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Strategic Renewal of Europe's Largest Telecom Operators (1992–2001): From Herd Behaviour Towards Strategic Choice?

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Forces of deregulation, internationalisation and technological innovation have dramatically changed the European telecommunications industry. To cope with these forces, incumbent telecommunication operators had to strategically renew their companies. What can be learned from these incumbents and which managerial challenges are ahead? To address these questions, we investigated trajectories of strategic renewal of Europe's five largest incumbent operators and the impact on financial performance for the period 1992–2001. Remarkably, we did not find significant differences between the renewal trajectories of these incumbents. These findings suggest herd behaviour, indicating a preference for adopting similar organizational templates due to institutional forces resulting in a common 'follow the industry' renewal trajectory. In the years to come, however, we expect such herd behaviour will not be viable anymore. On the contrary, top management should make firm-specific strategic choices. The analysis and findings discussed in this paper provide insights for top management of incumbent firms in other deregulating European industries as well, such as the financial services and energy industries.

Keywords: Strategic renewal of large incumbent firms, Top management, European telecommunications industry, Institutional theory, Strategic choice, Deregulation, Technological innovation

Introduction

In the last decade, incumbent operators[1] in the European telecommunications industry have been confronted by increasing turbulence. Forces like liberalisation, privatisation, internationalisation and technological innovation have transformed the European telecommunications industry. In responding to these forces, incumbent operators have had to engage in strategic renewal. The telecommunications industry is not a unique case. Deregulation, internationalisation and innovation have transformed other regulated industries in Europe as well. Examples of such industries are financial services, airlines, and electricity and gas utilities.

In this exploratory study, we investigate how Europe's five largest incumbent telecommunications operators[2] have responded to the increase of turbulence in their industry during the decade preceding the telecom crash that started in 2001 (cf. The Economist, 2002). From a practitioners' perspective, the research is relevant as it examines how top management of large incumbents tries to cope with the turbulence in their industry. The data set used will be unique in its comprehensive nature and also allows us to probe what future actions telecommunications operators might take. However, the relevance of this study is not limited to managers of the large telecommunications companies. The forces that have changed the European telecommunications industry have also influenced other regulated industries in Europe. Therefore, the analysis and insights presented here can also be used outside the telecommunications industry. Managers in other industries may use this framework as well to formulate strategic renewal trajectories of their companies.

The focus of this paper is on incumbent telecommunications operators and not on new entrants. As incumbent operators were used to stable competition for a long time, they are probably most challenged to strategically renew themselves; i.e. to perform strategic renewal actions to align organizational competencies with the environment to increase competitive advantage. Building upon previous research in which a conceptual framework of strategic renewal journeys was developed (Volberda *et al.*, 2001a) and has been applied to the European financial services sector (Volberda *et al.*, 2001b), we focus here on the main attributes of strategic renewal journeys. These attributes indicate to what extent strategic renewal actions are externally versus internally oriented; international versus domestic; exploration- versus exploitation-oriented, and aim at expansion versus retreat. We assess for each of the European top five operators how external, international, explorative, and expansive its strategic renewal actions have been. We are in particular interested to learn how different the patterns of strategic renewal actions, i.e. the resulting strategic renewal journeys, of the top five have been. In addressing this issue, we focus on the question: To what extent the renewal journeys of incumbents do result from similar selection forces at industry level or do these journeys result from strategic choice? Strong forces at industry level might suggest similarities and herd behaviour ('following the industry'), whereas distinct strategic choices at firm level would promote differences in strategic renewal journeys. Finally, we analyse the financial performance (return on equity) of the operators to highlight the relationship between strategic renewal and performance.

"*The number of wireless users worldwide has now surpassed the number of fixed lines*"

This paper is organised into four sections. In the first, we analyse the main forces transforming the European telecommunications industry during the past decade. In the second section, we discuss two opposing perspectives on strategic renewal, i.e. an institutional and a strategic choice perspective. Next, we describe briefly our methodology and present our empirical findings. In the final section, we draw conclusions and discuss the implications for management.

Three Forces at Industry Level

For decades the European telecommunications industry can be characterized as rather stable. Protected by State regulations, the incumbent (State-owned) operators enjoyed the benefits of monopoly. In the last decade, however, the European telecommunications industry has changed from a closed and stable industry into a more open and dynamic one. We focus here on three interacting forces at industry level that are responsible for this development: (1) institutional forces (privatisation and liberalisation), (2) internationalisation forces and (3) technological forces.

The *liberalisation* of the European telecommunications industry was triggered by the formation of the European Union (EU) in 1992. While the United Kingdom was already liberalised in 1984, large EU countries such as Italy, France, Germany and Spain followed in the mid-nineties (see Table 1). Liberalisation implied that the former monopolies of the incumbent operators were broken down. The former monopolists faced two types of new competition. First, the incumbents had to open up their wireline network to competitive carriers, such as Tele2. The incumbents still own and operate the phone lines but they have to provide access to new entrants. Second, the wireline incumbents faced the entry of wireless communications operators, such as Vodafone. The liberalisation of the European telecommunications industry introduced competition, choice for customers, lower prices and improved quality of services (Information Society, 1997). In advance of national announcements of deregulation and liberalisation, State-owned operators were fully or partly *privatised* in order to better exploit new market opportunities (see Table 1).

Wireline, or fixed-line, voice calls used to be the mainstream business of incumbent operators for a long time. However, due to *technological forces* this traditional wireline business has come under attack by the development of wireless or mobile communications. Mobile communication started in 1992 with the first generation standard GSM (Global System for Mobile Communication). This standard was extended in 2000 with the second generation standard GPRS (General Packet Radio System). Subsequent generations of mobile communication allow for higher capacity networks to download and process information at higher speed. Wireless voice communications have become a substitute for wireline voice calls. Wireless has grown from 9 per cent of worldwide revenues in 1993 to 48 per cent today. The number of wireless users worldwide has now surpassed the number of fixed lines[3].

Another important technology is the Internet. In con-

Table 1 Privatisation of the European Top Five Incumbents and Liberalisation of their Markets

Domestic market	Year of liberalisation	National operator	Year of privatisation
Germany	1998	Deutsche Telekom	1996
France	1998	France Telecom	1997
United Kingdom	1984	British Telecom	1984
Italy	1997	Telecom Italia	1997
Spain	1998	Telefonica	1997

Source: Financial Times Database

trast to the wireless technology, Internet mainly uses the wireline networks to transfer data and video between different computers and to provide data services. Whereas wireless communications, as a substitute for wireline, caused a decline in wireline communications, the Internet caused an increase in the wireline traffic volumes. In Europe, revenues from Internet traffic showed a compound annual growth rate of about 100 per cent (The Economist, 2002) as more and more companies and consumers got access to the Internet. Internet, however, is not restricted to data and video traffic. Internet may also be used to handle voice traffic: Internet telephony. This Internet-based voice calling is a substitute for traditional voice calling. These technological forces triggered the strategic renewal efforts of the incumbents.

Internationalisation forces created new international market opportunities. An example of these opportunities are the economies of scale in mobile communications. A strong customer base in the home market is no longer sufficient to offer mobile services cost-effectiveness. The opening of national markets confronted incumbents with an increasing number of new entrants in their domestic markets. Examples of new entrants in the European telecommunications industry are Vodafone and Orange, which entered the European national home markets quickly to destroy the stranglehold of incumbent operators in leadership positions. These developments are supported by regulations that allow new entrants to connect their networks to those of current market players (Information Society, 1997). As new entrants created an increasing number of alternatives in the market, incumbents were confronted with more demanding customers forcing them to renew.

Strategic Renewal: Driven by Industry Forces and/or by Strategic Choice?

Confronted with these industry forces, incumbent operators had to engage in strategic renewal. According to Volberda *et al*. (2001a), a firm's strategic renewal journey is reflected by the strategic actions a firm undertakes to alter its path dependence. These strategic actions are driven by both external selection forces at industry level, i.e. management is passive regarding the environment, and internal forces, i.e. management is active regarding the environment. By making a conceptual distinction between an active and a passive attitude towards the environment of top management and of middle- and frontline management, four idealised renewal journeys of multi-unit firms can be discerned (see Figure 1). The upper-left box illustrates the situation in which management is essentially passive regarding the environment, i.e. forces at industry level. In such a context the strategic renewal journeys are driven by common outside forces. We label such renewal journeys as 'emergent renewal' in which the 'market decides' about proper strategic renewal actions resulting in firms following the rules of the industry.

In the period investigated, large incumbents were confronted with strong interacting forces at industry level influencing the international character of the level playing field, and the institutional and technological context in which the incumbents have to renew. Seen in this context, using an *institutional theory lens* to investigate strategic renewal journeys of incumbents is helpful for our purpose. Institutional theory views strategic renewal as restricted by an inevitable push towards increasing homogeneity of in particular incumbent firms in their industry. According to the institutional perspective, strategic renewal can only be achieved through maintaining congruence with shifting industry norms regarding e.g. internationalisation and technologies and shared management logics (DiMaggio and Powell, 1983; Greenwood and Hinings, 1996). The institutional per-

	Top Management is PASSIVE with respect to environment	**Top Management is ACTIVE with respect to environment**
Frontline and Middle Management are PASSIVE with respect to environment	Emergent Renewal *'Market decides'*	Directed Renewal *'Top Management decides'*
Frontline and Middle Management are ACTIVE with respect to environment	Facilitated Renewal ***'Frontline and Middle Management decide'***	Transformational Renewal *'Top, Frontline and Middle Management jointly decide'*

(Source: Adapted from Volberda et al., 2001a)

Figure 1 Four Emergent Renewal Journeys Towards Directed and Transformational Renewal

spective corresponds with emergent strategic renewal journeys, in which top-, middle- and front-line management are passive regarding the environment (see Figure 1). As Volberda *et al*. (2001a, p. 162) pointed out: 'The ideal emergent journey of renewal is rooted in the assumption that managers believe that they be should essentially outwardly oriented or passive, their role being to amplify market forces and market signals … '. DiMaggio and Powell (1983) consider such mimetic behaviour as the modelling of an organisation after similar organisations in the same field that they perceive to be successful and legitimate. In emergent strategic renewal journeys, firms imitate practices ('following the industry') from other successful organisations that are considered as being legitimate in the hope of getting similar rewards. As the top five telecommunications operators were confronted with strong institutional forces, especially in the first half of the 1990s, the institutional perspective on strategic renewal suggests, therefore, that incumbent operators will display industry-generic behaviour, *resulting in similar renewal trajectories over time* (see Table 2).

In contrast to institutional theories, Baden-Fuller and Stopford (1994) argue that managerial intentionality is the most important driving force of renewal, not the industry. Their view corresponds with the *strategic choice perspective*. Strategic choice theory views strategic renewal as a dynamic interaction process between organisations and their environment (Child, 1997; Miles and Snow, 1978; Hrebiniak and Joyce, 1985), attributing the top management team managerial leeway regarding their environment and organisational design. The strategic choice perspective fits with the concept of the directed and the transformational renewal journey (see Figure 1 and Table 2). In both the directed and the transformational journey, top management is active with respect to the environment and believe they can influence the environment and change their own destiny. As strategic choice in general, and directed and transformational renewal in particular, are associated with new ways of thinking, unlearning and entrepreneurial spirit, a higher level of risk is involved.

The strategic choice perspective on strategic renewal suggests that incumbent operators focus on company-specific behaviour, resulting in idiosyncratic renewal trajectories over time (see Table 2). Despite the institutional and other forces, the top five incumbent telecom operators may have made distinct strategic choices. Each operator entered the new landscape from a different position. Different administrative heritages and path dependencies may have influenced strategic choices. Furthermore, the decision makers of these incumbent operators may have diverging ambition levels and views on the future of the industry ('industry foresight'), which also impact the strategic choices.

Empirical Research into the Strategic Renewal Journeys

Empirical data on the five largest European incumbent operators will be used to analyse the journeys of strategic renewal. If these data reveal *highly similar renewal trajectories* over time, this indicates strong *institutional forces* at industry level resulting in herd behaviour. If the data about the incumbent operators reveal significantly *different renewal journeys*, however, this indicates strategic renewal is more driven by *strategic choice* than by industry forces.

We use a document analysis to uncover and analyse journeys of strategic renewal[4]. First, we created a database of strategic renewal actions of the incumbents for the 1992–2001 period. Strategic renewal actions are extracted from publicly available secondary data sources (annual reports and an extensive electronic database of *Financial Times* articles). The combined use of these two data sources allow for both an insider perspective (annual report) and an outsider perspective (*Financial Times*) to access the strategic actions that have been implemented. We define *strategic renewal action* as: actions taken by the organisation, which are likely to have an impact on the overall behaviour of the organization and its performance. Such actions typically include mergers and acquisitions, joint ventures, alliances, new business ventures, acquisition of (mobile) licenses and sale or closure of businesses and activities (Volberda *et al*., 2001a).

In order to uncover patterns of renewal, all strategic renewal actions undertaken by the incumbent operators in the 1992–2001 period were coded using four

Table 2 The Institutional Perspective versus Strategic Choice Perspective on Strategic Renewal

	Institutional Perspective	Strategic Choice Perspective
Primary determinant of strategic renewal	Environment: industry forces and/or successful organisations (imitation)	Both environment and managerial intentionality
Expected outcome on firm level	Emergent strategic renewal: 'Follow the industry' (see Volberda *et al*. (2001a) and Figure 1).	Directed and transformational strategic renewal: 'Change your destiny' (see Volberda *et al*. (2001a) and Figure 1).
Expected outcome on industry level	Similar strategic renewal journeys: herd behaviour of large incumbents	Firm specific strategic renewal journeys

Table 3 The Four Attributes of Strategic Renewal Actions and Corresponding Ratios

1. External versus internal *External orientation ratio*=# external actions/(# internal actions + # external actions)	Internal actions originate within the company. Examples are start-ups of new business, opening subsidiaries.	External actions are undertaken in cooperation with other organisations. *Examples* are mergers, acquisitions and joint ventures.
2. International versus domestic *International orientation ratio*=# international actions/(# domestic actions + # international actions)	Domestic actions take place within the country where the headquarters are located. *Examples* are offering new services on the domestic market and sale of activities on the domestic market.	International actions concern all other countries. *Examples* are new business activities abroad and closure of foreign business.
3. Exploration versus exploitation *Exploration orientation ratio*=# exploration actions/(# exploitation actions + # exploration actions)	Exploitation actions elaborate on the current range of activities and fall within the current geographic scope, or that rationalise activities (cf. March 1991). *Examples* are cost savings, sale of activities and growing scale by merger or acquisition.	Exploration actions add new activities to the current range of activities of the company, or that increase the geographic scope of the company (cf. March 1991). *Examples* are entering new markets and offering new products and/or services.
4. Expansion versus retreat *Expansion oriented ratio*=# expansion actions/(# retreat actions + # expansion actions)	Retreat actions reduce the current range of activities of the company. *Examples* are divestitures, ending alliances and closure of offices.	Expansion actions increase the current range of activities of the company. *Examples* are mergers, obtaining licenses and opening of offices.

categories: external versus internal, international versus domestic, exploration versus exploitation, and expansion versus retreat (see Table 3). These four categories of strategic renewal cover both context (the first two lines in Table 3) and content (the latter two lines in Table 3) dimensions of strategy (Mintzberg, 1990). For each of these four categories we use metrics to capture meaningful development. For example, by relating a firm's external actions to the sum of all its strategic renewal actions (both external and internal actions) during a period, we created a ratio, coined here ' external orientation ratio' (see Table 3). The maximum value of these ratios is 1, the minimum equals zero.

Empirical Findings

Table 4 shows the ratios corresponding with the four categories of strategic renewal, measured over the 1992 – 2001 period. Using ratios enables the comparison of strategic renewal processes over time, both within and between companies. In order to determine whether the incumbent firms reveal herd behaviour or not, we used the *P*-values of the *t*-tests to determine whether the differences regarding the four categories of strategic renewal action and the financial performance (i.e. ROI) of the five operators are significant or not (level of significance: 5 per cent). If not, this indicates herd behaviour among the operators.

From Table 4 it appears that the top five incumbent telecommunications operators do not show significant differences with respect to three of the four ratios capturing various aspects of their strategic renewal journeys. The ratios regarding external orientation, the exploration orientation and the expansion orientation do not display significant differences ($P > 0.05$). To illustrate these findings for the first two categories, Figure 2 shows how the five incumbent operators herd together with respect to the external orientation ratio and the exploration orientation ratio. Similar values of the exploration orientation ratio hint at a collective race of investing in new technologies and the required licences. Concerning the attribute of international orientation, however, we have found significant differences among the operators. Taking a closer look at the international orientation ratio, however, we find that the significance of the differences can be fully explained by one telecom operator: Telecom Italia. This company showed outlier behaviour in the sense that only one-third of the strategic renewal actions were internationally oriented, while for the other companies about two-thirds were internationally oriented.

As the categories of the strategic renewal journeys do not display significant differences, one might wonder whether the financial performance of the operators

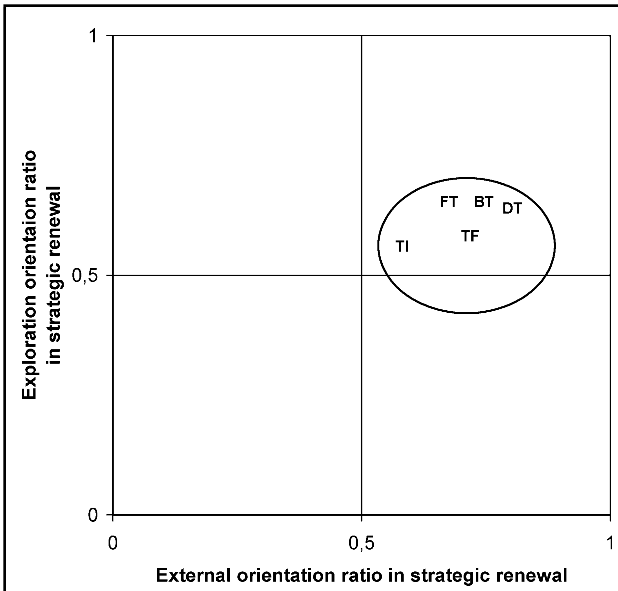
Table 4 Key Attributes of the Strategic Renewal Journeys and the Financial Performance of Europe's Top Five Incumbents (1992–2001)

Ratios[a] and ROE	Company[b]										P value[c]
	British Telecom		Deutsche Telekom		France Telecom		Telecom Italia		Telefonica		
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
External orientation	0.75	0.17	0.80	0.18	0.68	0.11	0.58	0.25	0.72	0.23	0.21
International orientation	0.72	0.19	0.74	0.13	0.57	0.13	0.34	0.30	0.77	0.22	0.00
Exploration orientation	0.65	0.29	0.64	0.13	0.65	0.10	0.56	0.23	0.59	0.16	0.82
Expansion orientation	0.80	0.26	0.85	0.14	0.90	0.07	0.84	0.21	0.92	0.08	0.52
ROE (%)	12.55	9.43	5.00	8.96	7.70	5.28	6.81	7.93	8.71	1.87	0.22

[a]For the definition of the four ratios see Table 3

[b]British Telecom (N = 134); Deutsche Telecom (N = 119); France Telecom (N = 151); Telecom Italia (N = 76); Telefonica (N = 73). *N* refers to the total number of detected strategic renewal actions in the period 1992–2001. Data with respect to return on equity, are based on the average of 10 years

[c]Only with respect to the international orientation ratio, the operators reveal significant differences, however this is due to one telecom operator: Telecom Italia. If we exclude this company from our investigation, we find no significant differences among the four other operators



Note: External orientation ratio is measured as: # external actions / (# internal actions + # external actions). Exploration orientation ratio is measured as: # exploration actions / (# exploitation actions + # exploration actions). BT: British Telecom: DT: Deutsche Telekom: FT: France Telecom: TI: Telecom Italia: TF: Telefonica

Figure 2 Herd Behaviour Regarding External and Exploration Orientation in the Strategic Renewal Actions of Five European Incumbent Operators (1992–2001)

differs significantly or not. We tested whether the differences in return on equity of the five operators were significant (see Table 4). Our analysis reveals no significant differences regarding the return on equity of the five companies ($P > 0.05$).

Discussion

The lack of significant differences in the investigated strategic renewal actions suggests the incumbent firms copied to a large extent each others strategic renewal actions as predicted by the institutional perspective on strategic renewal. These outcomes correspond with the descriptions of the emergent strategic renewal journey: 'the market decides' and 'let's follow the industry'. Such renewal behaviour is not restricted to large incumbents in the European telecommunications industry. Previous research on strategic renewal in the European financial services industry (Volberda *et al.*, 2001a) — a comparable industry regarding the industry forces investigated here — revealed similar behaviour.

We should not conclude, however, that the five largest telecommunications operators did not make different strategic choices at all during the period of investigation. Even in situations of high environmental determinism due to the strong industry forces discussed above, there is potential for strategic choice (Hrebiniak and Joyce, 1985). Although the strategic renewal journeys of the five incumbent operators look alike (see Table 4), they are not identical. There are differences between the operators but these differences were not found to be statistically significant. Furthermore, even if the ratios reported in Table 4 are similar, operators may choose from multiple alternative options within a particular category of strategic renewal. For example, if an operator has undertaken an internal action, the alternatives include, among other things, start ups, greenfield investments, and the launch of a new line of services.

What will be the *next challenge* for large incumbents in the coming years? In the past years (see Figure 2), operators followed the general industry recipe of investing in expensive third-generation licenses, thereby burdening themselves with enormous debt[5] To reduce these debts the incumbent operators have to restructure. They have to take impairment charges for the devaluated licenses and acquired businesses. Financial restructuring, including capital changes and divestments, are required to reduce debt. Furthermore, the incumbents need to reduce cost, among other things, by means of lay-offs. In terms of the strategic renewal actions such a development suggests an increasing emphasis on exploitation and retreat at the expense of exploration and expansion. All incumbents will face the same restructuring pressures and similar strategic actions are likely. The opportunities for idiosyncratic strategic renewal behaviour, indeed for strategic choice, are expected to increase when the incumbents have resolved the debt and performance issues.

Unfortunately, this study is not without its limitations. First, the analysis was limited to the dichotomous level of the four categories of strategic renewal. Second, this study did not distinguish between the different segments that compose the telecommunication industry. For example, we conducted no separate analyses of mobile and fixed line telecommunication segments. Third, this study was restricted to the five largest incumbent telecommunication operators. Other countries and smaller incumbents and new entrants as well were excluded from the analysis.

Conclusion

In the last decade, European incumbent telecommunications operators have been confronted with several forces that have transformed their industry and that have triggered their strategic renewal actions. Our research of the European top five incumbent telecommunications operators reveals no significant differences regarding four categories of strategic renewal actions. This suggests, due to selection forces and in particular the institutional context, these firms collectively choose an emergent strategic renewal journey ('follow the industry').

However, while the importance of the institutional forces are diminishing nowadays, managers may benefit from more strategic freedom to seize opportunities. As the largest operators previously found themselves confronted in 'the same box' of emergent renewal (see Figure 1), it is now time for strategic choice and 'out of the emergent renewal box' thinking. Both directed and transformational renewal (see Figure 1) seem viable options for incumbent operators to recover from the telecom crash. These strategic renewal journeys require a fundamental change of (top) management's attitude towards the environment: from passive ('let's follow the industry') towards an active attitude ('changing the industry rules').

The patterns of emergent renewal and herd behaviour are not necessarily restricted to large firms in the European telecommunications industry. Other European industries that were confronted with similar forces may display similar results, as previous research has already revealed for the European financial services industry (Volberda *et al*., 2001a).

Our framework identifies whether companies' strategic renewal trajectories differ (significantly) from each other or not. To escape herd-behaviour, it becomes necessary for management to craft one's own idiosyncratic trajectory of strategic renewal. This is a challenge for management and in particular for top management, but will enable gaining a sustainable competitive advantage. This paper contributes to this objective by offering managers a framework to analyse their strategic renewal efforts.

Notes

1. Incumbent operators are defined as the large, established operators in the telecommunications industry that used to be owned and controlled by national governments.
2. Based on Fortune Global 500 rank 2001: Deutsche Telekom (**75**), France Telecom (**97**), British Telecom (**139**), Telecom Italia (**144**) and Telefonica (**151**) (Source: http://www.fortune.com).
3. Source: International Telecommunications Union (2003).
4. The methodology of this document analysis corresponds with a document analysis developed by the Erasmus Strategic Renewal Centre (see Volberda *et al*., 2001a).
5. For example, in the last couple of years, operators spent $46 billion in Germany and $36 billion in the United Kingdom for third-generation licenses alone (Isern and Rios, 2002).

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