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CORPUS OF COLLOCATIONS IN BUSINESS ENGLISH AND STUDENTS' COLLOCATIONAL COMPETENCE

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Abstract

One of the aspects of language proficiency that characterizes proficient speakers of English is collocational competence. Those who have not developed or have emerging collocational competence avoid using collocations or resort to literal translation from their first or stronger language when they need to produce collocations in L2 English. The use of collocations facilitates communication with other English speakers, especially when it comes to English for specific purposes. In business English, collocations may have a terminological status, such as “bull market” and “hostile takeover”. Therefore, it is important for students who use and will use business English to develop collocational competence to a high level. The aim of this study is twofold: to compile a contemporary corpus of collocations in business English using Sketch Engine and to test university students' collocational competence using a gap-fill task targeting the most frequent collocations from the corpus. The results indicate that a more targeted approach to teaching collocations of business English is needed. We conclude that the corpus-based approach to teaching may help to enhance students' collocational competence.

Key words: collocations, collocational competence, business English, corpus-based teaching, Sketch Engine

1. Introduction

Collocations, despite being a longstanding point of interest in linguistics, lack a universally accepted definition, contributing to terminological confusion and theoretical discord within the field. The complexity of defining and demarcating collocations from other lexical phenomena persists, leading to a theoretical cacophony (e.g., Channel, 1981; Elkhatib, 1984; Ghadessy 1989; Fayez-Hussein, 1990; Bahns & Eldaw, 1993; Zhang, 1993; Arnaud & Savignon, 1994; Gitsaki, 1999).

Stojić (2012) sheds light on various theoretical approaches to the syntagmatic relationship inherent in collocations. Among these approaches, two dominant paradigms emerge: the frequency-based approach and the phraseological approach (Nesselhauf, 2003). The frequency-based approach, grounded in Firth's (1957) understanding, is primarily

employed in corpus research. Its core principle revolves around the frequency with which words co-occur, providing a quantitative background for studying collocations.

Conversely, the phraseological approach, prevalent in applied linguistics and language teaching, deals with narrowing down the definition of collocation to specific categories of syntagmatic relationships (Stojić, 2012). In this approach, exemplified in the collocation “to seal the deal”, the word “deal” serves as the base, while “seal” functions as the collocate, showcasing the intricacies of how words come together.

Benson’s (1985) distinction between collocations, free combinations, and idioms further contributes to our understanding. For instance, “an old house” is categorized as a free combination, whereas “to bring the house down” (meaning ‘to make an audience enthusiastic’) is considered an idiom. The intermediate category is exemplified by “a dilapidated house”, demonstrating specific ties between “dilapidated” and “house”.

Collocational competence refers to a learner’s ability to appropriately and effectively use word combinations, or collocations, in a target language. According to Nation (2001), collocational competence encompasses the ability to recognize, produce, and understand common word pairings, such as “make a decision” or “strong coffee,” which are often language-specific and cannot always be directly translated. Research indicates that collocational competence is not simply a subset of vocabulary knowledge but a complex skill requiring familiarity with lexical, grammatical, and cultural norms (Nesselhauf, 2003).

High collocational competence stands out as a key characteristic of proficient English users. In contrast, low collocational competence is marked by users avoiding the use of collocations or translating from their first language (L1). This dichotomy highlights the significant role that collocations play in enhancing communication, particularly in English for specific purposes (ESP), as they contribute to making communication more efficient and effective.

Hence, the aim of this study is twofold: to compile a contemporary corpus of collocations in business English and to test university students’ collocational competence.

2. Theoretical background

As a fundamental aspect of language, collocations are a crucial aspect of idiomacity, fluency, and appropriate language use (James, 1998; Nation, 2001). This highlights the necessity of prioritizing collocational competence in foreign language instruction (Borić, 2004; Košuta, 2012), particularly because lexical errors, which include collocational errors, are considered the most severe in terms of their impact on effective communication (James, 1998). Indeed, Ivir and Tanay (1975) recognized the unique challenge posed by learning collocations, observing that when acquiring vocabulary in a foreign language, “every student faces two types of challenges: one is to learn the meaning of individual lexical items, and the other is to learn how these items combine to form collocational bonds” (p. 29).

Several Croatian authors have investigated Croatian speakers’ collocation competence in English (e.g., Pavičić Takač & Lukač, 2013; Pavičić Takač & Miščin, 2013; Begagić, 2014; Miščin, 2015a; Miščin, 2015b; Miščin, 2016; Miščin, 2017; Koren & Rogulj, 2017; Patekar & Košuta, 2022), especially in ESP (medicine and business).

Pavičić Takač and Lukač (2013) conducted a study where they analyzed 298 essays written by Croatian students learning English. These essays were part of a state exam taken after high school, and the researchers specifically focused on how the students used adjective-noun collocations (word pairs like “major problem” or “spare time”). Their findings showed that these learners tended to overuse more general adjectives (for example, using “big problem” instead of “major problem”). Additionally, the study revealed that when a direct translation existed between Croatian and English, the students’ choices were influenced by their L1. This was evident in their preference for phrases like “free time” (which directly translates from Croatian) over the English collocation “spare time”.

Pavičić Takač and Miščin (2013) conducted a study on the collocational competence of 101 Croatian medical students (in their first and fifth year) and 26 medical doctors. The researchers used a test with three different types of tasks: multiple-choice questions, gap-fill tasks, and translation tasks (from English to Croatian and vice-versa). The study’s findings revealed that the participants were better at understanding collocations than producing them, and that their overall competence improved with more exposure to and active use of the language. However, the authors concluded that the participants’ ability to use collocations was still “rather limited” (Pavičić Takač & Miščin, 2013, p. 247). They attributed the errors made by the participants to their heavy reliance on their first language (Croatian) and their tendency to use approximation (choosing words that are similar in meaning but not the exact collocation).

Begagić (2014) conducted a study with 40 BSC-speaking (Bosnian/Serbian/Croatian) university students in Zenica, Bosnia and Herzegovina, who were in their first and fourth years of studying English. The study assessed their ability to produce and understand English collocations through translation and receptive tasks. The results revealed that the students’ overall collocational competence was unsatisfactory. Begagić attributed this to the influence of their L1 and the way they had been taught English. The study also found that fourth-year students performed significantly better than first-year students, and that their receptive collocational knowledge was stronger than their productive knowledge.

Miščin (2015a) conducted an analysis of collocational exercises within English textbooks used in Croatian elementary and high schools. The findings indicated that these exercises were infrequent and mainly focused on developing students’ receptive competence rather than productive. She also assessed the collocational competence of 80 elementary and high school students using a variety of tasks: multiple-choice, gap-fill, and translation (both from English to Croatian and vice-versa), encompassing a total of 20 collocations. The results revealed that students tend to depend on their L1, leading to the production of incorrect collocations. However, the study also demonstrated that collocational competence improves as students progress in their language-learning journey.

Miščin (2015b) conducted another study where she assessed the collocational competence of 40 first- and second-year business English students. She used a multiple-choice and gap-fill test, and the collocations included in the test were taken from a business English corpus that the author had compiled. The results of this study showed that the students’ collocational competence was below average.

In another study, Miščin (2016) compared the collocational competence of medical and management students. Fifty first-year and 60 sixth-year medical students, along with 20

first- and 20 second-year management students, were tested using multiple-choice and gap-fill tasks. The results showed that medical students performed better than management students overall. Additionally, within the medical student group, sixth-year students demonstrated greater collocational competence than first-year students. However, this difference in performance based on year of study was not observed among the management students. From these findings, Miščin (2016) concluded that students tend to rely on their L1 and use approximation strategies when producing collocations.

Miščin (2017) conducted a further study focusing on the collocational competence of 42 students studying financial management. Using multiple-choice and gap-fill tasks, the research revealed an interesting finding: the primary source of errors in translation was not the influence of the students' L1. Instead, it was attributed to their insufficient knowledge of financial terminology in both their native language and the target language, which led to poor performance. Despite this, the study also highlighted that the students' ability to understand collocations was superior to their ability to use them actively.

Koren and Rogulj (2017) conducted a study to evaluate the ability of 84 fifth- and sixth-year medical students to use collocations. They used multiple-choice questions and translation exercises to test this and also looked at how the students felt about learning collocations. The collocations used in the study were taken from the students' course materials. The study found that the students tended to rely on their first language and make approximations when trying to produce collocations. It also showed they were better at understanding collocations than using them correctly in their own writing or speech. Interestingly, there was no significant difference in collocational competence between fifth- and sixth-year students.

Finally, Patekar and Košuta (2022) surveyed 175 Croatian high school students at different year levels using a translation task, looking in particular into the difference in collocational competence based on whether the collocation is congruent or incongruent. They found that students were more proficient in producing congruent as opposed to incongruent collocations as well as that their collocational competence increased with year level and the number of other languages spoken.

In summary, research on the collocational competence of Croatian English learners reveals that collocations pose a significant challenge. Studies indicate a low level of collocational competence among participants, with researchers attributing this primarily to the influence of their L1. However, some studies have shown that collocational competence can improve with increased years of learning and exposure. Additionally, it has been observed that in some cases, learners demonstrate a stronger ability to understand collocations compared to their ability to use them actively in production. With this in mind, we set out to investigate the collocational competence of International Business students.

3. Methods

3.1. Aim

The aim of this study is twofold:

- 1) Compile a contemporary corpus of collocations in business English.
- 2) Test university students' collocational competence.

3.2. Instrument

Related to the first aim, the online tool *Sketch Engine* was used to compile a corpus, and *Microsoft Excel* was used for further work on the corpus.

Related to the second aim, the instrument was an online survey consisting of 30-item gap-fill task with 17 sentences missing a collocate and 13 sentences missing a base. The targeted collocations were the 30 most frequent collocations from the corpus, and the sentences containing these collocations were selected from the corpus. Attention was given to selecting appropriate sentences that provide sufficient contextual information to activate the participants' knowledge of collocations. Since no translation was involved, the participants' knowledge was to be activated by the provided context, for example, "Consumer price increases have been muted for years, despite more than a decade of rock-bottom _____ rates." The survey was designed in Google Forms.

3.3. Participants

Related to the second aim, there were 47 participants who studied International Business at an American university in Croatia, where all classes are taught in English and the students' are required to be at least at the B2 level of the Common European Framework of Reference for Languages. Their L1 was Croatian and L2 was English. There were somewhat more male (29) than female (18) participants. Although there were students from the first and third year, most of them were from the second year (30). The participants spoke an L3, which was in most cases German (27), followed by Italian (17), and Spanish (13); some students spoke an L4.

3.4. Procedure

Regarding the first aim, the corpus was compiled from September 2021 to January 2022. Details of compilation are provided in the section below.

Regarding the second aim, the survey was distributed online in February 2022.

4. Results and discussion

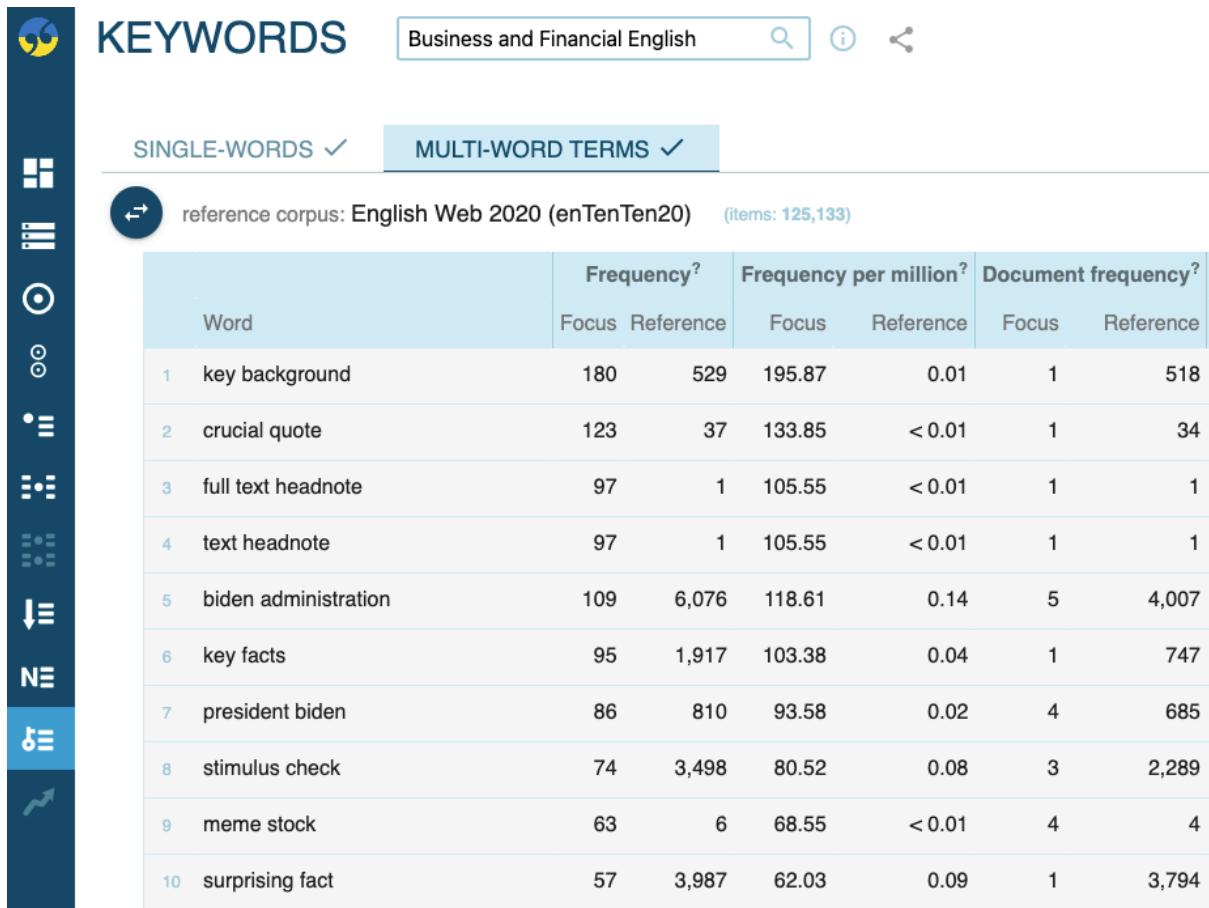
4.1. Corpus compilation

The corpus was compiled in January 2022, following four months of selecting business- and finance-related articles from five notable magazines: *The Wall Street Journal*, *The Financial Times*, *The Economist*, *Bloomberg*, and *Forbes*. The publication date of the articles selected for inclusion in the corpus ranged from January 2021 to August 2021, reflecting contemporary language in economically vibrant times of the pandemic. Following compilation, we used *Sketch Engine's* automatic keyword and terms extraction tool to obtain a list of the most frequent collocations (Figure 1).



Figure 1. Sketch Engine’s interface, showing, among other features, the option “Keywords: Terminology extraction” that was used to extract the most frequent terms, that is, collocations.

A thousand collocations were automatically extracted. However, as evident in Figure 2, which shows the results of the keyword extraction of multi-word items, not all results were relevant. Therefore, the list had to be manually cleaned in Excel to retain only business and financial terms. Examples of multi-word terms that were excluded are *key background*, *crucial quote*, *full text headnote*, *biden administration*, *key facts*, *president biden*, *surprising fact*, etc. The excluded words included the magazines’ metalanguage (e.g., *full text headnote*), personal names (e.g., *president biden*), and thematically unrelated collocations (e.g., *surprising fact*). Furthermore, overlapping terms, such as *public offering* and *initial public offering*, were merged into one.



KEYWORDS Business and Financial English

SINGLE-WORDS ✓ MULTI-WORD TERMS ✓

reference corpus: English Web 2020 (enTenTen20) (items: 125,133)

	Word	Frequency?		Frequency per million?		Document frequency?	
		Focus	Reference	Focus	Reference	Focus	Reference
1	key background	180	529	195.87	0.01	1	518
2	crucial quote	123	37	133.85	< 0.01	1	34
3	full text headnote	97	1	105.55	< 0.01	1	1
4	text headnote	97	1	105.55	< 0.01	1	1
5	biden administration	109	6,076	118.61	0.14	5	4,007
6	key facts	95	1,917	103.38	0.04	1	747
7	president biden	86	810	93.58	0.02	4	685
8	stimulus check	74	3,498	80.52	0.08	3	2,289
9	meme stock	63	6	68.55	< 0.01	4	4
10	surprising fact	57	3,987	62.03	0.09	1	3,794

Figure 2. A selection of results of the keywords extraction as it pertains to multi-word items

Once cleaned, the list contained 650 terms. Figure 3 shows the cleaned list in Excel, which formed the basis of the corpus.

As adherents of the phraseological approach to collocations, we found *Sketch Engine*, which identifies collocations based on frequency, an imperfect but a useful tool that requires the manual labor of sifting through all of the results to retain only the relevant collocations. Building on the corpus, we have created a glossary of the three hundred most frequent terms in Business and Financial English (Patekar, Miščin, & Božinović, in press), which provides information about the frequency of the term, a definition, and a sentence that illustrates its use.

	A	B	C	D	E	F
1	Item	Frequency (focus)	Frequency (reference)	Relative frequency (focus)	Relative frequency (reference)	Score
2	interest rate	212	713928	230,69281	15,87601	13,729
3	hedge fund	183	122065	199,13577	2,71443	53,881
4	central bank	168	227665	182,81317	5,06271	30,319
5	chief executive officer	162	236242	176,28413	5,25344	28,35
6	minimum wage	133	201371	144,7271	4,478	26,602
7	(first, second, third, fourth) quarter	110	232673	119,6991	5,17408	19,549
8	stock market	102	269369	110,99371	5,9901	16,022
9	small business	98	657816	106,64101	14,62821	6,888
10	share price	93	70619	101,20015	1,57039	39,761
11	economic recovery	90	64675	97,93562	1,43821	40,577
12	private equity	78	135306	84,87754	3,00887	21,422
13	financial crisis	76	206459	82,70119	4,59114	14,97
14	stimulus check	74	3893	80,52485	0,08657	75,029
15	initial public offering	74	27695	80,52485	0,61587	50,453
16	asset manager	73	32116	79,43668	0,71418	46,924
17	corporate tax	70	56401	76,17215	1,25422	34,235
18	unemployment benefit	66	39444	71,81946	0,87714	38,793
19	financial market	65	135817	70,73129	3,02024	17,843
20	stimulus package	63	29464	68,55494	0,65521	42,022
21	tax rate	62	191685	67,46677	4,2626	13,01
22	financial service	61	254716	66,37859	5,66426	10,11
23	retail investor	60	19356	65,29042	0,43043	46,343
24	meme stock	59	7	64,20224	0,00016	65,192
25	investment bank	59	50448	64,20224	1,12184	30,729

Figure 3. A segment of a cleaned list in Excel which forms the basis of the corpus

Having compiled a corpus that contains the most frequent business and financial terms, that is, collocations, we set out to test International Business students' collocational competence.

4.2. Testing Collocational Competence

Figure 4 shows the participants' responses to the 30 most frequent items from the corpus. The blue, or the first, part of the bar represents targeted responses, that is, those that match the collocation. The red, or the second, part of the bar are non-targeted responses. Non-targeted responses are not necessarily wrong, grammatically or semantically, but do not match the collocations selected from the corpus. (This is the drawback of gap-fill tasks as opposed to translation tasks that are explicit about the required word; gap-fill tasks rely on the power of the context to activate the participants' knowledge of what the missing item might be.) While not all non-targeted responses were not wrong, there were incorrect answers, as well as cases where the participants left the gap blank.

One can immediately tell that the participants were more successful with the most frequent terms, grouped at the top of the chart in Figure 4, such as, *minimum wage*, *hedge fund*,

central bank, first quarter, chief executive officer, interest rate. On the contrary, more challenging items are found in the bottom half of the chart, such as, *financial service, retail investor, meme stock, venture capital, family office, percentage point.* Interestingly, not a single participant completed the following sentence correctly: “McClain spent three decades working in financial service, first at American Express and then at the Michigan-based Hantz Group...” Some of the entries were *business, market, sector*, which are either semantically or grammatically wrong (requiring an article). Similarly, in the sentence “Voting with dollars and putting money to work shows conviction and helps the retail investors find true value”, only one participant entered the targeted word. Others wrote, for example, *business, industry, market, sector.* Another example where we were surprised not to see more targeted answers is the following: “The morning that Musk was preparing for his SNL performance, the total market value of Dogecoin peaked at more than \$94 billion, according to CoinMarketCap.com...” Not only is the context clear and should, in theory, help participants to use the right word, but the website mentioned in the sentence contains the targeted word. Several participants provided *nominal, stock, net* as answers.

Evidently, the participants’ productive collocational competence could be higher, especially considering that they are International Business students who take classes in English and are expected to understand and use the targeted collocations. It is interesting to observe that some of the targeted collocations, which are, in fact, terms, are clearly not stored in the participants’ mental lexicon (Stojić & Košuta, 2017), such as *private equity* or *hedge fund*, so they were not able to recall them by reading the base (_____ *equity*) or the collocate (*hedge* _____). One would imagine that *hedge* would automatically activate *fund* in a business context in all participants, but that was not the case with nine students. Similarly, *equity* did not activate *private* in 38 students.

In line with the results of the previously referenced studies on Croatian speakers of English in the ESP context (e.g., Pavičić Takač & Miščin, 2013; Miščin, 2015b, 2016, 2017; Koren & Rogulj, 2017), the participants’ productive collocational competence could be described as fairly low. Some of the collocations could be considered as terms that International Business students are expected to know, such as *private equity* and *hedge fund*, as they are exposed to these terms throughout their education. Furthermore, based on corpus analysis, we can say that these rarely appear in other multiword combinations and should thus be memorized as chunks. Other collocations from the corpus are “true” collocations, such as *asset manager*, where the base *manager* could collocate with *fund, portfolio, money, purchasing*, etc. For example, students could learn about the most frequent combinations with *manager* as the base. In any case, whether learned as chunks or as words with a certain collocational range (the extent and variety of words with which a given word can combine to form meaningful and acceptable collocations), we believe that a corpus-based approach to teaching is essential if students are to reach a high level of collocation competence in business English. Corpus-based teaching ensures that students, in this case, are learning the most frequent, and thus most useful, collocations. Considering that these collocations come from business and finance magazines, this ensures that International Business students are acquiring vocabulary that is relevant to their future profession and that they can comprehend and communicate in English at a high level.

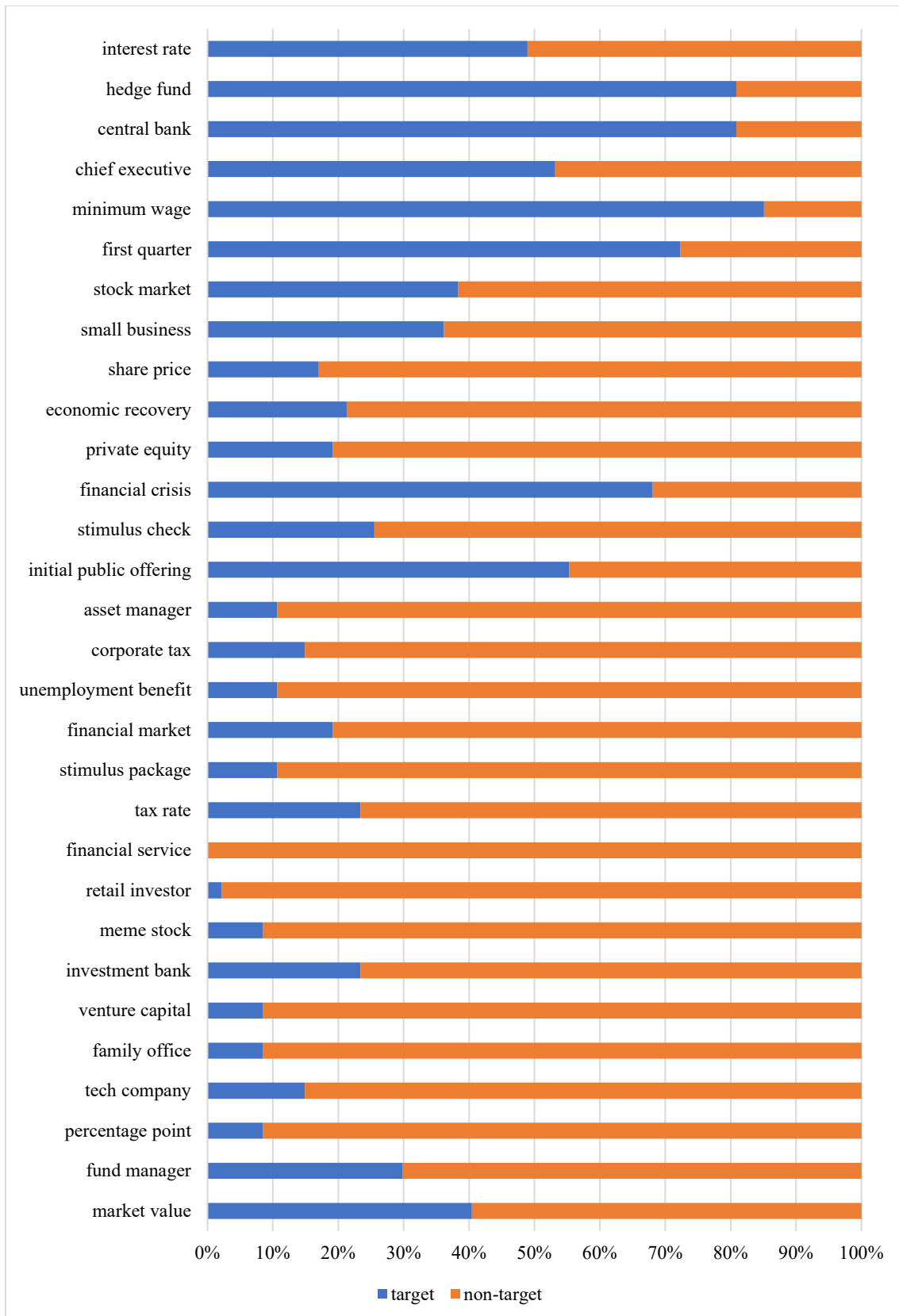


Figure 4. Participants' responses to the 30 items

5. Conclusion

This preliminary study has limitations that concern the number of participants and the instrument. Future studies should aim to include more participants from different year levels and should use a battery of instruments that would target both productive and receptive knowledge of collocations in finance and business English.

An important conclusion emerged from this study related to the research method. While a gap-fill task aims to elicit the targeted word without involving translation that may impact the participants' output (for example, if they rely on direct translation), such a task depends heavily on the context, that is, the sentence provided. In our study, these sentences were carefully picked from the corpus and represent language as it is actually used. However, perhaps a more prudent approach is needed whereby these sentences should be pedagogically constructed to provide an easy-to-understand context that leaves little room for non-target words. Yet, a pedagogical intervention could compromise the authenticity of language expression, considering that that task is corpus-based and that one of the goals of developing collocational competence is to enhance the reception of specialized texts. Furthermore, combining a gap-fill task with a translation task, perhaps in two experimental groups, is also an idea to be explored. It would also be interesting to see if there is a difference in performance based on whether the missing part is a base or a collocate.

Furthermore, this study has revealed that productive collocational competence among International Business students, although expected to be high due to the nature of their studies, is in reality fairly low. This was particularly evident with collocations that could be considered essential business terms, such as *private equity*. These findings align with previous research on Croatian English learners in the ESP context, suggesting a persistent challenge in acquiring and using collocations effectively.

The results highlight a pressing need for a more targeted and effective approach to teaching business English collocations. A corpus-based approach, where students are exposed to the most frequent and relevant collocations in context, is strongly recommended. This approach not only helps students learn collocations as chunks but also allows them to understand their collocational range, thus enhancing their overall language proficiency and communicative competence in a business setting.

Finally, the study emphasizes the importance of explicitly teaching business-specific terminology, ensuring that students are equipped with the vocabulary necessary to thrive in their future profession. It also highlights the need for further research into effective pedagogical strategies for teaching collocations in ESP contexts, particularly in light of the persistent challenges identified in this and previous studies.

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