

VERTICAL INTEGRATION AS CORPORATE ENTREPRENEURSHIP STRATEGY IN THE RENEWABLE ENERGY FIELD: OMV PETROM CASE STUDY

Alexandra-Cătălina CHINIE¹

ABSTRACT

Environmental regulations may have been the principal factors that lead to the strategic rethinking of many conventional oil companies. In the context of higher environmental awareness, improving the public relations image or the decision to invest in a product where their competitors have already become active could also have been a reason why the black oil companies have considered a greener strategy. In order to respond to the market's new regulations as well as new customers expectations, these companies have adopted a vertical integration strategy by acquiring or developing own projects in the renewable energy field. Such a strategy has been adopted by OMV Petrom, an oil company in South-Eastern Europe that has acquired a wind power park as part of their strategy to enter the energetic market. OMV Petrom has taken part in an academic research conducted by the authors, meant to identify a corporate entrepreneurship model in the renewable energy field. Based on the interview with the CEO of the wind power park, we present a simplified corporate entrepreneurial model for vertical integration in the renewable field. This model is based on the analysis of the triggering events that lead to corporate entrepreneurship, internal organizational factors and business strategies that fostered the entrepreneurial activity and their business.

KEYWORDS: *corporate entrepreneurship, renewable energy, vertical integration*

JEL CLASSIFICATION *Q42, L26, L10*

1. INTRODUCTION

The main scope of corporate entrepreneurship is gaining competitive advantage through innovation.

Ireland et. al (2009) define entrepreneurial strategy of a company as "a vision-directed, organization-wide reliance on entrepreneurial behavior that purposefully and continuously rejuvenates the organization and shapes the scope of its operations through the recognition and exploitation of entrepreneurial opportunity."

While corporate entrepreneurship initiatives exist in many companies, there is rarely a corporate entrepreneurship strategy, nor is corporate entrepreneurship integrated with the company's core strategy. Furthermore, Sadler (2000), Quinn (1985) and Jennings (1994) found that smaller firms are better supporters of corporate entrepreneurship than larger ones.

An entrepreneurial integrative growth strategy is investing across the value-chain by developing or acquiring the business of the company's provider (backward integration) or vendor (forward integration).

¹ The Bucharest University of Economic Studies, Romania, alexandra.chinie@gmail.com

Harrigan (1985) states that firms adopting a vertical integration approach may control vertical relationships without fully owning adjacent business units, may enjoy benefits of vertical integration without transferring all of their output internally, may (or may not) perform a variety of integrated activities at a particular stage of processing, or may engage in many (or few) stages of processing in the chain of production from ultra raw materials to the final consumer.

Vertical integration leads to major cost savings, by allowing a company "to schedule and coordinate efficiently the flow of products along the industry value-added chain" (Hill, Jones, 2008). Another benefit of vertical integration, as stated by Harrigan (2003), is economies of integration. The company achieves economies of scale through volume, and may also achieve synergies and economies of scope. Furthermore, the customer satisfaction can be increased by having more control across the value chain.

Vertical integration may have internal, but also external weaknesses. Many large, integrated companies emphasize one competitive advantage (Johnston & Lawrence, 1991) that may be attributed to one of the activities within the value chain, while missing out on other aspects that could be improved along the chain. In contrast, it may also happen that developing new competencies will have a negative impact on the existing ones. External effects of vertical integration may lead to market foreclosure in certain industries such as media, but may also lower prices and increase volumes for customers in others (Hortaçsu and Syverson, 2007).

The two post-integration strategies a company could choose are setting an internal price of the provider or support organization at a marginal cost, or trading services of the integrated company to other non-integrated companies, also achieving profit.

2. VERTICAL INTEGRATION AS GREEN CORPORATE ENTREPRENEURSHIP STRATEGY

Vertical integration has been broadly used by companies wanting to implement an ecological corporate strategy. Backward integration, more precisely, has been an entrepreneurial initiative used by big companies that wanted to produce their own electricity with renewable resources (usually through solar panels or wind power parks). Examples of such companies that started to produce their own energy from renewable resources are Google and Sainsbury. Google strives to use 100% renewable energy, while Sainsbury has claimed the title of biggest solar power generator in Europe in 2012, with over 69,500 solar panels on almost 170 stores (Murray, 2012). Energy players have also invested increasingly in renewable energy, in order to meet their quota of supplied energy from renewable sources. In this case, the strategy used has been diversification.

Conventional energy companies have long had an integrated structure across the value chain. With the development of renewable energy, many have adopted a horizontal diversification strategy (conventional electricity producer offering green energy), while many oil and gas companies have integrated backwards by investing in renewable energy in order to cover their energetic demand, diversify their energy services portfolio and acquire green certificates. The most renowned cases of energy players investing in renewable energy are those of Chevron, British Petroleum and Exxon.

Such strategies have also been adopted in South-Eastern Europe, by the largest oil company in this area, OMV Petrom. The company announced the extension of its power production projects portfolio by acquiring S.C. Wind Power Park S.R.L. in 2010. Wind Power Park owns a fully permitted wind power generation project. The total investment budgeted for this project was 100 million Euros. The main scope of the project was to capitalize on the flexibility of the Brazi gas-fired power plant.

3. CASE STUDY: OMV PETROM PROJECT DOROBANTU

OMV Petrom S.A. is the largest South-European oil and gas producer, acquired in 2004 by the Austrian company OMV. The company is active in the segments of Exploration and Production, Refining and Marketing, Gas and Power. In the second quarter of 2013, it has registered an EBIT of EUR 1,389 Million. In 2007, Petrom announced its intentions to diversify its oil and gas operations and move into the Romanian power generation sector by developing a gas-fired 860MW combined cycle power plant within Petrobrazi Refinery, Romania. Wanting to capitalize on the flexibility of the Brazi power plant, OMV Petrom extended its portfolio of power projects by acquiring S.C. Wind Power Park S.R.L. (on April 15, 2010), which owns a fully permitted wind generation project (Dorobanțu) with a capacity of 45 MW, situated in Dobrogea region. Green certificates received for the produced renewable energy plans will cover the green energy quota that a power company has to assure. The remaining certificates would be sold on the market.

We analyzed the corporate entrepreneurship internal factors that fostered the corporate entrepreneurial activity within OMV Petrom, based on the Corporate Entrepreneurship Assessment Instrument (CEAI) introduced by Hornsby, Kuratko and Zahra (2002), and the research of Kuratko, Hornsby and Bishop (2005). The 5 organizational factors studied by the authors are: management support for corporate entrepreneurship, work discretion, rewards and reinforcements, time availability and organizational boundaries.

Management support refers to the "the willingness of top level managers to facilitate and promote entrepreneurial behavior, including the championing of innovative ideas and providing the resources people require to take entrepreneurial actions" (Kuratko et. al, 2005, p. 703). Work discretion, or autonomy, is "top-level managers' commitment to tolerate failure, provide decision-making latitude and freedom from excessive oversight, and to delegate authority and responsibility to middle-level managers" (Kuratko et. al, 2005, p. 703). Rewards / Reinforcement concerns "developing and using systems that reward based on performance, highlight significant achievements, and encourage pursuit of challenging work" (Kuratko et. al, 2005, p. 703). Time availability refers to "evaluating workloads to ensure that individuals and groups have the time needed to pursue innovation and that their jobs are structured in ways that support efforts to achieve short- and long-term organizational goals" (Kuratko et. al, 2005, p. 703). Organizational boundaries mean "precise explanations of outcomes expected from organizational work and development of mechanisms for evaluating, selecting, and using innovations" (p. 704).

The internal organizational factors of OMV Petrom were measured on a 7-point likert scale. When comparing them to the means resulted from Kuratko's study (2005), a conversion to a 5-point Likert scale was necessary.

The internal factor with the highest score was work discretion, although it was below the average of Kuratko's study (2005). The second rating that was below the average was attributed to organizational boundaries. We can conclude that these two factors are influenced by the company's size (approx. 20,000 employees). OMV Petrom is divided between 5 strategic business units: Exploration & Production (upstream), Refining & Marketing (downstream), Gas & Power, Corporate and Global Solutions (business support center). The Dorobanțu wind park is a legally independent firm, integrated with the Gas & Power strategic unit. This allows the wind power park to have autonomy, while being aligned to the corporate strategy. One of the ways to improve work discretion and organizational boundaries would be to adopt this model further in the company. The entrepreneurial strategy may be sustained through the formation of cross-functional teams. In large corporations, this practice is gaining importance as a means of fostering innovation. Ferdousi (2012) states that the success factors for cross-functional teams may be effective communication for organic participation, self-governance of the team, and

effort to mainstreaming and institutionalization of corporate entrepreneurship culture and practices across the organization.

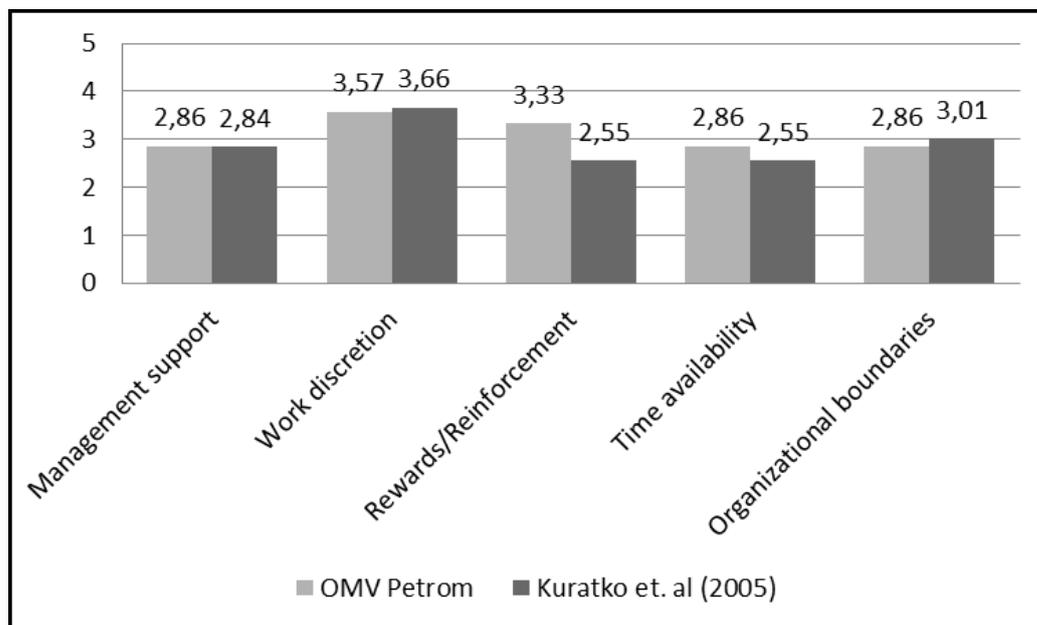


Figure 1: Comparison between OMV Petrom's Corporate Entrepreneurship Factors and Kuratko. et. al results (2005)

Source: represented by the author

The company has a rating just on average for management support, and above average for rewards and time availability.

In order to find out which were the triggering events for corporate entrepreneurship in the renewable energy field, we based our study on the research performed by Schindehutte, Morris and Kuratko (2000). They identified a number of 40 events that lead to corporate entrepreneurship activities inside organizations. In order to identify the triggering events that would most likely influence the decision to act entrepreneurially in the renewable energy field, a workshop at the Faculty of Business Administration has been organized with the authors and a renewable energy professional. All 40 triggering events received ratings, based on their capability to influence the entrepreneurial decision in the renewable energy field. The results revealed 18 triggering events that were further used in our study.

The triggering events that lead to the investment of OMV Petrom in the renewable energy market were: *Regulatory requirements, Diversification, Availability of new resources, Strategic growth target, and Vertical Integration.*

Following the company's decision to become an energy company, instead of an oil company, OMV Petrom has invested in a gas power plant in Brazi which entered full commercial operation in 2012. In compliance with Directive 2001/77/EC, OMV Petrom would have to cover a certain quota of the supplied energy from renewable resources. The company could have acquired green certificates from eligible renewable energy generators or via a broker, or decide to produce the renewable energy internally (Bertoldi, 2005). Thus, extending their portfolio by providing energy from conventional resources as well as renewable resources was part of the company's diversification strategy.

The company also wanted to capitalize on the country's potential to produce energy from renewable resources. In 2012, Ernst & Young ranked Romania on the 14th place (out of 40) for

its attractiveness for all renewable energy investments, and on the 11th place for wind power generation potential.

After its acquisition by the Austrian OMV in 2006, OMV Petrom has grown through numerous intensive growth strategies. The company has developed new end-products (new fuels) and redesigned its distribution channels.

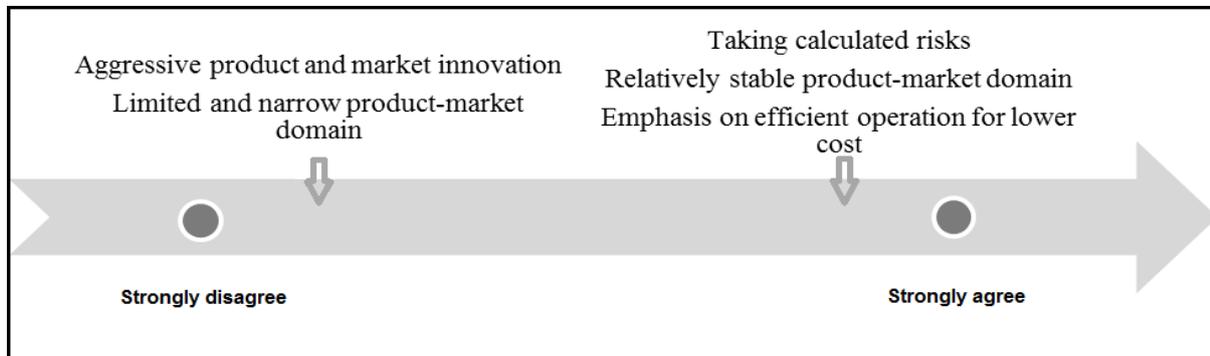


Figure 2: Business strategies at OMV Petrom S.A.

Source: represented by the author

In order to achieve further sustainable growth, the strategies adopted further were diversification and vertical integration. While producing green energy and also selling part of their green certificates on the market, the company has managed to enter a new market, and also achieve vertical integration.

The advantages of the company's investing in renewable energy through vertical integration would be sustainable growth, more profitability on the long-run, improved PR image and improved risk management.

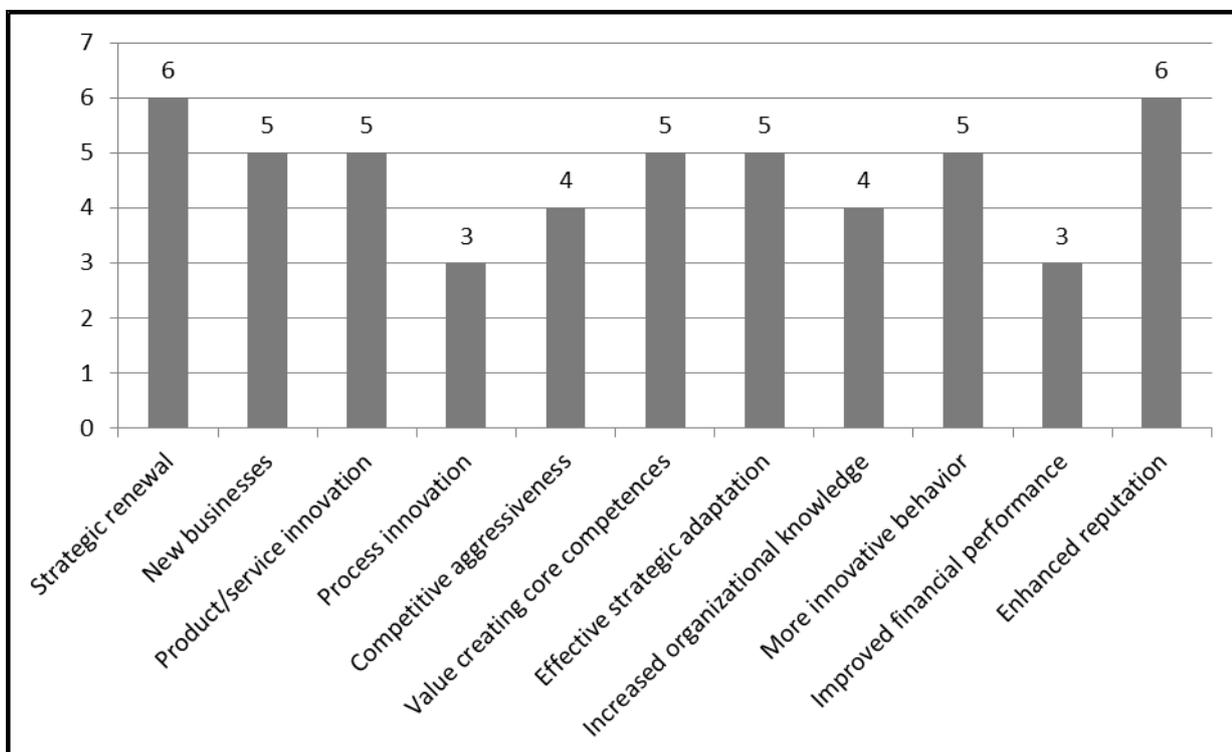


Figure 3: Business outcome ratings for OMV Petrom

Source: represented by the author

The respondent of our study was asked to rate the strategies that stood basis to the entrepreneurial initiative of the company based on their relevance. The list contained 14 business strategies. The most relevant to the company were: *Taking calculated risks*, *Relative stable product/market domain*, and *Emphasis on efficient operation for lower cost*. In an unpublished study by Tantau, Borisov and Chinie, the most relevant business strategies adopted by non-oil companies investing in renewable energy are: "Rapid response to opportunity", "Taking calculated risks", "Monitoring the actions of major competitors for new ideas", and "Careful new product development and market penetration only after their feasibility has been proved". The strategies that were most irrelevant to OMV Petrom's business were "Aggressive product and market innovation" and "Limited and narrow product-market domain".

The most relevant business outcomes achieved by the company through these strategies on a qualitative scale were *Strategic renewal* and *Enhanced reputation* (Fig. 2). Two low ratings have been attributed to business outcomes that were out of the vertical integration's scope (new ventures, process innovation). Another low rating has been attributed to financial performance, since the technology of renewable energy still is far more expensive than conventional energy, and there has only been a year since the wind park entered full operation.

4. CONCLUSIONS

Extending the company's portfolio over the value chain by investing in renewable energy may be the strategy of energy providers when faced with the decision of buying green energy, green certificates or producing green energy. Furthermore, this may also be part of the company's strategic growth target. In contrast to intensive growth that could be achieved through further exploitation of conventional resources, investing in renewable energy may assure sustainable growth on the long-run, in a relatively stable product-market domain. Besides strategic growth, this initiative increases the reputation of the company, and the innovative behavior of the organization. In the case of OMV Petrom, it has also proven to be a successful market adaption strategy, being also correlated to the regulatory requirements that influenced the company's decision to extend their services' portfolio.

REFERENCES

- Bertoldi, P. & Rezessy, S. & Langniss, O. & Voogt, M. (2005). White, green & brown certificates: How to make the most of them?. *Paper presented at ECEEE 2005 Summer Study – What Works & Who Delivers*. Retrieved from <http://www.ewc.polimi.it/dl.php?file=integration.pdf>
- Ferdousi, S. (2012). Cross-Functional Teams for Corporate Entrepreneurship Practices, *The ISM Journal of International Business*, 1(4)
- Harrigan, K. R. (1985). Vertical integration and corporate strategy, *Academy of Management Journal*, 28 (2), 397-425
- Harrigan, K. R. (2003). *Vertical Integration, Outsourcing and Corporate Strategy*. Washington D.C., Beard Books. Originally published "Strategies for Vertical Integration" in 1983.
- Hill, Charles W. L. & Jones, Gareth R. (2012). *Strategic Management Theory: An Integrated Approach*, 10th edition, South-Western Cengage Learning
- Hornsby, J. S. & Kuratko, D. F., & Zahra, S. A. (2002). Middle managers' perception of the internal environment for corporate entrepreneurship: Assessing a measurement scale. *Journal of Business Venturing*, 17, 253-273
- Hortaçsu, A. & Syverson, C. (2007). *Cementing Relationships: Vertical Integration, Foreclosure, Productivity, and Prices*, *Journal of Political Economy*, 115(2), 250-301

- Ireland, R. D. & Covin, J. G. & Kuratko, D. F. (2009). *Conceptualizing Corporate entrepreneurship strategy*, *Entrepreneurship Theory and Practice*, 33(1), 19-46
- Jennings, D. F. (1994). *Multiple perspectives of entrepreneurship*. Ohio: South Western Publishing.
- Johnston, R. & Lawrence, P. R. (1991). Beyond vertical integration – the rise of the value-adding partnership. In G. Thompson (Ed.) *Markets, Hierarchies and Networks*, 193-202, Sage Publications
- Kuratko, D. F. & Ireland, R. D. & Covin, J. G., & Hornsby, J. S. (2005). A model of middle level managers' entrepreneurial behavior, *Entrepreneurship Theory and Practice*, 29(6), 699-716
- Murray, J. (2012). *Sainsbury's claims title of biggest solar power generator in Europe*. Retrieved from <http://www.theguardian.com/environment/2012/aug/03/sainsburys-biggest-solar-power-generator-europe>
- Sadler, R. J. (2000). Corporate entrepreneurship in the public sector: the dance of the chameleon, *Australian Journal of Public Administration*, 59(2), 25–43.
- Schindehutte, M. & Morris, M. H. & Kuratko, D. F. (2000). Triggering events, corporate entrepreneurship and the marketing function, *Journal of Marketing – Theory and Practice*, Spring, 18-30.
- Quinn, J. B. (1985). Managing innovation: controlled chaos, *Harvard Business Review*, 63(3), 73–84.