Volume-3, Issue-12, Dec-2014 • ISSN No 2277 - 8160

Research Paper | Management

# Scarcity & Ubiquity: Towards Understanding What Makes a Strategic Resource

**Bilal M. Tayan** | The Department of Management Information Systems, Taibah University, Medina, Saudi Arabia

**ABSTRACT** *Advancements in technology have not only made lifestyles more convenient but have enabled us to exploit our skill and knowledge in new ways. In an ever-evolving globalised world of information systems and information technology, corporate survival requires product, service and organisational innovation. Achieving this, organisations require adopting and exploiting the potential of Information and Communication Technologies (ICTs). Information, and the information technology that is used to provide a unique resource, is the foundation and structure of all businesses, whether to gain competitive advantages or to build strategic alliances. This qualitative analytical paper is based on literature which intends to explore the significance of information technology in creating strategic resources for organisations. To this end, Carr's (2003) statement on which a resource truly becomes strategic is through the concept of scarcity and not ubiquity is investigated in light of the significance of ICT's.*

**KEYWORDS : Strategic, Scarcity, Ubiquity, Information Systems**

## Introduction

In 2003, Nicholas Carr came to prominence with his article 'IT Doesn't Matter', published in the Harvard Business Review'. He argued that creating a strategic resource could only be gained by making it scarce rather than ubiquitous. Since then, many arguments have been raised defending and contesting Carr's claims. This analytical qualitative paper therefore explores Carr's article in which he argues that what makes a resource truly strategic is scarcity and not ubiquity. The main dimensions of the discussion focus on the significance of Carr's claim, while noting the significance of information technology in today's world and the importance of information as a platform in building a strategic resource and competitive advantages for organisations. Further, commentary within the paper will focus on additional elements that are deemed significant in creating a strategic resource, exploring the balance between scarcity and ubiquity and considering the importance of Porters Five Forces Model. In addition, this paper will present an argument in favour of Carr's statement. It will adopt the perspective that a strategic resource is primarily founded on the principles of scarcity, in generating, competitive growth rather than ubiquity.

## Synopsis

Globally, information systems are changing, evolving and advancing into new frontiers. The information technology environment is rapidly shifting, seeing a permanent change in landscape of business and information systems. Here, a divergence from static and limited computing to a more ubiquitous and liberated form of business information systems and technology is being realised. Evans and Wurster (1997) explain "every business is an information business ........information is the glue that holds together the structure of all businesses" (p.255). This can be realised in present day management operations, where in the market of the 21st century, the needs for an effective supply chain management are greater than ever. Organisations are struggling to find solutions, approaches and techniques to acquire a strategic resource to better customer service through more effective information systems.

The modern world economy is in the early stages of a deep (Jessup and Valacich, 2008). In the ever-evolving globalised world of information systems and information technology, realising the survival of the fittest is paramount. Organisations therefore require innovative processes in product and service development coupled with organisational innovation too. What are required are new, productive, efficient, ever-evolving and developing approaches to delivering products and services in a cost-effective manner guided by structural and process innovation to deliver a truly strategic output that is unique and significantly different from competitive products and services. The new rule to market and industrial survival is to realise and force organisations to adapt, evolve and implement new approaches in the way they organise internal activities and external relations (Laudon and Laudon, 2007). To do this, companies are required to innovative through the use of Information and Communication Technologies (ICTs). Yet, due to frequent fluctuations and economic uncertainty in the global market-place, organisations cannot solely rely on their Information Technology (IT) systems to make their resources truly strategic.

## Discussion

A critical analysis of Carr's statement, in which a resource is only truly strategic through its scarcity and not ubiquity, is an argument that can be justified. However, the question posed can also be viewed as a value judgement, based on personal opinions and interpretations. What has been evident during the last quarter of the 20th century and through to the first quarter of the 21st century, is that organisations have begun to focus their information system strategies towards developing and delivering a product that is based more on scarcity. Their developments have streamed towards gaining, what is termed, a competitive edge through the exploitation of information systems over rival competitors within their markets. This point is supported by Carr's (2003), argument, which notes "the growth and evolution of a company's' business models, into one which is more 'digitized' " (p. 42).

Baron (2010) comments that developing a competitive edge in the market can only be achieved through creating and distributing a resource that is strategic. What is meant by strategic is the nature of the product's scarcity in the market. The scarcer the product, the more unique it therefore becomes. A resource or product that is unique can be differentiated from similar resources or products. Factors of differentiation may include i) branding; ii) superior quality and iii) visual appearance. It may not necessarily be the fact that to gain a competitive advantage, is to produce a resource that is ubiquitous. Product ubiquity many not accelerate competitive advantages. By selling products cheap and making those available in abundance, may counter act the position of an organisation's competitiveness in the market place (Bocij et al. 2008).

Likewise, it cannot be fair to say that while all companies may have access to technological infrastructure that rapid improvements in economic growth and market share would result. What is needed is a channel to specialise and focus skill on a service / good in order to provide a truly strategic resource. This may, in due course, inevitably provide a greater competitive advantage and result in market domination (Porter, 1996). This is enforced by Carr (2003), who states that "what makes a resource truly strategic – what gives it the capacity to be the basis for a sustained competitive advantage – is not ubiquity but scarcity" (p. 42).

## Porter's Generic Competitive Strategies

Michael Porter developed a strategy which highlights an organisation's relative position within its industry and analyses whether a firm's profitability is above or below the industry average. What Porter suggests, in a nutshell, is that firms have to be strategic. To gain competitive advantages and to gain market dominance, organisations have to create and produce strategic resources that are based on scarcity where the product they offer is unique, significant and can be differentiated from the norm. Consequently, a positive outcome such as cost leadership and market growth, through product differentiation, occurs. The fundamental basis of Porter's Model illustrates two basic types of competitive advantage a firm can possess (cost leadership and/or differentiation).

**Cost Leadership**

In cost leadership, Porter (1996) highlights that strategic resources can be achieved when a firm sets out to become the low cost producer in its industry. Lowering costs may be in the form of economies of scale, proprietary technology, preferential access to raw materials and other factors. However, Porter (1996) suggests that a low cost producer must find and exploit all sources of cost advantage. This is reinforced by Fitzsimmons (1994), who illustrates that if a firm can achieve and sustain overall cost leadership, then it will be an above average performer in its industry, provided it can command prices at or near the industry average.

**Differentiation**

With regards to differentiation, Porter argues that a firm seeks to be unique in its market in order to dominate or capture a larger share of the product market. Porter further comments, in similarity with Carr, that in order to gain a strategic resource, firms would need to implement factors such as product differentiation through appearance, branding, marketing and so forth, that would result in the firm uniquely positioning itself to meet the needs of its customers. Later, firms could then reward its uniqueness with a premium price after capturing a loyal consumer base and acquiring a larger share of the market in operates in.

**The Importance of Scarcity in Creating a Strategic Resource**

Baron (2010), Earl (1996), Eagan (1999) and Nonaka (1991) discuss the importance of information and tacit knowledge. Earl (1996) argues that what companies focus now is on information; where information is more superior to material resources or capital in creating wealth in the new information economy. Building competitive advantages is not gained by perfectly seizing the known, but rather more imperfectly seizing the unknown. Information has become a strategic resource upon which the operation and competitiveness of all firms depend on. Resources, products and services may be similar and ubiquitous, but to be truly strategic they need to compete on product differentiation by 'doing things differently', and hence creating a scarce product. In addition to scarcity, additional points in creating a strategic resource may include the following i) product diversity; ii) resource branding; iii) cost leadership; iv) product reliability and availability; v) excellent customer service/service support and vi) product innovation.

Furthermore, as Bocij et al. (2008) suggest, that it may be true to say information technology has become more available and affordable to all, where "their very power and presence have begun to transform them from potentially strategic resources into commodity factors of production…from a strategic standpoint, they became invisible; they no longer mattered" (Carr, 2003, p.42). One can see that with the evolution of information technology and information systems in business models, the age of wireless operating technologies could further generate a competitive edge for businesses due to the relative scarcity of the service. Robson (1994), Bocij (2008) and Baron (2010) explain that the scarcity of information technology and information systems for some organisations could result in a superior resource. This could perhaps be true for many organisations operating in developing countries. Translating this, automation and technology exploitation may witness products being supplied more swiftly to a market where there are no close substitutes. Therefore, the product could therefore see prices charged at a relatively higher rate due to its scarcity in the market. This is similar to Microsoft dominating the computer software market with their strategic resource being the Windows operating software and with Apple's Android operating system found in their hand-held electronic devices.

What can be witnessed now is IT being used everywhere; it is in our lives and it is an essential part of business organisational strategies. Companies now face a saturated market based on Information Technology. But what will differentiate them from their competitors is their ability to specialise in the production of a resource, to create, generate and supply a resource that is unique, whether tangible or intangible (in terms of customer service, quality of service delivery etc). For example, Wal-Mart, the world's biggest supermarket chain has used EDI (Electronic Data Interchange) with its suppliers to increase inventory turns. Information Technology though ubiquitous in terms of its availability, must be used in conjunctions with other exogenous factors based on scarcity, such as information and knowledge. What can be said is that information, and the Information Technology that is used to provide a unique resource, are the pillars that holds together the structure of all businesses, whether to gain competitive advantages or to build strategic alliances (Galliers, et al., 1995; Jessup and Valacich, 2008). The fact that companies need to specialise to provide a strategic resource is highlighted with the example of American airlines, which have used the SABRE Reservation System to increase levels of capacity utilisation in their aircraft. American Airlines have combined their use of IT and their knowledge of the tourism industry to efficiently create a unique system (scarce resource) that can efficiently maximise seating utilisation within all American Airline's aircrafts.

Likewise, in similarity to Carr (2003), Stevenson (2003) notes that, organisations should focus on spending less financial resources on Information Technology, as IT is no longer considered as a strategic resource. IT managers should rather concentrate on outsourcing where efficiently viable, as well as and becoming leaner and more responsive to customer demands and to environmental changes. This point may also be highlighted with the introduction and reconfiguration in business value chains over the years, new ways of working such as structural innovation with a greater focus of decentralisation. Further, more concentration on business process re-engineering and inter organisational innovation such as greater business-to-business (B2B) collaboration and inter-firm collaborations in producing a unique resource in gaining greater competitive advantages in their own markets.

Supporting Carr's argument is highlighted by Craig Barrett, the then Intel's CEO in which he states that "IT infrastructure is indeed essential to competitiveness…but it is no longer a source of advantage at the firm level – it doesn't enable individual companies to distinguish themselves in a meaningful way from their competitors." (Carr, 2004, p.42). However, "you can get real business advantage with technology. You just don't get it from products, services and information. You get it from processes, skills and execution..." (Carr, 2004, p.43). Nevertheless, this point can also be contrasted with Normann's (1995) argument who point out that the world and economy that we live in is past the age of Information Technology. The barriers of technology as we see it now are already being broken, as most company requirements already use and implement cutting edge technology, with IT requirements being fulfilled by existing software and equipment. However, it could be argued that technology also plays an important role in all major businesses. Tesco, a large UK retailer, for example, is an innovating company and has introduced various types of technology that is involved in the operations of their business (Tesco, 2014). These include wireless devices intelligent scales, electronic shelf labelling, self check-out machines and radio frequency identification systems (RFID). Competition in this industry is fierce, therefore it is vital that Tesco researches and introduces further technological advancements which in turn assists them to operate more efficiently and effective, thus providing a competitive advantage to maintain or extend their position as the leading retailer in the food provision market. Tesco realise the importance of being innovative, providing a scarce resource and understanding customers, in order to meet the needs and build a strong relationship, as they have highlighted in their core purpose.

Tesco is a supporter of technology, more specifically, wireless technology. It is one of a limited number of UK supermarket chains that utilises over 5,000 wireless access points across an excess of 600 stores and distribution centres to manage the inbound/outbound logistics (Tesco, 2014). This strategic scarce resource, as Carr notes, is essential more so than ubiquity in developing competitive advantages. Tesco believes that it would allow them to aim to have full control of the whole circulation of products and improve availability, in comparison against previous years where such a wireless information system was not present. The strategic scarce resource that Tesco have stated would give substantial support to their employees, allow recognising stock losses in a more simple way, and increase the levels of speed and ameliorating product availability for consumers. In the long run, the major retailer's vision is to take advantage of the wireless information system (its scarce strategic resource in gaining competitive advantages more so than ubiquity) with a view to performing more effectively in the market against other, perhaps stronger, competitors like Sainsbury's and Asda, while averting the possible threat from new entrants into the market.

According to Baron (2010), Bocij et al. (2008) and Geroski (2003), the emergence of information communication technologies (ICT's) could transform the means of information exchange within and between organisations, but the resource that is generated needs to be scarce and unique, more so than being ubiquitous. If the resource is easily duplicated and produced that rival competitors could undercut and over supply the market, seeing the resource and goods becoming more ubiquitous as it gets more readily available and cheaper in the economy. In addition, Parnell (2006) notes that what is also needed is a growth of customisation in developing a relationship with customers and understand their needs, offering as many products as possible at the best possible price by tailoring your products and services, thus making it scarce and unique resulting in greater levels of competitive growth (Muddie and Cottam, 1993).

**Conclusion**

In conclusion, this analytical paper, and based on the review of literature, has sought to note and discuss Carr's (2003) statement that what makes a resource truly strategic is scarcity and not ubiquity. What this paper has illustrated is that Carr's argument is one that most commentators would agree with, in the sense that a strategic resource is not just based on ubiquity but more towards scarcity. It has shown the perspective that other exogenous factors may also improve an organisations competitive advantage in delivering quality services or a unique product, and hence its scarcity. Significantly, the use of information technology is still important, but organisations need to utilise their IT systems to reprocess and restructure them in a way that develops and delivers a strategic resource which is unique to their organisation. While information technology is available to all, it needs to be harnessed and moulded to generate and work in conjunction with the other tangible and non-tangible elements of the business in order that a truly strategic resource is developed. This is what leads onto a road of competitive growth, market dominance and product utilisation.

## REFERENCES

Baron, D. (2010). Business and its Environment. London: Pearson. | Bocij, P., & Greasley, A., & Hickie, S. (2008). Business Information Systems. London: Prentice Hall. | Carr, N. (2003). IT Doesn't Matter, Harvard Business Review, Vol. 81, No. 5, 41-49. | Earl, M.J. (1996). An Organisational Approach to IS Strategy-Making In Information Management: The Organisational Dimension. Oxford: Prentice Hall. | Egan, C. (1999). Creating Organisational Advantage. London: Butterworth Heinmann. | Evans, P., & Wurster, T.S. (1997). Blown to Bits: How the New Economics of Information Transforms Strategy, Harvard, Harvard Business School Press. | Fitzsimmons J.A, Fitzsimmons, MJ. (1994). Service Management for Competitive Advantage. New York: McGraw-Hill. | Galliers, R.D., Swatman, P.M.C., and Swatman, P.A. (1995). Strategic Information Systems Planning: Deriving Comparative Advantage from EDI. Journal of Information Technology 10, 149 - 157. | Geroski. P.A. (2003). The Evolution of New Markets. Oxford: Oxford University Press. | Jessup, L., & Valacich, J. (2008). Information Systems Today: Managing in the Digital World. New Jersey: Prentice Hall. | Laudon, K., & Laudon, J. (2007). Essentials of Business Information Systems. London: Pearson. | Mudie, P. and Cottam, A. (1993). The Management and Marketing of Services. Oxford: Butterworth-Heinemann. | Nonaka, I. (1991). The Knowledge Creating Company. Harvard Business Review, Nov-Dec, 96-104. | Normann, R. (1995). Service Management. London: John Wiley. | Parnell, J. A. (2006). Generic strategies after two decades: A reconceptualisation of competitive strategy, Management Decision, 44,8, 1139-1154. | Peppard, J. (1999). Information Management in the Global Enterprise: An Organising Framework. European Journal of Information Systems 8, 77-94. | Porter, M.E. (1996). What is Strategy? Harvard Business Review, Nov-Dec, 61 - 78. | Robson, W. (1994). Strategic Management and Information Systems, London: Pitman Press. | Stevenson, W.J. (2003). Operations Management. London: McGraw Hill. | Tesco PLC (2014). Tesco Reports, available at: | http://www.tescoplc.com/index.asp?pageid=596 , accessed 13/05/2014. | Walsham, G. (1993). Interpreting Information Systems in Organisations. London: John Wiley. |