25. SWOT Analysis

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SWOT analysis is one of the most widely used analytical tools worldwide in both the business sector (Madsen, 2016) and the public sector for strategic planning. SWOT is an acronym for the terms Strengths, Opportunities, Weaknesses, and Threats.

This analysis consists of gathering key data that characterize the internal environment (strengths and weaknesses) and the external environment (opportunities and threats) of an organization (or project). Strengths and opportunities are positive aspects, relative to competitors, of internal or external origin, respectively. Weaknesses and threats are negative aspects of internal or external origin, respectively, as illustrated in the figure below, which is commonly used in this type of analysis. It should be noted that, when applied to public organizations, other factors such as economic or political crises, for example, are taken into account in addition to competition.

	Positive Factors	Negative Factors
Internal Factors	STRENGTHS	WEAKNESSES
External Factors	OPPORTUNITIES	THREATS

STRENGTHS: internal advantages of the company/project in relation to competitors.
Examples: quality of the product offered, excellence of customer service, team motivation, financial solidity, access to a specific technology, etc.

WEAKNESSES: internal disadvantages of the company/project in relation to competitors.
Examples: high production costs, poor market image, obsolete facilities, weak brand, lack of staff qualification, etc.

OPPORTUNITIES: positive external factors that may enhance the competitive advantage of the company/project.
Examples: changes in customer preferences, bankruptcy of a competing company, etc.

THREATS: negative external factors that may put the competitive advantage of the company/project at risk.
Examples: new competitors, loss of key employees, etc.

Origins: There is no consensus regarding the origin of SWOT analysis, either in terms of the authors who implemented this technique or the exact period in which it emerged. Some authors point to the American Albert Humphrey as the creator of this method during

the development of a research project at Stanford University between the 1960s and 1970s, while there is considerable evidence of the fundamental role played by Harvard Business School as the cradle of SWOT analysis during the 1950s and 1960s (Madsen, 2016).

Applications: Owing to its simplicity, SWOT analysis is used in very different scenarios, ranging from the creation of a website to the management of a multinational company, such as a pharmaceutical company, as it can improve performance by facilitating strategic activities (Madsen, 2016). In fact, although it is a simple list that does not provide information per se, it helps structure thinking based on the information we have, or should seek to obtain.

Application in the Drug Discovery and Development (DDD) process: It is worth emphasizing the importance of applying this type of strategic assessment before initiating any drug discovery and development project, whether in a pharmaceutical company or in an academic setting. According to Harpum (2012), SWOT analysis is particularly useful in the strategy development process within the drug discovery and development environment. Conducting a SWOT analysis allows multiple alternative drug project strategies to be developed, refined, and proposed to project governance. As an example of SWOT application in the DDD context, one may cite the review by Kang (2013) on the pros and cons of the GPR119 receptor as a target for the treatment of diabetes mellitus, which led the author to propose strategies for the success of drug discovery projects aimed at this target.

Application in the academic research environment: This type of analysis may also be useful when evaluating research projects and/or theses, as it forces reflection on their cost-benefit ratio and raises the question of whether a given project is being selected simply because it lies within the comfort zone of the supervisor and/or laboratory.

References

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