What SMEs can learn from Hidden Champions: An empirical analysis of the importance of strategic success factors for small and medium-sized enterprises

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This is the author accepted manuscript. The final article can be found in:

Deimel, K. & Gerke, A. (2025). What SMEs Can Learn from Hidden Champions: An Empirical Analysis of the Importance of Strategic Success Factors for Small and Medium-Sized Enterprises. *ZfKE - Journal for SMEs and Entrepreneurship*, *73*(1–2), 71–94. https://doi.org/10.3790/zfke.2025.1470705

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Abstract

The strategic implementation of success factors has gained growing attention among small and medium-sized enterprises (SMEs). Given the above-average performance of so-called Hidden Champions (HCs), the question arises as to what extent SMEs recognize and adopt the key success factors identified by Hermann Simon for HCs. This empirical study examines the perceived importance of these success factors within the SME sector and explores whether significant differences exist between more and less successful companies. Furthermore, an exploratory multivariate data analysis revealed two distinct clusters within the dataset - “International Innovators“ and ”National Traditionalists“ – which exhibit clear differences in how they assess the relevance of these success factors.

I. Introduction

Strategic management is no longer a discipline solely for large corporations; rather, it is increasingly essential for small and medium-sized enterprises (SMEs) as well. Amidst prevailing environmental dynamics - manifested in shortened product life cycles, increasing uncertainty, and heightened market volatility - it is imperative that SMEs systematically identify and develop potential sources of success and sustainable competitive advantage. Despite widespread recognition of the relevance of strategic business planning within SMEs, a significant gap remains between this recognition and the actual implementation of professional strategic planning and management approaches (Deimel et al., 2017). This gap can adversely affect the long-term success prospects of such firms.

Nevertheless, the German economic landscape is home to numerous exceptionally successful SMEs, often referred to as “Hidden Champions”. Since the early 1990s, Hermann Simon has made substantial contributions to the understanding of these firms, which are characterized by above-average performance despite low public visibility (Simon 1996, 2007, 2012). His research has revealed the global leadership and economic relevance of these SMEs. According to recent data, approximately 50 % of the world’s Hidden Champions are based in Germany (cf. iwd, 2019).

Simon (2012, p. 83) defines Hidden Champions as companies that:

- are ranked first, second, or third in their global market, or first in their continental market;
- generate annual revenues below €5 billion;
- maintain a relatively low public profile.

Given the outstanding and often sustainable success of these firms, the question arises: what specific success factors contribute to their performance? Based on a case study methodology, Simon and others (e.g., Knyphausen-Aufseß, 1994; Simon, 2007) identified a range of distinctive factors that contribute to the success of Hidden Champions. In the context of success factor research, these factors are understood as key areas that significantly influence the achievement of strategic objectives (Rockart, 1980, pp. 49 ff.). The aim of success factor research is to identify characteristics that distinguish successful firms from those who are less successful (Nicolai & Kieser, 2002, pp. 580 ff.).

This study revisits the Hidden Champions framework and pursues three primary research objectives through an empirical, practice-oriented approach. First, it investigates the extent to which SMEs that do not fall under the category of Hidden Champions nevertheless recognize and attribute relevance to the success principles identified by Simon. While building on Simon's framework, this study does not aim to redefine or empirically verify new success factors. Rather, it seeks to assess whether, and to what extent, SMEs, who are no Hidden Champions, perceive these principles as relevant to their own strategic management practices. The impetus for this investigation stems from Simon's own assertion that less successful SMEs can benefit from benchmarking their strategies against those of Hidden Champions (Simon, 2007, p. 42). Furthermore, the study examines whether the success factors identified by Simon are ascribed varying levels of importance by the companies under research.

The second research objective is situated within the broader field of success factor research. It aims to determine whether differences exist between successful and less successful companies with respect to the perceived importance of the success factors. This analysis is intended to reveal whether successful firms prioritize distinct strategic principles compared to their less successful peers.

The third objective involves conducting a multivariate, exploratory cluster analysis. The goal is to identify subgroups within the data that have homogeneous perceptions of the importance of success factors, but are heterogeneous compared to other groups. The study aims to determine whether specific combinations of success factors can be associated with distinct business models or firm typologies. Additionally, it explores whether certain companies already align

closely with the core strategies of Hidden Champions by attributing higher levels of importance to specific factors.

It is important to note that, in constructing the sample, a deliberate deviation was made from the SME definition provided by the IfM Bonn or the European Union. This decision was made to include larger firms that, despite their size, self-identify as SMEs (cf. Welter et al., 2014, p. 6; Welter et al., 2015, p. 41). To this end, the definition provided by the Deloitte Mittelstandsinstitut was adopted. According to this definition, SMEs include manager-led firms with up to 3,000 employees and/or revenues of up to €600 million, as well as owner-managed or family enterprises (Becker et al., 2008, p. 21).

This broader and more practice-oriented definition was deemed more suitable for the purposes of the present study. In particular, larger SMEs are more likely to engage in strategic planning and consider success factors systematically (Deimel et al., 2017, p. 97). Thus, excluding such firms would have limited the study's relevance and scope. Moreover, Simon's own conceptualization of Hidden Champions supports this broader view. He sets the revenue ceiling for Hidden Champions at €5 billion and emphasizes that firm size, in itself, is not the decisive criterion; rather, what matters is the retention of SME-like characteristics, strategies, and leadership styles, even in the context of growth (Simon, 2012, p. 84). Simon notes:

"More important than a strict size threshold is the fact that these companies have retained their typical characteristics, strategies, and leadership styles throughout their growth. Most CEOs of these larger firms are committed to preserving the strengths of SMEs. (…) The largest of our Hidden Champions are, indeed, large companies, yet they remain far from entering the global top 500 or the top 100 in Germany. (…) At this scale, even the largest Hidden Champions can still be considered medium-sized." (Simon, 2012, p. 84, own translation)

In light of these considerations, this study consciously adopts the Deloitte definition of SMEs to allow for the inclusion of larger, yet still SME-like, companies. This approach ensures the study remains aligned with both the theoretical approaches and the practical realities of researching success factors in the context of Hidden Champions.

II. Success Factors of Hidden Champions

Hidden Champions distinguish themselves from other firms by achieving above-average growth and long-term success through the pursuit of focused business strategies that often evade public attention. A number of scholars, including Simon (1996, 2007, 2012), Welter et al. (2014), and Blommen and Bothe (2007), have identified various critical success factors

associated with these firms in their respective studies. Table 1 summarizes the key success factors considered in the present research, accompanied by brief descriptions.

III. Methodology

This section outlines the research design, instruments employed, and the composition of the sample.

1. Research Design

In order to examine the extent to which medium-sized enterprises attribute importance to established success factors, an empirical study was conducted using a pre-existing dataset provided by the business information service Creditreform/LexisNexis. This dataset comprised medium-sized companies located in North Rhine-Westphalia (NRW), Germany. Based on the plausible assumption that firms in NRW do not differ fundamentally from other German companies in their assessment of success factors, this regional sample was considered sufficiently representative for an exploratory analysis.

The study employed a key informant approach (Marshall, 1996, p. 92), targeting company owners or managing directors as respondents. The address database used for the survey included companies with annual revenues of up to €400 million and a maximum of 5,000 employees. While the Deloitte Mittelstandsinstitut defines small and medium-sized enterprises (SMEs) as firms with up to 3,000 employees and/or revenues not exceeding €600 million, the selection criteria did not entirely align with this definition in terms of employee count. It is therefore possible that some companies in the sample exceeded the 3,000-employee threshold. However, the Deloitte definition employs a disjunctive "and/or" logic, and none of the firms in the sample exceeded the €600 million revenue limit, thereby maintaining overall conformity with the SME classification.

The empirical basis of the study was a standardized questionnaire administered in three waves of data collection to 2,000 firms, yielding a response rate of 5.8 % (116 completed surveys). Due to the relatively low response rate, the findings are interpreted as exploratory rather than generalizable. Incomplete responses were included to maximize the usable sample size, and consequently, item-level analyses were based on variable sample sizes depending on item completion.

Table 1: Selected success factors of Hidden Champions (HC)

Success Factor	Description
Narrow definition of core business	• HC focus on niche markets in which they have attained international or global leadership positions (Hamel & Prahalad, 1994, pp. 79 ff.). • HC offer a narrow and highly specialized range of products or services, characterized by depth rather than breadth in their market focus.
Early and strong internationalization in the core segment	• HC often achieve growth through significant international expansion within their core segment. • HC frequently enter international markets early to capitalize on first-mover advantages and to establish a strong market position. • Customer needs tend to be homogeneous across markets, facilitating the transferability of their strategies to global customers.
Customer-specific product offerings and close customer relationships	• HC maintain very close relationships with their customers. • Regional networking with customers plays a crucial role. • Top management – not only employees - regularly engage with customers and have a thorough understanding of their needs and requirements. • Product offering is strongly influenced by customer input and often involves collaborative product development (cf. Möller 2006, pp. 1067 f.). • Consequently, products are characterized by a high technical standard, are precisely tailored to customer specifications, and are complemented by customer-specific service offerings. • This results in increased customer loyalty and higher switching costs for customers, as well as elevated market entry barriers for competitors (cf. Simon 2007, pp. 176 f.).
Quality instead of price leadership strategy	• HC pursue a quality leadership strategy. • HC focus on achieving an above-average price-performance ratio. • Due to their limited size, an exclusive emphasis on cost leadership is often not feasible for HC, who instead prioritize innovation leadership
Innovation leadership	• A core success factor for HC is their capacity for innovation and rapid innovation speed. • Rather than relying primarily on patents, many HC depend on a continuous internal innovation process. • Research and development constitute a key source of competitive advantage for HC.
Organizational structure and depth of value creation	• HC rely on simple organizational structures and direct communication channels. Those that are internationally active often transition their organizational form from a functional to a divisional structure (cf. Simon 2007, pp. 262 ff.). • They maintain a high depth of production and value creation in their core competencies to ensure better quality control and to protect their technology (cf. Simon 2007, pp. 272 ff., 280 ff.).
Financial strength and cost management	• HC are typically characterized by strong financial resilience. • They prioritize internal cash flows and rely predominantly on traditional bank financing in accordance with pecking order theory (cf. Myers, 1984, pp. 576 f.). • Effective cost management is critical for HC. • High cost flexibility renders them less vulnerable to cyclical economic fluctuations (cf. Weirauch, 2007, pp. 97 ff.).
Employee motivation and qualification	• High employee motivation and qualification, low absenteeism, and strong organizational loyalty are essential factors contributing to the success of HC. • HC exhibit a high-performance organizational culture (also see Rosenstiel, 2009, pp. 28 ff.). • The recruitment of highly qualified personnel is often impeded by the relatively small size and limited visibility of HC. • Employees represent a central source of innovation and contribute significantly to organizational success.
Leadership personalities and management style	• Many HC are owner-managed, with company culture and strategic direction largely shaped by the values and leadership style of the owners. • HC leadership is characterized by strong identification with organizational goals, fearlessness, and high levels of energy and motivation. • HC leadership styles tend to be ambivalent - authoritarian in terms of core values but participatory in operational details. • HC emphasize long-term orientation and exhibit high leadership continuity (cf. Simon, 2007, pp. 361 ff.). • HC demonstrate a strong competence in the implementation of decisions and projects.

2. Structure of the Questionnaire

Drawing on the work of Simon (1996; 2007; 2012), Welter et al. (2014), and Blommen and Bothe (2007), 20 distinct success factors were identified. These were operationalized as questionnaire items and grouped into five thematic categories: Product/Services, Marketing/Sales, Management, Finance/Operations, and Employees (see Table 2). This categorization was guided by conceptual coherence and thematic consistency.

Table 2: Investigated success factors in this study

Category	Item	Description
Product/ Services	• Unique business idea	• Business idea
	• Outstanding product/service quality; best possible satisfaction of customer needs	• Product/service quality
	• Concentration on niche markets; narrow specialized range of services (deep rather than broad range of services; low product differentiation)	• Nichemarkets
	• R&D as a core competence; high technological innovativeness; technology leadership	• R&D as core competence
Marketing/ Sales	• Joint product development with customers	• Product development with customers
	• Strong international or global marketing of the company's services	• International marketing
	• Good price-performance ratio of products/services	• Price-performance ratio
	• High investment in marketing measures	• Investments in marketing
	• High customer proximity; long-lasting, intensive and direct customer relationships	• Intensive customer relationships
	• Favorable product price, cost leadership	• Cost leadership
Management	• Professional management by strong leaders; owner management	• Owner management
	• Performance-oriented corporate culture; setting ambitious targets	• Performance-oriented corporate culture
	• Concentration on core competencies; high share of value creation in core competencies	• Concentration on core competencies
	• High implementation competence; rapid implementation of decisions and projects	• High implementation competence
	• Internationalization of production	• Internationalization of production
Finance/ Operations	• Strong financial position/high equity ratio	• High financial strength
	• High (fixed) cost flexibility	• Cost flexibility
	• Centralized organizational structures; cost-efficient, internal processes	• Centralized organization
Employees	• High level of employee identification and motivation with the company's goals and values	• High employee motivation
	• High level of employee qualification; high level of employee expertise	• High employee qualification

Respondents were asked to rate the importance of each success factor for their respective companies using a five-point Likert scale (1 = very low/no importance; 5 = very high importance). In addition to these closed-ended items, the questionnaire also collected structural company data, including number of employees, industry sector, and ownership structure, to enable more nuanced subgroup analyses. Measures of firm performance were also included.

Acknowledging SMEs' sensitivity regarding financial data, firms were asked to assess their performance relative to their respective industry averages (i.e., above average, average, or below average).

Firm performance is a central construct in both general management and entrepreneurship research. Despite its importance, there is no consensus on a standard measurement approach. This lack of standardization is evident in the diverse success criteria used across empirical studies, limiting comparability (Evanschitzky, 2003, p. 54). In order to operationalize this latent construct, observable indicators must be derived.

Business administration offers a broad range of potential success indicators, including hard financial metrics (e.g., profitability, Tobin's Q), market indicators (e.g., market share, sales growth, revenue), and soft indicators (e.g., customer satisfaction). Success assessments may vary depending on whether the perspective is internal (e.g., owners, management) or external (e.g., customers, suppliers, other stakeholders). In the context of success factor research, Welge et al. (2017, pp. 226–227) emphasized financial indicators such as profitability and value-based metrics. According to Ambler and Kokkinaki (1997), the most frequently used success indicators in empirical studies are sales (22.3 %), market share (17.1 %), earnings (11.0 %), and brand choice/purchase intention (11.0 %) (cf. Baumgarth & Evanschitzky, 2009, p. 243).

Following Etzioni's (1964) goal-based approach, which conceptualizes firms as pursuing multidimensional goal bundles, success in this study was measured using three performance indicators: return on equity, sales growth, and relative market share. These align with prior empirical studies on strategic planning, which typically employ financial indicators as dependent variables (cf. Hall & Weiss, 1967; Pearce et al., 1987; Rue & Ibrahim, 1998; Schmalensee, 2007). The number of direct competitors was also assessed as a control variable.

3. Sample

The sample primarily consisted of small and medium-sized enterprises, with 74.7 % employing up to 499 individuals and 67.8 % generating annual revenues below €50 million (see Figures 1 and 2 for detailed distributions). The sample was diversified across key SME-relevant sectors, including industry (43.6 %), services (30.9 %), trade (18.2 %), and craftsmanship (4.5 %).

In terms of ownership structure, 59.2 % of the firms were owner-managed, 14.5 % were externally owned, and 21 % were subsidiaries of larger corporate groups or conglomerates. Only 5.3 % were publicly listed. It should be noted that data on ownership structure was not collected during the third wave of the survey, resulting in a reduced sample size (N = 80) for

this variable. While the sample cannot be considered representative of the entire SME population in Germany, it provides valuable insights into a specific subset of firms willing to participate in the survey. The sampling procedure was primarily driven by data availability and respondent willingness, which introduces potential biases and limits the generalizability of the findings. However, the exploratory nature of the study was intended to generate hypotheses for future research rather than to draw definitive conclusions.

Demographically, the sample was skewed toward smaller firms with relatively low revenues. The industry and service sectors were prominently represented, whereas trade and craftsmanship were underrepresented. The ownership structure was relatively homogeneous, with a majority of firms being owner-managed.

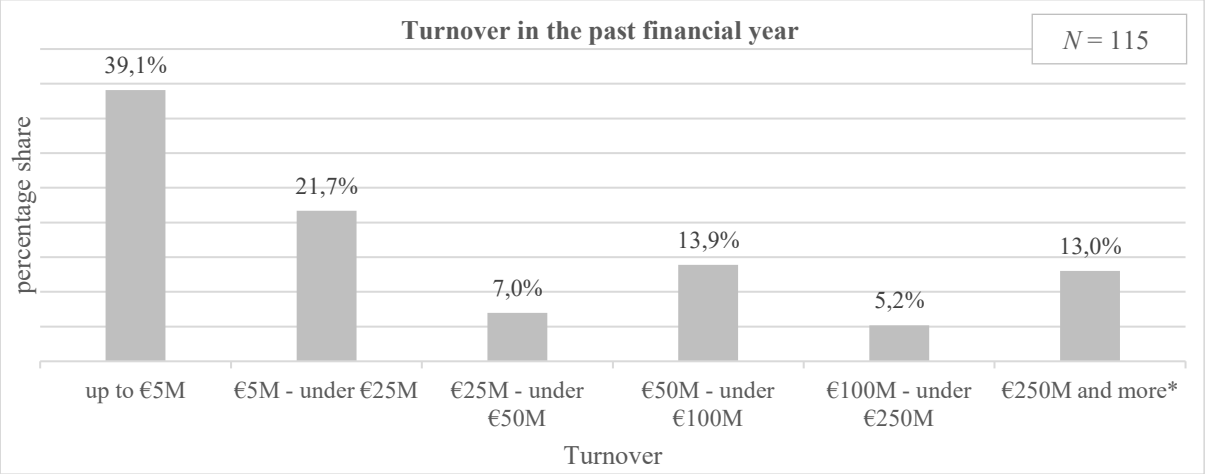

Figure 1: Turnover distribution in the sample.
** Maximum turnover of up to 400 million euros.*

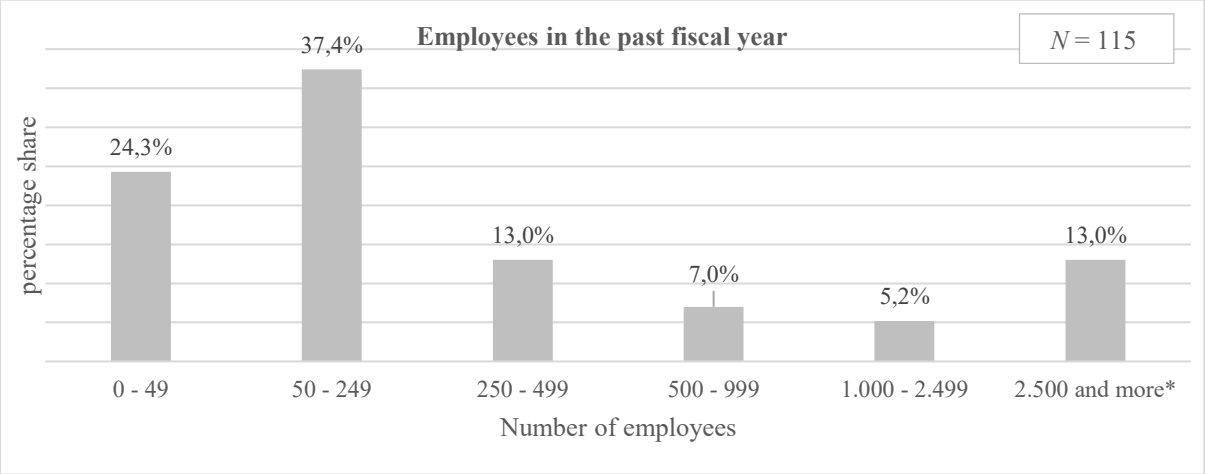

Figure 2: Employee distribution in the sample.
** Maximum of up to 5,000 employees.*

IV. Results

To assess how medium-sized companies value the success factors identified by Simon and other researchers, the analysis began by examining the overall importance of these factors for the surveyed firms. Subsequently, a comparative evaluation was conducted between more and less successful firms with regard to their perceived importance of these factors. In a final step, a multivariate cluster analysis has been employed to derive deeper insights.

1. General Importance of Success Factors

One of the main objectives of this study was to assess how medium-sized enterprises perceive the importance of success factors identified by Simon and other researchers. -. To this end, the survey assessed the perceived importance of each factor. For more clarity, the factors were categorized into five overarching domains based on conceptual plausibility - namely Product/Services, Marketing/Trade, Management, Business/Finance, and Employees - though these categories were not subject to further statistical analysis. An overview of the importance ratings is presented in Figure 3. The individual analysis revealed that the following five success factors were regarded as particularly important:

- Intensive customer relationships ($M = 4{,}61$; $SD = 0{,}54$)
- Product/service quality ($M = 4{,}47$; $SD = 0{,}58$)
- Employee motivation ($M = 4{,}45$; $SD = 0{,}55$)
- Employee qualification ($M = 4{,}00$; $SD = 0{,}59$)
- High implementation competence ($M = 4{,}80$; $SD = 0{,}72$)

The implications of these findings are significant for both business practice and economic policy. The study emphasizes the central role of the above-mentioned factors in driving the success of medium-sized enterprises. In particular, the results highlight the need for companies to actively develop and maintain these capabilities to remain competitive. From a policy perspective, the findings point to the importance of supporting SMEs in strengthening their customer orientation, enhancing employee competencies, and improving operational implementation. By fostering these capabilities, policymakers can contribute to a more robust and competitive SME sector. Overall, the study offers valuable insights into the prioritization of success factors in medium-sized firms and provides a conceptual framework to support strategic development. Firms may use this framework to align internal strategies with empirically identified success drivers.

2. Importance of Success Factors Among More and Less Successful Companies

To investigate potential differences in the perception of success factors between more and less successful companies, an initial analysis was conducted by splitting the overall sample into two subgroups according to firm performance, used as the dependent variable. Two indicators of success were employed: return on equity as an objective measure, and self-assessed sales growth as a subjective performance metric. Companies were asked to evaluate their performance relative to their industry as above average, average, or below average. Firms reporting above-average performance were grouped as "successful", whereas those with average or below-average performance were grouped as "less successful". Figure 4 presents the importance ratings of the success factors by both groups.

In general, the findings indicate a high degree of similarity in the perceived importance of success factors between the two groups (Tables 3 and 4). Both, successful and less successful firms rated intensive customer relationships, employee motivation, and product/service quality as highly important. Employee qualification ranked fourth in both groups, with successful firms assigning slightly higher importance to this factor. The only notable difference appeared at the fifth rank: successful firms emphasized the importance of owner-led management, whereas less successful firms considered a favorable price-performance ratio more critical. This general similarity suggested a broadly shared understanding of which factors contribute to business success. However, differences in strategic emphasis - such as the prioritization of financial independence and management structure - may explain performance variations.

Regarding the least important success factors, both groups show similar patterns, although the specific rankings slightly differ. Successful firms rated investment in marketing activities as the least important factor, while less successful firms ranked internationalization of production lowest. Notably, three of the five lowest-rated factors fall within the Marketing/Sales category, a result that aligns with the general importance assessment (Figure 3). These findings suggest that strategic marketing activities are not prioritized among the surveyed firms, regardless of performance level. This may reflect resource constraints or differing perceptions of market dynamics in the medium-sized enterprise segment. In conclusion, the five most and least important success factors exhibit relatively little variation between more and less successful companies. However, based on *t*-tests, two statistically significant differences were identified:

- Price-performance ratio (Less successful: $M = 4{,}23$; $SD = 0{,}57$; Successful: $M = 3{,}89$; $SD = 0{,}86$; $t(92) = 2{,}35$; $p = .022$)
- Financial strength (Successful: $M = 4{,}06$; $SD = 0{,}79$; Less successful: $M = 3{,}70$; $SD = 0{,}74$; $t(95) = -2{,}28$; $p = .025$)

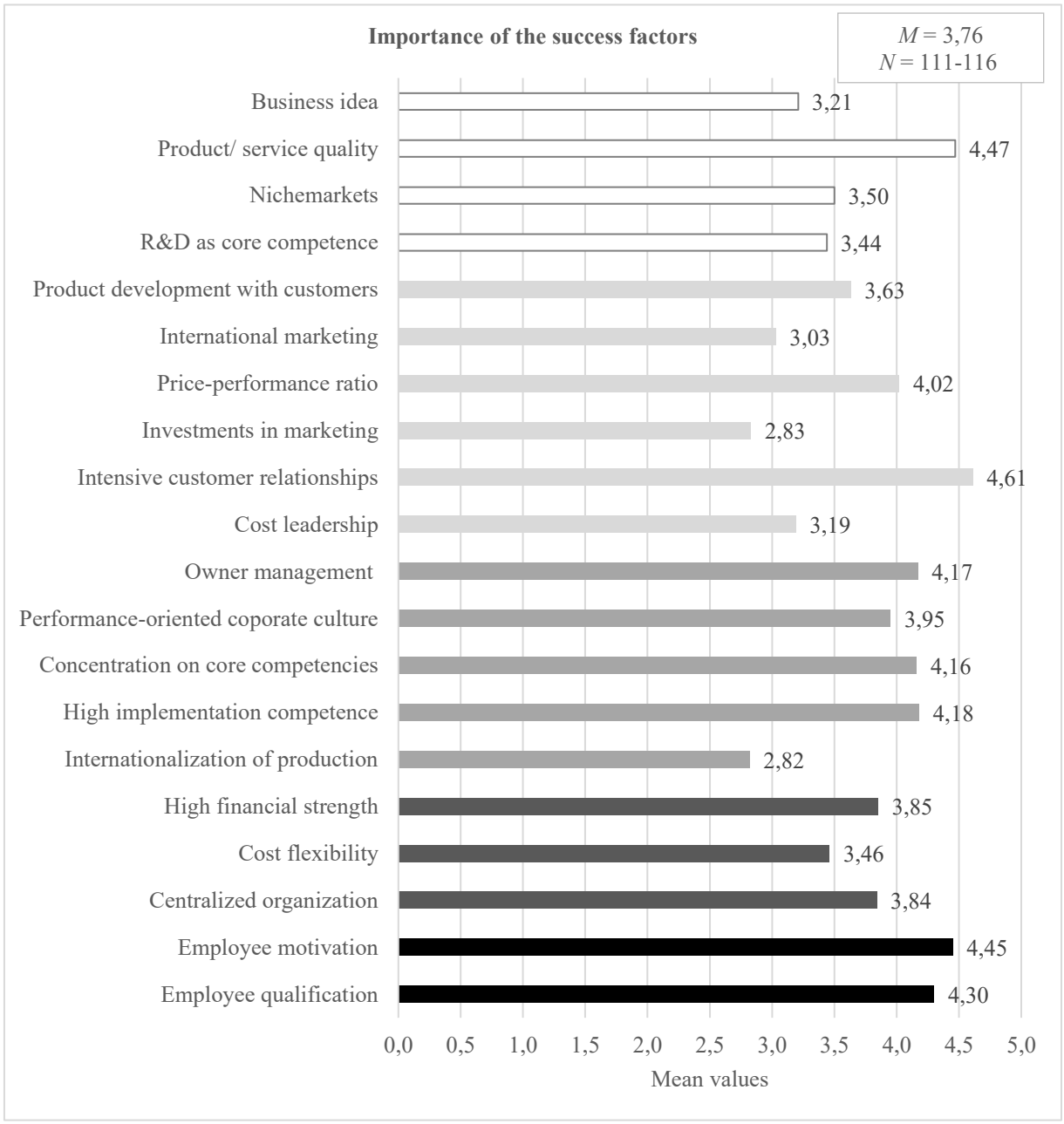

Figure 4: Importance of the success factors

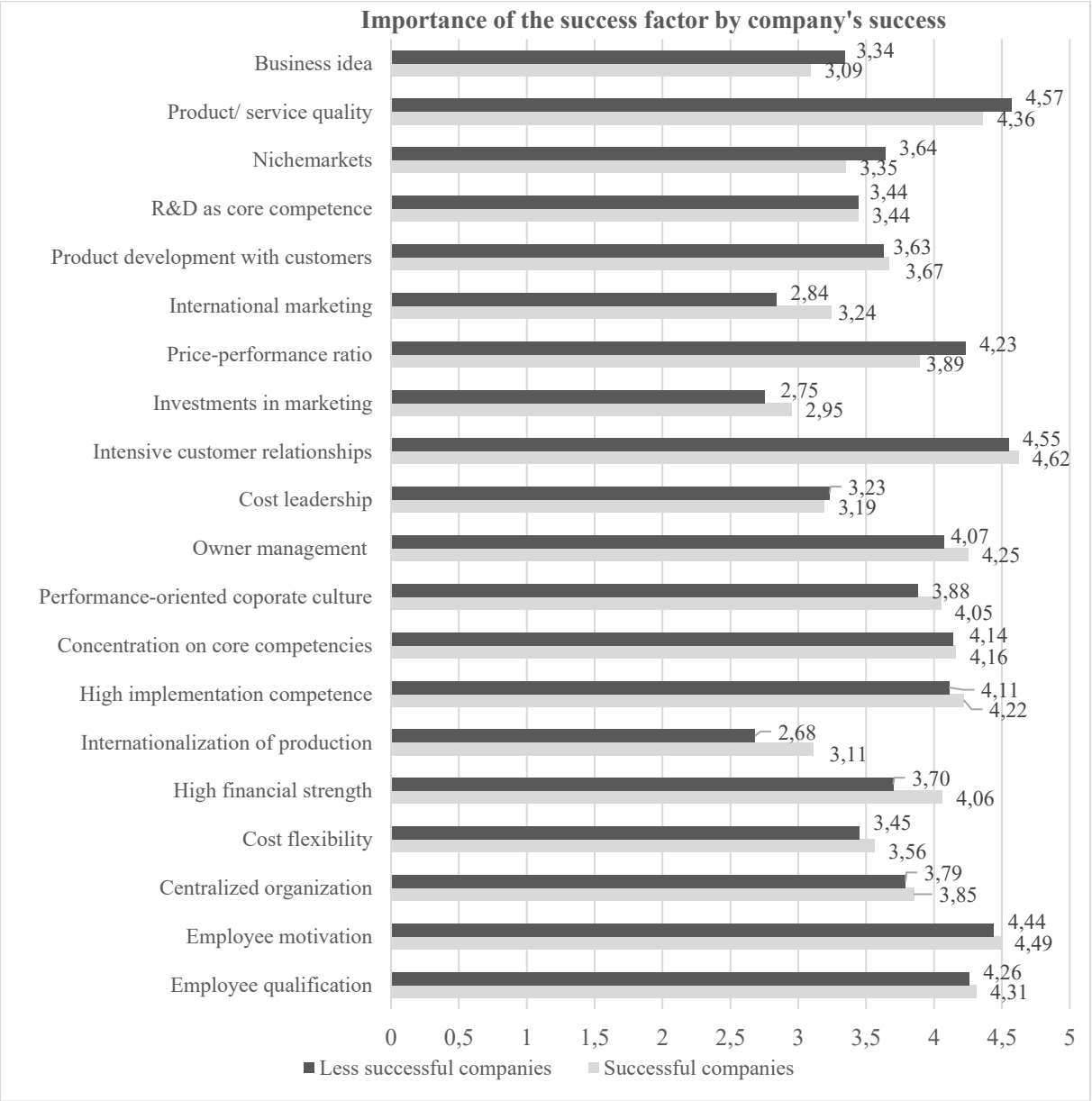

Figure 4: Importance of the success factor by company's success.
Less successful n_1 = 42-44 and successful companies n_2 = 54-55.

Table 3: Success factors with the highest importance

Rank	Successful companies	*M*	*SD*	Less successful companies	*M*	*SD*
1	Intensive customer relationships	4,62	0,56	Product/service quality	4,57	0,59
2	Employee motivation	4,49	0,57	Intensive customer relationships	4,55	0,55
3	Product/service quality	4,36	0,52	Employee motivation	4,44	0,50
4	Employee qualification	4,31	0,57	Employee qualification	4,26	0,62
5	Owner management	4,25	0,65	Price-performance ratio	4,23	0,57

Table 4: Success factors with the least importance

Rank	Successful companies	*M*	*SD*	Less successful companies	*M*	*SD*
20	Investments in marketing	2,95	0,93	Internationalization of production	2,68	1,24
19	Business idea	3,09	1,22	Investments in marketing	2,75	0,84
18	Internationalization of production	3,11	1,34	International marketing	2,84	1,46
17	Cost leadership	3,19	0,99	Cost leadership	3,23	0,83
16	International marketing	3,24	1,39	Business idea	3,34	1,20

These results indicate that less successful firms emphasize competitive pricing, while more successful companies place greater value on financial robustness.

When comparing the overall sample with its two subsamples, only minor descriptive differences were observed. Overall, successful and less successful companies showed similar views on the relevance of success factors, with key differences emerging only in select areas. Both groups ranked customer relationships, employee motivation, and high product/service quality as top priorities. However, successful companies rated employee qualifications as slightly more important. The most notable divergence emerged on the fifth-ranked factor: successful firms valued owner management, while less successful firms emphasized a favorable price-performance ratio. Only two success factors showed statistically significant differences between the success groups, namely price-performance ratio of products/services, favored by less successful firms and financial strength/equity ratio, prioritized by more successful firms. This finding is consistent with the literature, which suggests that Hidden Champions tend to follow quality leadership strategies rather than competing on price.

3. Cluster Analysis

To gain deeper insights into the success factors of Hidden Champions among medium-sized enterprises, a cluster analysis - a multivariate, exploratory method - was employed. The objective was to determine whether distinct groups could be identified within the dataset that differ in their assessment of success criteria, thus reflecting divergent business models. Initially, the dataset was examined using the single-linkage method to detect outliers. Since no significant outliers were identified, Ward's method was applied to form clusters. Based on theoretical considerations, visual inspection of the dendrogram, and statistical evaluation, a two-cluster solution was deemed the most appropriate. The resulting clusters comprised sample sizes of $n_1 = 87$ and $n_2 = 23$, meaning that 110 of the 116 data points were retained for the analysis. Six data points were excluded due to excessive missing values in the success factor evaluations.

a. Evaluation of Success Factors

The two clusters displayed distinct average evaluations of the success factors. Figure 5 provides a comparative overview of these assessments, revealing notable differences between the clusters for certain criteria, while other differences were minimal or negligible. Table 5 presents the results of t-tests, indicating that the differences in evaluation were statistically significant for 12 out of 20 success factors. The most pronounced differences were found in the following areas:

- International marketing (M_1 = 3,55; SD_1 = 1.22; M_2 = 1,35; SD_2 = 0,65; $t(67) = 11{,}74$, $p < .001$)
- R&D as a core competence (M_1 = 3,82; SD_1 = 0,96; M_2 = 2,09, SD_2 = 1,20; $t(108) = 7{,}28$; $p < .001$)
- Internationalization of production (M_1 = 3,20; SD_1 = 1,23; M_2 = 1,52; SD_2 = 0,30; $t(59) = 8{,}31$; $p < .001$)
- Business idea (M_1 = 3,54; SD_1 = 1,07; M_2 = 1,96; SD_2 = 0,77; $t(47) = 8{,}06$; $p < .001$)
- Focus on niche markets (M_1 = 3,64; SD_1 = 1,08; M_2 = 2,74; SD_2 = 0,96; $t(108) = 3{,}65$; $p < .001$)

The cluster analysis results indicate that Cluster 1 placed significantly greater emphasis on internationalization, R&D, and niche market strategies, while Cluster 2 prioritized owner management and more traditional operational approaches. These distinctions suggest different strategic orientations and success models. Based on these differences, Cluster 1 was labeled “International Innovators”, and Cluster 2 “National Traditionalists”.

Cluster 1 - the “International Innovators” - consistently assigned higher importance to the five key success factors mentioned above. These firms emphasized internationalization, innovation, uniqueness, and niche strategies. This aligns with existing literature on Hidden Champions (Simon, 1996, 2007, 2012; Blommen & Bothe, 2007; Welter et al., 2014), suggesting that Cluster 1 companies perceive these factors as highly relevant to their own success.

Accordingly, it can be inferred that firms in Cluster 1 are more likely to qualify as Hidden Champions based on their strategic orientation and evaluation of success factors, in contrast to firms in Cluster 2. The only criterion rated significantly higher by Cluster 2 was the price-performance ratio (M_1 = 3,93; SD_1 = 0,76; M_2 = 4,30; SD_2 = 0,70; $t(108) = -2{,}13$; $p = .036$), which again supports the hypothesis that Cluster 1 firms emphasize quality over price, as expected in the Hidden Champions model.

Table 5: Results of t-tests comparing "International Innovators" (Cluster 1) and "National Traditionalists" (Cluster 2)

	Success factors	Cluster 1 International Innovators		Cluster 2 National Traditionalists				
		$n_1 = 87$		$n_2 = 23$				
		M_1	SD_1	M_2	SD_2	t	df	p
1	Business idea	3,54	1,07	1,96	0,77	8,06	47	.000
2	Product/service quality	4,48	0,57	4,48	0,59	0,03	108	.973
3	Nichemarkets	3,64	1,08	2,74	0,96	3,65	108	.000
4	R&D as core competence	3,82	0,96	2,09	1,20	7,28	108	.000
5	Product development with customers	3,83	0,93	3,00	1,04	3,70	108	.000
6	International marketing	3,55	1,22	1,35	0,65	11,74	67	.000
7	Price-performance ratio	3,93	0,76	4,30	0,70	-2,13	108	.036
8	Investments in marketing	2,84	0,82	2,78	1,13	0,23	28	.823
9	Intensive customer relationships	4,61	0,56	4,65	0,49	-0,34	108	.737
10	Cost leadership	3,10	0,93	3,52	0,99	-1,89	108	.061
11	Owner management	4,24	0,66	3,83	0,65	2,68	108	.009
12	Performance-oriented corporate culture	4,01	0,67	3,57	0,79	2,49	31	.018
13	Concentration on core competencies	4,25	0,61	3,83	0,72	2,86	108	.005
14	High implementation competence	4,31	0,69	3,78	0,67	3,29	108	.001
15	Internationalization of production	3,20	1,23	1,52	0,73	8,31	59	.000
16	High financial strength	3,94	0,74	3,61	0,89	1,85	108	.068
17	Cost flexibility	3,51	0,73	3,17	0,83	1,88	108	.062
18	Centralized organization	3,92	0,72	3,57	0,90	1,99	108	.049
19	High employee motivation	4,47	0,57	4,35	0,49	0,95	108	.342
20	High employee qualification	4,34	0,57	4,13	0,63	1,58	108	.117

b. Cluster Characteristics Based on Demographic Variables

Beyond strategic evaluations, the clusters were also examined for differences in demographic variables.

Industry Sector

Among "International Innovators" (Cluster 1), a majority (51.2 %) operated in the industrial sector, followed by services (26.2 %), trade (14.3 %), and craftsmanship (6.0 %). In contrast, the majority of "National Traditionalists" (Cluster 2) were active in services (40.0 %) and trade (35.0 %), while only 20.0 % operated in the industrial sector, and none in craftsmanship

Number of Employees

No statistically significant differences were observed regarding company size. Most firms in both clusters employed between 50 and 249 people (Cluster 1: 34.9 %, Cluster 2: 52.2 %), followed by firms with fewer than 50 employees (Cluster 1: 22.1 %, Cluster 2: 21.7 %).

Ownership Structure

Ownership structures were similar across clusters. The majority of companies were owner-managed or family-owned (Cluster 1: 54.5 %, Cluster 2: 66.7 %), with owner-managed firms slightly more prevalent in Cluster 2.

Competitive Environment

Significant and strategy-consistent differences emerged in perceived competitive intensity. "International Innovators" reported lower competitive pressure due to more specific competitive advantages. Specifically, 45.3 % of Cluster 1-firms reported having 4 to 10 main competitors, 27.9 % had 1 to 3, and 26.7 % had more than 10. By contrast, 43.5 % of Cluster 2 firms reported facing more than 10 competitors, with only 17.4 % reporting 1 to 3 competitors.

This suggests that "International Innovators", who emphasize uniqueness and niche strategies, face reduced competition - an outcome aligned with Porter's (2014) competitive strategy framework. A higher degree of differentiation typically reduces substitutability and increases alignment with customer needs, resulting in lower competitive intensity (Porter, 2014; Woeckener, 2014).

Revenue and Revenue Growth

Regarding revenue, 50.9 % of Cluster 1 firms generated between €50 million and €100 million annually. In Cluster 2, 68.8 % reported annual revenue below €50 million. Additionally, 50.0 % of Cluster 1 firms reported revenue growth above the industry average over the past five years, compared to only 26.1 % in Cluster 2. Most Cluster 2 firms (52.2 %) reported average revenue growth, and 13.0 % reported below-average growth.

Return on Equity

A similar pattern emerged regarding return on equity (ROE). In Cluster 1, 51.8 % of firms reported ROE above the industry average, while only 39.1 % of Cluster 2 firms reported equal or above-average ROE. The lowest proportion in both clusters reported below-average ROE (Cluster 1: 2.4 %, Cluster 2: 8.7 %). A comparable share of companies in both clusters did not report ROE data (Cluster 1: 12.9 %, Cluster 2: 13.0 %).

In summary, Cluster 1 – "International Innovators" - exhibited higher financial strength than Cluster 2 – "National Traditionalists" - in both revenue growth and ROE. Given their alignment with the Hidden Champions' profile and their emphasis on niche markets, this is an expected and theoretically supported finding.

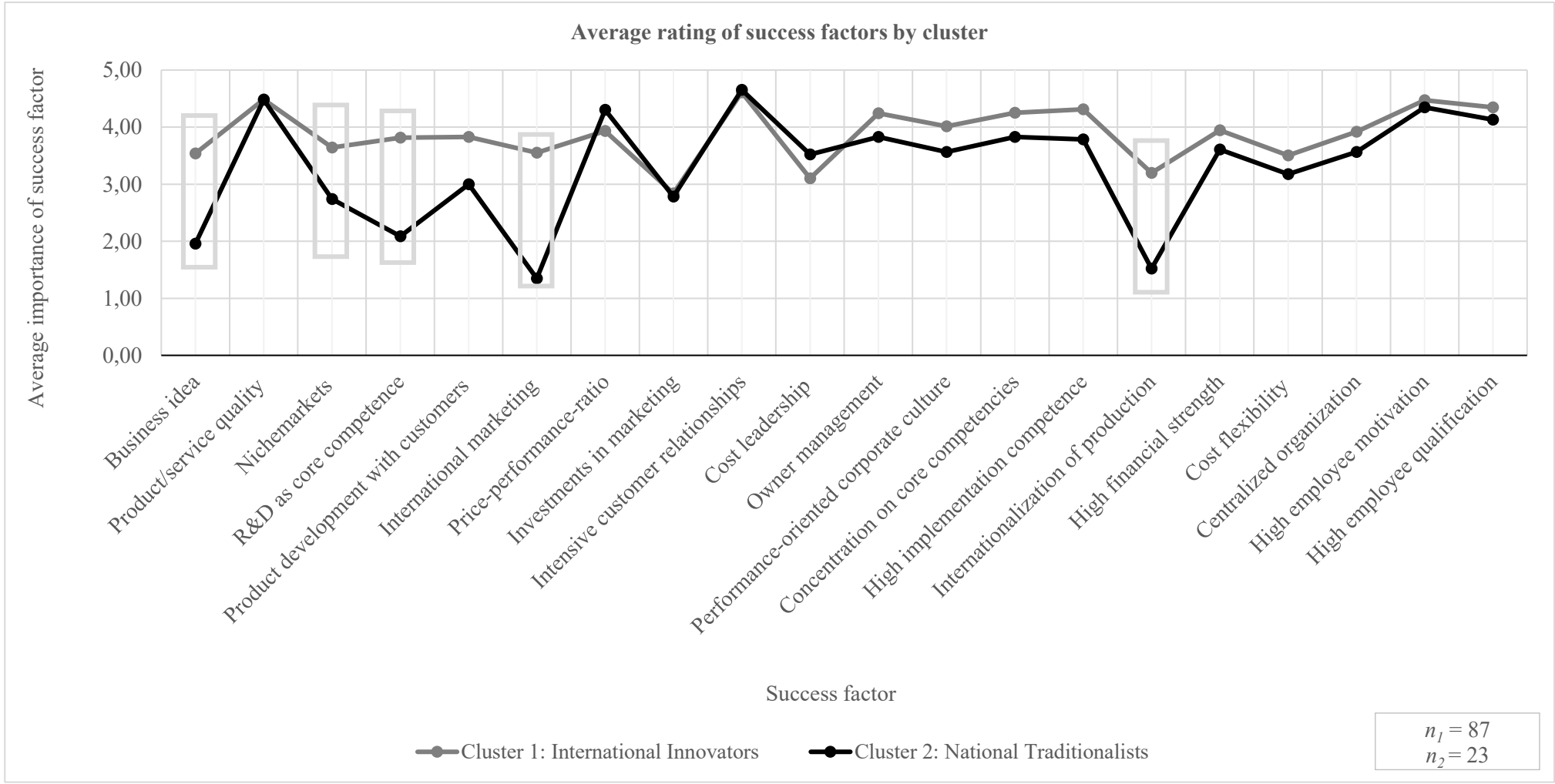

Figure 5: Average rating of success factors by cluster.
Importance increases with ascending values. 1 = very low/none, 5 = very high.

V. Conclusion and Limitations

The results of this study indicate that the surveyed medium-sized enterprises recognize the relevance of the success factors postulated by Simon and other authors in the context of Hidden Champions and consider them fundamentally important for their own success. The most highly rated factors include the establishment of close customer relationships, high product or service quality, strong employee motivation and qualifications, and a high level of implementation competence.

When analyzing the perceived importance of success factors in relation to company performance - measured relative to industry averages - only marginal differences emerged between more and less successful companies at a descriptive level. This observation was largely confirmed by t-tests. With the exception of two factors, the differences were not statistically significant. The only success factors showing statistically significant differences were the price-performance ratio and the success factor of financial strength. More successful companies placed less emphasis on price competition and attached greater importance to high financial strength compared to their less successful counterparts. Overall, the findings suggest that company success is not strongly associated with differing evaluations of success factors at the subjective level.

In contrast, the cluster analysis yielded more differentiated results. The aim of this analysis was to identify homogeneous groups within the sample based on their evaluations of success factors, while maximizing heterogeneity between these groups. This approach was intended to determine whether specific strategic orientations - consistent with those of Hidden Champions - exist within medium-sized enterprises. The analysis identified two distinct clusters that differed significantly in their evaluations of 12 out of 20 success factors. Firms in the first cluster - referred to as “International Innovators” - assigned greater importance to factors such as strong international or global marketing of company performance, R&D as a core competence, internationalization of production, a unique business idea, and a focus on niche markets. These factors were less emphasized by firms in the second cluster, labeled “National Traditionalists”.

Furthermore, companies in the International Innovators-cluster reported higher values for performance metrics such as revenue, revenue growth, and return on equity. They also faced a lower intensity of competition: the majority reported having between four and ten competitors, whereas most firms in the National Traditionalists-cluster reported more than ten competitors. This reduced competitive pressure among the International Innovators aligns with findings from the literature (e.g., Porter, 2014), which suggest that higher differentiation leads to lower

competitive intensity. A sectoral comparison revealed that over half of the firms in the International Innovators-cluster operated in the industrial sector, whereas the majority of firms in the National Traditionalists-cluster were active in services.

Taken together, these findings suggest that firms within the International Innovators-cluster embody the classic characteristics of Hidden Champions. They are primarily active in innovation-driven industrial sectors and tend to target niche markets. These results are consistent with the findings of Holz et al. (2020), who likewise identified Hidden Champions as firms marked by internationalization, R&D activities, a willingness to expand market share based on core competencies, and the pursuit of technological process improvements. According to Holz et al., Hidden Champions deliberately occupy and expand niche markets globally and are more likely to be found in the manufacturing sector than in services or trade.

Whereas Simon's identification of Hidden Champions is based on objective, fact-oriented criteria, the present study sheds light on how medium-sized firms subjectively assess the importance of key success factors for their own operations. The findings show that while many success factors are broadly acknowledged, their relative importance can vary significantly across firms.

Finally, several limitations must be addressed. Although this study offers insights into which success factors medium-sized companies associate with success, it must be emphasized that no causal inferences can be drawn. Whether a strategic focus on the success factors favored by the International Innovators actually leads to superior financial outcomes - such as increased revenue or profitability - remains a question for future research. It should also be noted that the definition of success and the target metrics used in performance measurement can significantly influence how company success is evaluated and, by extension, how the impact of various success factors is interpreted. Future studies should also investigate how differences in perceived importance of success factors translate into actual strategic behavior and outcomes. From a theoretical perspective, it is plausible that companies prioritizing certain factors in their assessments are also more likely to align their strategies accordingly. However, the extent to which importance assessments influence real-world business behavior must be empirically tested.

Moreover, it is important to acknowledge that the economic performance indicators in this study were collected on a relative, self-reported basis, rather than using absolute, objective data. This Key Informant Approach entails a risk of key informant bias, which can affect the validity of both independent and dependent variables (Klarmann, 2008, pp. 124 ff.). Nonetheless, methodological studies (e.g., Dess & Robinson, 1984; Pearce et al., 1987; Dawes, 1999; Wall et al., 2004, all cited in Baumgarth & Evanschitzky, 2009) have found medium to high and mostly

significant correlations between subjective assessments and objective indicators, suggesting that self-reports under the Key Informant Approach can yield valid results. Nevertheless, the use of multiple data collection methods, including objective performance data, is recommended for future research (Klarmann, 2008, pp. 230 ff.; Baumgarth & Evanschitzky, 2009, p. 242).

Furthermore, the relatively small sample size limits the generalizability of the findings. Future studies should include a larger sample to strengthen the robustness of the results. In addition, the geographic focus on medium-sized companies in North Rhine-Westphalia (NRW) limits the representativeness of the sample. Although it was assumed that firms in NRW do not differ significantly from those in other parts of Germany, this assumption was not empirically tested. Therefore, future research should either include firms from across the entire country or explicitly examine potential regional differences in success factor perceptions and strategies.

Overall, the study found that medium-sized enterprises generally recognize and value the success factors associated with Hidden Champions, such as strong customer relationships, high quality of products or services, and employee motivation. While overall company performance showed little difference in how success factors were perceived, cluster analysis revealed two distinct groups in our dataset. The “International Innovators” cluster prioritized innovation, internationalization, and niche market strategies, while the “National Traditionalists” place less emphasis on these aspects. Firms within the “International Innovators”-cluster embody the classic characteristics of Hidden Champions, confirming the strategic importance of innovation and global orientation for superior firm success for SMEs.

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