

A SYSTEMATIC REVIEW OF THE DUE DILIGENCE STAGE OF MERGERS AND ACQUISITIONS: TOWARDS A CONCEPTUAL FRAMEWORK

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ABSTRACT

Organisations are under constant pressure to grow in the face of increased competition, changing conditions, and increasingly relaxed country and currency regulatory environments. In order to remain a player or an industry leader, it's imperative for companies to achieve real growth. Mergers and acquisitions (M&A) are an external mechanism for organisations to achieve growth. There are different stages in the typical M&A transaction. The due diligence stage of a transaction is critical in evaluating whether to proceed with a deal. It provides essential information that is used in setting negotiating parameters, determining bid prices, and providing a basis for integration recommendations. The due diligence process, therefore, should be managed effectively to ensure a higher probability of success for the deal. A systematic literature review was undertaken to establish the key concepts behind due diligence. Due diligence is multidisciplinary in nature, thus a wide range of literature was reviewed to gain a holistic understanding of the process. Concepts identified during the review were then individually examined. Similar concepts were grouped together into a new concept. The outcome of this paper forms the basis of a conceptual framework that captures the key areas of due diligence, the due diligence process and principles.

OPSOMMING

Organisasies is deurlopend onder druk om te groei in die aangesig van verhoogde mededinging, veranderende omstandighede en toenemend verslakte land- en valuta-regulerende omgewings. Om hul status as 'n rolspeler of industrieleier te handhaaf, is dit van kern belang vir organisasies om ware groei te behaal. Samesmeltings en verwerwings is 'n eksterne meganisme vir organisasies om groei te behaal. Daar is verskillende stadiums in só 'n transaksie. Die noulettendheidsondersoek stadium van 'n transaksie speel 'n kritiese rol in die voortgaanbesluitneming van 'n ooreenkoms. Dit verskaf essensiële inligting wat gebruik word om onderhandelingspunte te stel, die vasstel van 'n aanbod en die daarstelling van integrasie aanbevelings. Hierdie proses moet dus doeltreffend bestuur word om 'n hoër waarskynlikheid van onderhandelingsukses te verseker. 'n Stelselmatige literatuurstudie is onderneem om die sleutelkonsepte te formuleer. 'n Noulettendheidsondersoek is multidissiplinêr van aard en dus beslaan die literatuurstudie 'n noemenswaardige reikwydte om sodoende 'n holistiese verstaan van die proses te bekom. Konsepte wat tydens die literatuurstudie identifiseer is, is saam gegroepeer om nuwe konsepte te vorm. Die resultaat is 'n konseptuele raamwerk wat die sleutel areas van 'n noulettendheidsondersoek saamvat.

1 INTRODUCTION AND PROBLEM STATEMENT

Organisations are under constant pressure to grow in the face of increased competition, changing conditions, shrinking geographical boundaries, and increasingly relaxed country and currency regulatory environments. In order to remain a player or an industry leader, it is imperative for companies to achieve real growth [1], [2]. Traditional methods of achieving organic growth, such as new products, markets, and efficiencies may only assist in growing the organisation to a certain extent.

Mergers and acquisitions (henceforth referred to as 'M&A') are an external mechanism for organisations to achieve real growth. M&A has indeed been a popular growth strategy since the latter part of the twentieth century for both big and small firms [3]. Organisations see M&A as an alternative strategy for expansion and growth [4]. This is indicated through the increasing value of M&A deals year on year. For example, acquisitions that were completed in 1997 were valued at more than all the acquisitions that occurred throughout the 1980s [5].

Organisations see M&A as a valuable tool with which they can increase revenue streams relatively quickly. The outcome of a merger or acquisition can often create new organisations whose financial and strategic options are more promising.

Although M&A activity is on the rise, the results of many of these deals are dismal [6]. Gomes *et al.* [7] confirm that less than half of all corporate combinations achieve their financial or strategic objectives. They suggest that the field of M&A suffers from a lack of connectedness, which leads to the high failure rate in transactions, and that the different streams of M&A research are only marginally informed by each other. This leads to much of the understanding of M&A and its complexities being restricted and compartmentalised [7]. Thus there is a need to establish a link between different approaches to M&A.

Much of the literature points to an M&A transaction being viewed as a process. Historically, organisations that did not approach the transaction as a process have often been exposed to more risk within the transaction and a higher likelihood of failure.

There are common elements that make up every deal including strategy development, systematic selection and screening of possible targets, due diligence, negotiations, and integration. Many models that describe the M&A process focus their steps on these core activities. The deal flow model [8] is used in this paper to refer to the various stages of the M&A process. The stages of this model are summarised in Table 1.

Table 1: The deal flow model [8]

STAGE	DESCRIPTION
1. Formulate	The first stage sets the tone for the rest of the deal; it is therefore important to start off on the correct path. The firm should set out its business objectives and growth strategy in a well-defined, rational, and data-oriented way. The executives should explain what a feasible target would encompass in meeting specific criteria that are grounded in the objectives set out. Criteria can include the likes of market share, geographical access, new products or technologies, and synergies. The executives should decide on the rationale behind the merger or acquisition.
2. Locate	During this stage, the firm searches for desirable target companies. Financial and operational analyses initiate conversations between the executive staff. These conversations lead to high-level identification of potential synergies by the M&A deal team. The result of this exercise is the letter of intent that contains the initial deal parameters, terms, and conditions.
3. Investigate/Due Diligence	The third stage of the model consists of a thorough due diligence to explore all aspects of the target company. The due diligence that is conducted should uncover as much detail as possible about the target before finalising a definitive agreement. Due diligence should be conducted over several areas, such as finance, operations, legal, and environmental, to name a few. The due diligence team summarises their key findings from the process, and identifies potential deal killers or synergies. The acquiring company uses findings from the due diligence process to set negotiating parameters, determine bid prices, and provide the foundation for initial integration recommendations.

STAGE	DESCRIPTION
4. Negotiate	This stage is made up of process steps and requirements to conclude a deal successfully. The deal team drives this stage of the transaction. After being briefed by the due diligence team, the deal team and the senior executives devise the final negotiating strategy for all terms and conditions of the deal. Considerations for the final negotiating strategy include factors such as price, performance, people, legal protection, and governance.
5. Integrate	This stage of the deal should be customised for each company and modified for each specific deal. This stage involves the process of planning and implementing the newly merged organisation's processes, people, technology, and systems. Questions that should be considered to help resolve the host of issues encountered during this stage include: how fast to integrate; how much disruption will be created and how the disruption can be minimised; how people can be assisted to continue focusing on customers, safety, and daily operations; and how best to communicate with all stakeholders.
6. Motivate	The final stage of this model is focused on maximising the long-term value of the merger's firm. When major integration activities have been completed and most, if not all, projected synergies have been realised, management's responsibility moves to the demands of driving the organisation forwards to achieve continuous performance improvements.

The literature points to Stage 3, investigate/due diligence, as critical in evaluating whether an organisation should proceed with the M&A deal. Outcomes from the due diligence stage are used to set negotiating parameters, determine bid prices, and provide a basis for initial integration recommendations [9]. Furthermore, the due diligence stage plays an important role in determining whether a deal will be successful. According to Perry and Herd [10], the danger is not that an organisation will fail to complete the due diligence for a deal, but rather that they will fail to complete the due diligence effectively.

A gap exists in the research into the processes that should be followed for the due diligence stage of a transaction. Currently there is no guideline or model to direct an organisation about which due diligence investigations to apply to an M&A transaction, and what priority should be assigned to the various due diligence investigations to facilitate a decision on how to proceed with the transaction. It is also unclear what level of investigation is required within a transaction to minimise the risks involved and to ensure a successful transaction. Finally, the literature identifies a deficiency in the knowledge of the different outcomes that the due diligence investigations could lead to, and how this impacts the overall transaction and the steps that could be taken to deal with these outcomes.

This paper presents the findings of a systematic literature review for the due diligence stage of an M&A transaction. The review is guided by the following research questions:

1. What are the various areas of due diligence investigations?
2. What are the tools/data/processes that are required to conduct these due diligence investigations?
3. What are the key concepts of the due diligence process?
4. What are the best practice and strategies for the due diligence process?

2 METHODOLOGY

In order to develop a conceptual framework, Jabareen's [11] conceptual framework analysis (CFA) method is adopted for this study. CFA is a grounded theory technique that aims to generate, identify, and trace the concepts of the subject under investigation. This procedure is flexible and allows for modification to assist in completely understanding the phenomena surrounding the subject. The process of the systematic literature review, and the analysis of the results, are outlined in this paper. The steps towards an initial conceptual framework are also discussed.

The CFA method is broken up into eight phases. The phases to be covered in this paper are phases 1 to 5; the remaining three phases will be covered in future work. Table 2 provides a breakdown of these phases and the corresponding sections in this paper where they are covered.

Table 2: Research methodology towards the development of a conceptual framework (adapted from Jabareen [11])

CFA PHASE	OBJECTIVE OF PHASE	ACTION COMPLETED	SECTION
Phase 1: Mapping the selected data sources	<ul style="list-style-type: none"> Identify gap in literature. Determine research questions. Identify sources of data. Define search terms. Decide on a filtering process. Select studies. 	Preparation and initiation of systematic literature review.	3.1.1., 3.1.2.
Phase 2: Extensive reading and categorising of the selected data	<ul style="list-style-type: none"> Read through the selected studies to gain a better understanding. Identify data categories. Organise data according to categories. 	Data categories established. Data extracted from papers and coded in Microsoft Excel.	3.1.3.
Phase 3: Identifying and naming concepts	<ul style="list-style-type: none"> Identify concepts through extensive reading. Identify core concepts, principles, and processes. 	Concepts are identified and named. Completion of systematic literature review.	5.2.
Phase 4: Deconstructing and categorising the concepts	<ul style="list-style-type: none"> Deconstruct each concept according to its main attributes, characteristics, assumptions, and role. Organise and categorise concepts according to their features. 	Core concepts emerge and are critically analysed. Concepts are organised into specific categories.	5.3.
Phase 5: Integrating concepts	<ul style="list-style-type: none"> Group together or integrate concepts that have similarities to form new concepts. 	Three areas are identified in which concepts are categorised, forming the basis of the conceptual framework.	6.

3 SYSTEMATIC LITERATURE REVIEW

Systematic literature reviews are carried out in research to answer predetermined questions. Empirical evidence is identified from all applicable studies that fit the predefined criteria, and is then analysed and integrated [12]. Systematic literature reviews are a method for mapping out uncertainty and identifying where gaps in literature exist, thus highlighting any opportunities for future work [13].

3.1 Phase 1: Mapping the selected data sources

3.1.1 Data collection

Phase 1 of the CFA method, discussed in Table 2, shows that the first step is searching for and selecting the relevant literature works. Data was acquired using the web-based search engines Google Scholar and Scopus. The primary search terms used included 'M&A' and 'due diligence'. The search term 'M&A' was also interchanged with the term 'mergers and acquisitions' to increase the effectiveness of the search. Secondary search terms that were employed in the data collection process included 'methodology', 'framework', 'process', 'tools', 'data', 'outcomes', and 'costs'. These secondary search terms were used in various combinations; however, it was found that the results remained relatively consistent, with only minor changes recorded. The initial results from these searches are shown in Table 3. More than 1000 publications were identified in this initial search.

Table 3: Initial search results

SEARCH TERMS	SCOPUS	GOOGLE SCHOLAR
('Mergers and Acquisitions') OR ('M&A') AND ('Due Diligence')	181	24400
('Mergers and Acquisitions') AND ('Due Diligence') AND ('Methodology' OR 'Framework' OR 'Process')	90	15700
('Mergers and Acquisitions') AND ('Due Diligence') AND ('Tools' OR 'Data' OR 'Processes')	89	15100
('Mergers and Acquisitions') AND ('Due Diligence') AND ('Outcomes')	70	6160
('Mergers and Acquisitions') AND ('Due Diligence') AND ('Costs')	30	12600

3.1.2 Data selection

The data selection process was used to reduce and filter the number of publications. From this process, a comprehensive literature database was established as the basis of the systematic literature review. The data selection process that was followed is illustrated in Figure 1.

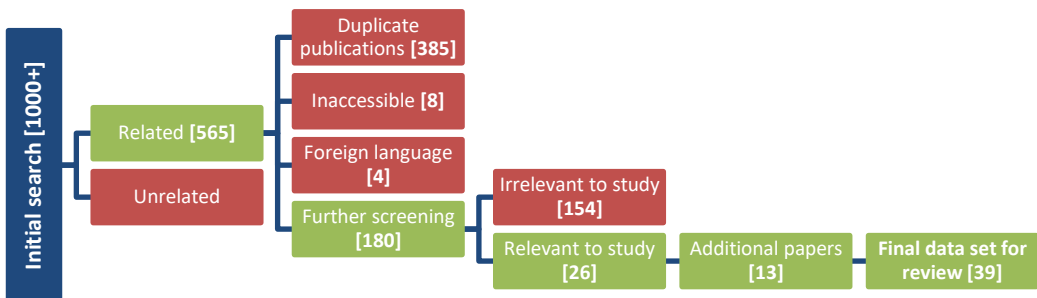


Figure 1: Data selection process

The number of duplicate publications removed was 385. A further four publications were removed on the basis of their being in a foreign language. Another eight publications were removed as they were inaccessible. A screening process of the remaining 180 articles was then carried out.

Using the title and abstract of the papers, a screening process was used to filter the publications. Two factors were used to assist in determining whether the publication under examination would be accepted for review. These factors are shown in Table 4. A score for each factor was allocated to the publication, based on relevance to the factor in question. A score of 0 was allocated if it was irrelevant to the factor, 0.5 if it was partially relevant to the factor, and 1 if it was relevant to the factor.

Table 4: Factors used in the screening process for publications

FACTOR	DESCRIPTION
1	Addresses due diligence in some significant way
2	Identifies/examines/proposes concepts/theories/frameworks/models concerning due diligence within M&A

The ancestry approach was employed to add additional papers to the literature database that had been created. This approach involves tracking research cited in the literature that has been obtained already [14]. In total, 13 papers were added to the literature database using this approach.

The final comprehensive literature database consisted of 39 articles for review. A list of these publications is available in Appendix A.

3.2 Phase 2: Extensive reading and categorising of the selected data

To fulfil the requirements of phase 2 of CFA (see Table 2), extensive reading of the data is necessary to gain a better understanding of due diligence, and to establish categories for data collection. The categories with their attributes are presented in Table 5 below.

Microsoft Excel was used to code the selected studies as they were reviewed. Coding of these studies allowed the reviewer to gain an understanding of the underlying concepts of the field of due diligence while also picking up on certain trends from the data being coded. The process of coding involved the allocation of a specific code or category component to a concept or factor identified within the publication under review. Table 5 also displays the corresponding code, where applicable, that is assigned to each category or attribute. The code, along with a number, was assigned to each new concept or factor that was coded.

Table 5: Data collection categories and components/attributes

CATEGORIES	COMPONENTS / ATTRIBUTES
1. Paper characteristics	<ul style="list-style-type: none"> • Title of document • Author(s) • Year published • Document type • Document source • Citations • Geographic focus of document • Industry focus
2. Empirical elements	<ul style="list-style-type: none"> • Data collection methods • Validation techniques • Gap in literature addressed
3. Areas of due diligence	<ul style="list-style-type: none"> • Financial [FD] • Legal [LD] • Tax [TD] • Environmental [ED] • Regulatory [RD] • Operational [OD] • Market [MAD] • Human resources [HRD] • Cultural [CD] • Strategic [SD] • Marketing [MD] • Intellectual property [IPD] • Technology [TD] • R&D [RDD]
4. Due diligence process factors	<ul style="list-style-type: none"> • Steps [ST] • Planning [P] • Tools [T] • Success factors [SF] • Risk factors [RF]
5. Due diligence concepts and principles	<ul style="list-style-type: none"> • Best practices [BP] • Considerations [CO] • Strategies [S] • Costs [C]
6. Observations	<ul style="list-style-type: none"> • Conclusions drawn by authors of the paper • Oversights in paper

The aim of the systematic literature review was to formulate an analysis that emphasised identifying the key areas, processes, principles, and concepts of due diligence. The analysis of the results of the systematic review is presented in Section 4.

4 INTRODUCTION TO DUE DILIGENCE

Angwin [15] defines due diligence as a comprehensive process of investigating and evaluating business opportunities in mergers and acquisitions. Due diligence usually occurs before major deals are made, or after the deal is announced. Traditional due diligence includes the review and analysis of ‘hard data’ about the business, and typically covers aspects such as products, financial assets,

business models, and technology, with most of the focus being placed on legal and financial issues [16].

Due diligence is essentially the process of conducting research on a firm. Its role in M&A is to support the valuation process, arm the negotiators, test the accuracy of representations and warranties contained in the merger agreement, fulfil disclosure requirements to investors, and inform the planners of post-merger integration [1].

In a report by the Delta Publishing Company [9], key areas are discussed about where to focus the due diligence investigations. The first is the market, where questions – such as the size of the target market, the rate of growth of specific segments, any threats that exist from rival products or technologies, and the extent to which the market is influenced or controlled by the government – should be asked.

The second key area is the customers. Investigations are carried out into the target's major customers, their purchase criteria (price, quality, reliability), the various customer channels, any unmet needs, and whether or not a change in buying behaviour is to be expected following completion of the transaction [9].

The third key area is the competitors. Here, the due diligence needs to focus on identifying the target's main competitors, the degree of rivalry between competitors, the strengths and weaknesses of competitors, whether barriers of entry exist for new competitors, and how competitors might try to exploit the merger or integration issues to their own advantage [9].

The final area on which to focus, according to the Delta Publishing Company [9], is culture and human resources. Investigations into which key people must be kept, the core areas of competency that should be retained, and the possibility of doing either, must be conducted. Due diligence should also find out whether there are any major cultural discrepancies with the target, whether they could cause major defections or other losses of productivity, and whether the organisation is willing to resolve them, and at what cost.

Many of the deals that occurred during the 1980s produced disappointing results. Harvey and Lusch [17] suggest that part of the reason for this was the limited due diligence done for these deals. Many of these companies found that the cost of acquisition was not what was paid for the company, but rather, was all that was paid after the company had been purchased to remedy problems not uncovered during the due diligence stage of the transaction [18]. From these findings it is clear that due diligence forms a critical part of the M&A transaction and can, indeed, influence the success of the deal.

Harvey and Lusch [17] discuss various issues that arise during a transaction that can impede the level of due diligence conducted. The identified issues are characterised as time restrictions, cost constraints, and situational factors. A description of each of these characteristics is given in Table 6.

Due diligence covers a variety of areas. Ideally, a thoroughly conducted due diligence considers all aspects of the target's business. These areas include, but are not limited to, legal, accounting, taxation, information technology, risk and insurance, environment, market presence and sales, operations, real and personal property, intellectual and intangible assets, finance, cross-border issues, organisation and human resources, culture, and ethics [1].

5 REVIEW ANALYSIS AND RESULTS

This section highlights the results of the systematic literature review. It begins with an illustration of the descriptive statistics of all the papers reviewed during the process. The remainder of this section addresses phases 3 and 4 of the CFA by providing an introduction to concept identification, followed by the deconstruction and categorisation of these concepts.

Table 6: Characteristics that impede the level of due diligence conducted [17]

CHARACTERISTIC	DESCRIPTION
Time restrictions	Time restrictions are highly important and significant in many deals. With this constraint present, it is highly likely that effective examination of the target, apart from the major financial, legal, tax, and sales projections, does not occur.
Cost constraints	It is often seen as too costly to bring in experts from every functional area to provide an opinion. Cost constraints are usually a function of the size of a deal; if the deal is relatively small, then it is seen as uneconomic to invest a lot in the due diligence.
Situational factors	Situational factors, such as foreign acquisitions and hostile takeovers, have been the causes of shortcuts taken in due diligence. The competitive nature of bidding for a company has required less than well-articulated due diligence.

5.1 Descriptive statistics

In this section, the descriptive statistics of the systematic literature review are presented and discussed. Various bibliometric indicators are presented in order to gain a better understanding of the analysis.

Figure 2 shows the timeline and composition of the papers included in the review. Articles make up the bulk of the papers at 62 per cent, followed by reviews at 23 per cent. The majority of the papers in the review were published after 2001, indicating that information obtained from the papers presents an accurate view of the field of due diligence today.

Figure 3 provides a breakdown of citations for each publication type. It is clear that articles account for the highest number of citations. All citation statistics were obtained from Google Scholar to ensure consistency.

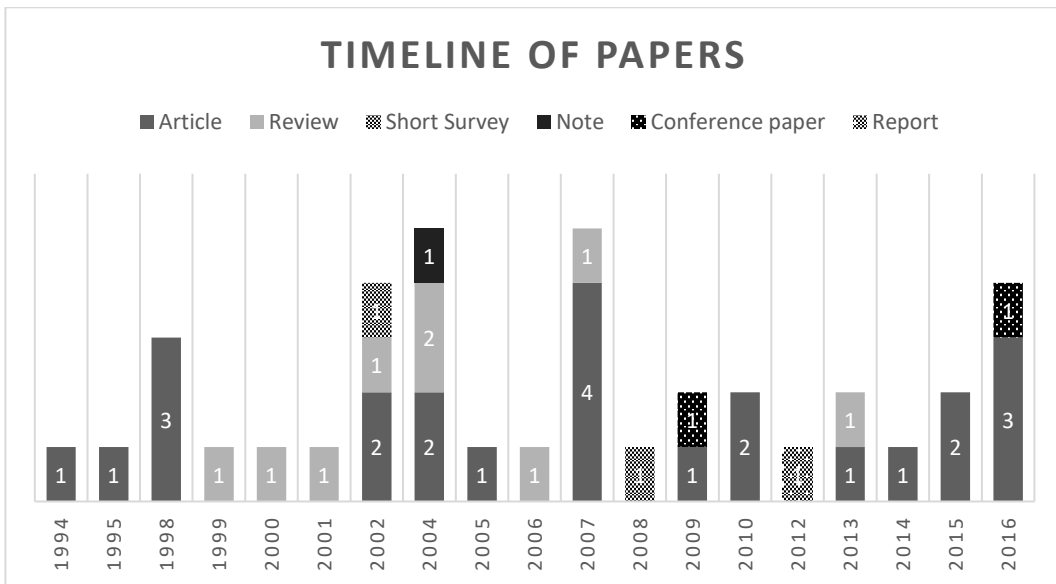


Figure 2: Timeline and type of papers included in the study

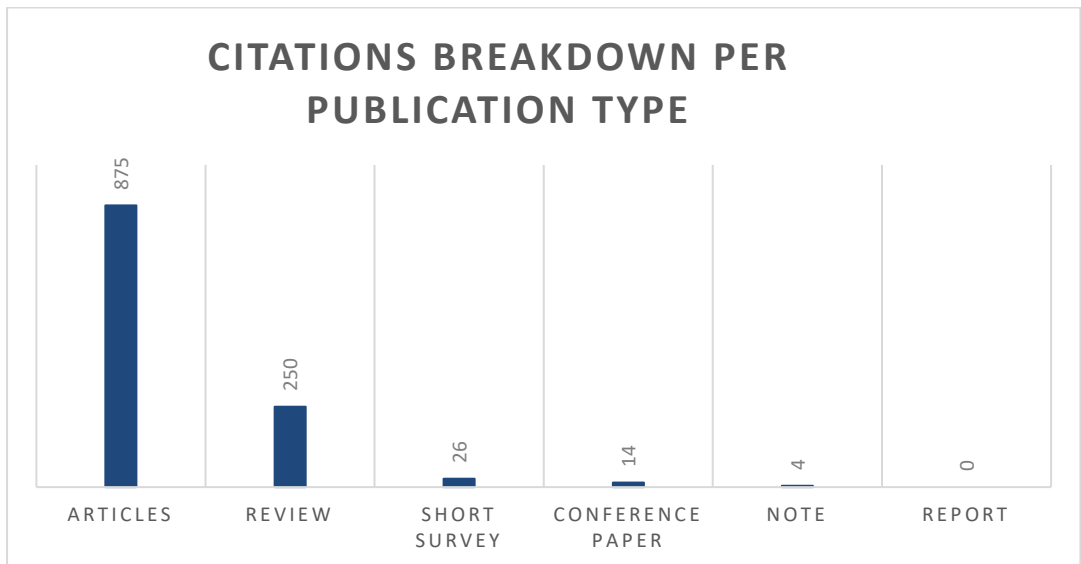


Figure 3: Citations per publication type

5.2 Phase 3: Identifying and naming concepts

Following the completion of the review of papers, three important fields were identified:

- 1) The different areas of due diligence
- 2) Due diligence process factors
- 3) Due diligence concepts and principles

Each of these fields will be discussed to aid in the process of concept identification, in accordance with phase 3 of the CFA.

5.2.1 Areas of due diligence

There are different areas of focus in the due diligence process. The areas of due diligence have been selected in accordance with standard due diligence practices. Areas that were overlooked were added when mentioned in the papers under review. For example, in the article by Lemieux and Banks [19], several factors in the areas of research and design (R&D) were mentioned. It was therefore added to the list of areas of due diligence covered by this review. Figure 4 provides a breakdown of the number of factors or concepts identified for each of the different areas of due diligence that were covered in this review.

It is clear from Figure 4 that financial due diligence is heavily weighted in terms of importance due to the number of factors or concepts extracted from the papers reviewed. The other areas of due diligence that seem to be significant are environmental, marketing, cultural, and intellectual property (IP).

It should be noted that areas of due diligence such as legal and tax already have stringent guidelines in place, dictated by the competition legislation of the country or region. They are therefore not covered as comprehensively in the academic literature, which seems to focus more on those areas of due diligence that are often overlooked.

Table 7 provides a description and breakdown of the various areas of due diligence that were covered in the review.

FACTORS/CONCEPTS IDENTIFIED FOR EACH AREA OF DUE DILIGENCE

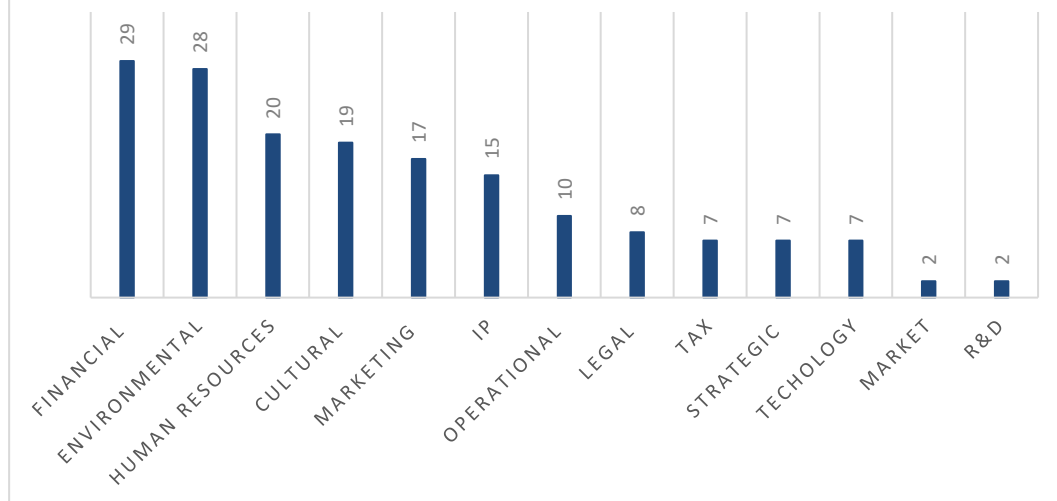


Figure 4: The number of factors/concepts uncovered for each area of due diligence

Table 7: Breakdown of the different areas of due diligence

AREA OF DUE DILIGENCE	DESCRIPTION
Financial	It consists of a thorough analysis and assessment of a company's books in order clearly and reliably to present the company's current financial situation, and make it easier for the acquirer to understand the character of the company's operation in financial terms. A buyer must be convinced that the deal makes economic sense, and must scrutinise historical income statements, balance sheets, and financial forecasts. Consolidators should look at ways of reducing overhead costs if a deal goes ahead [20].
Legal	Legal due diligence must assess the condition of the target in four dimensions: (1) corporate organisation, (2) ownership of assets and exposure to associated liabilities, (3) actual and potential litigation, and (4) regulation [1].
Tax	Investigations should focus on the target's compliance with tax laws and regulations. The primary concern of tax due diligence is to determine the buyer's exposure to the target's possible unpaid taxes and to tax fraud. Investigations should also identify any opportunities for tax reductions [1].
Environmental	The aim of environmental due diligence is to issue an opinion of compliance with respect to environmental law, calculate the costs of detected environmental liabilities, and reduce the risks of legal litigations [21]. The investigations should also determine the target's compatibility with the buyer's environmental strategy, and identify any cost improvements in the environmental processes, such as reducing inefficiencies in the disposal of waste [1].
Operational	Understanding the operations of the target company is important, as it allows the acquirer to see how they will fit into their enterprise structure. Operational due diligence is the process by which a potential buyer reviews the operational aspects of a target company. The approach to operational due diligence varies by industry. The process itself should be executed by specialists and professionals who understand the industry and have a background in it [22].
Market	Market due diligence should gain a thorough understanding of the target's market. The acquirer should also conduct market assessments across the market segments within which the target operates [23]. Due diligence in this area should also uncover any opportunities within the market and potential synergies with the acquirer [1].
Human resources	This is an important investigation for any type of transaction or deal. The investigations should look into the following areas: (1) adequacy of talent and leadership, (2) exposure to workforce problems such as union issues, (3) inefficiencies in compensation and benefits, (4) exposure to benefit claims, and (5) compatibility of organisation and HR policies [1], [24].

AREA OF DUE DILIGENCE	DESCRIPTION
Cultural	Cultural differences between the target and the buyer are believed to contribute to the high failure rate of M&A transactions [25]. Due diligence investigations of the target's culture should aim to assess resemblance on three levels: (1) between actions and aspirations, (2) between the cultures of buyer and target, and (3) between the target's culture and its strategic threats and opportunities [1].
Strategic	Strategic due diligence explores whether the potential value and concern about buying the target at the right price is realistic. It tests the strategic rationale behind a proposed transaction with two broad questions: Is the deal commercially attractive? And are we capable of realising the targeted value? [26]
Marketing	Marketing due diligence assists in the strategic fit between the target and acquirer. It employs an analytical methodology that assesses the target's sales and marketing strengths and weaknesses to ensure that the deal meets the financial, strategic, and operational objectives of the acquirer [27]. A key aspect of marketing due diligence is to study the deal through the eyes of the customer; this is critical to market-facing businesses [28].
Intellectual property (IP)	IP due diligence should focus on the intellectual and intangible aspects that can be owned in the legal sense. Patents, copyrights, trademarks, trade secrets, software, and any other IP of the target should be investigated and analysed. These investigations should also uncover any infringement claims by others on the target [1], [29].
Technology	Technology due diligence should focus primarily on IT issues of the target. The target's compatibility in terms of technology should be assessed in these investigations. The target's IT department should be evaluated. A plan should also be drawn up for post-merger integration [1], [30].
Research & design (R&D)	R&D due diligence is often specific to certain types of deals. This due diligence would only be carried out on specific targets. The capabilities of the R&D department of the target are analysed in these investigations. Potential synergies should also be identified [19].

5.2.2 Due diligence process factors

There are many ways in which to approach the due diligence process. The aim of identifying the concepts and factors in the due diligence process is to gain an understanding of the different methods currently in use, and to assist in creating a framework that considers a comprehensive approach to due diligence.

In identifying the various steps and planning factors across the diverse data set of papers, it is possible to explore where there are gaps in the literature on the due diligence process. It is also important to uncover the various tools that are used during the process of due diligence. While some tools are common to the due diligence process, there are some that are not commonly used, and the purpose of identifying the tools in the due diligence process will enable the creation of a comprehensive framework.

Success and risk factors were also examined in the review process, as one of the underlying motivations in this research is to ensure the maximum probability of success. The due diligence process is responsible for uncovering any risks that may occur in the deal, and to assist in mitigating those risks.

Figure 5 indicates the number of factors and concepts extracted from the dataset of papers reviewed. The highest number of concepts or factors extracted were for the steps in the due diligence process, followed by the risk factors.

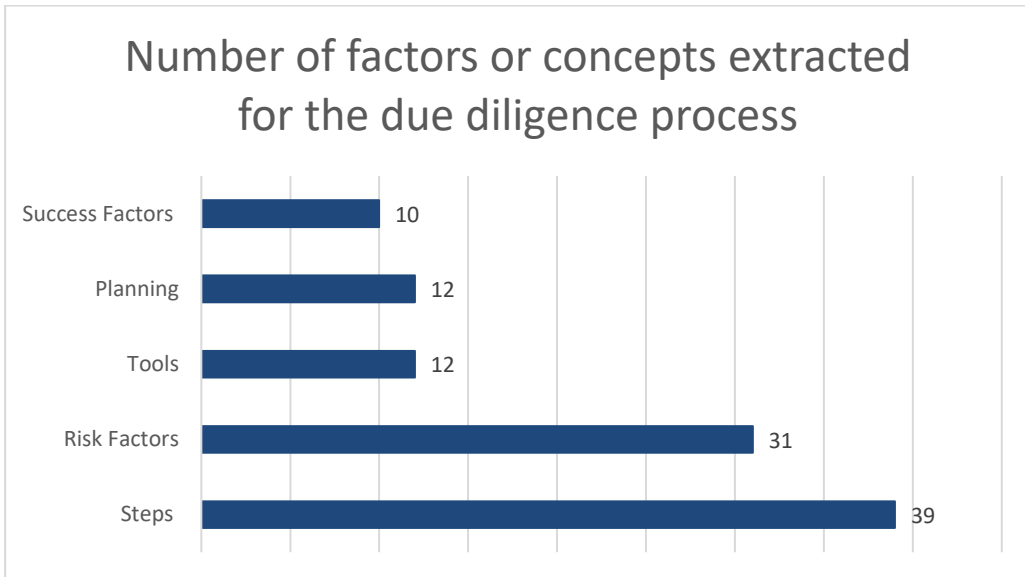


Figure 5: The number of factors/concepts extracted from the dataset for the due diligence process

5.2.3 Due diligence concepts and principles

Owing to the diverse nature of due diligence, various principles and key concepts were considered when reviewing the dataset of papers. The concepts and principles were extracted according to four categories: best practice, considerations, strategies, and costs. Figure 6 indicates the number of concepts and principles extracted for each of the categories.

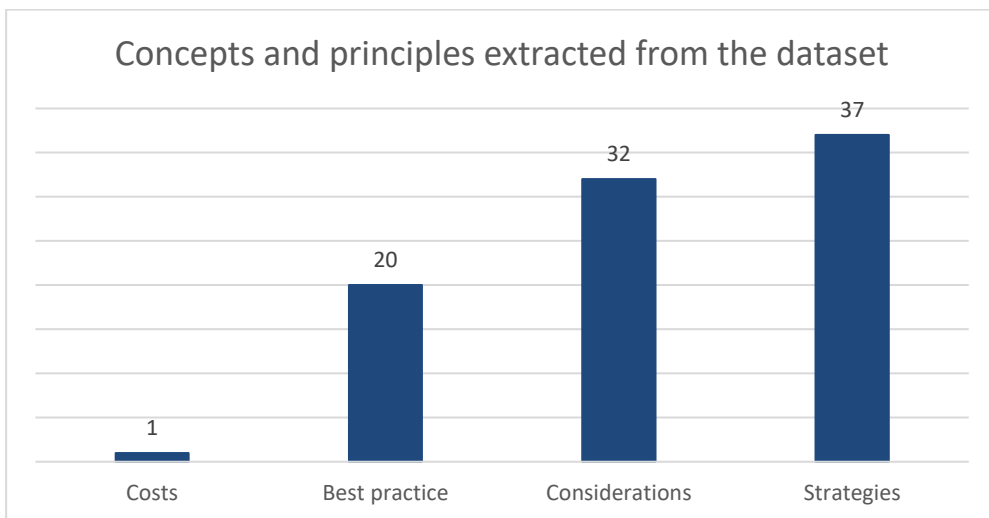


Figure 6: Concepts and principles extracted from the dataset

5.3 Phase 4: Deconstructing and categorising the concepts

In this phase, the concepts and factors that were identified in the review were analysed and categorised according to their features and goals. Many of the identified concepts had similarities in their attributes, characteristics, or assumptions, and therefore were combined into one concept. The categories that have been used are carried through from Section 5.2, and include best practice, strategies, success factors, and risk factors. It was found that the concepts, principles, or factors from the considerations category could be allocated to the various other categories, according to their features and goals.

Table 8 below provides a breakdown of the concepts identified through the review. These concepts have been arranged according to their category.

Table 8: Categorised concepts

CATEGORY	CONCEPT	DESCRIPTION	REFERENCES
Best practice	Merger teams	It is important to have a dedicated merger team composed of a range of operational experts (both internal and external). The inclusion of line management in the search-and-selection builds understanding of, and buy-in to, the acquisition strategy among the people who will be running the acquired business.	[22] [10] [26] [6]
	Checklist for due diligence	Checklists should be living documents that are modified as regulations or issues become more complex. Review the checklist to assure that new issues haven't arisen that should be considered. Checklists ensure that all investigations have been carried out as they should be.	[31]
	A vision for the combined organisation	It is crucial that an acquirer has a strong and clear sense of purpose. This purpose comes from a guiding vision, a defining mission, and a deep understanding of the markets served, and the strategies, competencies, and so on that add granularity and distinctiveness to the vision and mission.	[6]
	Trust, but verify	Sellers will often make promises that could make the buyer complacent. It is important not to take these assurances at face-value, but to carry out a thorough due diligence to ensure that integration can occur as smoothly as possible.	[10]
	Have clarity about what the acquirer is looking for, and focus on what matters	Be clear about the criteria you are looking for in the acquisitions and the metrics by which the deals will be judged. Emphasise the areas that matter most in this deal.	[22] [10]
Strategies	M&A motivation	Due diligence should identify the primary motivation for considering an M&A. The motivation to purchase another company needs to be understood by the due-diligence team in order for them to focus their search for candidate firms better.	[32]
	Amount and depth of due diligence	If insufficient investigation is done, it could mean that something is missed; on the other hand, too much investigation could mean a rise in costs and time spent going through the information.	[33] [17]
	Intangible assets	Intangibles cannot be easily defined and are therefore difficult to assess, measure, and manage. Intangible assets can be classified into six categories: (1) the 'having' capabilities, (2) the 'doing' capabilities, (3) 'people dependency', (4) 'people independency', (5) protection by law, and (6) no protection by law.	[34] [17] [35]
	Analyse the target's selling motive	When filtering the target enterprises, the acquiring party should analyse every potential target enterprise's motive for merger or acquisition, in order to determine the target enterprise and develop the pricing strategy.	[36]
	Estimating synergies	Some synergies are achievable, and ignoring them may steer companies away from smart acquisitions. A good approach is to use the due diligence process to distinguish carefully between different kinds of synergies, and then estimate both their potential value and the probability that they can be realised. That assessment should also include the speed with which the synergies can be achieved and the investments it will take to get them.	[37] [25] [26]
	Exposing and managing risk	Exposing major risks early in the due diligence process can help to determine whether it is wise to continue with a deal. If it is determined that the risk is acceptable, a risk-mitigation strategy should be determined and implemented.	[38] [22]
	Establishing a price	Executives must be convinced not only that the potential deal value justifies the significant investment being made, but also that the business is truly capable of realising this value. The buyer should demand a price that is commensurate with the level of integration risk uncovered, and be willing to walk away if that price isn't met.	[26] [37] [25]
	Produce a list of likely revenue enhancement opportunities (REO)	Produce a list of REOs, and then prioritise how quickly and easily they can be expected to be achieved. This provides a 'pipeline' or stream of potential growth opportunities, some of which can begin immediately after the acquisition, with others following later.	[27]

CATEGORY	CONCEPT	DESCRIPTION	REFERENCES
Success factors	Decide on critical success factors	Critical success factors (CSFs) ground the vision and storyline into tangible objectives and measurable milestones. They give shape to the combination of functions, products, and services, and drive integration decisions toward the creation of value. The CEO and top team must define and ensure that these CSFs are kept at the top of priority lists of managers if the combination is to succeed. They form the criteria against which combination decisions and execution are evaluated.	[39]
	Targeted debiased approach	The approach requires executives first to identify the cognitive mechanisms at play during various decision-making steps, and then to use a set of techniques to reduce bias at specific decision points, thus leading to sounder judgements.	[25]
	Realisation of the 'people situation' in the target company	To increase the chances of a long-term, financially successful M&A, comprehensive due diligence must incorporate the realisation of the 'people situation' in the target company. A thorough due diligence that pays great attention to the target's workforce is aimed at discovering both the company's people problems and its people strengths.	[24]
	Due diligence activities carried out by successful companies	A clear, agreed vision shared by both parties. A detailed, prioritised architecture for change. An architecture for the new company based on the strengths of the two parties, and focused on maximising value. A new leadership team chosen and communicated quickly. An explicit plan to address cultural issues	[34]
Risk factors	Rushed due diligence	Due diligence is often hurried as excitement for the deal rises. The due diligence process is then carried out inadequately, which may lead to overestimations of revenue enhancement and cost savings, and underestimation of the resource requirements and headaches involved in integrating businesses.	[6]
	Ignoring organisational, HR, and cultural issues	Ignoring organisational culture differences, HR, or cultural issues may have high long-term hidden costs. Either these people or cultural issues never surface during the due diligence, or the acquirer underestimates their importance and fails to recognise them as warning signs of business problems that could sap value from the deal and even threaten the success of the transaction.	[2] [24] [25]
	Limiting the due diligence process	Limiting the DD process to an evaluation of financial statements, management, and physical assets leaves the acquisition process, and more importantly, the acquirer, with serious vulnerabilities. It is essential that DD goes beyond the obvious analyses and also includes a detailed self-analysis and thorough review of the markets and competitive environment of prospective acquisitions.	[23]
	Verification	Unless you are using a primary data source (such as official records filed at a government institution), there is always going to be an issue about whether the information is reliable or not. Once you start moving out of your own jurisdiction, the likelihood is that you will be less familiar with the data sources.	[33]
	Timeliness	The data can change very quickly. It is important to ensure, in the checking process, that it is clear to the user of the data that the checks undertaken in terms of financial performance and reputation are only accurate at the point they were undertaken. Things can, and do, change. Regular rechecking of client lists is part of the due diligence process.	[33]
	Entrenched business processes	Companies that acquire targets from firms in maturing industries must 'untangle' the target's business processes from its parent company; in most cases, the pieces being sold have entrenched processes and cultures that are difficult to integrate into the buyer's organisation.	[10]
	The planning fallacy	People tend to underestimate the time, money, and other resources needed to complete mergers and acquisitions.	[25]
	Confirmation bias	People tend to seek out information that validates an initial hypothesis. The need to provide an acceptable initial bid often biases all analyses upward. Instead of synergy estimates guiding the price, the letter of intent often guides the synergy estimates. In effect, this seeds the entire due diligence process with a biased estimate, even before much information has been exchanged.	[25]

6 TOWARDS THE DEVELOPMENT OF A CONCEPTUAL FRAMEWORK

To assist in the development of a conceptual framework, the focus was on integrating and grouping together the concepts identified in phases 3 and 4. The framework provides a conceptualisation of the due diligence process.

Phase 5 of the CFA is covered in this section. Similar concepts were grouped together and combined. This decreased the overall number of concepts. The grouping and integration of concepts was assisted by the recognition of trends that emerged from the systematic literature review process. The process followed was to integrate, and group concepts were iterative.

The concept categories were also organised into three main areas that laid the foundation of the conceptual framework. These areas, and the categories, can be seen in Table 9.

Table 9: Main areas for concept integration

DUE DILIGENCE PROCESSES	DUE DILIGENCE PRINCIPLES	DUE DILIGENCE AREAS
<ul style="list-style-type: none"> • Steps • Planning • Tools 	<ul style="list-style-type: none"> • Best practices • Strategies • Success factors • Risk factors 	<ul style="list-style-type: none"> • Financial • Legal • Tax • Environmental • Operational • Market • Human resources • Cultural • Strategic • Marketing • Intellectual property • Technology • R&D

7 CONCLUSION AND FUTURE WORK

Due diligence forms a critical component of the mergers and acquisitions process. Due diligence has become more than just a process to identify or review a candidate. Increasingly, due diligence teams are being asked to make calls on whether the targeted value of the deal can be realised, whether the projected timeframe is achievable, and whether all associated risks can be managed effectively [6]. It is evident that the due diligence process needs to be carefully controlled and monitored to ensure the maximum probability of success for the deal.

The systematic literature review carried out identified the core principles, processes, and concepts that make up the due diligence process. A comprehensive dataset of papers assisted in capturing these concepts, principles, and processes. The due diligence process was categorised according to the areas of due diligence, the process factors, and the concepts and principles. The principles, processes, and concepts that were captured were then analysed.

Jabareen's [11] CFA method was adopted. Phases 1 to 5 were covered by this paper. The basis of the conceptual framework was developed. The information and insight gained through this review will be used in developing the final conceptual framework by following phases 6 to 8 of the CFA. Phase 6 synthesises the concepts into a theoretical framework; phase 7 covers the validation of the framework; and phase 8 focuses on rethinking the framework by instituting changes recommended during the validation process.

This paper forms part of a larger research project for the due diligence stage of M&As. Future work will be focused on the completion of the conceptual framework and its validation. A due diligence tool will then be developed, based on the conceptual framework.

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APPENDIX A

Number	Title of paper	Reference
1	Compleat compliance: Due diligence on companies and individuals	[33]
2	Executing on Integration: The Key to Success in Mergers and Acquisitions	[40]
3	Environmental due diligence for commercial and residential real estate	[21]
4	Using patent citation analysis to target-value M&A candidates	[30]
5	When to Walk Away from a Deal	[37]
6	Cultural due diligence in mergers and acquisitions	[35]
7	Loose lips can sink ships	[41]
8	Improving the acquisition profit of cross border transactions by adjusting the tax due diligence process – A theoretical model based on a German target	[42]
9	A synergy measurement model to support the pre-deal decision making in mergers and acquisitions	[43]
10	Using capital transaction due diligence to demonstrate CSR assessment in practice	[38]
11	Making brand equity a key factor in M&A decision-making	[28]
12	Is the role of HRM strategic in M&A success? Exploring the involvement of HRM in a due diligence process	[24]
13	M&A: Due Diligence: More Than a Financial Exercise	[23]
14	High tech M&A – Strategic valuation	[19]
15	Deals without delusions	[25]
16	Doing the Deal Part 3: Enhanced Environmental Due Diligence	[44]
17	Merger manual	[20]
18	Safety guidelines for the merger and acquisition process	[31]
19	Merger deal breakers: When operational due diligence exposes risk	[22]
20	Reducing M&A risk through improved due diligence	[10]
21	Critical factors of pre-acquisition due diligence in cross-border acquisitions	[45]
22	A study on financial strategy for determining the target enterprise of merger and acquisition	[36]
23	Due diligence as a key success factor of mergers and acquisitions	[46]
24	The importance of intellectual property due diligence in mergers and acquisitions	[29]
25	Double due diligence: Incorporating strategic environmental management in environmental assessments for industrial mergers and acquisitions	[47]
26	Applying a fuzzy multiple criteria decision-making approach to the M&A due diligence	[48]
27	Strategic Due Diligence: A Foundation for M&A Success	[26]
28	Mergers and Acquisitions across European Borders: National Perspectives on Pre-acquisition Due Diligence and the Use of Professional Advisers	[15]
29	Private equity into high-risk markets - The need for a new due diligence approach	[49]
30	Due Diligence Review: M&A Behind the Scenes	[50]
31	Marketing due diligence ... where do customer and marketing details fit into pre-deal activity?	[27]
32	Human Due Diligence	[51]
33	Expanding the nature and scope of due diligence	[17]
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35	Dynamic due diligence an entrepreneurial business planning method for evaluating mergers and acquisitions	[52]
36	Due diligence neglected: managing human resources and organisational culture in mergers and acquisitions	[2]
37	Managing the pre-combination phase of mergers and acquisitions	[6]
38	Extending Due Diligence to Improve Mergers and Acquisitions	[34]
39	M&A Due Diligence and its Consequences for Post-Acquisition Financial Statements	[53]