


## The Integration of the Spanish Electricity System: Volta's Business Model (1910-1960)

*La integración del sistema eléctrico español:  
el modelo de negocio de Volta (1910-1960)*

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### ANALYTICAL SUMMARY

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#### Objectives

The objective of this work is to shed light on the role played by those companies involved in regional integration processes and to highlight the business function of distribution/marketing companies. The aim is to gain a better understanding of the operation of traditional electrical systems and their contribution to the first integrated regional systems, managed by a large production company and its network of production-distribution subsidiaries.

#### Methodology

This case study of one of the largest Spanish distribution companies, Volta, is organized into sections based on both the existing literature on the electricity sector and corporate sources. We highlight how technological change brought about by domestic and industrial electrification opened up new opportunities not only for electricity producing companies but also for distributors; the dynamism of the Valencian market which explains the company's strategy of horizontal integration through the acquisition of other electrical businesses; how the failed attempt at backward integration of the distribution business forced Volta to strengthen its commercial ties with its main electricity supplier; how a change in the producer's policy led to the transformation of the distributor into its subsidiary and a tool to consolidate regional markets; and how the distributor reorganized the Levantine market according to the interests of its parent company.

#### Findings

Limitations in financial and productive resources, a fragmented electric demand, and a conservative approach to management prevented the evolution into integrated and far-reaching electric companies. Distribution companies became highly dependent on large energy suppliers, limiting their ability to control the electricity value chain. Hidrola opted for a business model that outsourced the distribution of medium and low voltage to third parties, focusing on the generation and distribution of high voltage. Hidrola's policy change went from cooperating with independent distributors to exercising majority control over them, as was the case with Volta. Electric companies that received financial and strategic support from major banks followed a model that combined the production and distribution of electricity, favoring the development of regional and later national electrical systems. The wide variety of electrical business models at the beginning of electrical development tended towards corporate concentration as demand increased and technology allowed for economies of scale. Medium or large foreign distributors encountered significant entry barriers in markets dominated by large regional producer-distributors (not fully developed during the study dates) that would allow for free connection and competition among operators of different sizes. Distribution companies that became subsidiaries took on a new role focused on standardizing and optimizing their markets, financially supported by the parent companies to keep distribution and marketing costs low. The existing business strategies in the Spanish electricity market began to change in the 1950s and 1960s, with a horizontal integration of the subsidiaries and a reconfiguration of the high, medium, and low voltage markets.

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## **Limitations**

Despite proposing several hypotheses, we have not been able to determine with great precision why business strategies fell apart in Spain towards the end of the 1950s, resulting in the reconfiguration of the high, medium, and low voltage markets, especially from the 1960s onwards through the horizontal integration of subsidiary companies.

## **Evaluation of originality**

The originality of this work lies in filling a gap that has existed until now in most studies on the evolution of the electric sector, which have rarely offered a general explanation of the organizational structural change that entailed the process of local, regional, and even national concentration. This gap is addressed by examining the role that companies played in the integration of traditional electrical systems, as well as what the business function of the distribution/marketing companies was in the integration processes.