

Ranking Offshoring Strategies within the Structure of Capital Market Satellite Companies

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Abstract: The primary objective of this study was to develop a framework for the formation of satellite companies based on the implementation of offshoring strategies in terms of their driving antecedents. Its second objective was to conduct a fuzzy network evaluation of the structural outcomes of satellite companies arising from the utilization of offshoring strategies within capital market companies. The methodology of the present study was based on a multi-method research design that combined the Strategic Reference Points technique in the inductive phase with the Fuzzy Analytic Network Process in the deductive phase to achieve the study objectives. To develop the semantic framework through the implementation of the Strategic Reference Points technique, the participants consisted, on the one hand, of industry experts, including strategic managers of companies operating in the food and beverage industry, and, on the other hand, of policy experts serving in financial market working groups, including the Risk Management and Crowdfunding Working Groups. Drawing on the strategic functions of offshoring identified in the theoretical literature, interviews were conducted to determine the criteria that could thematically describe the structures of satellite companies. The sampling procedure in this phase was theoretical, while access to interview participants was facilitated through snowball sampling. In the deductive phase, the Fuzzy Analytic Network Process was implemented with the participation of financial managers of capital market satellite companies who had greater professional tenure and were therefore considered to possess more extensive experience. The findings obtained through the study's implementation procedures demonstrated that an initial strategic reference model of the outcomes arising from the formation of satellite companies could be developed based on two dimensions: financial offshoring strategies and process-oriented offshoring strategies. Through 18 interviews and the generation of 194 open codes, 24 propositional themes were initially identified. These themes were subsequently combined through the development of assessment checklists, resulting in the emergence of four categories at the intersections of the vertical dimension, representing the criteria for evaluating financial strategies, and the horizontal dimension, representing the criteria for evaluating process-oriented strategies. According to the four quadrants of the matrix, the identified categories were the "mixed satellite company structure," "vertical satellite company structure," "operational satellite company structure," and "horizontal satellite company structure." Furthermore, the findings of the deductive phase identified the vertical satellite company structure "[EF_1]" and the reduction of corporate tax burdens "{V_6}" as, respectively, the most central category and propositional theme within the cognitive framework developed for capital market companies. These findings can therefore serve as a strategic roadmap.

Keywords: Satellite companies, offshoring strategy, fuzzy network matrix

1. Introduction

The globalization of production, finance, and service delivery has transformed offshoring from a narrowly defined cost-reduction mechanism into a multidimensional corporate strategy. Firms increasingly distribute activities, resources, capabilities, and decision rights across national boundaries to obtain specialized knowledge, access new markets, improve operational flexibility, and optimize their financial structures. This development reflects broader paradigm shifts in management theory, in which the firm is no longer viewed solely as a self-contained hierarchy but as a networked system of interdependent organizational units embedded in global markets and institutional environments [1]. Early managerial frameworks for offshore outsourcing emphasized the strategic importance of selecting appropriate activities, locations, suppliers, and governance arrangements rather than treating offshoring as a purely transactional purchasing decision [2]. Research on information technology outsourcing similarly demonstrated that large corporations use offshore arrangements to reconfigure internal functions and gain access to capabilities that cannot be developed efficiently within the parent organization [3]. More recent evidence confirms that offshoring remains a significant business strategy in industries characterized by intense international competition, technological specialization, and pressure for continuous cost and quality improvement [4].

The strategic logic of offshoring has therefore expanded beyond wage differentials and short-term savings. Contemporary firms evaluate offshoring in relation to resilience, scalability, market responsiveness, resource access, innovation, and the ability to manage operational complexity. Decisions to offshore or reshore production increasingly depend on the interaction among cost structures, disruption risks, technological requirements, and the strategic value of retaining particular capabilities within the domestic organization [5]. Offshoring can promote technical change by enabling firms to reorganize production tasks, introduce new technologies, and concentrate internal resources on higher-value activities [6]. It can also provide flexibility in environments characterized by demand volatility and supply-chain disruption, although the value of such flexibility depends on the quality of coordination across organizational and geographic boundaries [7]. The relationship between offshore outsourcing and firm performance is consequently contingent on firm size, growth opportunities, slack resources, managerial capabilities, and the characteristics of the outsourced activity [8]. Sector-specific research, including studies of service offshoring in tourism, further indicates that offshoring may serve as a competitive strategy by permitting firms to combine cost efficiency with differentiated service delivery and broader market coverage [9].

Offshoring performance also depends on the design of management control systems and the quality of interorganizational relationships. Geographical separation, institutional differences, information asymmetry, and cultural distance can weaken monitoring and increase the likelihood of coordination failures. Accordingly, firms must create control mechanisms that balance formal performance measurement with relational governance, trust, and shared strategic understanding [10]. Global value-chain governance research similarly emphasizes that offshore strategies should be aligned with the distribution of authority, contractual responsibilities, operational interdependence, and the bargaining positions of firms within international production networks [11]. Weak governance may generate not only efficiency losses but also social, ethical, and reputational consequences. Offshore outsourcing can contribute to corporate social irresponsibility when institutional distance is substantial and interorganizational governance mechanisms fail to ensure accountability across the supply network [12]. Thus, the strategic evaluation of offshoring requires simultaneous attention to financial returns, process efficiency, governance quality, stakeholder exposure, and the risks arising from fragmented organizational structures.

One structural response to these challenges is the establishment or reconfiguration of satellite companies. In the present context, satellite companies refer to affiliated, controlled, or strategically connected entities formed around a parent company to perform distinct financial, operational, market, technological, or supply-chain functions. Such structures allow parent companies to distribute activities among specialized units while retaining various degrees of ownership, coordination, and strategic influence. Conglomerate expansion illustrates how firms use multiple affiliated entities to diversify activities, allocate capital, enter new sectors, and separate operational risks across organizational boundaries [13]. The theory of vertical cross-shareholding also demonstrates that ownership links among related entities can influence strategic behavior, incentives, competition, and the coordination of vertically connected activities [14]. By contrast, research on horizontal holdings highlights the complexity of corporate networks in which multiple entities operate across markets under overlapping ownership and control arrangements [15]. These perspectives suggest that satellite company structures may be vertical, horizontal, operational, or mixed, depending on the strategic functions assigned to the affiliated entities and the nature of their relationship with the parent company.

The use of satellite and affiliated units has also been examined in relation to competitiveness, organizational learning, regional expansion, and risk management. Firm-level research on satellite manufacturing has shown that geographically distributed production units can support competitiveness while enabling firms to manage heritage assets, operational risks, and global production relationships [16]. Studies of affiliated companies have also emphasized the role of organizational learning and relational mechanisms in improving strategic quality across supply-chain networks [17]. In institutional settings, satellite units may be used to extend the geographic reach of a parent organization, although their development requires systematic assessment of internal capabilities, external opportunities, and strategic constraints [18]. Qualitative research on satellite work arrangements has further revealed that such structures may produce important socioeconomic consequences for employees, host communities, and organizational systems [19]. These findings indicate that satellite structures should not be treated as merely administrative extensions; rather, they are strategic configurations that influence resource flows, authority, risk distribution, learning, and value creation.

From a financial perspective, participation in global value chains and the establishment of cross-border organizational units can materially affect corporate performance. Multinational enterprises may improve productivity, sales, investment efficiency, and financial outcomes by positioning activities at different stages of international value chains [20]. However, the financial consequences of offshore structures depend on capital allocation, financing constraints, governance arrangements, and the ability of the parent company to coordinate its subsidiaries. Offshore subsidiaries can alter capital structure decisions and create distinctive governance problems because financing, ownership, and cash-flow rights may be distributed across jurisdictions [21]. Offshore assets may also support tax planning and investment, although their contribution to investment efficiency depends on whether financial resources are allocated toward productive opportunities rather than retained within inefficient organizational structures [22]. Evidence on multinational firms likewise suggests that tax avoidance and investment efficiency are interrelated, but the direction and quality of this relationship depend on managerial incentives and the effectiveness of corporate governance [23].

Tax considerations constitute one of the most influential financial drivers of offshoring and cross-border subsidiary formation. The evolution of international tax policy has changed the incentives governing the location of income, assets, intellectual property, and corporate functions [24]. Multinational firms may reduce their effective tax burdens through profit shifting, debt allocation, transfer pricing, treaty structures, and the strategic location of

subsidiaries, although the scale and consequences of these practices vary across countries and industries [25]. Offshore corporate ownership networks often include conduit jurisdictions through which capital and income are transferred and sink jurisdictions in which financial value is ultimately accumulated [26]. Internal organizational complexity may further facilitate tax avoidance by making transactions, ownership relationships, and income allocation more difficult for external stakeholders and regulators to evaluate [27]. Accordingly, the formation of satellite companies may produce tax advantages, but it may also create compliance costs, governance risks, and reputational exposure.

The measurement of taxation within complex global supply chains is itself problematic. Double counting, intercompany transactions, and differences in accounting boundaries may distort estimates of effective tax rates and obscure the actual distribution of tax liabilities across organizational units [28]. Tax-motivated income shifting may also affect the quality and comparability of corporate financial reporting [29]. In multinational firms, the quality of reported earnings can be influenced by the extent to which income is transferred among jurisdictions for tax purposes [30]. Changes in international tax systems may alter the cross-border allocation of capital by affecting the relative attractiveness of domestic and foreign investment locations [31]. Financial integration and the presence of foreign subsidiaries can likewise expand the opportunities available for firm-level tax planning [32]. These issues are particularly important for capital market companies because investors, regulators, creditors, and other stakeholders assess both the financial benefits and the transparency of cross-border organizational arrangements.

Tax regulations also influence operational strategy. The decision to offshore or reshore activities may change when governments modify corporate tax rates, border adjustments, incentives, or the treatment of foreign income [33]. Transfer-pricing policies are similarly central to the competitive strategies of multinational companies because they determine how revenues, costs, and profits are allocated among related entities [34]. Consequently, a satellite company cannot be evaluated solely according to its legal form or operational location; it must be examined as part of a broader system of value creation, cost allocation, risk transfer, financing, and tax planning. This perspective also clarifies why reduction of the corporate tax burden may emerge as a major outcome of vertical satellite structures, particularly when affiliated entities perform complementary stages of production, financing, distribution, or intellectual-property management.

Nevertheless, the objectives of satellite company formation are not exclusively tax-related. Parent companies may use affiliated offshore entities to gain access to lower-cost human resources, achieve economies of scale, reduce production and supply-chain costs, transfer knowledge and technology, improve liquidity, expand market share, and enter new markets with higher expected margins. Strategic outsourcing studies have long indicated that the selection of activities for externalization depends on cost, strategic importance, resource availability, supplier capability, uncertainty, and the protection of core competencies [35]. Legal and institutional rules governing trade in services also shape the available modes of offshore outsourcing and the conditions under which firms can transfer business functions internationally [36]. Decision-making research therefore recommends evaluating offshoring through integrated frameworks that incorporate economic, operational, strategic, and risk criteria rather than relying on a single financial indicator [37].

The growing importance of environmental, social, and governance considerations further broadens the range of criteria relevant to offshore structures. Contemporary financial decision-making increasingly incorporates nonfinancial risk indicators, including environmental exposure, geographic vulnerability, supply-chain sustainability, and governance quality. Satellite-derived data, although conceptually distinct from satellite companies, demonstrate how new information sources can support ESG risk assessment and improve the spatial

precision of financial decisions [38]. This development reinforces a broader managerial principle: complex investment and organizational decisions require multidimensional information and methods capable of integrating qualitative judgments with quantitative evidence. In the case of offshoring, decision makers must simultaneously consider profitability, cost reduction, resource utilization, corporate risk, taxation, market development, and strategic learning.

Because these criteria are interdependent, conventional hierarchical ranking methods may not adequately represent the feedback relationships among categories and subcriteria. Fuzzy multicriteria decision-making methods are useful when expert judgments are linguistic, uncertain, or difficult to express through precise numerical values. The Fuzzy Analytic Network Process permits the modeling of reciprocal influences among criteria and supports the derivation of relative priorities within a network structure. Applications of integrated fuzzy ANP frameworks have demonstrated their usefulness for prioritizing complex supply-chain problems involving multiple interacting dimensions [39]. Fuzzy multicriteria approaches have also been applied to strategic evaluations in which intangible factors, expert disagreement, and ambiguous judgments must be converted into comparable weights [40]. Such methods are therefore suitable for ranking satellite company structures and their associated outcomes after the underlying categories have been identified qualitatively.

Despite the breadth of the literature, several gaps remain. First, offshoring studies frequently focus on the choice between domestic and foreign sourcing, whereas the structural form of the affiliated company created to implement the strategy receives less systematic attention. Second, research often examines operational performance, financial outcomes, governance, or taxation separately, even though these dimensions interact within actual corporate structures. Third, studies of satellite companies have addressed ownership networks, manufacturing, affiliated organizations, and regional units, but they have not sufficiently differentiated vertical, operational, horizontal, and mixed satellite structures according to the joint logic of financial and process-oriented offshoring strategies. Fourth, limited attention has been given to ranking the structural outcomes of satellite companies specifically within capital market firms, where tax burden, financing access, market value, return on equity, reporting quality, and investor expectations are especially consequential.

Addressing these gaps requires an exploratory design capable of eliciting the experiential knowledge of managers and policy experts before imposing a formal quantitative structure. Phenomenological interviewing provides a systematic means of examining how experienced participants interpret a complex organizational phenomenon and assign meaning to its consequences [41]. Phenomenological and ethnographic processes have also been used in corporate governance research to identify consequences that may not be adequately captured through predetermined measurement instruments [42]. Combining such qualitative inquiry with Strategic Reference Points makes it possible to organize emergent themes along theoretically meaningful financial and process dimensions. The subsequent application of fuzzy network analysis then permits the identified categories and themes to be prioritized while accounting for their mutual dependence.

Accordingly, the aim of this study was to develop a Strategic Reference Points framework for classifying satellite company structures according to the financial and process-oriented dimensions of offshoring strategies and to rank the resulting structural categories and propositional outcomes within capital market companies using the Fuzzy Analytic Network Process.

2. Methodology

The methods employed in this study followed a series of substantial analytical sequences within a multi-method research process. These sequences differentiated the implementation procedures and methodology of the present study from those of other studies conducted in financial and competitive market contexts. Accordingly, by combining different research data-collection procedures to understand the nature of the relationship between offshoring strategies and satellite company structures, this study sought to present a framework based on Strategic Reference Points. First, it aimed to identify the propositional outcomes associated with the formation of different types of satellite companies. Second, after determining the identified categories, it sought to conduct a fuzzy evaluation of the most central outcome identified within the Strategic Reference Points framework in the context of capital market companies. In terms of its purpose, therefore, the study should be classified as exploratory because interviews constituted the primary data-collection instrument used to complete the initial Strategic Reference Points matrix, and the outcomes were identified through the subsequent coding process. In terms of its intended contribution, the study should also be regarded as developmental because an integrated understanding of the combined application of offshoring strategies and the formation of satellite companies aligned with those strategies had not previously been adequately addressed. The findings of this study can therefore function as a strategic roadmap for companies' operational policymaking concerning cross-border outsourcing. Finally, in terms of data collection, the study should be classified as mixed-methods. In the first phase, Seidman's (2006) phenomenological interviewing technique was used to identify the contextual factors associated with the initial strategic reference matrix and to complete the criteria incorporated into the preliminary Strategic Reference Points matrix. Subsequently, a focus group technique was employed to facilitate deductive discussion and deliberation concerning the identified themes, thereby enabling the themes derived from the interviews to be categorized within the final strategic reference matrix. In this phase, the focus groups participated in the fuzzy network process. This analytical process was selected to determine the most influential category and theme in response to the third research question.

Given the sequence of analytical procedures within the multi-method research design, the following sections separately explain the stages that contributed to the achievement of the research objectives.

In the first stage of the present study, the Strategic Reference Points technique was employed. In this process, systematic efforts were initially undertaken to review the relevant theoretical literature by referring to the theoretical drivers underlying the conceptual construction of the phenomenon under investigation. By determining the vertical and horizontal dimensions of the initial Strategic Reference Points construct, semi-open-ended questions could then be posed during interviews with experts to identify the propositional themes that could contribute to the development of categories explaining the formation of satellite companies through offshoring strategies. Accordingly, through the coding procedures, the study sought to identify the categories represented by the themes. Subsequently, two techniques—the Content Validity Index (CVI) and classical Delphi analysis—were employed to assess the validity and reliability of the criteria derived from the interview process. This procedure made it possible to generalize the criteria to the target context of the study and prepare them for fuzzy evaluation.

In the second stage of the study's analytical procedures, the Fuzzy Analytic Network Process was used to operationalize the criteria incorporated into the Strategic Reference Points matrix. Using triangular fuzzy linguistic scales, data relating to each category and propositional theme were initially collected through fuzzy pairwise comparisons. The consistency ratios of the identified criteria were then calculated, followed by the construction of

an unweighted supermatrix and, finally, the defuzzification of the criteria derived from the qualitative phase. These procedures enabled the selection of the most central categories and propositional themes within the context of capital market companies.

In addition to employing analytical procedures that differ from those used in other inductive methods to develop a cognitive model based on the integration of two central phenomena, phenomenological research also differs from other inductive analytical methods in terms of data collection through the participation of actors possessing relevant lived experience. One of the analytical capacities emphasized in studies with a phenomenological structure is the achievement of a shared level of understanding through discussion aimed at developing a deeper comprehension of a phenomenon (Eslami-Mehr et al., 2024). Recognizing this importance, the present study focused, on the one hand, on industry experts, including strategic managers of companies operating in the food and beverage industry, and, on the other hand, on policy experts serving in financial market working groups, including the Risk Management and Crowdfunding Working Groups. This selection was intended to ensure sufficient experiential capacity based on the following criteria for expertise and cognitive adequacy.

- **First criterion for selecting the participants:** Individuals were required to possess relevant lived experience, whether as strategic managers of companies operating in the food and beverage industry or as industry policymakers serving in the Risk Management and Crowdfunding Working Groups of capital market committees. In either role, they were expected to possess an appropriate level of knowledge concerning the criteria addressed in this study.
- **Second criterion for selecting the participants:** Individuals selected as experiential participants were required to have an academic and professional background in different areas of structural strategies adopted by industrial companies in the capital market. Such a background was considered necessary to ensure that they possessed adequate analytical and reasoning capabilities for participation in the study.
- **Third criterion for selecting the participants:** Because different data-collection procedures were employed, the selection of active experiential experts also required an adequate level of analytical knowledge. Specifically, participants were selected based on their previous familiarity with phenomenological research, whether as researchers or participants. This familiarity was expected both to facilitate the data-collection process and to ensure that they possessed the interpretive capacity required to participate in discussions and express informed opinions in the focus groups.

Accordingly, to achieve an adequate level of expertise based on the formulated criteria, participants were selected through snowball sampling, beginning with referrals to individuals possessing sufficient experiential competence and knowledge-enhancing capabilities. The sample size in this process was determined based on theoretical saturation, which was reached when additional interviews could no longer add deeper concepts to the previously generated open codes. Based on the point of theoretical saturation established in this study, 18 individuals with relevant lived experience were selected and participated in the different stages of the phenomenological process. In the quantitative phase, which addressed the third research question, financial managers of capital market satellite companies with greater professional tenure were recruited to strengthen the evaluation of each criterion that had emerged from the qualitative phase. By participating in panels organized as focus groups, these individuals conducted fuzzy pairwise comparisons to identify the most central themes and categories derived from the final model. The formation of focus groups requires the participation of more experienced individuals with extensive knowledge of professional concepts so that they can contribute to interpreting and assigning meaning to the nature of an emerging concept such as the one examined in the present

study. Furthermore, given the limitations of network analysis in the quantitative phase in terms of the number of participants, the study sought to recruit financial managers working within the financial structures of satellite companies who had participated in steering the objectives of the parent companies. The number of participants in analytical procedures based on binary pairwise comparisons is generally limited, with 20 to 30 participants regarded as the optimal standard range (Dinçer et al., 2020; Chandra & Kumar, 2020). Accordingly, 30 of the aforementioned individuals were selected to form the focus groups. They were divided into six groups of five participants and took part in the quantitative phase of the study by completing the fuzzy analytic network questionnaires.

3. Findings and Results

As explained in the methodology, a phenomenological approach was employed to develop the final Strategic Reference Points matrix. In the first stage of the analysis, 18 interviews were conducted, from which 194 open codes were extracted. The open codes were subsequently classified to derive propositional themes that could be organized into higher-order categories. Based on the recurrence of each open code across the interviews, represented by the abbreviated symbols *F*, 24 propositional themes were identified. Table 1 presents the themes derived from the open-coding process.

Table 1. Propositional Themes Emerging from the Open Codes Extracted from Interviews with Experienced Participants

Code	Emergent propositional theme	Interviews in which the theme was identified	Frequency	Percentage
$\langle V_1 \rangle$	Transfer of knowledge and technology to parent companies	F01, F02, F04, F07, F09, F10, F12, F13, F16	9	4.63%
$\langle V_2 \rangle$	Growth in the company's performance value, as measured by Tobin's Q	F02, F04, F06, F07, F10, F12, F14, F16, F18	9	4.63%
$\langle V_3 \rangle$	Access to lower-cost human resources	F01, F05, F06, F09, F10, F14, F15	7	3.60%
$\langle V_4 \rangle$	Increased cash flow	F01, F02, F04, F08, F09, F10, F11, F14, F17	9	4.63%
$\langle V_5 \rangle$	Fulfillment of market expectations	F01, F03, F04, F06, F07, F09, F10, F11, F15	9	4.63%
$\langle V_6 \rangle$	Reduction of the company's tax burden	F02, F04, F05, F06, F07, F09, F12, F13, F18	9	4.63%
$\langle V_7 \rangle$	Achievement of economies of scale in production	F01, F03, F06, F10, F11, F16, F17	7	3.60%
$\langle V_8 \rangle$	Achievement of higher profit margins through entry into new markets	F03, F04, F06, F07, F08, F10, F14, F15	8	4.12%
$\langle V_9 \rangle$	Higher returns resulting from investment efficiency	F02, F03, F05, F07, F08, F09, F11, F12, F16	9	4.63%
$\langle V_{10} \rangle$	Reduction of statutory employment-related payments, including severance and insurance costs	F01, F04, F06, F07, F09, F11, F12, F13, F17	9	4.63%
$\langle V_{11} \rangle$	Growth in major customers	F02, F03, F05, F10, F12, F14, F16, F17	8	4.12%
$\langle V_{12} \rangle$	Increase in market value added (MVA)	F01, F02, F04, F09, F13, F14, F16	7	3.60%
$\langle V_{13} \rangle$	Reduction of production costs	F03, F04, F05, F09, F10, F11, F14, F16	8	4.12%
$\langle V_{14} \rangle$	Maintenance of the company's competitive position	F02, F06, F07, F08, F09, F10, F12	7	3.60%
$\langle V_{15} \rangle$	Reduction in the consumption of natural resources in the production line	F01, F03, F05, F06, F08, F09, F11, F14, F16	9	4.63%
$\langle V_{16} \rangle$	Prevention of the accumulation of manufactured products	F01, F02, F04, F05, F07, F09, F11, F12, F15	9	4.63%
$\langle V_{17} \rangle$	Improved access to greater financial resources	F02, F05, F07, F11, F13, F15	6	3.09%

$\langle V_{18} \rangle$	Reduction of the total cost of products	F01, F03, F04, F06, F09, F10, F12, F15, F16	9	4.63%
$\langle V_{19} \rangle$	Increase in economic value added (EVA)	F03, F06, F10, F14, F15, F17	6	3.09%
$\langle V_{20} \rangle$	Reduction of component supply-chain costs	F02, F05, F09, F12, F13, F15	6	3.09%
$\langle V_{21} \rangle$	Increase in market share	F01, F03, F05, F07, F08, F10, F14, F18	8	4.12%
$\langle V_{22} \rangle$	Increase in return on equity	F02, F04, F07, F08, F09, F10, F12, F14, F16	9	4.63%
$\langle V_{23} \rangle$	Utilization of the value gained by converting foreign currency into domestic currency	F01, F02, F05, F06, F08, F09, F12, F15, F17	9	4.63%
$\langle V_{24} \rangle$	Elimination of financial resource-acquisition constraints	F01, F03, F06, F08, F11, F13, F15, F18	8	4.12%
Total		194 open-code occurrences	194	100%

As shown in Table 1, 24 propositional themes were identified from 194 open-code occurrences generated through the 18 interviews. To position these themes within the initial Strategic Reference Points framework, themes with similar meanings and strategic implications were grouped together. Axial coding was then used to identify the higher-order categories associated with the themes. The results of this process are presented in Table 2.

Table 2. Categories and Propositional Themes Identified through Axial Coding

Emergent category	Category code	Experiential cluster or propositional theme	Theme code
Vertical satellite company structure	$[EF_1]$	Increase in economic value added (EVA)	$\langle V_{19} \rangle$
		Growth in the company's performance value, as measured by Tobin's Q	$\langle V_2 \rangle$
		Higher returns resulting from investment efficiency	$\langle V_9 \rangle$
		Increase in market value added (MVA)	$\langle V_{12} \rangle$
		Reduction of the company's tax burden	$\langle V_6 \rangle$
		Increase in return on equity	$\langle V_{22} \rangle$
Operational satellite company structure	$[EF_2]$	Elimination of financial resource-acquisition constraints	$\langle V_{24} \rangle$
		Access to lower-cost human resources	$\langle V_3 \rangle$
		Achievement of economies of scale in production	$\langle V_7 \rangle$
		Reduction of production costs	$\langle V_{13} \rangle$
		Reduction in the consumption of natural resources in the production line	$\langle V_{15} \rangle$
		Reduction of statutory employment-related payments, including severance and insurance costs	$\langle V_{10} \rangle$
Horizontal satellite company structure	$[EF_3]$	Growth in major customers	$\langle V_{11} \rangle$
		Fulfillment of market expectations	$\langle V_5 \rangle$
		Maintenance of the company's competitive position	$\langle V_{14} \rangle$
		Prevention of the accumulation of manufactured products	$\langle V_{16} \rangle$
		Reduction of the total cost of products	$\langle V_{18} \rangle$
		Reduction of component supply-chain costs	$\langle V_{20} \rangle$
Mixed satellite company structure	$[EF_4]$	Achievement of higher profit margins through entry into new markets	$\langle V_8 \rangle$
		Increased cash flow	$\langle V_4 \rangle$
		Improved access to greater financial resources	$\langle V_{17} \rangle$
		Transfer of knowledge and technology to parent companies	$\langle V_1 \rangle$
		Utilization of the value gained by converting foreign currency into domestic currency	$\langle V_{23} \rangle$
		Increase in market share	$\langle V_{21} \rangle$

After assigning each propositional theme to an evaluative category, validity and reliability assessments were performed before the criteria were transferred to the final Strategic Reference Points matrix. These assessments were intended to determine whether the classified themes demonstrated sufficient internal consistency and conceptual compatibility with their respective categories.

Content validity was first examined using the Content Validity Index (CVI). The identified dimensions were resubmitted to the experienced participants, who evaluated each item on three dimensions: relevance, clarity, and simplicity or comprehensibility. Each dimension was evaluated on a four-point scale. For relevance, the response alternatives ranged from “not relevant” to “completely relevant.” For clarity, the alternatives ranged from “ambiguous” to “completely clear.” For simplicity, the alternatives ranged from “incomprehensible” to “completely comprehensible.”

The percentages of participants selecting the two highest ratings, particularly the ratings indicating complete relevance, complete clarity, and complete comprehensibility, were calculated separately. A score exceeding 70% was considered evidence of acceptable validity. Dimensions that did not meet this threshold were to be revised and reassessed until an acceptable percentage was obtained or, where necessary, merged with another dimension or modified.

The CVI was calculated using the following equation:

$$CVI = \frac{e^n}{N} \quad (1)$$

where e^n represents the number of experts who assigned a score of 3 or 4 to an item on the four-point scale, and N represents the total number of experts participating in the validity assessment.

Under the interpretive procedure adopted in the study, a negative validity value would indicate that fewer than 50% of the experts considered an item essential. A value of zero would indicate that exactly 50% of the experts considered the item essential, whereas the other 50% selected other alternatives. A value of 1.00 would indicate unanimous selection of the essential option. Values between zero and one would indicate that more than 50%, but fewer than all, of the experts selected the essential option.

Each theme and category was assessed according to relevance, clarity, simplicity, and the modal response. The item-level results are presented in Table 3.

Table 3. Content-Validity Assessment of the Propositional Themes and Categories

Category	Item code	Relevance	Clarity	Simplicity or comprehensibility	Overall CVI
Vertical satellite company structure	$\langle J_{13} \rangle$	13/18 = 0.72	15/18 = 0.83	16/18 = 0.88	0.81
	$\langle J_{20} \rangle$	14/18 = 0.77	16/18 = 0.88	18/18 = 1.00	0.88
	$\langle J_{14} \rangle$	15/18 = 0.83	14/18 = 0.77	15/18 = 0.83	0.81
	$\langle J_{22} \rangle$	13/18 = 0.72	16/18 = 0.88	17/18 = 0.94	0.84
	$\langle J_{15} \rangle$	17/18 = 0.94	16/18 = 0.88	16/18 = 0.88	0.90
	$\langle J_9 \rangle$	17/18 = 0.94	13/18 = 0.72	13/18 = 0.72	0.79
Operational satellite company structure	$\langle J_{10} \rangle$	16/18 = 0.88	13/18 = 0.72	15/18 = 0.83	0.81
	$\langle J_7 \rangle$	14/18 = 0.77	14/18 = 0.77	15/18 = 0.83	0.79
	$\langle J_{19} \rangle$	14/18 = 0.77	17/18 = 0.94	17/18 = 0.94	0.88
	$\langle J_2 \rangle$	16/18 = 0.88	16/18 = 0.88	16/18 = 0.88	0.88
	$\langle J_{18} \rangle$	17/18 = 0.94	18/18 = 1.00	18/18 = 1.00	0.98
	$\langle J_8 \rangle$	16/18 = 0.88	15/18 = 0.83	17/18 = 0.94	0.88
Horizontal satellite company structure	$\langle J_1 \rangle$	17/18 = 0.94	16/18 = 0.88	15/18 = 0.83	0.88
	$\langle J_{17} \rangle$	16/18 = 0.88	16/18 = 0.88	15/18 = 0.83	0.86

	$\langle J_{24} \rangle$	16/18 = 0.88	16/18 = 0.88	16/18 = 0.88	0.88
	$\langle J_{16} \rangle$	14/18 = 0.77	15/18 = 0.83	15/18 = 0.83	0.81
	$\langle J_{23} \rangle$	17/18 = 0.94	13/18 = 0.72	18/18 = 1.00	0.88
	$\langle J_{11} \rangle$	16/18 = 0.88	15/18 = 0.83	17/18 = 0.94	0.88
Mixed satellite company structure	$\langle J_{21} \rangle$	14/18 = 0.77	14/18 = 0.77	16/18 = 0.88	0.80
	$\langle J_4 \rangle$	16/18 = 0.88	15/18 = 0.83	15/18 = 0.83	0.81
	$\langle J_5 \rangle$	14/18 = 0.77	15/18 = 0.83	17/18 = 0.94	0.84
	$\langle J_3 \rangle$	16/18 = 0.88	16/18 = 0.88	16/18 = 0.88	0.88
	$\langle J_6 \rangle$	16/18 = 0.88	15/18 = 0.83	17/18 = 0.94	0.88
	$\langle J_{12} \rangle$	16/18 = 0.88	17/18 = 0.94	13/18 = 0.72	0.84

The modal-frequency assessment indicated that all four categories exceeded the minimum validity threshold. The aggregated CVI values were 0.838 for the vertical satellite company structure, 0.870 for the operational satellite company structure, 0.865 for the horizontal satellite company structure, and 0.841 for the mixed satellite company structure. Consequently, all propositional themes were considered to possess adequate validity within their assigned categories.

Following the validity assessment, a Delphi procedure was conducted to evaluate reliability and establish theoretical consensus among the experts. For a cluster to be retained, the kappa-based agreement coefficient was required to be at least 0.50. Because a seven-point Likert scale was used, the mean score was also required to equal or exceed 5.00. The Delphi analysis was conducted in two rounds, and its results are presented in Table 4.

Table 4. Delphi Analysis for Establishing Expert Consensus

Propositional theme	Code	Round 1 agreement	Round 1 mean	Round 2 agreement	Round 2 mean	Decision
Increase in economic value added (EVA)	$\langle V_{19} \rangle$	0.55	5.15	0.60	5.20	Confirmed
Growth in the company's performance value, as measured by Tobin's Q	$\langle V_2 \rangle$	0.62	5.25	0.65	5.30	Confirmed
Higher returns resulting from investment efficiency	$\langle V_9 \rangle$	0.60	5.20	0.65	5.30	Confirmed
Increase in market value added (MVA)	$\langle V_{12} \rangle$	0.70	5.40	0.70	5.40	Confirmed
Reduction of the company's tax burden	$\langle V_6 \rangle$	0.50	5.00	0.55	5.15	Confirmed
Increase in return on equity	$\langle V_{22} \rangle$	0.82	6.10	0.85	6.30	Confirmed
Elimination of financial resource-acquisition constraints	$\langle V_{24} \rangle$	0.62	5.25	0.65	5.30	Confirmed
Access to lower-cost human resources	$\langle V_3 \rangle$	0.60	5.20	0.65	5.30	Confirmed
Achievement of economies of scale in production	$\langle V_7 \rangle$	0.82	6.10	0.85	6.30	Confirmed
Reduction of production costs	$\langle V_{13} \rangle$	0.70	5.40	0.75	5.50	Confirmed
Reduction in the consumption of natural resources in the production line	$\langle V_{15} \rangle$	0.70	5.40	0.75	5.50	Confirmed
Reduction of statutory employment-related payments, including severance and insurance costs	$\langle V_{10} \rangle$	0.62	5.25	0.65	5.30	Confirmed
Growth in major customers	$\langle V_{11} \rangle$	0.75	5.50	0.80	6.00	Confirmed
Fulfillment of market expectations	$\langle V_5 \rangle$	0.70	5.40	0.75	5.50	Confirmed
Maintenance of the company's competitive position	$\langle V_{14} \rangle$	0.60	5.20	0.65	5.30	Confirmed
Prevention of the accumulation of manufactured products	$\langle V_{16} \rangle$	0.55	5.15	0.60	5.20	Confirmed
Reduction of the total cost of products	$\langle V_{18} \rangle$	0.65	5.30	0.73	5.45	Confirmed
Reduction of component supply-chain costs	$\langle V_{20} \rangle$	0.70	5.40	0.75	5.50	Confirmed
Achievement of higher profit margins through entry into new markets	$\langle V_8 \rangle$	0.65	5.30	0.73	5.45	Confirmed
Increased cash flow	$\langle V_4 \rangle$	0.70	5.40	0.75	5.50	Confirmed
Improved access to greater financial resources	$\langle V_{17} \rangle$	0.65	5.30	0.73	5.45	Confirmed

Transfer of knowledge and technology to parent companies	$\langle V_1 \rangle$	0.62	5.25	0.65	5.30	Confirmed
Utilization of the value gained by converting foreign currency into domestic currency	$\langle V_{23} \rangle$	0.70	5.40	0.75	5.50	Confirmed
Increase in market share	$\langle V_{21} \rangle$	0.55	5.15	0.60	5.20	Confirmed

All 24 propositional themes were confirmed in both Delphi rounds. Every first-round agreement coefficient was at least 0.50, and all first-round means were at least 5.00. Agreement generally increased in the second round, indicating convergence in expert judgments and supporting the reliability of the categories and themes.

After all propositional themes had been confirmed, a checklist based on a four-point scoring scale was developed and distributed among the experienced participants. The purpose of the checklist was to determine the position of each category in one of the four quadrants of the final Strategic Reference Points matrix.

A score of 1 represented the first quadrant, located in the southwest of the matrix. This quadrant represented the intersection between cost reduction as an outcome of financial offshoring strategies and risk reduction as an outcome of process-oriented offshoring strategies.

A score of 2 represented the second quadrant, located in the southeast of the matrix. This quadrant represented the intersection between cost reduction as an outcome of financial offshoring strategies and increased resource utilization as an outcome of process-oriented offshoring strategies.

A score of 3 represented the third quadrant, located in the northwest of the matrix. This quadrant represented the intersection between increased profitability as an outcome of financial offshoring strategies and risk reduction as an outcome of process-oriented offshoring strategies.

A score of 4 represented the fourth quadrant, located in the northeast of the matrix. This quadrant represented the intersection between increased profitability as an outcome of financial offshoring strategies and increased resource utilization as an outcome of process-oriented offshoring strategies. The resulting classification is presented in Table 5.

Table 5. Positioning of the Emergent Categories within the Strategic Reference Points Matrix

Category	Increased profitability	Cost reduction	Increased resource utilization	Reduction of corporate risks	Final matrix position
Vertical satellite company structure	✓	—	—	✓	Quadrant 3: northwest
Operational satellite company structure	—	✓	✓	—	Quadrant 2: southeast
Horizontal satellite company structure	—	✓	—	✓	Quadrant 1: southwest
Mixed satellite company structure	✓	—	✓	—	Quadrant 4: northeast

After the position of each category had been determined at the intersections of the final matrix, the final Strategic Reference Points matrix was developed to represent the outcomes associated with the formation of satellite companies.



Figure 1. Final Strategic Reference Points Matrix for the Objectives of Applying Offshoring Strategies to the Outcomes of Satellite Company Formation

The final Strategic Reference Points matrix was structured around two dimensions: financial offshoring strategies on the vertical axis and process-oriented offshoring strategies on the horizontal axis. The matrix contained four structural outcomes: the horizontal satellite company structure, operational satellite company structure, vertical satellite company structure, and mixed satellite company structure. In the second stage of the analysis, a Fuzzy Analytic Network Process was employed to address the third research question and prioritize these outcomes.

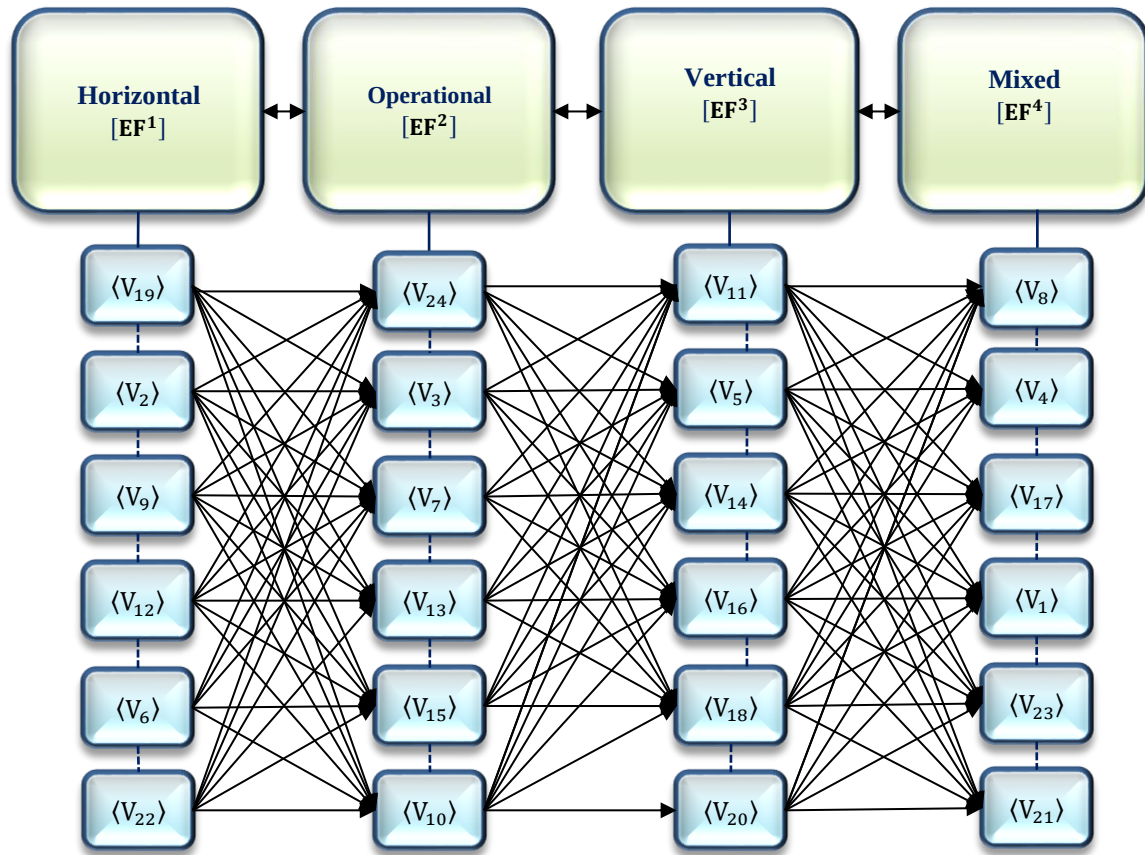


Figure 2. Network Structure for Evaluating Satellite Company Outcomes Based on Offshoring Strategies

The network model incorporated four principal category nodes, namely $[EF_1]$, $[EF_2]$, $[EF_3]$, and $[EF_4]$, as well as the 24 propositional-theme nodes $\langle V_1 \rangle$ through $\langle V_{24} \rangle$. The mutual-relations matrix was constructed to represent the direct relationships among the four categories and between each category and its associated themes. Pairwise fuzzy comparisons were then performed using the highest level of consensus, as determined by the modal expert response.

A judgment and decision matrix was developed containing the four principal categories and their 24 associated themes. In the matrix, each row represented element i , each column represented element j , and an identified relationship indicated that the row element directly influenced the corresponding column element. The category-level section compared each of the four categories with the other three categories. The theme-level sections represented the interdependencies between the category nodes and the themes assigned to the vertical, operational, horizontal, and mixed satellite company structures.

The fuzzy pairwise comparisons were performed using W_{ij} , representing the relative influence of element i over element j . The linguistic scales and their associated triangular fuzzy numbers are presented in Table 6.

Table 6. Linguistic Scales Used to Express Relative Importance

Linguistic judgment	Triangular fuzzy number	Reciprocal triangular fuzzy number
Equal importance	(1, 1, 1)	(1, 1, 1)
Relatively more important	(1, 3, 5)	$(1, \frac{1}{3}, \frac{1}{5})$
More important	(3, 5, 7)	$(\frac{1}{3}, \frac{1}{5}, \frac{1}{7})$
Much more important	(5, 7, 9)	$(\frac{1}{5}, \frac{1}{7}, \frac{1}{9})$
Absolutely more important	(7, 9, 9)	$(\frac{1}{7}, \frac{1}{9}, \frac{1}{9})$

Pairwise comparisons were conducted using Saaty's nine-point scale, consistent with the procedure employed in the Analytic Hierarchy Process. The modal judgment represented the most frequently reported level of influence between categories and between categories and themes.

The consistency of the pairwise-comparison judgments was evaluated using the consistency ratio:

$$CR = \frac{CI}{RI}, CR < 0.10 \quad (2)$$

where CR denotes the consistency ratio, CI denotes the consistency index, and RI denotes the random consistency index. A consistency ratio of less than 0.10 was considered acceptable.

Table 7 reports the fuzzy pairwise-comparison coefficients, weights, reported ranks, and fuzzy row sums for the four principal categories.

Table 7. Fuzzy Pairwise-Comparison Results and Weights of the Principal Categories

Category	$[EF_1]$	$[EF_2]$	$[EF_3]$	$[EF_4]$	Weight	Reported rank	$\sum_{j=1}^m M_{ij}$
$[EF_1]$	[1.00, 1.00, 1.00]	[1.55, 1.21, 1.00]	[1.21, 1.07, 0.78]	[1.13, 1.01, 0.55]	0.313	First	[6.29, 5.11, 4.82]
$[EF_2]$	[0.90, 0.62, 0.40]	[1.00, 1.00, 1.00]	[1.17, 1.05, 0.73]	[1.10, 1.00, 0.49]	0.217	Third	[4.19, 3.20, 2.49]
$[EF_3]$	[0.82, 0.42, 0.32]	[0.79, 0.40, 0.30]	[1.00, 1.00, 1.00]	[1.05, 0.91, 0.45]	0.203	Fourth	[4.15, 3.06, 2.18]
$[EF_4]$	[0.76, 0.39, 0.29]	[1.073, 0.37, 0.26]	[0.73, 0.51, 0.17]	[1.00, 1.00, 1.00]	0.187	Second	[5.87, 4.39, 3.38]

Using the consistency index and random index derived from the 4×4 matrix, the final consistency ratio of the identified categories was calculated as follows:

$$W_{ij} = \begin{bmatrix} F^1 \\ F^2 \\ F^3 \\ F^4 \end{bmatrix} \begin{bmatrix} 0.000 & 0.365 & 0.295 & 0.413 \\ 0.240 & 0.000 & 0.303 & 0.361 \\ 0.210 & 0.194 & 0.000 & 0.219 \\ 0.308 & 0.215 & 0.178 & 0.000 \end{bmatrix} \Rightarrow CR = 0.056 \quad (3)$$

Because $CR = 0.056 < 0.10$, the inconsistency level of the matrix was acceptable. The result supported the consistency of the experts' pairwise judgments and confirmed the suitability of the four identified categories for evaluating the phenomenon under investigation.

The category weights demonstrated that the vertical satellite company structure, $[EF_1]$, was the most influential structural outcome of applying offshoring strategies, with a weight of 0.313. Its weight was higher than those of the operational, horizontal, and mixed satellite company structures.

To determine the relative importance of the clusters in the initial unweighted supermatrix, the cluster matrix was calculated by treating the column clusters as control elements, consistent with the network-process procedure described by Saaty (1999). The column cluster containing the propositional themes was compared with the cluster containing the principal categories.

The fuzzy cluster pairwise-comparison matrix was represented as:

$$A_{\text{clusters}} = \begin{bmatrix} 1.000 & (1.11, 1.51, 1.83) \\ (0.81, 1.12, 1.36) & 1.000 \end{bmatrix}, W_{\text{clusters}} = \begin{bmatrix} 0.614 \\ 0.521 \end{bmatrix} \quad (4)$$

The first cluster, consisting of the principal categories, had a relative-importance vector of 0.614. The second cluster, consisting of the propositional themes, had a relative-importance vector of 0.521.

The cluster-consistency structure resulting from the pairwise comparison was expressed as:

$$C = \begin{bmatrix} 1.000 & 0.000 & 0.000 \\ 0.000 & 0.614 & 0.000 \\ 0.000 & 0.521 & 1.000 \end{bmatrix} \quad (5)$$

The absolute consistency values confirmed the compatibility of the propositional themes with the principal categories. It was therefore possible to multiply the elements of each column cluster in the unweighted supermatrix by the relative-importance vector of the corresponding cluster.

The resulting weighted supermatrix was stochastic, meaning that the sum of the elements in each column equaled 1.00. The weighted supermatrix was then raised to a sufficiently large power to determine the long-term relative influence of the propositional themes on one another. In general terms, the limiting supermatrix was obtained through:

$$W^\infty = \lim_{k \rightarrow \infty} W^k \quad (6)$$

In this study, the weighted supermatrix was raised to the power of:

$$K = 24 \times 24 = 576 \quad (7)$$

At $K = 576$, the limiting supermatrix was obtained, and its theme coefficients had become approximately stable. The elements of the limiting supermatrix were subsequently normalized so that the sum of each column equaled 1.00.

Because the network contained 24 propositional themes, the reported matrix was presented in summarized form. The four principal-category rows contained values of 0.00 across the columns. The reported portions of the theme-priority matrix were as follows:

$$\begin{aligned} \langle V_{19} \rangle &: [0.44, 0.38, 0.64, 0.51, 0.41, 0.47, 0.63, 0.80, 0.29, 0.53, \dots, 0.49, 0.57, 0.39, 0.48, 0.63, 0.56] \\ \langle V_2 \rangle &: [0.39, 0.51, 0.76, 0.89, 0.51, 0.23, 0.68, 0.40, 0.88, 0.91, \dots, 0.54, 0.68, 0.60, 0.84, 0.35, 0.36] \\ \langle V_9 \rangle &: [0.59, 0.87, 0.79, 0.25, 0.42, 0.51, 0.35, 0.87, 0.66, 0.31, \dots, 0.42, 0.43, 0.82, 0.76, 0.78, 0.49] \\ \langle V_{12} \rangle &: [0.73, 0.59, 0.69, 0.59, 0.64, 0.78, 0.73, 0.17, 0.51, 0.21, \dots, 0.60, 0.42, 0.56, 0.39, 0.40, 0.52] \\ \langle V_6 \rangle &: [0.51, 0.44, 0.58, 0.51, 0.39, 0.26, 0.41, 0.38, 0.49, 0.33, \dots, 0.65, 0.61, 0.43, 0.65, 0.87, 0.89] \\ \langle V_{22} \rangle &: [0.61, 0.56, 0.71, 0.74, 0.40, 0.83, 0.37, 0.43, 0.57, 0.62, \dots, 0.69, 0.58, 0.56, 0.41, 0.61, 0.67] \\ \langle V_8 \rangle &: [0.81, 0.35, 0.66, 0.69, 0.46, 0.39, 0.65, 0.64, 0.75, 0.59, \dots, 0.30, 0.72, 0.61, 0.57, 0.87, 0.21] \\ \langle V_4 \rangle &: [0.48, 0.71, 0.78, 0.53, 0.25, 0.49, 0.53, 0.49, 0.72, 0.54, \dots, 0.65, 0.71, 0.38, 0.41, 0.46, 0.74] \\ \langle V_{17} \rangle &: [0.40, 0.76, 0.48, 0.76, 0.47, 0.68, 0.31, 0.28, 0.27, 0.70, \dots, 0.53, 0.46, 0.54, 0.43, 0.27, 0.30] \\ \langle V_1 \rangle &: [0.46, 0.78, 0.62, 0.65, 0.51, 0.39, 0.58, 0.37, 0.42, 0.25, \dots, 0.25, 0.61, 0.52, 0.43, 0.67, 0.91] \\ \langle V_{23} \rangle &: [0.51, 0.58, 0.46, 0.76, 0.22, 0.63, 0.60, 0.37, 0.28, 0.55, \dots, 0.18, 0.54, 0.60, 0.43, 0.27, 0.47] \\ \langle V_{21} \rangle &: [0.54, 0.48, 0.26, 0.36, 0.20, 0.44, 0.76, 0.64, 0.45, 0.37, \dots, 0.21, 0.73, 0.75, 0.55, 0.35, 0.10] \end{aligned} \quad (8)$$

Based on the matrix compatibility between the propositional themes and the principal categories, the defuzzified weights were used to prioritize the 24 themes. Table 8 presents the final weights and priorities.

Table 8. Final Prioritization of the Propositional Themes Associated with the Principal Categories

Emergent category	Propositional theme	Code	Defuzzified weight	Overall priority
Vertical satellite company structure	Increase in economic value added (EVA)	$\langle V_{19} \rangle$	0.240	3
	Growth in the company's performance value, as measured by Tobin's Q	$\langle V_2 \rangle$	0.219	6
	Higher returns resulting from investment efficiency	$\langle V_9 \rangle$	0.241	2
	Increase in market value added (MVA)	$\langle V_{12} \rangle$	0.222	5
	Reduction of the company's tax burden	$\langle V_6 \rangle$	0.245	1

	Increase in return on equity	$\langle V_{22} \rangle$	0.235	4
Operational satellite company structure	Elimination of financial resource-acquisition constraints	$\langle V_{24} \rangle$	0.173	14
	Access to lower-cost human resources	$\langle V_3 \rangle$	0.167	16
	Achievement of economies of scale in production	$\langle V_7 \rangle$	0.170	15
	Reduction of production costs	$\langle V_{13} \rangle$	0.184	13
	Reduction in the consumption of natural resources in the production line	$\langle V_{15} \rangle$	0.160	17
	Reduction of statutory employment-related payments, including severance and insurance costs	$\langle V_{10} \rangle$	0.151	18
Horizontal satellite company structure	Growth in major customers	$\langle V_{11} \rangle$	0.126	20
	Fulfillment of market expectations	$\langle V_5 \rangle$	0.102	24
	Maintenance of the company's competitive position	$\langle V_{14} \rangle$	0.135	19
	Prevention of the accumulation of manufactured products	$\langle V_{16} \rangle$	0.111	23
	Reduction of the total cost of products	$\langle V_{18} \rangle$	0.118	21
	Reduction of component supply-chain costs	$\langle V_{20} \rangle$	0.114	22
Mixed satellite company structure	Achievement of higher profit margins through entry into new markets	$\langle V_8 \rangle$	0.205	9
	Increased cash flow	$\langle V_4 \rangle$	0.215	7
	Improved access to greater financial resources	$\langle V_{17} \rangle$	0.201	10
	Transfer of knowledge and technology to parent companies	$\langle V_1 \rangle$	0.190	12
	Utilization of the value gained by converting foreign currency into domestic currency	$\langle V_{23} \rangle$	0.199	11
	Increase in market share	$\langle V_{21} \rangle$	0.210	8

The final defuzzified weights of the weighted supermatrices indicated that the vertical satellite company structure, $[EF_1]$, was the most central structural outcome of satellite company formation, with a coefficient of 0.313. Among the 24 propositional themes, reduction of the company's tax burden, $\langle V_6 \rangle$, had the highest weight, at 0.245, and was therefore ranked first.

The findings indicate that when satellite companies are formed through offshoring strategies, the most central competitive outcome is associated with the vertical satellite company structure. At the more specific operational level, the principal benefit is the reduction of the tax burden borne by capital market companies. Accordingly, tax-burden reduction constitutes the most influential micro-level outcome to be considered when designing and implementing offshoring strategies within satellite company structures.

4. Discussion and Conclusion

The present study sought to develop and prioritize a strategic framework for the formation of satellite companies through offshoring strategies in capital market firms. The phenomenological phase generated 194 open codes from 18 interviews, which were consolidated into 24 propositional themes and subsequently organized into four structural categories: vertical, operational, horizontal, and mixed satellite company structures. The validity assessment demonstrated that all four categories exceeded the acceptable Content Validity Index threshold, while the two-round Delphi process confirmed all 24 themes based on the required agreement coefficients and mean scores. The Fuzzy Analytic Network Process further indicated that the vertical satellite company structure was the most influential category, with a weight of 0.313. At the level of propositional themes, reduction of the company's tax burden received the highest defuzzified weight of 0.245, followed by higher returns resulting from investment efficiency, increased economic value added, increased return on equity, increased market value added, and growth

in the company's performance value as measured by Tobin's Q. These findings demonstrate that the most important strategic outcomes of satellite company formation were concentrated in the financial-performance and tax-planning dimensions of vertical offshoring arrangements.

The identification of four distinct satellite company structures confirms that offshoring should not be regarded as a homogeneous strategy. Instead, its outcomes depend on how the parent company distributes ownership, activities, resources, risks, and decision-making authority among affiliated entities. The vertical structure reflected the integration of complementary activities across different stages of the corporate value chain and was primarily associated with financial value creation. The operational structure emphasized access to resources, economies of scale, production-cost reduction, and the removal of financing constraints. The horizontal structure was connected to market maintenance, customer growth, product-flow management, and supply-chain cost reduction. Finally, the mixed structure combined financial, market, technological, and international resource-conversion functions. This classification is consistent with the broader view of modern firms as networks of interdependent units rather than self-contained hierarchies [1]. It also supports research suggesting that offshore strategies require differentiated governance arrangements according to the nature of the activity, the strategic importance of the function, and the degree of interdependence between the parent firm and its affiliated units [2, 37].

The prominence of the vertical satellite company structure can be explained by its ability to coordinate value-creating activities across financially and operationally interconnected entities. Vertical corporate arrangements allow firms to distribute production, financing, investment, distribution, and support activities among specialized subsidiaries while maintaining strategic control over the broader value chain. Research on vertical cross-shareholding demonstrates that ownership connections among vertically related firms can alter incentives, facilitate coordination, and influence competitive behavior [14]. Similarly, participation in global value chains can improve firm-level financial performance when the distribution of activities enables multinational enterprises to exploit specialization, efficiency, and cross-border resource complementarities [20]. The present findings therefore suggest that the vertical structure was prioritized because it provides a clearer mechanism through which offshoring can be translated into measurable financial outcomes.

The high priority assigned to the vertical structure is also compatible with research on offshore subsidiaries and international corporate governance. Cross-border subsidiaries influence capital structure, resource allocation, internal financing, and governance because they create multiple channels through which capital and income may be transferred among affiliated entities [21]. The use of vertically connected satellite firms may consequently increase the parent company's ability to coordinate investment decisions, allocate capital to more productive locations, and separate particular financial or operational functions. Organizational complexity, however, can produce both advantages and governance concerns. Complex internal structures may facilitate strategic flexibility and tax planning, while also increasing information asymmetry and reducing the transparency of transactions among related entities [27]. The superiority of the vertical structure in this study should therefore be understood as reflecting its financial and strategic capacity rather than implying that greater structural complexity is unconditionally beneficial.

The most important specific finding was the first-place ranking of reduction of the company's tax burden. This result indicates that tax considerations constitute a central rationale for forming satellite companies through offshoring strategies in capital market firms. International corporate tax research has shown that multinational enterprises may reduce their effective tax burdens through transfer pricing, debt allocation, the location of intellectual property, treaty networks, and the distribution of income among jurisdictions [25]. Offshore corporate

ownership networks also include conduit and sink jurisdictions that facilitate the movement and accumulation of corporate income across international structures [26]. The emergence of tax-burden reduction as the most influential theme is therefore consistent with the financial logic of locating affiliated entities in jurisdictions that provide advantageous tax, regulatory, or financing conditions.

The importance of tax reduction is further supported by evidence that cross-border subsidiaries expand the range of firm-level tax-planning opportunities. Financial integration and foreign subsidiary networks provide firms with additional options for locating income, expenses, assets, and financing arrangements [32]. Transfer-pricing policies are particularly important because they determine how revenues, costs, and profits are allocated among related entities and can directly affect the competitive position of multinational companies [34]. Tax regulations also influence the decision to offshore or reshore operations, because changes in tax rates and the treatment of foreign income alter the relative attractiveness of alternative production locations [33]. Accordingly, the first-place ranking of tax-burden reduction reflects the interaction between the structural flexibility of satellite companies and the financial incentives embedded in international tax systems.

Nevertheless, tax-related benefits must be interpreted alongside reporting quality and regulatory risk. Profit shifting and tax-motivated allocation of income may affect the reliability, transparency, and comparability of financial statements [29, 30]. Complex global supply chains can also produce measurement problems, including the double counting of income and difficulties in calculating effective tax rates across organizational boundaries [28]. Moreover, changes in international tax regimes may alter the allocation of capital between domestic and foreign operations [31]. Thus, although the present study identifies tax-burden reduction as the most influential outcome, this advantage should be managed within a transparent governance framework that distinguishes legitimate tax planning from arrangements that could expose the firm to legal, reporting, or reputational consequences.

The second-ranked theme, higher returns resulting from investment efficiency, indicates that the value of satellite structures is not limited to minimizing tax payments. Offshore assets and affiliated entities can improve investment efficiency when they enable firms to access profitable projects, allocate capital across markets, and reduce financing frictions [22]. Evidence from multinational firms also suggests that tax planning may be associated with investment efficiency, although the outcome depends on whether the released financial resources are directed toward productive investments or retained through inefficient managerial decisions [23]. The present findings imply that vertical satellite structures are valued because they can combine tax advantages with more efficient capital allocation. In capital market companies, this combination may be particularly important because investors evaluate not only short-term profitability but also the quality of investment decisions and the ability of management to generate sustainable returns.

The high rankings of economic value added, return on equity, market value added, and Tobin's Q demonstrate that participants evaluated offshoring structures from both accounting-based and market-based perspectives. Economic value added reflects the firm's ability to generate returns above the cost of capital, whereas return on equity captures the profitability attributable to shareholders. Market value added and Tobin's Q represent the extent to which investors perceive the firm's assets and growth opportunities as valuable. The simultaneous importance of these measures suggests that satellite company formation is expected to influence internal operating performance as well as external capital market valuation. This conclusion aligns with research showing that participation in global value chains can affect the financial performance of multinational enterprises through productivity, specialization, market access, and more efficient resource distribution [20]. It is also consistent with

studies emphasizing that offshore outsourcing performance depends on firm-specific resources, growth capacity, and managerial slack [8].

The operational satellite company structure incorporated the elimination of financing constraints, access to lower-cost human resources, economies of scale, lower production costs, reduced natural-resource consumption, and reduced statutory employment-related payments. These themes reflect the conventional efficiency logic of offshoring. Offshoring can produce technical and organizational change by enabling firms to reorganize production and concentrate domestic resources on higher-value activities [6]. It can also increase flexibility in managing complexity and disruption when activities are distributed across locations with different cost and capability profiles [7]. Research on strategic outsourcing similarly identifies production costs, access to expertise, resource constraints, and protection of core competencies as major determinants of outsourcing decisions [35]. The findings therefore confirm that cost and resource considerations remain important, even though they were subordinate to the financial-value outcomes associated with the vertical structure.

The horizontal satellite company structure was associated with customer growth, market expectations, competitive positioning, inventory accumulation, total product costs, and component supply-chain costs. These outcomes indicate that horizontal arrangements are primarily market- and distribution-oriented. Such structures may allow firms to operate through multiple affiliated entities serving different geographic markets or customer segments while sharing ownership, knowledge, and supporting resources. Research on horizontal holdings demonstrates that overlapping corporate ownership can create complex networks whose market effects cannot be understood by examining individual firms in isolation [15]. The relatively lower ranking of horizontal themes may indicate that market expansion and customer-related benefits are viewed as less immediate or less controllable than tax and investment outcomes. Nevertheless, maintaining competitiveness and managing supply-chain costs remain essential for the long-term success of offshore structures.

The mixed satellite company structure combined market expansion, cash-flow growth, financial-resource access, knowledge and technology transfer, currency conversion, and increased market share. This category reflects a hybrid strategic configuration in which satellite firms perform multiple functions simultaneously. The importance of knowledge transfer is supported by research showing that offshoring can stimulate technical change and organizational learning when firms successfully absorb and reintegrate capabilities developed across international units [6]. Studies of affiliated companies similarly indicate that organizational learning and relational governance contribute to the quality of strategic decision-making across corporate networks [17]. However, the benefits of mixed arrangements may be accompanied by higher coordination requirements because financial, technological, market, and operational objectives must be aligned across entities.

The confirmation of all themes through the Delphi process and the acceptable consistency ratio of 0.056 support the internal coherence of the proposed framework. The use of fuzzy network analysis was appropriate because the categories and themes were interdependent and expert evaluations involved uncertainty and linguistic judgments. Fuzzy ANP methods are particularly suitable for prioritizing criteria in complex decision environments where reciprocal influences cannot be represented through a simple hierarchy [39]. Prior research has also demonstrated the value of fuzzy multicriteria decision-making for converting ambiguous strategic judgments into comparable priorities [40]. Consequently, the methodological integration of phenomenological interviewing, Strategic Reference Points, Delphi analysis, and fuzzy ANP provided a systematic transition from experiential knowledge to a ranked strategic model.

Overall, the findings suggest that satellite company formation should be understood as a strategic architecture for allocating financial, operational, market, and technological functions across affiliated entities. The superiority of the vertical structure and the prioritization of tax-burden reduction indicate that capital market companies view financial coordination as the most important benefit of offshoring. However, effective outcomes depend on management controls, trust, cultural alignment, and governance quality [10]. Global value-chain governance also requires clarity concerning authority, responsibilities, and interorganizational relationships [11]. Inadequate governance can expose firms to social irresponsibility, institutional conflict, and reputational damage, particularly when offshore partners operate in distant regulatory and cultural environments [12]. The proposed framework should therefore be applied as a balanced strategic roadmap in which financial advantages are evaluated together with transparency, risk control, and long-term organizational sustainability.

This study was limited by its reliance on expert judgments obtained from participants associated with selected industries, financial market working groups, and satellite companies. Although theoretical saturation was achieved, the relatively small phenomenological and fuzzy-analysis samples may restrict the generalizability of the findings to all capital market sectors. The cross-sectional design also captured participants' assessments at one point in time and could not determine whether the priorities of tax reduction, investment efficiency, or structural configuration remain stable under changing economic and regulatory conditions. In addition, the weights derived from fuzzy pairwise comparisons reflect subjective judgments and may be affected by participants' professional backgrounds, organizational interests, and familiarity with particular offshoring arrangements.

Future studies should test the proposed four-category framework in different industries, countries, and institutional environments and compare the priorities of firms operating under different taxation, ownership, and capital market systems. Longitudinal research could examine how the strategic importance of the identified themes changes following tax reforms, exchange-rate shocks, supply-chain disruptions, or changes in international trade regulations. Researchers could also combine expert-based fuzzy analysis with objective financial data, including effective tax rates, market value added, return on equity, investment efficiency, operating costs, and market share. Comparative studies of parent companies with and without satellite structures would provide stronger evidence concerning the causal effects of each structural configuration.

Managers should evaluate satellite company formation through an integrated framework that considers financial returns, tax consequences, operational efficiency, resource utilization, market development, and corporate risk simultaneously. Before selecting a vertical, operational, horizontal, or mixed structure, firms should define the strategic function of each affiliated entity, establish transparent transfer-pricing and reporting procedures, and clarify responsibility for investment, financing, production, and market decisions. Boards and financial managers should treat tax-burden reduction as one component of sustainable value creation rather than as an isolated objective. Periodic reassessment of the structure is also necessary to ensure that expected tax and efficiency benefits do not create excessive complexity, weak accountability, regulatory exposure, or reputational risk.

Authors' Contributions

Authors equally contributed to this article.

Ethical Considerations

All procedures performed in this study were under the ethical standards.

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Conflict of Interest

The authors report no conflict of interest.

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