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Business Model Evolution: In Search of Dynamic Consistency

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The business model concept generally refers to the articulation between different areas of a firm's activity designed to produce a proposition of value to customers. Two different uses of the term can be noted. The first is the static approach - as a blueprint for the coherence between core business model components. The second refers to a more transformational approach, using the concept as a tool to address change and innovation in the organization, or in the model itself. We build on the RCOV framework - itself inspired by a Penrosian view of the firm – to try to reconcile these two approaches to consider business model evolution, looking particularly at the dynamic created by interactions between its business model's components. We illustrate our framework with the case of the English football club Arsenal FC over the last decade. We view business model evolution as a fine tuning process involving voluntary and emergent changes in and between permanently linked core components, and find that firm sustainability depends on anticipating and reacting to sequences of voluntary and emerging change, giving the label 'dynamic consistency' to this firm capability to build and sustain its performance while changing its business model.

Introduction

The term business model (BM hereafter) has flourished in the managerial literature since the end of the 90s, especially with the emergence of the Internet and its massive adoption for e-commerce.[1] Generally speaking, the concept refers to the description of the articulation between different BM components or 'building blocks' to produce a proposition that can generate value for consumers and thus for the organization.[2] Broadly, two different uses of the concept can be identified. The first refers to what we might call a *static approach*. Essentially, this insists that the important word in the expression is 'model', and thus on the coherence between its core components. In

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this approach, a BM is ultimately a blueprint - even a recipe - that fulfils important functions such as enabling description and classification.[3] For instance, the generic BMs of low cost airlines are now well documented and regularly referred to as a coherent set of choices that offer the potential for superior performance. In this view, a BM synthesizes a way of creating value in a business.[4] This stream helps to describe how an organization functions and generates revenues - more precisely, it assists managers to conceptualise the different activities their company employs to generate value and its mechanisms for value creation.

The second use of the concept represents a *transformational approach*, where the BM is considered as a concept or a tool to address change and focus on innovation, either in the organization, or in the BM itself. In particular, new BMs have been acknowledged as radical innovations with the potential to shake whole industries: Raff, for instance, has noted how the superstore models of Borders and Barnes and Noble alarmed the American book retailing sector. In this approach, a sustainable BM is rarely found immediately, but requires progressive refinements to create internal consistency and/or to adapt to its environment - as Winter and Szulanski argue: '*The formula or business model, far from being a quantum of information that is revealed in a flash, is typically a complex set of interdependent routines that is discovered, adjusted, and fine-tuned by 'doing'*'[5].

The static view [of a business model] allows us to build typologies and study [its] relationship with performance …the transformational view deals with the major managerial question of how to change [it]

Each of these stances is interesting and has strengths - but also weaknesses. On the one hand, the static view allows us to build typologies and study the relationship between a given BM and performance. From the managerial point of view, it gives a consistent picture of the different BM components and how they are arranged, which can then be communicated and understood (which can be particularly important for entrepreneurs aiming to win the confidence of investors).[6] But static approaches are often unable to describe the process of BM evolution since they do not aim to. On the other hand, the transformational view deals with this major managerial question, and thus can help managers reflect on how they can change their BMs. But (as both Yip and Teece point out) it tends to mobilize the BM concept to discuss change rather than looking at how business models change themselves: those (rare) articles dealing with this feature tend to focus on a given BM component — such as Raff on the evolution of the capabilities, Winter and Szulanski on the role of routines, and Johnson et al. on the change in value propositions — but to overlook the interactions between components which Tikkanen et al. note as the hallmark and usefulness of the static approach.

In this article, we try to reconcile these two approaches to address the question of how a BM evolves, looking particularly at the dynamic created by the interactions between its building blocks.[7] To handle this question, we adopt a deductive approach to identify first the BM's component parts — corresponding to the static approach - and then to deduce how these components change at the organizational level. To do so, we build on Lecocq et al.'s RCOV framework which was inspired by the Penrosian view of the firm. Our interest in Penrose's work lies in her dynamic view of the growth of organizations, and her delineation of the different core components of a firm which allows us to explain firms' growth process by theorizing about the dynamics between these components. Following Siggelkow's argument that illustrative cases assist conceptual contributions by allowing us to '*get closer to constructs and be able to illustrate causal relationships more directly […] and to unravel the underlying dynamics of phenomena that play out over time*', we illustrate our framework with the case of English Premier League football club Arsenal FC (see Exhibit 1).[8]

The choice of sector and case organization are justified by the important changes occurred during the last ten years (our study period) in these settings. Professional football has become an important economic sector, particularly in England where Premier League revenues grew five-fold between

Exhibit 1
The case of Arsenal FC

Context

Arsenal FC is one of the oldest established of England's professional football clubs. First founded in 1886, it is the only club to have remained in the top English League since World War I. Since then, based at its famous old ground in Highbury in north London, the club has enjoyed many periods of significant success: but the most recent era has probably been the most celebrated in its whole history. Its current manager - the Frenchman Arsène Wenger, appointed in 1996 and widely held to be the most visionary and charismatic figure in contemporary English football — has built a succession of teams based on talented young players (often from abroad) and developed a playing style based on speed, skill and verve that has won the Club both trophies and admirers, in numbers. (As just one example of their success, they managed the unequalled feat of remaining unbeaten throughout the whole 2003—04 Premier League season.) These achievements are the more remarkable in being made during a period of far-reaching business turmoil in football's financial landscape, largely associated with a 'triptych' of environment jolts - which we have rehearsed in our main text under the labels Taylor, BSkyB and Bosman - which have left many English clubs (even in the upper echelons) in considerable financial peril. In Arsenal's case, a significant element in its response has been to conceive, plan, build and move into its new 'Emirates' stadium — an advance many other English clubs are still only contemplating.

Method

We present the case of Arsenal FC as an illustrative case, designed to flesh out our arguments, rather than to be 'mined' to extract theoretical concepts, and because the changes in its business model in face of the sector's recent environment uncertainty (and its responses in terms of investments in infrastructure) have been arguably the most impressive in Europe. In studying the evolution of the Club's BM, we have essentially exploited one main secondary source — its Annual Reports (noted as AR throughout the article) over our 11 year analysis span (1999—2009) — as they provide comparable figures. We collected further secondary data, such as official Club press releases, Deloitte Reports on European Premier leagues, as well as dozens of articles from sports and business journals. Using the Annual Reports as our main source of material has entailed pros and cons. On the pros side, they allow us to collect rigorously quantitative data which are comparable over a long period, and also enabled qualitative comparisons via the reports' repetition of the same sections (chairman's report, CEO's report, financial review…). However, the clear drawbacks of this source are a positive bias towards Arsenal's successes and a tendency to rationalize *ex post* what happened during the year, without giving much attention to decision makers' trials and errors. But our consciousness of these weaknesses does not lessen the usefulness and richness of this material, which we have been able to triangulate against data from independent sources such as the Deloitte reports and business journals articles.

1995 and 2005 (to nearly £2 billion), with other big European leagues reporting substantial, two- or three-fold increases. Arsenal FC was chosen in particular because of the dramatic evolutions of its environment and the significant modifications it has made to its BM over the decade to maintain its status of one of the English Premier League's 'big four'. The period saw a new logic of 'football as business' replace the older, traditional professional sports club structure, entailing diversified revenue sources, increased internationalisation, multiplied sponsorship ties and the development of new resources: over the study period, Arsenal was the largest investor in terms of capital expenditure in its sector. These changes have seen the group's turnover multiplied nearly 650% to over

£310m, which we can regard as being a dramatically successful case, with (as the club's Annual Report for 2009 notes) a '*business model [that is] widely respected*'.[9]

In sum, then, our contribution in this article concerns BM evolution viewed as a fine-tuning process involving intended and emergent changes both between and within its core components. The Penrosian approach also underlines the ongoing dimension of change as a permanent state. A refreshing consequence of our finding is that the sustainability of an organization depends on its ability to anticipate and react to the consequences of evolution in any given component. We label the capability that allows a firm to change its BM while at the same time building and maintaining sustainable performance as 'dynamic consistency'.

A Penrosian view of the business model concept

We make our conception of BM operational by adopting Penrose's view of the firm as bundle of resources (rather than of contracts or transactions as in other theories): her framework explaining the growth of the firm is suitable to our purposes, as it is at once dynamic, and based on the interaction between distinct core components. On one side, resources - mainly physical (plant, equipment, waste products, stocks…) and human (unskilled and skilled labour, clerical, financial, legal …) - play a crucial role. They are not important *per se*, but their importance lies in the 'services of resources', (i.e. the productive services that a resource can yield), and here Penrose notes that '*[the services] yielded by resources are a function of the way in which they are used … in combination with different types or amounts of other resources*'.[10] These resources can be bought, leased or produced internally - or hired in the labour market — and are acquired on the basis of the services they will notionally render to the organization. But, once incorporated in its operational activities, these services gain a more specific, idiosyncratic status, from being bundled and associated with other kinds of internal resources.

On another side, their final application — the bundle of possible services an organization's resources can produce — will depend on its management's capacity to extract value from their use, and to create more or less innovative combinations. Here Penrose distinguishes between the operational and entrepreneurial capacities of management. The first concerns the way such services support the organization's normal ongoing regime, and, importantly, involves improving the exploitation of organizational resources and the deepening of its accumulated knowledge. The second (entrepreneurial ability) results from managerial capacities - which are not confined to dedicated roles but could emanate from any position in the organization's hierarchy — and encompasses new combinations between the 'services of resources', the creation of opportunities to use the resources or the motivation to acquire and/or develop new ones. The resources accumulated over the organization's history will be continually reacting with each other, and with other constituent parts of the firm's structure and sharing the same path-dependency, in unique combinations that will vary within the firm, and which produce and determine the firm's idiosyncratic bundle of capabilities that differentiate it from others in its sector.[11]

The resources accumulated over an organization's history continually react with each other in unique combinations to determine the firm's idiosyncratic bundle of capabilities that differentiate it in its sector

Finally, the collection of accumulated resources, and the way they are articulated by the organization's management, can enable it to envisage new productive opportunities and to propose new products or services into its markets. The role of entrepreneurs is to build *new* value propositions in an organization, while the role of managerial services to implement entrepreneurial ideas and proposals. Penrose argues that the firm's environment is more '*an "image" in the entrepreneur's mind*' — and that they (and by extension the entire firm) interpret their environment based on the internal resources the firm possesses, so that its development is driven more by subjective ideas about potential productive opportunities than by an objective view of what the firm can accomplish at a given moment.

Before further developing our own view of BM, two points must be addressed. Firstly, the concept can be used at different levels, which are equally important. At an abstract and conceptual level, the BM concept refers to generic representations that can be applied in multiple sectors.[12] For instance, the free business model describes how some organizations can earn revenues by proposing free products or services to groups of consumers. This general model encompasses itself different specific models, such as the cross-subsidization between products, price discrimination between customers (freemium) or 'double-sided' markets.[13] But the BM concept can also refer to real world instances and to the study of the models implemented by concrete organizations.[14] To continue with free business models, the BM of Linux differs from those of Google, Wikipedia or Adobe, both in the value proposed to consumers and in how transactions are organized. At the individual level of analysis, each organization's own specific BM is linked to a more generic (i.e. a more conceptual) BM. So the BM lens helps us analyse the functioning and architecture of a specific organization, which is the level of analysis we adopt in this article.

Secondly, we conceive of the BM as the way an organization operates to ensure its sustainability. To study change in a BM in a fine grained manner demands that we identify its core components, as a first step, before dealing later with the complex processes of change and organizational evolution.[15] In the literature, the concept is broken down in two ways. Some authors (including, for instance, Yip, Osterwalder, and Johnson et al.) choose to identify and to describe *ex ante* the main components of a BM (for instance, resources, value network, customers …) while others rely on a more inductive approach to distinguish them - and their interactions - for the specific organization under study.[16] Siggelkow notes that '*the advantage of an ex ante specification of core elements is that changes in these elements can be measured consistently across firms. The disadvantage of this approach is that it assumes that the same elements are equally central or core in all the firms*'[17]. We argue that, by specifying only a few general core BM, components, each encompassing various subsidiary elements, we can avoid the disadvantages of the *ex ante* approaches while still allowing comparisons across firms.

Further elaborating on the Penrosian firm view, we assume that a BM can be described with three core components: its *resources and competences*, its *organizational structure* and its *propositions for value delivery.*

- Even a start-up will begin with something in the way of *resources and competences*.[18] The resources may come from external markets or be developed internally, while the competences refer to the abilities and knowledge mangers develop, individually and collectively, to improve, recombine or change the services their resources can offer.
- The second component— the *organizational structure*, encompasses the organization's activities and the relations it establishes with other organizations to combine and exploit its resources. To put it in a nutshell, this 'building block' includes its *value chain of activities*, i.e. the various discrete process it is involved in, and its *value network*, i.e. the (maybe quite complex) web of relations its creates with external stakeholders (suppliers, customers, competitors, regulators …).[19]
- Finally, a BM also includes a third component - the *value propositions* a company delivers to customers, in the form of its products and services. At a subsidiary level, these propositions also encompass how and to whom the offer will be marketed. Firms may address value propositions to various kinds of 'customers' - end consumers, suppliers, complementors, competitors or sponsors - particularly in the case of multisided markets.[20] As Amit and Zott define them, value propositions reflect the content of the transactions with customers, and the idiosyncratic deployment of resources that each organization manages so as to generate its offers. For instance, in the biotech industry, many start-ups add services to their portfolio of products development: in the long term their revenue sources are their products, but proposing services to their customers allows them to generate short-term cash resources.[21]

These three core *components* (resources and competences, organization, value propositions) will each encompass several different *elements* (numerous kinds of resources, partnerships with different firms within the value network, various kinds of products offered to customers …), and the structure and volume of the organization's costs and revenues follow from them. Our conception sets value propositions as the only sources of revenues, to be understood in the broadest sense as turnover, but also include to royalties, rents, interest, subsidies or assets handovers. Alongside revenues, running different activities in an organization and acquiring, integrating, combining or developing resources are the BM's costs drivers. The difference between revenues and costs ultimately generates a more or less substantial margin (reflecting the value that the organization captures) that can subsequently feed the stock of resources and competences and which therefore determines over time the sustainability of the BM.

Somehow Arsenal had to keep up its performance (on both field and balance sheet) [in spite of] significant changes in its operating environment, while at the same time evolving its BM to face its future.

We now apply our concept to the illustrative case of Arsenal FC. In common with its rivals – English and European – the study period saw significant changes in its operating environment (which we enumerate at a later stage). Somehow it had to keep up its performance (on both field and balance sheet) while at the same time looking to evolve its BM to face its future. A brief look at some staffing and financial figures over the study period give some insights into the outlines of its changing situation.

On the resources side, observers of the football sector regularly associate clubs' performance with two major resource categories: its stadium facilities and its human resources, especially the playing squad, but also the training staff. Throughout the study period, the increasing levels of transfer fees and players' wages required to attract and retain the best players gave Arsenal's management cause for concern, but were considered as an inexorable constraint the club couldn't escape if it wanted '*to maintain a playing squad of the size and quality necessary to achieve success at the highest level of the game*' (AR, 2000). These two major key inputs (its stadium and its staff) are the main resources on which the Club's value propositions are built. However, building offers from these main resources requires the development of other resources and competences, such as customer relationship management, developing the brand equity of Arsenal's famous trademark and the capacity to establish strategic partnerships with sponsors. Other competences - in detecting and attracting, and then training and developing talented young players – are also seen as crucial, as they can enable a club (partly) to escape from the rises in player costs.

In Arsenal's case, these resources and competences were partly exploited by creating long-term partnerships with many external actors - commercial partners, suppliers, foreign football clubs and media partners. In 2006, Arsenal listed among its main partnerships: '*naming rights and shirt sponsorship contracts with Emirates Airline which expire in 2021 and 2014 respectively, a kit sponsorship contract with Nike which expires in 2011 and a catering contract with Delaware North which expires in 2026*' (AR, 2006). But Arsenal also made internalisation/externalisation choices, deciding, for instance, to internalise its supporter Contact Centre and to develop its customer relationship competence, but to externalise the exploitation of its name and trademark and its retailing and catering facilities at the new Emirates Stadium. During the 11-year study period, these choices entailed an overall doubling in the club's administrative and ground staff to handle its new activities (see Table 1).

The structure of revenue sources (see Table 2) displays the main aggregated value propositions in different markets. Of course, an important part of the revenues of Arsenal come from its gate

Table 1. Arsenal Group: average employee numbers

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Playing staff	58	57	63	71	71	72	61	49	52	54	62
Training staff	27	26	25	26	29	31	32	32	31	31	38
Administrative staff	85	89	109	118	129	135	158	190	206	197	196
Ground staff	10	16	21	24	27	33	42	41	85	97	88
Total	**180**	**188**	**218**	**239**	**256**	**271**	**293**	**312**	**374**	**379**	**384**

Source: Annual reports of Arsenal FC.

receipts, which themselves depend on the total capacity and comfort of the stadium, and on the attractiveness of the team's performance on the pitch. But other value propositions are also made by exploiting the club's resources, including retailing, broadcasting, player sales, property rental and sales (from converting the old stadium into a real estate development) and from renting the stadium for concerts or events, or space (on players' shirts or within the stadium) for commercial advertising and club sponsors. All in all, these multiplying propositions enabled the club to both diversify and increase its revenue sources.

For Arsenal - and most football clubs - costs derivate principally from developing and exploiting its human resources, and from the human competences the organization is building. Staff costs quadrupled over the period, varying between 33% and 68% of turnover (ave. 52%), and while this reflects the growth in the organization itself and its total employee numbers, the lion's share was made up of players' salaries. There was significant inflation in the salaries of 'star' players, and Arsenal's 2002 report records that its management was regularly urged to re-negotiate '*new contract terms with a number of first team players and team management personnel, [to] secure their long term futures at the Club.*' Despite this factor, Arsenal managed to maintain a respectable average operational margin of 17% and a profit after taxation of 8% over the period, although this performance is mainly attributable to the end of the period when the club's new BM became fully operative. (For more details of costs and financial results, see Table 4 below.)

Table 2. Arsenal Group: Evolution of revenue sources

£m %	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Gate receipts	16.2	20.3	21.8	24.6	27.9	33.8	37.4	44.1	90.6	94.6	100.1
	33.3%	*33.2%*	*33.7%*	*27.0%*	*23.7%*	*21.6%*	*27.0%*	*32.2%*	*45.2%*	*42.5%*	*32.3%*
Commercial	26	35.9	23.7	15.8	15.6	14.1	20.7	22.8	29.5	31.3	34.3
			36.7%	*17.4%*	*13.2%*	*9.0%*	*15.0%*	*16.6%*	*14.7%*	*14.1%*	*11.1%*
Broadcasting			14	45.3	51.8	59.8	48.6	54.9	44.3	68.4	73.2
	53.5%	*58.7%*	*21.7%*	*49.8%*	*44.0%*	*38.2%*	*35.1%*	*40.0%*	*22.1%*	*30.7%*	*23.6%*
Retail income	6.4	5	5	4.9	8.5	6.9	8.4	10.2	12.1	13.1	13.9
	13.2%	*8.2%*	*7.7%*	*5.4%*	*7.2%*	*4.4%*	*6.1%*	*7.4%*	*6.0%*	*5.9%*	*4.5%*
Property rentals	—	—	0.1	0.4	14	41.8	23.3	5.1	23.8	15.3	88.3
			0.2%	*0.4%*	*11.9%*	*26.7%*	*16.8%*	*3.7%*	*11.9%*	*6.9%*	*28.5%*
Total	**48.6**	**61.2**	**64.6**	**91**	**117.8**	**156.4**	**138.4**	**137.1**	**200.3**	**222.7**	**309.8**

Source: Annual reports of Arsenal FC.

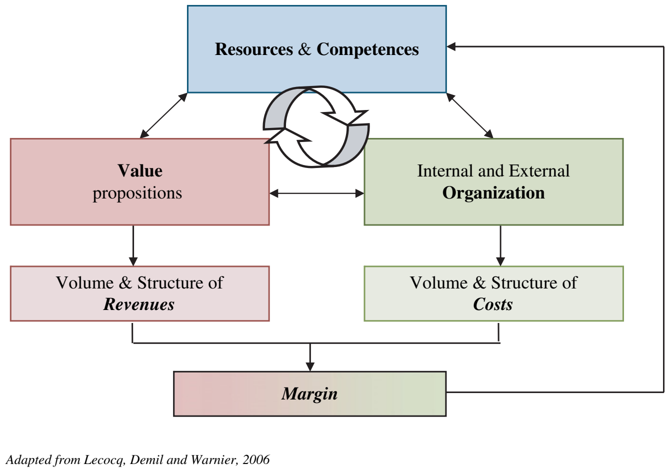

Figure 1. The RCOV framework: main Business Model components and their relationships

The relationships between components: the RCOV framework

Penrose argues that the growth of the firm results from the interaction between its resources, its organization and its capacity to propose new value propositions in markets. Although writing more than half a century ago, her ideas still have a simple strength and much relevance: studying these same core components can help us understand how today's BMs operate as both depictions and tools, and appreciate how an firm (like Arsenal) can sustain its performance while changing its BM. We first revisit the three BM components noted above, and then discuss how an organization articulates them dynamically to generate revenues. As already noted, the three basic BM components in the RCOV framework - resources and competences (RC) to value or combine; the organization (O) of the business within a value network or within the firm boundaries; and the value propositions (V) through the supply of products and services - determine the structure and the volume of costs and revenues of a business and thus its margin, and so, ultimately, its sustainability (see Figure 1). The RCOV framework constitutes a parsimonious and dynamic approach to the BM, implying that entrepreneurs and managers have to consider — *jointly* — questions of accumulated and combined resources, of organization and of value offered. In our view, the BM of a given organization is a snapshot, at a given time, of the ongoing interactions between these core components. But, rather than a snapshot, we should perhaps think of this image as a single frame from a motion picture - for the open-ended interactions between its core components (and between the elements *within* each core component) and the initiatives that flow from managers' entrepreneurial abilities ensure that the BM is always changing.[22]

In this framework, the BM's ongoing dynamics come from the interactions *between* and *within* the core model components. Interactions between components will follow choices to develop a new value proposition, to create new combinations of resources or to make changes in the organizational system, and the impacts such adaptations will have on the other components and their subsidiary elements. For instance, development of resources or competencies (such as Arsenal's new stadium, or its brand) may lead to changes in organizational system, such as the network of its partnerships with sponsors or with foreign clubs. Conversely, changes in the value network or value chain (such as the introduction of new sponsors) will generate changes in the resources and competencies available, such as competencies in managing brand rights and trademark matters. Among numerous possible examples of such reciprocally-acting relationships in Arsenal's case over the study period, we illustrate a selection in Table 3.

But a BM's dynamics also come from changes that occur *within* its core components. In other words, changes within the resource/competency set may subsequently change other elements of the same component; some value proposition may create productive opportunities for further value propositions; and modifications in the internal organization or the web of external links may

Table 3. Dyadic relations in the Arsenal case between the core components of the model

Impact	Resources and competences	Organization	Value proposition
Resources & Competences choices	**Reputation of trainer attracts quality new players**	Customer Relationship Management developed and based in new Contact centre	New stadium generates new retailing and sponsorship opportunities
Organization choices	Developed links with US and Asian clubs provides access to new sponsors	**Externalising catering services creates £15m subsidy towards catering equipment capital costs and limits wage costs**	Incorporating a new sponsor allows selling new range of shirts
Value proposition choices	New 60,000 capacity stadium constitutes a resource to improve value proposition	Property development activities lead to adoption of holding governance structure in 2001	**Arsenal TV channel opens new opportunities for advertising**

directly impact other parts of the organizational system. For instance, a decision concerning the development of externalisation may subsequently change other organizational elements, such as reducing the number of employees or developing a service to manage external contracting. (Some illustrations of these intra-components interactions in the case of Arsenal appear in the shaded cells on the diagonal of Table 3.)

The intended choices that an organization makes concerning its BM components are a first and important source of its dynamics, as each choice entails further changes within that component or in others. These choices are often praised in the literature (including by Yip and Johnson et al.) as a source of radical innovation in sectors (as well as having the added attraction of being actions that managers can actually *do)*. But relying excessively on intentional drivers in BM evolution ignores other sources of evolution. Indeed, as Mintzberg notes, there are risks to having an exclusively deliberate view of strategy, which would imply that an organization's BM is *only* the result of its management's purposeful and specific design decisions.[23] In reality, organizational evolution may have antecedents and consequences which are more emergent and surprising, more dependent on environment or happenstance than on deliberate management choices.[24]

The antecedents to business model change

We now consider the evolution of business models. The observable sign of BM evolution is a substantial change in the structure of its costs and/or revenues — from using a new kind of resource, developing a new source of revenues, reengineering an organizational process, externalising a value chain activity — whether triggers deliberately or environmentally. Usually such changes also lead on to cost/revenue *volume* changes, but these aren't, in themselves, BM changes - indeed, firms may grow and volumes increase *without* their BM changing: it's *structural* changes in these dimensions that are the first 'symptom' of BM evolution.

structural changes in costs and/or revenues are the first 'symptom' of BM evolution.

Similarly, we argue that Arsenal's BM evolution is indicated by the growth of both its revenues and its costs (see Tables 2 and 4), but more particularly in the modifications in the *structure* of these indicators. During the period under study, the Club growth saw turnover multiplied by 6.5. But despite this sustained increase in turnover, its financial performance only improved significantly after 2007, with the full utilization of its new Emirates stadium ensuring it an operational margin of about 20% and substantially improved post-tax profits over the last two years. This performance was mainly driven by the improved gate receipts from the new stadium's increased capacity and enhanced facilities. The implementation of yield management and price discrimination between seats has seen these revenues increased dramatically – in fact, they've doubled. Since its opening, the Emirates' gate receipts have represented more than 40% of total revenues (except in 2009 when property rentals were exceptionally high) giving the club greater autonomy against relying on TV broadcasting and commercial revenues. Another striking point has been the capacity of the organization to increasingly diversify its sources of revenues over the period, and in particular to generate a new stream of consistent revenues from the conversion of the Club's old Highbury stadium into a real estate development. While property rentals have produced on average 9% of total revenues since 2001, the 2009 figure rose sharply to over 28%. Staff costs over the whole period have increased by a factor of four, and represented an average of 63% of expenditure. However, here again the story is one of a turn-around from a poor position: this figure peaked at 75+% in 2002, threatened the Club's whole cost structure, but has since declined to match its levels earlier in the period. The sharp drop in the final year's percentage is no doubt partly due to the simultaneous increase in the proportion attributable to costs associated with the property development (a reminder that, while they may be a new route to new profits, new activities that exploit new resources will also entail new costs.)

Theoretically, changes in a firm's BM may lead to an increase or a decrease in its performance in terms of margin which may constitute signals about its sustainability. Generally, a firm will engage in change when performance is poor or decreasing.[25] However, poor BM performance may be only transitory and independent of the suitability of the BM design that is eventually envisaged. This is often the case with start-ups or new business units that may have to bear losses before generating profits: for instance, Amazon displayed poor performances over several years due to a lack of sales volume before starting to record impressive results. In the case of Arsenal, a period of poor performances occurs during the transition from Highbury to the Emirates stadium, before new revenue generation starts to take off.

We contend that, as strategy, a BM may evolve in response to *both* external *and* internal factors.[26] External factors refer to constraints occasioned by environmental changes, or to external 'jolts' which may disrupt the organization's usual functioning more abruptly. A firm may foresee some environmental changes, like the arrival of aggressive new entrants, the increasing cost of some resources or the emergence of substitutes that may require a change in its BM. Internal factors include the outcomes of top (or middle) managers' teleological decision processes, but also the consequences of the dynamics within or between core components. Penrose underlines that the

Table 4. Arsenal Group: Evolution performance

£m	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Turnover (group)	48.6	61.2	64.7	91	117.8	156.9	138.4	137.2	200.8	223	313.3
Staff costs*,**	26.5	34	40.6	61.5	60.6	69.9	66	83	89.7	101.3	104
*% of total operating expenses***	*62.5%*	*65.0%*	*71.9%*	*75.1%*	*66.8%*	*59.0%*	*63.5%*	*67.2%*	*60.2%*	*62.2%*	*43.5%*
Operating profit**	6.2	8.9	6.5	7.3	25.3	36.2	32.6	11.3	41.6	48	58.8
Post-tax Profit	1.3	14.1	26.3	−20.6	4	8.2	8.3	7.9	2.8	25.7	35.2

*Including performance related bonus payments. **Before player trading and depreciation.
Source: Annual reports of Arsenal FC.

permanent increase in the firm's knowledge about the efficient use of its resources, or the discovery of new uses (or combinations of uses), can lead to the development of new value propositions which will not be wholly connected to environmental changes.

environmental changes or external 'jolts' may disrupt the organization's usual functioning abruptly. Internal factors are the results of managers' decisions, but also of the dynamics within or between core components of the business model.

From an analytical point of view, our RCOV framework suggests that the environment has the potential to influence each of the three core BM components: affecting the cost, value or availability of resources and competences; changing the characteristics of the value network or the value chain; or modifying the value of the products and services proposed. Each of these evolutions in the environment may have macro-economic or macro-sociologic origins, but may also stem from the behaviour of competitors or complementors. Thus, although the environment is not in itself a core BM component, environmental evolutions are endogeneized into the firm's RCOV framework via their impact on each of its components, so that external influences may ultimately affect the volumes and structures of costs and products.

The analysis of Arsenal's case may help to illustrate several of the environmental changes that affected the operating conditions for English football clubs during the 90s, but which were largely beyond the control of the individual clubs themselves (in contrast, for instance, to their collective strategies in the 80s in their successful pursuit of higher television revenues). Some of them were clearly negative in terms of their direct consequences, others positive and others were more ambiguous. We focus here on three that affected Arsenal's BM — and those of all English clubs - during the decade.

The Taylor report (negative)

In 1989, 96 Liverpool fans died during crowd trouble at a match at Sheffield. The final Taylor report into the causes and aftermath of the 'Hillsborough disaster' was published in January 1990, and led to rules regarding the provision of crowd safety at future sporting events, in particular recommending an end to standing accommodation in sports stadia. These new regulations reduced the capacity of Arsenal's Highbury stadium at a stroke from 60,000 to 38,000 seated spectators from the 1993-94 season, threatening to block any growth in revenues, and facing the Club with the prospect of regular losses by the end of the 90s which would see it progressively left behind by its main rivals.

BSkyB TV revenues (positive)

When the new Premier League was created in 1992, the satellite broadcaster BSkyB spent nearly £200m buying the exclusive rights to broadcast league matches to drive its expansion via its Sky Sports channel. Although half of this income was divided equally between all the Premier League clubs, allocation of the remaining 50% was based on club's final League positions and number of matches broadcast, which has since led to progressively widening inequalities between successful and smaller clubs. While this division emphasizes the importance of on-field success, in general terms, this revenue source is largely beyond the control of the clubs, as they are '*derived from contracts which are currently centrally negotiated by the FAPL and, in respect of European competition, by UEFA; the group does not have any direct influence, alone, on the outcome of the relevant contract negotiations*' (AR, 2006).

The Bosman ruling (negative/positive)

This final event changed the landscape of professional football in Europe dramatically. The European Court of Justice 1995 decision in support of the Belgian player Jean-Marc Bosman's freedom to move to a French club relaxed the existing transfer system and liberated professional footballers from their peculiar contractual status. Their strengthened bargaining power increased the pressure on clubs to retain their most highly valued players, so that '[…] *main competitors can determine trends for market rates for transfers and wages that the Group may be required to follow in order to maintain the strength of its first team squad*' (AR, 2006). The ruling promoted sudden and harsh competition for the best players between European clubs which increased both wage bills and transfer fees (as indicated in the Table 4), tending (again) to benefit the biggest clubs with the financial resources to pay higher wages.[27]

[Bosman] promoted sudden, harsh competition for the best players, increasing wage bills and transfer fees, benefiting the biggest clubs

Two of these changes threaten two of our framework's strategic resources (in this context) - the players and the stadium - and the entire Arsenal BM was put at risk by the substantially increased costs of retaining 'star' players, and the much decreased match revenues available from the Highbury stadium. The third environmental change affected the organization element of the BM, by introducing a new powerful actor in Arsenal's value network which brought in large financial resources, on a distribution pattern that gave bonuses to the biggest clubs.

However, these environmental changes were not the only factors affecting Arsenal's BM over the period - the club undertook several important internal changes. We identify four kinds of internal changes that can affect a firm's BM firm. *Deliberate decisions by managers* are often acknowledged in the literature as leading to BM changes: for instance, Johnson et al. present several examples of BM innovations where Tata, Hilti, Dow Corning and Procter and Gamble have redesigned their customer value proposition in their sectors more or less radically. However, despite managers making rational decisions to initiate change, we follow Penrose in suggesting the emergent dimension as also being important in changing BMs, and contend that the *independent path* in the development of an element (e.g. network externalities, accumulation of reputation, experience accumulated by employees, bureaucratization of structure or economies of scale related to products), *the interactions of elements within core components* (e.g. synergies emerging from the possession of a bundle of complementary resources or increases in knowledge about the use of resources) and the *interactions between the core components* (e.g. the revenues extracted from value propositions enabling to acquire new resources), also generate BM change. Not only do these dynamic processes themselves lead to BM evolution, but they can also yield possibilities for further change, since some (e.g., learning, network externalities, economies of scale or scope) may alter each element. Penrose notes that the exhaustion of 'resource services' is only temporary during the firm's expansion and '*in most circumstances one would expect new managerial services to be created in the process of expansion and to remain available to the firm*'.[28] Moreover, increased efficiency in resource use (physical or human) may also enable part of the resources to be freed up and thus available for developing further new projects. Thus, increasing returns to resource use create slack and constitute a key driver for the future growth of the firm, as the excess capacity may be used in diversification movements or for innovation in new value propositions.

Several intended decisions promoted changes in Arsenal's BM, the major one being the decision to invest over £400m in a new stadium (that is, to build a new resource) which was taken in the late 90s and realized in 2006. Two other important decisions were the increased insistence on youth development, which has allowed the Club partly to escape the upward pressure on transfer fees by training home grown talents, and the signing of a naming deal with Emirates Airlines worth

£90m which bought the airline the rights to have its name on the Club's new stadium for 15 years (and on the players' shirts for 8 years). These decisions have helped Arsenal counter the potential negative impact of the external threats of the Taylor Report and the Bosman ruling, and (as Table 4 shows) restore – and even improve – the Club's financial performance. In terms of the emergent changes during the study period, the creation of an 'indivisible' resource (such as a stadium) opened up a lot of subsequent opportunities to generate complementary revenues from organizing events or exploiting new retail stores – in effect the stadium's existence in concrete (rather than as a plan) now encourages its better use, and inspires the discovery of innovative ways to exploit it differently or more efficiently.

Several intended decisions promoted BM changes that restored and improved Arsenal's financial performance: the new stadium, the youth development policy and the Emirates Airlines naming deal

Continuous and emerging business model change

An organization's trajectory is the result of the intertwining of emerging trends and events with the results of its deliberate decisions. Whereas these 'voluntary' changes to the BM are the result of one or a set of decisions related to one or several core component, the emerging changes are unintended and partly beyond managers' control. Such evolutions may come from the environment, but also from the unanticipated effects of voluntary decisions, or from the dynamics of the operation of the BM itself, which may generate spillover effects or diminishing returns, which (as Raff notes) may lead on to the creation of virtuous or vicious circles. The capacity to extract services from resources depends on the knowledge developed by an organization, which should increase automatically and continuously with the normal functioning and expansion of the organization. Table 5 provides some illustrations of this kind of intertwining of voluntary and emerging evolutions in Arsenal's BM.

Our framework seeks to integrate voluntary and emerging dynamics in BMs by considering several potential sources of evolution. Thus, even if it is necessary (or possible) to adopt the abstract approach and present a BM as a blueprint or a recipe - to communicate to stakeholders or to help reflect about possible future modifications - in reality, any given firm's BM will continuously be evolving. Thinking about this sense of 'permanent evolution' Casadesus-Masanell and Ricart argue convincingly that a BM should be conceived as a set of relations and feedback loops between variables and their consequences, and recommend strategic management aims to develop these so as to create virtuous circles in its BM. In our case, the new Emirates stadium increases gate revenues, allows for the implementation of new retail stores, helps generate new sponsorship and ultimately contributes financial resources that can help the Club afford to contract star players. In their turn, these players generate good quality performances on the pitch and the resultant Club success further increases its gate, retailing and broadcasting revenues. Arsenal's management point to the existence of this virtuous circle in their 2006 annual report: '*The Group's income, which is currently significantly greater than that of the majority of its competitors, and its policy of continual investment in the playing staff by way of both transfers and wages provides a platform for a virtuous circle of continued on-field success and growth in the Club's support and revenues*' (AR, 2006).

However, managers also have to deal with negative emerging change, which could lead eventually to vicious circles detrimental to their BMs. In the Arsenal case, the explosion in players' salaries Europe post Bosman led to a race between the major clubs to attract players with still higher wages in a vicious circle that also increased the amounts clubs had to dedicate to their wage bills. Thus, emerging changes within the BM, whether due to the specific path of an individual element, or to interactions within or between core components of the framework, may serve to increase or decrease the firm's overall performance. Moreover, the different sources of evolution mentioned

Table 5. Examples of voluntary and emerging changes in Arsenal's BM

Affected component	**Voluntary change**	**Emerging change** ***(positive or negative)***
Resources & Competences	2006: New Emirates Stadium replaces old Highbury Stadium, which becomes a resource for property development.	1990: Taylor Report recommendation for all-seated stadia reduces Highbury's capacity from 60,000 to 38,000 1995: Bosman European case abolishes existing transfer system and liberates professional footballers' contractual status. Competition for the best players induces a burst of staff costs over 10 year study period.
Organization	Arsenal makes deals with football clubs in Asia and the USA that open the door to new sponsorship possibilities Creation of the Supporters Service Centre.	1992: the creation of the Premier League leads to new stakes and partners for broadcasting, especially BSkyB deal.
Value proposition	Emirates Stadium increased capacity enables creation of new value propositions: 'Diamond Club', corporate boxes, restaurants, bars and shops. Creation of non-season events (weddings, banquets, music events, official meetings, pre-season tournaments). Arsenal launches its own TV offer. Highbury is transformed into luxury apartments.	New shirt sponsorship from O2 (2002) and Emirates Airlines (2006) brings growth in the retail business. 2008/2009: financial crisis affects the sale of the corporate boxes, premium and Diamond club seats

here are likely to combine and - interacting with each other - create sequences of change. The overall effect of such emerging changes is that, even if the top management does not explicitly decide to modify some elements of their firm's BM, it may yet change.

So, BM evolution has to be thought of as sequences that encompass intertwined determined and emergent changes affecting core components or their elements. These sequences mean the BM is *permanently in a state of transitory disequilibrium,* some part of which can be 'fixed' by managerial decisions, some not so easily restored in the short term. Some sequences appear to be purely based on intentional managerial actions - for instance, the Club has recently announced its 'Arsenal TV' project, relying on both existing and new partnerships to build this value proposition: '*Setanta will become a commercial partner of the Club as part of our agreement and Input Media will provide production expertise. As part of the project, we will make use of our relationship with Sony to further upgrade our facilities at Emirates Stadium to provide a fully functioning TV production studio*' (AR, 2007). But other sequences alternate voluntary and emergent changes: thus, the decision to move to a new stadium was a reaction to an emergent change (new all-seating requirements) but was then followed by the (voluntary) decision to redevelop the Highbury stadium into real estate that has rapidly generated new sources of complementary revenues. This last decision was itself followed by a modification in the overall group organization with the adoption of a holding structure in October 2001 to provide '*greater flexibility in making the necessary financial arrangements for the construction of the new stadium and for the related property development*' (AR, 2001), which then enabled the Club to incorporate future new subsidiaries to manage different of its value propositions. Subsidiaries (of which there were eleven in 2009, as against only three in 1999) were dedicated, for instance, to the retailing business, to managing the stadium's operations, etc. Thus this sequence saw an external environmental change (the Taylor report) lead to an internal choice for new investment (the new stadium), and then to structural changes (the holding form) that created a strategic flexibility for the development of new value propositions.

The notion of 'permanent disequilibrium' is at the heart of this thinking … resources are never utilized optimally and inefficiencies always persist, offering opportunities for new value propositions and better exploitation of resources

In fact, the notion of 'permanent disequilibrium' is at the heart of Penrosian thinking, stemming both from the existence of a surplus in the services its internal resources can supply ('slack'), and from the continuous development of its new knowledge. Both of these create 'room' to discover new services of resources that can lead on to new value propositions (product innovation), or to exploit existing resources more efficiently (process innovation). Activities flowing from this new knowledge can be part of either normal operations and/or expansion. In this sense, Penrose envisages change as a continuous process — in effect, the 'normal permanent state' of an organization when viewed via a dynamic rather than episodic perspective.[29] As Penrose notes, '*Enterprising firms have a continuous incentive to expand*' - resources are never utilized optimally, and inefficiencies persist, always, offering opportunities to shape new knowledge search and accumulation processes in pursuit of better exploiting resources.[30] Drastic changes in a BM's revenue and/or cost structures are the consequences of radical BM changes, and while much of the literature focuses on radical, discontinuous or episodic change, we believe that incremental and continuous BM changes are much more common. For us, radical change generally follows the incremental changes accumulated from the model's unintended 'drift', and/or from the multiple internal changes generated by the BM's operation and managers' continued ongoing adjustments between and within components.[31]

Given the BM is in a permanent state of evolution, a crucial question concerns the competence of managers to maintain or improve its performance. In our view, management has three main tasks when considering BM dynamics.

- The first is to monitor the risks and uncertainties that could impact the firm's BM on a permanent basis, which requires regular analysis of both the environment and of the organization's internal drifts.
- The second task entails anticipating the potential consequences of both environmental and internal changes, where we think that circular, iterative thinking and a representation of sequences may help to gain a fine-grained view of how environmental trends and events or organizational drifts may impact the BM going forwards. However (as Siggelkow notes) grasping the systemic nature of the changes that are required to avoid the vicious circles leading to poor performance is generally difficult. In this connection, a crucial characteristic of the RCOV framework (one underlined by Tikkanen et al.) is that it is systemic by nature.
- Finally, managers have to participate in these sequences, implementing deliberate actions to promote consistency between their BM components with the aim of preserving (or even increasing) their organization's performance. These changes may be directed towards adapting, or even completely redesigning their BM (i.e. innovating it either incrementally or radically), although we may hypothesize (as Cyert and March suggest) that such changes will generally be incremental, involving marginal rather than drastic change. Since we have argued that BM components and elements are in continuously evolving (positively or negatively), the role of managers is thus to maintain what we label a 'dynamic consistency' between the core components of their firm's BM. Dynamic consistency is the capability to balance the trade-off between a BM's consistency (and thus its performance) against the reality that (in most industries) it will be changing all the time, by continuously influencing and countering the dynamic movements inherent in the BM's

sequences, trends and drift with deliberate actions designed to keep it consistently balanced and aligned.

Discussion and conclusion

In this article we have tried to reconcile two different common uses of the BM concept that we see as being complementary rather than opposed. We have argued that both the *static* view, which aims to describe the configurations of elements producing (or not) good performance, and the *dynamic* view, which tries to grasp the ways in which a BM evolves over time, are useful, but that, simply, they fulfil *different* functions. To integrate the strengths of these two approaches, we chose to consider BM evolutions by focusing on the interactions between its core components.

Based on a Penrosian view, we have proposed that the resources and competences of a firm, its organizational system and the value propositions it offers are permanently interacting, in ways that increase or decrease its performance. Thus, our conception insists that, when change occurs in an organization, it does so systemically, so that each changing element may impact the others, keeping the BM is in a permanent state of disequilibrium. We have described BM in terms of relatively broad components, thus avoiding confining the analysis to narrow, pre-defined conceptual categories that may only suit specific kinds of organizations or BMs. On the other hand, we have avoided considering BM in a holistic view which may lead to describing BM change in only general terms without the appropriate detailed analysis. Given this, we have introduced the RCOV framework which we argue is parsimonious but also dynamic, making the potential relations and the feedback mechanisms between the various BM components clear, so as to allow reflection on the changes in an organization's BM and their relationship to its performance. We believe such a framework can offer an effective way to overcome the paradox between using the BM to analyse the consistency of a given firm (implying the notion of a BM as 'static') and embodying the dynamic view necessary to support managers' efforts to integrate change and ensure performance over time.

managers must attend to their resource/competence portfolio to [try to] generate new value propositions …Arsenal's fans are both a value proposition target and a resource, encouraging [new] Club sponsors

For practitioners, our RCOV framework may constitute a useful artefact to help them reflect on the design of their business model and how to change it. The continued evolution of the elements in core BM components means that managers must constantly pay attention to their portfolio of resources and competences - more precisely to the services that those resources can provide - to help generate new value propositions and to modify their organization to best exploit its resources. For example, fans of 'the Arsenal' are both the target of some value propositions and a resource, in the sense that their numbers encourage sponsors to want to partner the Club. Over time, the club has developed both yield management and customer relationship competences, so as to both exploit and serve its fan base resource better – and these competences could themselves be the basis from which new value propositions could be proposed as services to other clubs in the future. By underlining the various uses and future potential of their resources and competences, our framework stimulates managers to think creatively about changes they could introduce in their value propositions, in their internal or external organization structures, or to their resources themselves.

Managers can also use our framework to think about the systemic interactions between the different components of their BM, and the sequences of causes and consequences they produce. Up to a certain point, managers have an interest in creating a tightly coupled system between their BM's core components so as to attain good performance. In our framework, a BM may be considered strongly coupled when its core components are permanently interacting, allowing the firm to realize its full potential and improve its profits.[32] For instance, core components are strongly coupled when the resources are well incorporated within the organizational system, and their potential services fully exploited in proposing existing value propositions, which the organizational system is fully dedicated to producing. Such a strong coupling can create positive feedback between core components (e.g. the value propositions in themselves may become new resources to generate other products and services) and within each core component (e.g. via synergies between value propositions). In the end, it is the creation and the management of these interactions between core components that creates firm performance, and may even serve to start or sustain valuable virtuous circles.

However, a tightly coupling system may be difficult to maintain when environmental conditions evolve, or emerging change prompts vicious circles to appear between or within components. In this case, incrementally modifying some BM elements could be insufficient to restore performance and a firm may have to change its BM more radically. Thus, the sustainable performance in the case of BM evolution lies in the ability of managers to identify the consequences of change in one component on the other components and on overall BM performance. Managers have then to introduce deliberate changes to create or facilitate changes, or to reduce or counter their effects, to maintain or increase performance. We have called this capability 'dynamic consistency' - that is, the capability to anticipate change sequences and implement incremental or radical changes to adapt the BM to maintain or restore ongoing performance. This capability requires managers to have a deep knowledge and understanding of their BM and of the relations on which it is built. It may be that the reasons performance in new firms — or in mature firms with new BMs — tend vary more is that managers in these situations have not yet completely understand what their BM is, how it works, and what the relationships are between its core components, that seem to at first sight to be only loosely coupled. A progressive process of discovering more about these relations over time will enable managers to fine-tune their BM more effectively and preserve its efficiency.

From the academic point of view, we propose that the Penrosian approach helps to ground the concept of BM in a solid and parsimonious theoretical framework. We see the BM concept as suffering from an under-theorized approach, or from a fragmented theorization based on such diverse theories as transaction costs or entrepreneurship theories. Her approach to the antecedents of firm growth provides analytical categories that help us anchor the concept and to provide a clear understanding of the BM dynamic, especially by underlining the permanence of the reciprocal relationships between core elements.

At first glance, our view of BM seems to mirror configurational perspective literature, in that it uses the idea of a consistent set of relations between components. In this literature, the consistency (the fit) refers to the coherence and reinforcing effects between organizational attributes more than to the existence or mastering of any one isolated attribute.[33] While we share some arguments with this approach - in considering that the study of a BM should focus on the relationships between its core components more than on their isolated attributes - our line is more distant from it in not identifying a definitive list of elements included in core components, or their characteristics for high-performing business models. Thus we do not identify what is the *good* set of resources, the *best* organizational form or the *right* kind of products and services for a given BM — but rather recognize the permanent state of disequilibrium inherent in any BM's on-going functioning. In our BM approach, the line of reasoning is different: a model may only be said to be consistent when the various choices about its RCOV core components lead to a sustainable performance — so, in effect, profit is the indicator for BM consistency. Such an approach allows room for new models that may not yet have been created, or even identified. As new BMs are created regularly in every industry, it is impossible to identify every RCOV configuration that might lead to sustainable performance. On the contrary - the essence of our BM approach is to give managers a frame and tools to help them to create consistent new configurations for new ventures, for firms in mature industries or for small firms competing against giants. Configuration can be taken as a given set of elements and the relations between them. But a complete list of all the possible elements from which a BM may be configured — and all the possible relations between them - is unforeseeable. An RCOV approach may (at least at a first stage) suggest some basic core components and inter-component relationships to help managers to create the BM and understand the evolution in its activity. (However, we may, progressively, be able to identify good configurations for well known BMs in some industries, such as the successful low cost airline BM).

A business model may only be said to be consistent when the choices about its core RCOV components lead to sustainable performance

Moreover, in our approach, the lack of consistency between elements does not reflect an abnormal situation, as it does in the configurational literature (for instance in Miles and Snow's consideration of the 'reactor' configuration) but is virtually the normal BM state. The Penrosian view enables us to introduce the idea that disequilibrium is a permanent characteristic of firm's business models, by underlining several processes affecting the individual elements, the core components and their inter-relationships, such as the knowledge accumulation that attends the exploitation of resources, the discovery by the organizational system of new applications for the services of resources, the increasing efficiency produced by economies of scale or scope, the synergies created over time between and within components, or how environmental evolutions can increase or decrease the value of specific resources. Thus, changes in a BM — following incremental evolutions or radical redesign decisions - are permanent, and will periodically produce new opportunities or threats. For instance, as Arsenal's BM has evolved over the last decade, it has left the Club with a significant debt (£268m), and a partial dependence on the continued strength of demand for real estate, two consequences that made it extremely sensitive to the 2008/09 financial and economical crisis. However, while the dynamics of its BM constituents may leave firms in a permanent state of disequilibrium, sustained low performance demonstrates inconsistency between the elements: such a 'miss-fit' calls for radical BM innovation.

Finally, our framework promotes a dynamic vision of strategy which avoids the drawbacks of both the approaches based on sustainable competitive advantage (e.g. Industrial economics and Resource Based View) which suggest competitive advantage must be protected, (i.e. there should be no major changes in an operating BM), as well as those approaches - e.g. hypercompetition theory - which hold that, amid the chaos of unending change caused by today's repeated environmental jolts and uncertainties, competitive advantage can no longer be seen as sustainable. A dynamic consistency view of strategy proposes concepts and tools that allow managers to monitor consistency, and take sequences of decisions to change their business profitably: we believe the business model concept is a good candidate with which to study this 'dynamic consistency'.

The open-ended interactions between core components and managers' entrepreneurial initiatives mean business models are always changing … Managers must monitor consistency to ensure sustainable performance

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