft coordinate their movement via a timing belt or chain. The timing chain holds the crankshaft and camshaft in the same relative position to each other at all times during the engine's operation. If the camshaft and crankshaft become out of sync for whatever reason the engine won't work.	Funictional strategies	Each business unit comprises a number of functions such as finance, HR, sales and marketing, IT and engineering that make up the total activities withing a business unit. The strategic role of each function is to support those competitive dimensions within a market for which it is wholly or partly responsible. In this way, the market comprises of the agenda based on functional strategies and becomes the mechanism for determining development and investments priorities, which is part of the CS.

Fig. 3 Similarities between principles of work of internal combustion engine with definitions of corresponding strategy levels

The camshaft, positioned at the top of the engine is appointed as its brain; similarly CS is at the highest level of the strategy pyramid and sets up the main directions. This notion is supported by scientists, who assign superior role of CS than BS, identifying five areas of concerns, three of which contain BS issues: (1.) Composition of businesses, (2) Resource allocation between businesses, (3) Formulation of business unit strategies, (4) Control of business unit performance and (5) Coordination of business units and creation of company cohesiveness and direction [9]. The real work is performed in the cylinders, provided by pistons' motion, as the real completion is done on the business level. Each cylinder embraces one piston, similar to the principle: BS is prepared per each strategic business unit. The crankshaft

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is located in the base of the engine and provides horizontal and vertical motion, same as OS, positioned below BS, providing top-down reflection, bottom-up activity, along with matching horizontal market requirements and resources exploitation. And finally, the whole engine activity is synchronized by the timing system, similar to functional strategies that provide resources and capabilities to all three strategic levels. In case the synchrony is lost, the engine is not able to provide any motion - without proper resources and capabilities; no strategy will generate any advantage for the company.

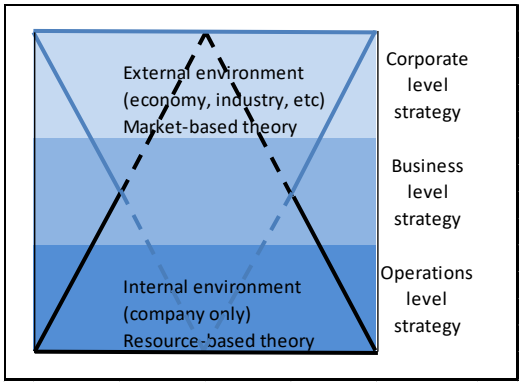


Fig. 4 Matching RBT and MBT at different strategic levels

C. The Theory behind "the Strategic Engine"

Resource-based theory (RBT) plays a significant role in both CS and BS [10]. The same implications apply to OS as well. Adopting a similar logic, we could trace its impact from Market-based theory (MBT) on three strategy levels. In Fig. 4, we outline several consequences matching both theories over the three strategic modes. The blue triangle represents the MBT and its impact on the different strategy levels. The black triangle indicates the RBT. We argue that both theories interact with the three strategic levels in a different, but consistent way. The impact of external environment for CS is different from that for BS. The first one researches the opportunity if anyone is able to assemble a similar portfolio of businesses, while the BS examines the issue if anyone is able to influence a business' cost structure or quality differently. Following a similar logic, OS seeks to achieve the best combination of performance objectives that satisfies market requirements of the firm. Analogously, the internal perspective of OS seeks to achieve highest efficiency, matching those objectives; BS strives to the find best fit of activities, while CS focuses on the most suitable allocation and application of resources and skills sharing among various businesses.

As already mentioned, CS deals with three dimensions of a firm's scope: product, vertical and geographical. The product scope examines the issue with the specialization of the firm in terms of the supplied range of products. Our assessment suggests equal allocation of application of both theories. The vertical scope deals with the range of vertically linked activities within the value chain. As indicated in Fig. 5, we believe that vertical scope requires three times more assessment of MBT than RBT. And finally, geographical range of company's activities requires 100% application of MBT. On average score, CS adopts 75% from MBT principles and just 25% from RBT.

Next level is BS, where the application of RBT and MBT has been extensively researched. The crossing point resulted in the establishment of the famous "SWOT analysis" in 1960's at HBS. On a business level, both theories equally impact the strategy formulation process. With other words, achieving sustainable competitive advantage should result half by assessing environmental opportunities and threats, and the other half by the assessment of a company's strengths and weaknesses.

In terms of OS, in general we believe that RBT plays much more important role (75% on average score) than MBT (25% on average). The highest disproportion impacts cost and quality, where internal effects of high productivity (cost) and error-free products/processes (quality) are four times more important than external effects over the combination of low price and high margin (cost), and uniqueness/specification on products/services (quality) respectively. A similar effect is applicable to speed and flexibility. Internal effects of high throughput process and ability to change system are three times higher than the external impacts on short delivery/lead time (speed) and frequently new products/services (flexibility). To the last performance objective – dependability, we assign one quarter to external dependable delivery as importance of MBT and the remaining score is left to reliable processes and internal production organization, applicable for the scope of RBT.

Based on the average results from the three strategy levels, we posit: From top-down perspective, the application of MBT diminishes its impact proportionately (75% on CS, 50% on BS and 25% on OS), to the same extent as the importance of the application of RBT is increasing (25% on CS, 50% on BS and 75% on OS). In other words, from bottom-up perspective, the application of RBT diminishes its impact proportionately at the same rate at which the application of MBT is increasing.

Corporate strategy	**Impact of theory**	**Product scope**	**Vertical scope**	**Geographical socpe**			**Average score**
	MBT	50%	75%	100%			**75%**
	RBT	50%	25%	0%			**25%**
Business strategy		**Strengths**	**Threats**	**Weaknesses**	**Opportinities**		
	MBT	0%	100%	0%	100%		**50%**
	RBT	100%	0%	100%	0%		**50%**
Operations strategy		**Cost**	**Quality**	**Speed**	**Flexibility**	**Dependability**	
	MBT	20%	20%	30%	30%	25%	**25%**
	RBT	80%	80%	70%	70%	75%	**75%**

Fig. 5 Assigning values for the impact of MBT and RBT to the corresponding strategy levels

D. "The Strategic Engine" Applied in the Automotive Industry

Practical application of "the strategic engine" could be found at Inchcape plc. (www.inchcape.com) - a leading global premium automotive group (Fig. 6), operating in 26 countries across Africa, Asia, Australasia, Europe and South America, with a portfolio of the world's leading car brands in the fast-growing luxury and premium segments, like Audi, BMW, Toyota, Mercedes-Benz, Volkswagen, Lexus, Jaguar, Land-Rover, Porsche, Subaru, Mini, Rolls-Royce. The company is

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listed on the London Stock Exchange and is a constituent of the FTSE 250 Index.

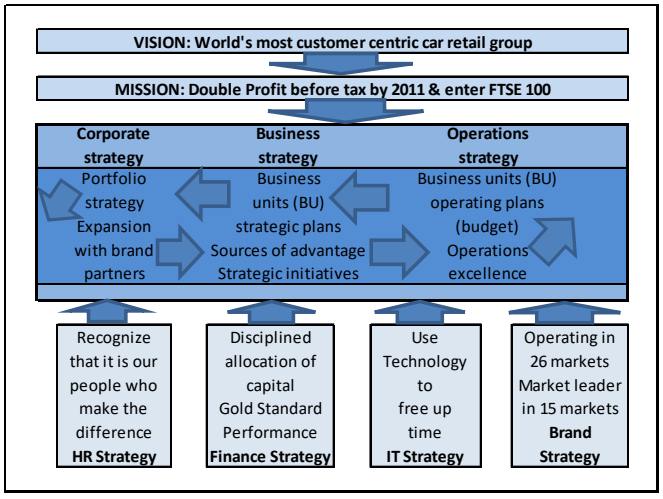


Fig. 6 Inchcape strategic model [13]

By the end of 2006 Inchcape launched its core strategy "Strengthen and Expand", based on the belief and direction that outstanding end-customer relationships driven by superior-centric operational process would improve the Group's business performance in existing markets [11]. The strategic goal was to align the business understanding with a 5-year road map of the group, enabling to deliver the vision to become the world's most customer-centric car retail group. In order to do this, profit before tax from 2016 had to be doubled in five years' time. Inchcape elaborated a strong three-dimensional global business model (strategic pyramid) designed to give the company a vital portfolio diversification and a powerful platform for future expansion. The three dimensions were:

- (CS) A broad geographic spread, with respected local management, which provides a scale of presence across emerging and developed markets; a portfolio of the world's leading premium automotive brands as core partners; enabling Inchcape to fit the right brand with the right market;
- (BS) Approaching markets applying more than one channel – distribution (effectively a master-franchise partner to a motor manufacturer operating as the exclusive national sales and marketing company) or retailing, with scale operations on a regional basis;
- (OS) Diversified revenue streams, supported by growth and defensive value drivers such as new vehicle sales and after-sales servicing.

Four core pillars (functional strategies) were formulated to support this strategy [12]:

- People Make the difference (HR strategy): Matrix organizational management structure, with high growth performance culture, supported by corporate values, world class customer orientation, outstanding management and personnel expertise, talent development and capability planning, combined with timely and proper recognition
- Disciplined allocation of capital (finance strategy): Investment criteria (opportunities must meet strategic criteria - focus on internal rate of return, economic profit generated over the investment period, cash payback, differential hurdles for developing and developed markets), funding capacity (in order to finance the aggressive growth strategy – a cash fund was established - with a financial capacity to invest up to £800m). The aim is to achieve best performance in existing processes and assets utilization (internal and external retail and distribution benchmarking in order to identify the gap versus gold standard profitability, overhead and working capital).
- Use technology to free up time (IT strategy): Automation of processes and information, free up people to focus on front office activities, transfer of best practice processes around the group and consistent information for decision making
- Growth through expansion along with brand partners (brand strategy): Accelerate profit growth through expansion with brand partners (build long-term partnerships with leading automotive manufacturers, to be most preferred brand partner for the related markets, efficient investments in advertising and promotions).

One year after the launch of this strategy, the financial results for 2007 reported extraordinary performance: year-on-year turnover growth of 26 to £6.1bil. and operating profit of £270.7m. Despite the company's record financial performance in the first half of 2008, Inchcape had to prepare itself to place an unprecedented and disruptive economic downturn. End of 2008, since the economic assumptions were totally changed, the original strategy had to be changed as well. A three-tiered strategic approach to managing the crisis replaced the core strategy "Strengthen and Expand":

- Reduce the number of activities in the business;
- Increase the frequency of management reporting from monthly to weekly sessions;
- Stress on outstanding employee performance – monitoring and recognition.

Nevertheless, Inchcape successfully survived the economic crisis from the past decade, but abandoned its initial strategic intent to enter the prestige club of companies from FTSE 100 (Premium segment of London Stock Exchange companies), the roots from "the strategic engine" model still drive its sustainable performance resulted in 2018 in £9.3bil. turnover and profit before tax of £357m.

III. Limitations and Future Research

The paper addressed the notion for redesign of the strategic hierarchy levels from CS, BS and FS to CS, BS and OS, supported by remaining FS at all levels. It is highly probable that after such a vigorous restructuring, the aggregated strategic value would bring the desired sustainable advantage. The value of our conceptual model is mainly limited to the fact that its validity is difficult to be proved since the set of principles is theoretical and its empirical tests will be

questionable. Eventually the reflection of RBT and MBT over the strategic levels framework, and the formulated logical consequence of their impact could be supported by interviews from the CEOs surveys. The other option for sampling of practical application from corporations would be rather vague.

IV. Conclusion

The competitive edge of a successful strategy is built on solid foundations of the right strategy levels within a proper hierarchy. The sustainability of its vertical ingredients (CS, BS and OS) depends on the availability of some horizontal features (functional strategies). Based on these assumptions, we have proposed a conceptual strategic model, simultaneously with providing a different view for the role of OS within strategy overall. Our model is supported by strong theoretical framework. We researched the application of RBT and MBT over the related layers and based on this we formulated a logical conformity: At every strategic level – CS, BS and OS, both theories supplement each other to the extent where the validity of the one exceeds the other. Presumably, our conclusion should be empirically tested and eventually confirmed.

Different functional strategies play different role for supporting CS and BS. The essence of OS is much more profound and extensive, compared with FS. On the other hand, most concepts of OS are valid neither for finance nor for HR or IT functions. We consider that OS occupies a superior place in comparison to other FS. Actually we proved that most theoretical concepts from OS are similar to those that exist in the BS and CS environment. All those arguments allow us to propose a conceptual model, consisting in three levels – CS, BS and OS, that are supported by FS at every stage.

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