
DEVELOPING A METAPHOR-BASED ECONOMIC-FINANCIAL VOCABULARY FRAMEWORK FROM ONLINE NEWS DISCOURSE FOR ENGLISH READING INSTRUCTION AT UNIVERSITIES



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ABSTRACT

The study aims to develop a conceptual metaphor-based economic and financial vocabulary framework from English news discourse to support reading comprehension instruction for university students. The study was conducted using a qualitative corpus-based approach combined with descriptive statistics. The data included 283 English economic and financial news texts published online in 2021-2025. Metaphorical expressions were identified by the Metaphor Identification Procedure, then analyzed and classified according to their respective source and target domains. The findings indicated that economic and financial vocabulary in the corpus is mainly organized around seven metaphorical source domains, namely MOVEMENT, JOURNEY, TEMPERATURE, MACHINE, LIQUID, LIVING ORGANISM, and WAR. These source domains are further divided into three larger cognitive categories, including DYNAMIC CHANGE, PHYSICAL EXPERIENCE, and HUMAN EXPERIENCE. Based on these findings, the study constructed metaphor-based vocabulary networks and proposed an economic-financial vocabulary framework for ESP reading instruction. This research contributes to the extension of the application of cognitive linguistics in English for Specific Purposes education by viewing conceptual metaphor as a principle of lexical organization rather than merely an object of discourse analysis. The proposed lexical framework can enable learners to identify conceptual patterns, infer meaning from context, and improve their understanding of English economic and financial texts.

Keywords: Cognitive Linguistics, Conceptual Metaphor, English Reading Instruction, Economic and Financial Discourse Vocabulary Network

1. INTRODUCTION

In the context of globalization and international economic integration, the ability to comprehend economic-financial texts in English has become increasingly important for students majoring in economics, finance, and related disciplines. However, understanding these texts often presents considerable challenges for learners. In addition to specialized terminology, a significant difficulty lies in the widespread use of metaphorical expressions in economic-financial discourse (Resche, 2001; Littlemore & Low, 2006; Langer, 2015). In many cases, economic phenomena are expressed through familiar words and phrases but with metaphorical meaning, such as *inflation cooled*, *markets plunged*, *economic recovery*, and *cash flow*, etc. This requires learners not only to understand the vocabulary but also to identify the conceptual patterns that underlie the construction of meaning in the text.

In teaching English for Specific Purposes (ESP), news articles are considered a valuable source of language data because they reflect contemporary economic and financial issues in authentic communicative contexts. Through these articles, learners have the opportunity to access linguistic expressions used in economic discourse. At the same time, economic and financial journalism is characterized by the frequent use of conventional metaphorical expressions, which reflect how economic phenomena are perceived, interpreted, and communicated in society.

Previous studies have contributed to clarifying the role of conceptual metaphors in economic and financial discourse. Many works have focused on identifying, classifying, and interpreting metaphorical patterns used to express phenomena such as inflation, growth, recession, stock markets, or economic crises (Espunya & Zabalbeascoa, 2003; Pecican, 2007; Gao, 2016; Kaleta, 2019; Liang, 2021). In the field of English language teaching, some studies have also shown the potential of conceptual metaphors in supporting vocabulary learning, developing metaphorical awareness, and enhancing the ability to understand specialized texts (Boers, 2000; Littlemore & Low, 2006; Chen, 2017). However, most existing research still stops at analyzing or describing metaphorical patterns. The transformation of these findings into vocabulary networks and a pedagogically oriented learning framework that directly serves the teaching of ESP reading comprehension has remained relatively limited.

Stemming from the aforementioned research gap, this study aims to construct a metaphor-based economic-financial vocabulary framework from English economic-financial news discourse and to explore the potential application of this framework in teaching ESP reading comprehension for university students. To achieve this goal, the research focuses on answering the following three questions:

(1) *What metaphorical source domains are prominent in English economic-financial news discourse?*

(2) *What lexical networks can economic-financial lexical items be organized into based on these metaphorical source domains?*

(3) *How can conceptual metaphor-based lexical networks be transformed into a vocabulary framework for teaching English reading instruction for university students?*

The study does not regard metaphor analysis as an end in itself but rather considers conceptual metaphor as a principle for organizing vocabulary and instructional materials. By connecting economic discourse analysis with the application of cognitive linguistics in teaching ESP, the study seeks to demonstrate how vocabulary networks based on conceptual metaphor can enable learners to recognize semantic relationships, infer meaning from context, and improve their reading comprehension of English economic and financial texts.

2. LITERATURE REVIEW

2.1. Conceptual metaphor

In traditional views, metaphor is often considered a rhetorical device, primarily associated with literary language or artistic expressions. However, the conceptual metaphor theory initiated by Lakoff and Johnson (1980) has broadened the understanding of the nature of metaphors. According to the two authors, metaphor is not a linguistic phenomenon but a fundamental cognitive mechanism in everyday thinking and language. Lakoff and Johnson argued that “*our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature*” (Lakoff & Johnson, 1980, p. 4). Thus, everyday linguistic expressions can be considered the surface manifestation of deeper conceptual structures.

Essentially, conceptual metaphor is a cognitive process in which one conceptual domain is understood through another conceptual domain. Kövecses (2010) defines metaphor as

understanding one conceptual domain in the form of another conceptual domain. A conceptual metaphor typically comprises two domains: the source domain and the target domain. The source domain is the more concrete, familiar experiential domain, grounded in bodily, physical, or spatial experience; whereas the target domain is usually more abstract and is expressed through the source domain. The general form of conceptual metaphor can be represented as: TARGET DOMAIN IS SOURCE DOMAIN.

An important characteristic of conceptual metaphors is the systematic nature of the mappings between the source and target domains. According to Lakoff (1993), metaphors are characterized by systematic mappings from the source domain to the target domain; thus, knowledge of the source domain can be used to structure understanding and reasoning about the target domain. For example, in the metaphor ECONOMIC FLUCTUATION IS MOTION, upward movement maps to increase, downward movement maps to decrease, rapid movement maps to strong fluctuations, and loss of momentum maps to a weakening trend. Therefore, expressions such as *prices rise*, *inflation falls*, *stocks climb*, *markets plunge*, *growth accelerates*, and *the economy slows down* are not isolated expressions but rather different linguistic realities of the same conceptual metaphor model.

Functionally, conceptual metaphors primarily serve a cognitive function because they help people understand and talk about abstract concepts through concrete, familiar, and experiential concepts. Gibbs (1994) emphasized that metaphorical thinking is a fundamental aspect of how people understand themselves and the world, and it is involved in many cognitive processes such as reasoning, classification, evaluation, and problem-solving. In the field of economics and finance, many phenomena such as inflation, recession, growth, liquidity, or market fluctuations, are highly abstract and difficult to directly perceive; therefore, they are often conceptualized through more concrete and embodied source domains.

Besides its cognitive function, conceptual metaphor also has the function of organizing meaning and framing discourse. Metaphorical expressions do not appear randomly, but they tend to form systematic networks. This systematic nature provides a basis for organizing vocabulary according to conceptual domains rather than isolated lexical items. Moreover, when a phenomenon is expressed through a specific source domain, readers' understanding of that phenomenon is also oriented towards the aspects that the source domain highlights. Lakoff and Johnson (1980) affirmed that metaphors have the ability to both highlight some aspects and conceal others of the target domain. For example, *fight inflation* frames inflation as an adversary to be defeated, while *inflation cooled* conceptualizes inflation as a phenomenon that can be heated up, cooled down, or regulated.

Based on the perspective of cognitive linguistics, it can be seen that conceptual metaphor provides an appropriate theoretical framework for investigating economic and financial vocabulary in English news discourse. Analyzing and organizing metaphorical expressions according to the conceptual domains can help clarify the mechanisms of meaning construction in economic-financial journalism. At the same time, this approach provides a foundation for building a vocabulary framework that can support reading instruction at the university level.

2.2. Cognitive perspectives on reading comprehension and the pedagogical role of conceptual metaphor

Contemporary theories of reading comprehension view reading as a meaning-building process in which readers actively connect linguistic information with their background knowledge and existing conceptual structures to construct an understanding of a text (Kintsch, 1998). According to this view, comprehension is not simply decoding words and sentences but rather

a process of activating and organizing cognitive schemas related to the content of the text (Anderson, 2018).

In economic and financial discourse, many abstract concepts are expressed through conceptual metaphors such as ECONOMY IS A HUMAN BODY, ECONOMY IS A JOURNEY, and INFLATION IS AN ENEMY. Reading comprehension difficulties are therefore not caused only by limited vocabulary knowledge. Another important factor is learners' inability to recognize the conceptual mappings that underpin meaning construction. Cognitive linguists argued that conceptual metaphors serve as a bridge between linguistic form and conceptual understanding (Lakoff & Johnson, 1980; Kövecses, 2020).

Accordingly, this study suggests that organizing economic and financial vocabulary into metaphor-based networks can serve as a pedagogical mediation tool, helping learners identify recurring conceptual patterns in texts and thereby enhancing their ability to interpret and comprehend English economic news discourse. The vocabulary framework proposed in this study aims to simultaneously support the development of specialized English vocabulary and reading comprehension skills in university students.

2.3. Previous study related to the research topic

2.3.1. Previous study on conceptual metaphors in economic and financial discourse

Previous studies have shown that economic and financial discourse is a metaphor-rich field in which phenomena such as inflation, growth, markets, trade, money, etc. are often conceptualized through more concrete experiential domains such as living organisms, disease, machinery, natural disasters, fluids, and upward/downward orientations. Comparative and corpus-based studies of news discourse demonstrate that these patterns are both systematic and culturally significant in the lexical realization and discursive function (Espunya & Zabalbeascoa, 2003; Pecican, 2007; Greco, 2009; Hu & Chen, 2015; Hu & Liu, 2016; Gao, 2016; Qin, 2018; Pham, 2024). Regarding the discourse of economic and financial crises, many studies indicate that crises are commonly framed within domains such as disease, living organisms, natural disasters, toxins, external forces, war, and downward movement, thereby shaping how the public understands and evaluates the severity of the crisis (Silaški & Đurović, 2010a, 2010b; Cardini, 2014; Arrese & Vara-Miguel, 2015; Nergheş et al., 2015; Negro, 2016; Cibulskienė, 2017; Shevchenko, 2021).

More recent studies have continued to affirm the systematic nature of metaphor in economic discourse through corpus linguistics, cross-cultural analysis, and discourse analysis approaches (Charteris-Black & Ennis, 2001; Silaški & Đurović, 2010b; Breeze, 2014; Kelly, 2016; Kaleta, 2019; Andryukhina, 2021). Other studies have shown that metaphors in economic news do not only reflect market understanding but also influence collective emotions, investment behaviour, and framing of economic events (Mohammed & Jawad, 2023; Martin et al., 2024). Overall, these works have clarified the cognitive and discursive functions of metaphor in economic-financial communication. However, the majority still focus on identifying, classifying, and interpreting metaphorical patterns rather than transforming the results into pedagogical resources for reading instruction.

2.3.2. Previous studies on the application of conceptual metaphor in English education

In language education, conceptual metaphors have been recognized as a useful resource for vocabulary learning, metaphorical awareness, translation, ESP, and specialized reading comprehension. Studies related to English for Economics suggested that learners need guidance in identifying, understanding, and using conventional metaphors in economic discourse, especially at the level of phrases and collocations, where many specialized concepts

are expressed through metaphorical everyday vocabulary (Charteris-Black, 2000; Resche, 2001). Research on metaphor awareness and metaphorical competence also indicated that organizing vocabulary according to source domains can facilitate the retention of figurative expressions, while the ability to understand metaphors is an important component of second language communication competence (Boers, 2000; Littlemore & Low, 2006).

In the areas of translation and business English, several previous studies have shown that learners need to be guided in analyzing source-target domain mappings, handling cross-linguistic and cross-cultural differences, and selecting appropriate translation strategies when encountering metaphorical expressions in specialized texts (Olivera & Sacristán, 2001; Sacristán, 2009; Chen, 2017; Almaghlouth & Alotaibi, 2024). Langer (2015) also emphasized that many seemingly technical economic terms remain grounded in metaphorical conceptualizations and may create “mapping traps” when learners interpret them solely on the basis of their literal meanings.

Overall, previous research has demonstrated the pedagogical potential of conceptual metaphors in vocabulary and reading comprehension instruction. However, most studies still focus on metaphor awareness, translation, idioms, or a few individual economic terms. The construction of a vocabulary framework derived from actual economic-financial news discourse and arranged according to conceptual metaphor domains for the specific goal of supporting university-level reading instruction remains relatively underexplored.

To address this research gap, the present study constructs a metaphor-based economic-financial vocabulary framework derived from English news discourse. The proposed framework is intended to help students identify semantic relationships among lexical items, infer meaning from context, and enhance their ability to comprehend English economic-financial journalism.

3. RESEARCH METHOD

3.1. Research design

The study adopted a mixed-methods design combining qualitative analysis and descriptive statistics. Qualitative analysis was used to identify, classify, and interpret metaphorical expressions in English economic-financial news discourse, while descriptive statistics were adopted to determine the frequency and prominence of conceptual metaphor domains. Based on the analysis results, the study developed a metaphor-based economic-financial vocabulary framework intended to support English reading instruction for university students.

3.2. Data source

The study was based on a corpus of metaphorical expressions extracted from 283 English online economic-financial news articles published between 2021 and 2025. The articles were collected from major news online platforms, including *CNN*, *The Washington Post*, *The New York Times*, *NBC News*, *Newsweek*, *Business Insider*, and *The Wall Street Journal*. The corpus covers a wide range of economic-financial topics, including inflation, prices, stock markets, labor markets, economic growth, trade, taxation, monetary policy, capital, etc.

3.3. Data collection procedure

The data collection process consisted of three stages.

- Step 1: Economic-financial news articles were selected from the identified online news sources.
- Step 2: The articles were read in their entirety to identify linguistic expressions used metaphorically within economic-financial contexts.

- Step 3: The identified expressions were extracted and entered into a database for coding. Each entry included the metaphorical expression, its contextual meaning, the relevant economic-financial topic, the source domain, the target domain, and the corresponding conceptual metaphor.

3.4. Data analysis procedure

The identification of metaphorical expressions was carried out using the Metaphor Identification Procedure (MIP) proposed by the Pragglejaz Group (2007). According to this procedure, a lexical unit is considered metaphorical when (1) it has a more basic meaning associated with a particular experiential domain, (2) it is used in context with a different meaning, and (3) the contextual meaning can be understood through a mapping from the basic meaning domain to the target meaning domain.

Once identified, the metaphorical expressions were encoded according to their source domains and target domains and then grouped into conceptual metaphor patterns. Next, the expressions belonging to the same source domain were then reorganized into lexical groups that reflect conceptual networks in economic-financial discourse.

For example, in the expression *inflation cooled*, the verb *cooled* is used to describe a decrease in inflation through the notion of declining temperature. This expression was identified as an instance of a conceptual mapping from the source domain TEMPERATURE to the target domain INFLATION, corresponding to the conceptual metaphor INFLATION IS TEMPERATURE.

Metaphorical expression	Contextual meaning	Source domain	Target domain	Conceptual metaphor
<i>inflation cooled</i>	inflation decreased	TEMPERATURE	INFLATION	INFLATION IS TEMPERATURE

Based on the coding results, the metaphorical expressions were reorganized into vocabulary groups according to their source domains for pedagogical purposes, as illustrated below:

Vocabulary group	Representative lexical items
Temperature	hot, cool, overheat, frozen, etc.

3.5. Criteria for constructing the vocabulary set

The vocabulary framework is constructed based on five criteria: (1) An expression must clearly demonstrate a metaphorical motivation and be explainable through a mapping between the source and target domains; (2) The expression must be directly related to economic and financial topics; (3) The expression must be classified into a specific conceptual metaphor pattern; (4) The expression must appear with sufficient frequency to reflect a stable conceptual pattern in the corpus; (5) The expression needs to have pedagogical value for developing students' English economic-financial vocabulary knowledge and reading comprehension skills.

4. RESEARCH FINDINGS

4.1. Major conceptual metaphors in economic-financial news discourse

The analysis of metaphorical expressions from 283 economic-financial news articles revealed that economic phenomena are conceptualized through various source domains. However, these

expressions are not randomly distributed but are primarily concentrated around seven major source domains: MOVEMENT, WAR, MACHINE, LIVING ORGANISM, TEMPERATURE, JOURNEY, and LIQUID. Table 1 below shows the distribution of metaphorical expressions and their frequencies in each source domain.

Table 1: Distribution of metaphorical expressions across source domains

Source domains	Target domains	Number of metaphorical items	Number of occurrences
MOVEMENT	INFLATION, PRICES, STOCKS, GROWTH, MARKETS	61	1034
TEMPERATURE	INFLATION, ECONOMY, LABOUR MARKET	9	108
WAR	INFLATION, TRADE	21	131
LIVING ORGANISM	ECONOMY, LABOUR MARKET, STOCK MARKET	14	170
MACHINE	ECONOMY, GROWTH, POLICY INTERVENTION	21	88
LIQUID	MONEY, CAPITAL, LIQUIDITY, BANKING SYSTEM	6	18
JOURNEY	INFLATION, GROWTH, INTEREST RATES, POLICY TARGETS	9	104

The distribution of metaphorical expressions across source domains reveals that economic-financial phenomena are predominantly conceptualized through a limited number of recurring experiential domains. As shown in Table 1, the source domain MOVEMENT is by far the most productive domain, accounting for 61 metaphorical items and 1034 occurrences. This finding suggests that economic and financial phenomena are primarily understood in terms of motion through space. Processes such as inflation, price changes, stock market fluctuations, and economic growth are frequently represented through upward or downward movement, changes in speed, and shifts in direction. Expressions such as *rise*, *fall*, *soar*, *plunge*, *accelerate*, and *slow down* indicate that movement serves as a fundamental conceptual resource for understanding economic change.

The second notable finding concerns the source domains LIVING ORGANISM and WAR, which account for 170 and 131 occurrences, respectively. Through the LIVING ORGANISM domain, economic entities are conceptualized as living beings that can be healthy, weak, resilient, vulnerable, or capable of recovery. This metaphorical pattern allows abstract economic conditions to be understood through familiar experiences of physical well-being and survival. Similarly, the WAR domain frames economic issues such as inflation and trade disputes as conflicts that require strategic intervention and control. Expressions such as *fight inflation*, *combat inflation*, and *trade war* portray economic challenges as adversaries that must be confronted and defeated.

The domains TEMPERATURE, MACHINE, and JOURNEY also play important roles in structuring economic understanding. The TEMPERATURE domain is primarily used to conceptualize the intensity of inflation and economic activity through expressions such as *hot*

inflation and *inflation cooled*. The MACHINE domain portrays the economy as a mechanical system that can function efficiently, lose momentum, or require adjustment, while the JOURNEY domain represents economic development and policy goals as movement towards a destination along a particular path or trajectory.

Although the LIQUID domain contains the smallest number of metaphorical items and occurrences, it remains conceptually significant. Expressions such as *cash flow*, *capital inflow*, *outflow*, and *flood the economy with cash* reveal that money and capital are frequently understood as liquids that circulate, accumulate, or overflow. This metaphor highlights the dynamic movement of financial resources within economic systems.

Collectively, these findings indicate that economic-financial discourse relies primarily on embodied and experience-based source domains. The dominance of MOVEMENT, together with the substantial presence of LIVING ORGANISM, WAR, TEMPERATURE, MACHINE, JOURNEY, and LIQUID, supports the view that abstract economic concepts are systematically understood through concrete experiences related to bodily movement, physical interaction, and social experience. Such patterns provide the conceptual basis for organizing economic-financial vocabulary into metaphor-based networks for pedagogical purposes.

4.2. Vocabulary networks derived from conceptual metaphors

The analysis of conceptual metaphors in economic-financial news discourse suggests that metaphorical vocabulary can be organized into coherent vocabulary networks rather than treated as isolated lexical items. Based on the source domains identified in the corpus, three major vocabulary networks can be distinguished: the dynamic change vocabulary network, the physical experience-based vocabulary network, and the human experience-based vocabulary network. Each network groups metaphorical expressions that share common conceptual foundations and reflect a particular way of understanding economic-financial phenomena through human experience.

4.2.1. Dynamic change vocabulary network

The findings indicate that a substantial proportion of economic-financial vocabulary is organized around the conceptualization of economic phenomena as processes of change and movement. This cognitive pattern is primarily realized through the source domains MOVEMENT and JOURNEY, which together constitute the dynamic change vocabulary network. Although these two source domains are based on different metaphorical mapping mechanisms, both conceptualize economic phenomena in terms of change unfolding over time. While the MOVEMENT domain emphasizes changes in direction, speed, and magnitude, the JOURNEY domain highlights the goal-oriented, developmental, and progressive nature of economic activities. Table 2 below presents the dynamic change vocabulary network derived from the corpus.

Table 2. The Dynamic change vocabulary network

Source Domain	Semantic subcategory	Metaphorical-expressed words
MOVEMENT	Increase	<i>rise, climb, move higher, pick up, climb, move up, go up, head toward...</i>
	Sharp increase	<i>soar, surge, jump, skyrocket, rocket, touch a new record high, peak...</i>
MOVEMENT	Decrease	<i>fall, drop, decline, move lower, down, go down, drift lower, turn lower, slip, slide...</i>

	Sharp decrease	<i>plunge, tumble, slump, sink, collapse, go through the roof...</i>
	Recovery	<i>rebound, bounce back...</i>
	Speed	<i>slow down, accelerate, decelerate, speed up...</i>
JOURNEY		<i>the path for inflation from here is not upwards or sideways but rather down; the path to bringing down price pressures remains bumpy; the economy is moving in line with its projections, China's economy has been on a downward glidepath; the long-term trajectory for the South Asian economy; break down foreign trade barriers...</i>

From a pedagogical perspective, the dynamic change vocabulary network can help learners organize vocabulary according to conceptual relationships rather than memorizing isolated lexical items. For example, expressions such as *rise, climb, soar, and rocket* can be learned as variations of the same conceptual pattern of increase, differing primarily in intensity and degree. Similarly, JOURNEY-based expressions such as *path, trajectory, and glide path* help learners recognize how economic discourse conceptualizes goals, directions, and developmental processes. Organizing vocabulary into such conceptual networks may facilitate meaning inference, vocabulary expansion, and more effective comprehension of English economic-financial texts.

4.2.2. Physical experience-based vocabulary network

The source domains TEMPERATURE, MACHINE, and LIQUID reflect the use of familiar physical experiences to conceptualize economic phenomena. Although these domains rely on different metaphorical mappings, they all draw upon direct bodily experiences of temperature, mechanical objects, and liquids. For this reason, they are grouped into the Physical Experience-Based Vocabulary Network. Rather than functioning as isolated lexical items, the metaphorical expressions associated with these domains form interconnected vocabulary networks that enable readers to understand abstract economic concepts through concrete physical experiences. Table 3 presents the physical experience-based vocabulary network identified in the corpus.

Table 3. Physical experience-based vocabulary network

Source domain	Conceptual categories	Representative vocabulary
TEMPERATURE	High temperature	<i>hot inflation, overheating economy, burst of inflation, flared out of control</i>
	Low temperature	<i>cool inflation, frozen labor market, icy inflation, frozen economy</i>
	Temperature change	<i>heat up, cool down, cooling</i>
MACHINE	Operation and power	<i>economic engine, engine of growth, fuel inflation, drive the economy, supercharge the economy</i>
MACHINE	Speed and Momentum	<i>momentum, gain momentum, lose momentum, shift down a gear, pump the brakes</i>
	Breakdown and Control	<i>cracking, break, brakes, brakes have failed, not working well</i>

LIQUID	Flow	<i>cash flow, trade flows, flow through the economy, flows to funds</i>
	Inflow	<i>inflow, fund inflows, capital inflows, daily inflows</i>
	Outflow and overflow	<i>outflow, fund outflow, flood the economy, flood the banking system</i>

Overall, the three source domains demonstrate that economic-financial discourse relies heavily on embodied physical experiences to structure abstract economic knowledge. Through the conceptual resources of temperature, machinery, and liquids, complex economic phenomena become more concrete and accessible. From a pedagogical perspective, organizing vocabulary into these conceptual networks may help learners recognize semantic relationships among lexical items, infer the meanings of unfamiliar expressions, and develop a deeper understanding of economic-financial texts.

4.2.3. Human experience-based vocabulary network

The source domains LIVING ORGANISM and WAR reflect the use of fundamental human experiences related to life, health, and social conflict to conceptualize economic phenomena. Although these domains are based on different metaphorical mapping mechanisms, both draw upon human and social experiences that are familiar and readily accessible. For this reason, they are grouped into the human experience-based vocabulary network. The metaphorical expressions associated with these domains enable abstract economic phenomena to be understood through experiences of health, survival, competition, and conflict. The human experience-based vocabulary network is presented in the following Table 4.

Table 4. The human experience-based vocabulary network

Source domain	Vocabulary items	Example expressions
LIVING ORGANISM	healthy, resilient, weak, vulnerable, recover, recovery, hurt, pain	<i>healthy economy, economic recovery, economic weakness, resilient economy, hurt the economy</i>
WAR	fight, combat, battle, attack, defend, beat, control, vanquish, war	<i>fight inflation, combat inflation, trade war, economic battle, defend the economy</i>

The two source domains demonstrate that economic-financial discourse often relies on human and social experiences to structure abstract economic concepts. Through metaphors of living organisms and war, economic processes are presented in ways that are more concrete, relatable, and cognitively accessible. From a pedagogical perspective, organizing vocabulary into such conceptual networks may help learners recognize recurring conceptual patterns in economic discourse, understand semantic relationships among lexical items, and improve their ability to infer meaning when reading English economic-financial texts.

4.3. A metaphor-based economic-financial vocabulary framework

Based on the findings of the corpus analysis, this study proposes a metaphor-based economic-financial vocabulary framework for organizing economic-financial vocabulary into conceptual networks that can support the teaching and learning of ESP reading. Table 5 demonstrates the hierarchical structure of the framework, while Figure 1 illustrates the relationship between the constituent layers.

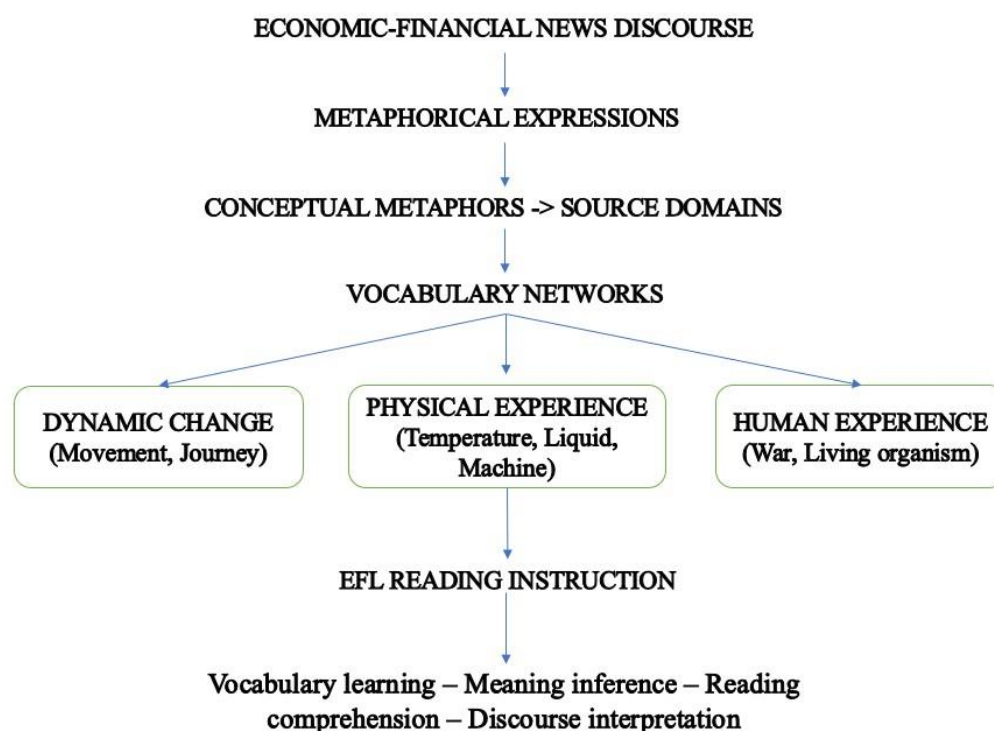


Figure 1. Metaphor-based economic-financial vocabulary framework

Table 5. Hierarchical structure of the metaphor-based economic-financial vocabulary framework

Level	Description
Level 1	Metaphorical expressions in economic and financial discourse
Level 2	Source domains
Level 3	Vocabulary networks
Level 4	Cognitive categories
Level 5	Pedagogical applications

The framework is structured as a multi-layered model linking economic-financial discourse to pedagogical application. At the first level are the metaphorical expressions identified in authentic economic-financial news discourse. At the second level, these expressions are categorized according to seven major source domains: MOVEMENT, JOURNEY, TEMPERATURE, MACHINE, LIQUID, LIVING ORGANISM, and WAR. At the third level, the source domains are reorganized into three vocabulary networks that share common conceptual foundations, namely the dynamic change vocabulary network, the physical experience-based vocabulary network, and the human experience-based vocabulary network. At the fourth level, these vocabulary networks are further grouped into three broader cognitive categories: dynamic change, physical experience, and human experience. Finally, at the pedagogical level, these cognitive categories provide the basis for developing vocabulary resources and instructional activities designed to support the reading comprehension of economic-financial texts.

The proposed framework illustrates how conceptual structures underlying economic discourse can be transformed into an organized vocabulary system for pedagogical purposes. Rather than

learning vocabulary as isolated lexical items or as topic-based word lists, learners are encouraged to understand vocabulary through interconnected conceptual networks. For example, expressions such as *inflation rose*, *inflation cooled*, and *fight inflation* originate from different source domains but refer to the same economic phenomenon. By recognizing the conceptual motivations underlying these expressions, learners can develop a deeper understanding of how meaning is constructed in economic-financial discourse.

From a cognitive linguistics perspective, the proposed framework demonstrates that conceptual metaphor's function both as mechanisms for meaning construction and as organizing principles for vocabulary learning. By connecting linguistic expressions with their underlying conceptual structures, the framework provides a systematic approach to vocabulary instruction that may facilitate vocabulary expansion, mean inference, and reading comprehension. More broadly, it offers a pedagogical model through which insights from conceptual metaphor theory can be integrated into ESP reading instruction at the university level.

4. DISCUSSION

The findings reveal that economic-financial discourse in English news media relies extensively on conceptual metaphors to structure and communicate abstract economic phenomena. The analysis identified seven major source domains, namely MOVEMENT, JOURNEY, TEMPERATURE, MACHINE, LIQUID, LIVING ORGANISM, and WAR, which were subsequently organized into three broader cognitive categories: dynamic change, physical experience, and human experience. Based on these conceptual patterns, the study developed a metaphor-based economic-financial vocabulary framework that organizes economic-financial vocabulary into interconnected conceptual networks. These findings suggest that economic-financial vocabulary is not merely a collection of specialized lexical items but forms part of a coherent conceptual system through which economic realities are understood and communicated.

The findings have important theoretical implications. First, they support Lakoff and Johnson's (1980) claim that metaphor is not simply a rhetorical device but a fundamental mechanism of human cognition. Expressions such as *inflation rose*, *markets plunged*, *inflation cooled*, *fight inflation*, *economic recovery*, and *cash flow* reflect systematic mappings between concrete source domains and abstract economic-financial concepts. The findings are also consistent with Kövecses' (2010, 2020) view that conceptual metaphors provide cognitive structures through which abstract domains are understood in terms of familiar human experiences. Furthermore, the source domains identified in this study largely correspond to those reported in previous research on economic-financial discourse (Espunya & Zabalbeascoa, 2003; Pecican, 2007; Greco, 2009; Gao, 2016; Kaleta, 2019; Liang, 2021). Similarly, the prominence of WAR, LIVING ORGANISM, and MOVEMENT metaphors is consistent with studies of economic crisis discourse (Silaški & Đurović, 2010a, 2010b; Cardini, 2014; Arrese & Vara-Miguel, 2015; Nerghes et al., 2015; Negro, 2016; Cibulskienė, 2017; Shevchenko, 2021). However, unlike most previous studies that focus primarily on identifying and interpreting metaphorical patterns, the present study extends conceptual metaphor research by transforming metaphor analysis into a pedagogically oriented vocabulary framework.

The findings also demonstrate the potential of conceptual metaphor as an organizing principle for ESP vocabulary instruction. Rather than learning lexical items in isolation, learners may benefit from understanding the conceptual relationships that connect expressions within the same metaphorical network. Such an approach is consistent with previous studies highlighting the value of metaphor awareness for vocabulary learning and specialized language

comprehension (Charteris-Black, 2000; Boers, 2000; Littlemore & Low, 2006; Sacristán, 2009; Chen, 2017; Langer, 2015). For university students studying English for economics and finance, the proposed framework may facilitate meaning inference, vocabulary retention, and the recognition of recurring discourse patterns in economic-financial texts.

5. CONCLUSION

The principal contribution of this study lies in the development of a metaphor-based economic-financial vocabulary framework, in which economic-financial vocabulary is organized into conceptual networks rather than treated as isolated lexical items. The framework offers a novel approach to transforming the findings of conceptual metaphor analysis into pedagogical resources, particularly for the teaching and learning of English reading in economic-financial contexts.

From a pedagogical perspective, the study suggests that helping learners recognize conceptual metaphor patterns in texts may facilitate meaning inference, expand specialized vocabulary knowledge, and improve reading comprehension. Accordingly, metaphor-based vocabulary networks can serve as a valuable supplementary resource for English for economics and finance courses at the university level.

Despite these contributions, the study has several limitations. First, the corpus was restricted to English-language online news articles published between 2021 and 2025. As a result, the findings may not fully represent metaphor use in other types of economic-financial discourse, such as financial reports, economics textbooks, policy speeches, or academic publications. Second, the study focused on the construction of a vocabulary framework based on corpus analysis and did not empirically investigate its effectiveness in improving learners' vocabulary acquisition or reading comprehension.

Future research may extend the corpus to other genres of economic-financial discourse or conduct cross-linguistic comparisons of metaphor use in English and other languages. More importantly, classroom-based empirical studies are needed to evaluate the effects of the proposed framework on university students' vocabulary retention, meaning inference, and comprehension of economic-financial texts. Such research would provide further evidence for the pedagogical value of vocabulary instruction informed by cognitive linguistics.

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