METHODOLOGY AND CONCEPTUAL FRAMEWORK

Business Competitiveness Ranking
The aim this ranking is to assess the competitiveness of firms at the country level. This implies the construction of factors which enable us to conduct such an assessment. Relevant factors include both contextual variables and intrinsic variables that are firm-specific. While undoubtedly statistical data is useful in the assessment of competitiveness, the practice of heavily relying on that data does not provide a complete picture of the competitiveness of firms. Statistical data, for example, cannot capture the intricacies of the governance of a particular firm. For this reason, the methodology herein presented emphasizes the use of a survey, the Business Competitiveness Survey, in order to obtain company-specific insights that lead to better understanding of internal behaviors and dynamics of firms.

**CONCEPTUAL FRAMEWORK**

Business competitiveness is the capacity of a firm to sustain its long term profitability. There are two aspects to such a capacity, general and intrinsic dimensions. The general dimension refers first to structural elements that define the context in which a firm operates (i.e., country level), for example, the regulatory framework of a given country and level of international trade. A second component of the general dimension is industry-related variables; for example, the level of investment on R&D in a particular sector or the degree of industry concentration.

The intrinsic dimension refers to the behaviors and practices of firms which allow them to sustain their performance in the long-term. The intrinsic dimension includes governance, organizational, functional, sustainability, talent development and digital factors. The governance factor concerns all the practices, processes and structures necessary for the effective governing of the firm; for example, the fulfillment of the board of directors’ strategic role. The organizational factor refers to practices and processes that allow for the well-functioning of the management of a company, for example, ability of the management team to adapt the firm’s strategy to market changes. The functional factor is related to the firm’s operational processes; for example, marketing strategies and innovation.

The sustainability, talent development and digital factors concerns processes that enable firms to ensure the effectiveness of its governance, organizational factor and functional factors; for example, practices that enable firms to remain dynamic vis-à-vis its competitors (e.g., level of digitization) and the ability of firms to build an organizational culture that fosters collaboration among its members. Figure 1 represents our conceptualization of business competitiveness.

The performance of the firm seems to be an outcome of structural, industry and intrinsic factors. That is to say, the intrinsic factor includes the capabilities of a particular firm, which in combination with the structural and industry factors impact the performance of the company. Indeed, the correlation among these factors may be strong but this is not surprising because it reflects that firms exhibiting high level of competitiveness function in contexts that facilitate the conduct of businesses, implement certain practices and develop internal processes which have a strong impact in their performances.
Our selection is limited, first, by the length of the questionnaire that is feasible for participants to complete within time-constraints; and second, by our emphasis on capturing specific aspects of firm capabilities. In this sense, the selection of intrinsic factors is a summary of the capabilities that firms can build upon in order to sustain their long-term profitability.

Data related to the general dimensions of business competitiveness are available from the World Competitiveness Online dataset. In the case of the industry factor, we complement statistical data with survey data. The list of general dimension’s variables is presented in Table 1. We utilize the Business Competitiveness Survey to obtain data on intrinsic factors. Table 2 presents the set of intrinsic variables.

**BUSINESS COMPETITIVENESS VARIABLES**

In line with the above structure, we use the following criteria for the construction of the Business Competitiveness Ranking. It is important to point out that the Ranking is dynamic and thus in the future will incorporate new variables that will increase its robustness. In this sense, the list of criteria under the general dimension is not exhaustive. Similarly, in terms of the intrinsic dimension, there are objective variables, such as the number of board meetings per year, that are not included in the current list due to data availability.

Admittedly, the list of intrinsic factors can be longer than the set of variables developed.
### Structural factor
- Country overall productivity—real growth
- Economic performance (by sectors: agriculture, industry and services)
- International trade: exports (by sectors)
- Employment (by sectors)
- Regulatory framework
- Shareholders’ rights
- Labor productivity
- Labor cost
- Labor relations
- Quality of physical country infrastructure

### Industry factor
- Size of industry
- Industry concentration
- Capital/labor intensity
- Vertical integration
- Level of regulation
- R&D investment
- Productivity (by sectors)

### Firm performance factor
- Assets
- Revenues
- Return on sales and return on equity
- Profit margin
- Business processes outsourcing
- International expansion (M&A)
- Job creation

### Governance factor
- Size of the board
- Number of board meetings
- Board structure (committees, CEO/Chair roles split)
- Oversight role of the board
- Strategic role of the board
- Support role of the board
- Board tenure
- Director retirement age
- Limited number of board seats (other firms) to be held
- Independent directors
- Board diversity
- Director skills development
- Directors succession plan
- Related party transactions (evaluation/disclosure policy)
- Constructive partnerships (management/board)

### Functional factor
- Dynamic strategy
- Alignment of strategy and objectives
- Customer centricity
- Understanding of competitors
- Understanding of customers
- Access to high-quality suppliers
- R&D expenditures/innovation
- Use of digital technology
- Development of methods of production
- Adoption of technology/further productivity
- Use digital technology/build organizational capabilities
- Adapt product-services/external opportunities
- Encourage employees’ creativity
- Integration of operations (processes and technology)

### Sustainability factor
- Integrate new knowledge/value-creating strategies
- Value-creating strategies (no reproduced)
- Market responsiveness
- Constant improvement (products/services)
- Innovative solutions
- Alignment of skills and innovation (orientation)
- Alignment of skills and innovation (behaviours and processes)
- Work force’s skill development (support)
- Mentoring partnerships (potential candidates)
- Talent retention
- Employees “on-the-job happiness”
- Employees empowerment
- Encouragement of dissent
- Environmental-friendly outputs
- Community engagement (social media)
METHODOLOGY

Survey respondents evaluate a series of statements in regard to their companies’ behavior and practices. This evaluation follows the following scale.

- Strongly Disagree = 1
- Disagree = 2
- Neither agree nor disagree = 3
- Agree = 4
- Strongly Agree = 5

Survey responses are then normalized to the 0 to 1 range of values; for example, an average response of 2 is equivalent to 0.40. The objective is to bring survey results and all relevant hard statistics into proportion with one another in preparation for the construction of the factors’ scores. The first methodological step is thus to collect and map the data following the structure presented in the conceptual framework section. Subsequently, relevant raw scores need to be generated in order to develop the overall ranking.

The steps required for the construction of the ranking are the following:

1. Collect all indicators: survey responses (numeric values) and hard data variables
2. Produce raw scores by aggregating each individual criteria (i.e., survey responses and hard statistical variables)
3. Normalize raw scores of all variables
4. Aggregate normalized scores into factors using averages
5. Construct the final ranking by aggregating all factors (each has equal weight) into an overall score

We then subject the data to a series of statistical tests (e.g., factor analysis) to identify possible biases and errors.

FURTHER READINGS


IMD is ranked 1st in open programs worldwide – 5 years in a row.
Financial Times 2012 – 2016

The IMD Difference

IMD is a top-ranked business school. We are the experts in developing global leaders through high-impact executive education.

Why IMD?
- We are 100% focused on real-world executive development
- We offer Swiss excellence with a global perspective
- We have a flexible, customized and effective approach

www.imd.org

World Competitiveness Center

Dedicated to the advancement of knowledge on world competitiveness

www.imd.org/wcc