# 基于商务英语语料库的RATE搭配特征研究

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摘 要:随着商务英语专业的蓬勃发展,如何更为科学地开展商务英语研究,是近年来学者们越来越感兴趣的一个领域。本文以百万词的"商务英语语料库"为依托,通过搭配分析、词丛分析及索引分析等语料库技术,对商务英语主题词RATE的搭配特征进行了多方位的研究。研究结果显示,在商务语境中,RATE最重要的搭配词是interest,exchange等,反映出利率、汇率对商务活动的重要影响。本研究也表明,基于语料库的商务英语搭配分析,不仅可以揭示商务英语主题词的语言特征,还可以帮助研究者更好地理解蕴含在其中的商务信息。

关键词: RATE; 搭配词; 词丛; 索引行; 商务英语语料库

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# A BEC-based Analysis of Collocational Features of RATE

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**Abstract:** Recent years have witnessed the fast development of Business English Program in China. As a result, there has been growing interests in scientific studies of business English. This paper, based on 1-million-word Business English Corpus (BEC), conducted a profound analysis of the keyword RATE by examining its collocates, clusters and concordancing lines. The result shows that the most important collocates of RATE are *interest*, *exchange*, etc, indicating that interest rate and exchange rate play an important role in business world. This study also implies that the corpus-based analysis of business English keywords not only helps researchers discover the linguistic features of the target expressions, but also enables them to better understand the information of business encoded in those words.

Key words: RATE; collocates; word clusters; concordancing lines; business English corpus

# 一、引言

近年来,随着商务英语研究热潮的兴起以及语料库语言学理念日益深入人心,基于语料库的商务英语研究也受到了越来越多的重视(Burdine & Barlow, 2008; Crawford Camiciottoli, 2007; Nelson, 2000/2006; 曹合建等, 2008; 胡春雨, 2011/2014)。语料库不但"能强化、反驳或者修正研究人员的直觉"

(Partington, 2003: 12),展示出预期不到的语言型式,而且还能帮助研究人员挖掘非语言信息(冯志伟, 2010: 1)。本文拟采用语料库语言学的方法,以商务英语主题词RATE(rate/rates)为个案,探讨如何更好地开展基于商务英语语料库的搭配研究。

#### 二、相关研究述评

1. 搭配的语料库研究

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对搭配的研究最早可追溯到希腊时期的斯多葛学派。据语言史学家Robins介绍,斯多葛派学者在研究词汇意义时摒弃了一词一义的理念,提出"词义并非孤立存在,而是依据不同搭配产生变化"(Robins, 1967: 21)。当代语言学中的搭配研究主要聚焦于3个层面:搭配的心理现实性、搭配的语篇分布、搭配的统计计算(参见Hoey, 2005),而最后两个层面的研究主要在语料库语言学的框架下展开。

搭配的语料库研究,其成果主要体现在Sinclair及其同事的研究中。早在1966年,Sinclair(966:415)就指出: "我们使用节点(node)这一术语来称呼进行搭配研究的对象,并可以将跨度(span)定义为节点两侧与其相关的词语数量,由跨度确立的范围内所有词项均成为搭配词(collocates)"。Jones & Sinclair(1974)是第一个发表基于语料库的词语搭配研究报告的,该研究在Sinclair(1966)的基础上确立了一系列重要原则和基本方法,包括跨距界定、统计方法、搭配词与节点词相互吸引力的测量,显著搭配的确定等。

在以后的工作中, Sinclair(1991:170)把搭配定义为"两个或两个以上的词在文本中短距离内的共现"。但是,这个短距离到底在什么位置最佳呢?经过多年的实证研究, Sinclair认为4:4的跨度(即节点词两侧各4个单词)最为理想,并给予搭配一个新的定义:"搭配是两个词同时出现,而中间间隔不超过4个单词。这是横组合方向最简单、最明显的关系"(Sinclair, 2004:114)。

卫乃兴(2003:13)把语料库语言学兴起后搭配研究发生的变化概括为以下几点:(1)研究效度提高。研究者可便捷地检索百万计乃至千万计词容量的连续文本,概括关键词的搭配行为,而不必求助于个人直觉;(2)量化研究的比重增大,从数据提取到数据处理等,都有一套定量分析方法,许多抽象的概念,如"相互期待"、"搭配力"等都具有了可观察、可操作的定义;(3)自动化程度愈来愈高,研究过程中的人为干扰因素大大降低。

在语料库语言学中,还存在几个和搭配紧密相连的概念,如类连接(colligation)、语义倾向(semantic preference)、语义韵(semantic prosody)。类联接指语法范畴间的结合,是词语搭配发生于其中的语法结构和框架,比如说

cases经常与数量词some, many, most, more, both, several共现,构成了"determiner+cases"这样的语法关系。语义偏好指词项与周边词在语义上的频繁共选倾向,它关注惯常搭配词的语义特征或类别。语义韵指由上述这些语义倾向所带出的语言使用者的立场、态度或感情取向特征,它散布于多个词的范围内,是形成整个词项意义的决定因素(Louw, 1993: 157)。例如, set in常和winter, bad weather, gloom, decline, rot等表示不好的词或词组共现(Sinclair, 1991)。Sinclair(2003: 178)称语义韵为"语料库研究迄今最为重要的贡献",因为前计算机时代无法将语言使用的延伸语境如此大批量地凸显出来。

# 2. 基于语料库的商务英语搭配研究

近年来,从事ESP研究的学者开始尝试把语料库语言学的搭配研究理念及技术应用到商务英语研究中。其中,Nelson(2000)可谓同类研究的楷模。基于自建的百万词的商务英语语料库,Nelson对50个商务英语词语的搭配词、类连接、语义韵开展了深入研究。他发现,同一类别的商务英语词语(如描述商务趋势的international,global, local)有很不同的搭配特征。

Nelson还发现,商务英语词汇的语义韵体现的是商业人士的所思所想。比如,在语料库中,谈论利率(interest rate)上升的次数是谈论利率下降次数的2倍。此外,rising interest rates的"共现语境"(co-text)通常是消极的,而lower interest rates的"共现语境"多是积极的。利率上升似乎是人们较为害怕而且谈论较多的(通常和murderously,disastrous等消极语言共现)。利率下降则人们谈论得较少,而且在这种情景下,interest rate多和具有褒义色彩的词(如marketfavorable,taking advantage)共现。Nelson的发现很有意义,但遗憾的是他仅仅以此例作为商务英语具有独特语义韵的证明,并没有从商务知识体系出发,深入探讨这一话题。

# 三、研究设计

# 1. 研究问题

在研究商务英语主题词时,已有研究(Nelson, 2000; Crawford Camiciottoli, 2007; 曹合建等,

2008)发现RATE是一个很重要的主题词,用来测量商务活动(measuring business performance)。然而,除了Nelson(2000)略微提及interest rates的语义韵特征外(参见上节的述评),上述3项研究均未对RATE的搭配特征进行研究。

本文拟探讨以下问题: (1)RATE的搭配词有何特征? 其搭配词和该词的词丛有何联系? (2)从RATE的搭配词和词丛中能发现哪些重要的商务信息?

# 2. 研究语料

本文所用语料库是Nelson所建的"商务英语语料库"(Business English Corpus; BEC)。根据Nelson(2000)的介绍,BEC收录28类商务文本,共计100万词,其中英国英语804 002词,美国英语219 019词。

笔语语料占总库的56%,除了书籍、报刊中的商务文本,还包括"商务电报"(business faxes)、"商务信函"(business letters)、"商务电邮"(business emails)、"公司说明书"(company brochures)、"商务合同"(business contracts)、"协议"(agreements)、"报道"(report)、"会议记录"(minutes)、"年报"(annual reports)、"备忘录"(memos)、"一般文献"(general docs)、"手册"(manuals)、"销售传单"(sale leaflets)、"报价单"(quotations)、"杂项"(miscellaneous)。

口语语料占总库的44%,包括"电视节目"(TV program)、"收音机节目"(radio program)、"访谈"(interviews)、"演讲"(speeches)、"展示"(presentations)、"协商"(negotiating)、"娱乐"(entertaining)、"培训"(training situations)、"会议"(meeting)、"打电话"(telephoning)、"工作广告"(job advertisement)、"工作面试"(job interviews)、"产品说明"(produce brochures)。

#### 3. 相关语料库技术

本文主要采用3种语料库技术开展RATE的搭配研究:

(1) 计算RATE的搭配词及其搭配强度 (strength of collocability)。计算搭配强度的方 法有两种。一种是通过计算在跨距内每个词的频 数分布,根据峰值的显著性来确定搭配强度。但

- 是,仅凭搭配词的频数并不能确定该搭配词是否与搜索词具有真正意义上的搭配关系,这是因为一些高频搭配词的出现可能是由于该词本身在语料库中频数就很高,另外一些搭配词的出现很可能纯属偶然。为了克服上述局限性,有必要引进统计方法,以便得到真正的搭配词。WordSmith Tools 5.0提供了4种搭配词的计算方法,分别是互信息值(Mutual Information Score,简称MI值)、T值及Z值。数值越大,搭配强度越高。在跨度问题上,本文采用WordSmith的缺省值5:5(即节点词两侧各5个单词)。
- (2)对RATE进行词丛(word clusters)分析。词丛又被称为"词串"(lexical bundles),即:3个或3个以上词组成的、在某一特定语域里频繁地成串出现的词列(Biber et al. 1999)。在Scott & Tribble(2006)的研究中,词丛则指频繁出现的不同长度的连续词语片段,其最低频数满足研究者的设定。在本文中,我们在提取RATE的3~6词词丛时,把最低频数设定为5。
- (3)对RATE进行索引(concordancing)分析。在Sinclair(1991: 170)看来, "索引分析是语料库语言学的核心,因为它可以让我们看到文本中许多重要的语言型式"。索引分析最基本的功能是提供节点词在语料库中的词频信息,并展示该词的语境信息,从而帮助研究者辨别节点词典型的词汇语法框架及其所传达的意义。

# 四、结果与讨论

# 1. RATE的搭配及词丛特征

表1列出了WordSmith自动生成的RATE的搭配词表,包括:实词interest, low, exchange, growth, per, tax, higher, low, annual, inflation, unemployment和功能词of, from, be, on, at等。

表2列出了WordSmith自动生成的频数大于(或等于)5的3~6词词丛。显然,词丛中和RATE共现的词中相当一部分是其搭配词。可以看出,居于主导地位的是3词词丛,4词词丛也只有3个(表中划线部分),而5词、6词词丛则根本没有出现,体现出词丛随着长度的增加而递减的规律。

| 表1 RATE在REC中的前30位搭配话 |   |
|----------------------|---|
|                      | - |
|                      | ш |

| 排名 | 搭配词       | MI值    | 共现频数 | 排名 | 搭配词      | MI值   | 共现频数 |
|----|-----------|--------|------|----|----------|-------|------|
| 1  | interest  | 11.01  | 166  | 16 | high     | 5.516 | 20   |
| 2  | exchange  | 10.346 | 78   | 17 | more     | 5.435 | 18   |
| 3  | return    | 10.112 | 14   | 18 | lowest   | 5.315 | 12   |
| 4  | rise      | 9.827  | 20   | 19 | any      | 4.823 | 14   |
| 5  | higher    | 9.56   | 25   | 20 | increase | 4.188 | 15   |
| 6  | low       | 9.376  | 24   | 21 | and      | 4.007 | 146  |
| 7  | growth    | 8.801  | 45   | 22 | up       | 3.412 | 32   |
| 8  | inflation | 8.316  | 21   | 23 | at       | 3.271 | 96   |
| 9  | lower     | 8.073  | 18   | 24 | our      | 2.173 | 21   |
| 10 | term      | 7.676  | 24   | 25 | its      | 1.833 | 22   |
| 11 | fixed     | 7.499  | 21   | 26 | their    | 1.809 | 16   |
| 12 | per       | 6.635  | 44   | 27 | for      | 1.642 | 75   |
| 13 | cent      | 6.316  | 23   | 28 | an       | 1.169 | 30   |
| 14 | tax       | 5.697  | 26   | 29 | but      | 1.164 | 26   |
| 15 | long      | 5.583  | 18   | 30 | which    | 1.13  | 22   |

表2 RATE的3~6词词丛

| 词丛                              | 频数 | 词丛                       | 频数 |
|---------------------------------|----|--------------------------|----|
| the rate of                     | 24 | rate of growth           | 7  |
| the exchange rate               | 15 | an exchange rate         | 7  |
| higher interest rates           | 12 | of return on             | 7  |
| interest rates and              | 11 | rates are up             | 6  |
| in interest rates               | 11 | on interest rates        | 6  |
| of exchange rate                | 11 | of the exchange rate     | 6  |
| low interest rates              | 11 | of the exchange          | 6  |
| rate of return                  | 10 | interest rates to        | 6  |
| term interest rates             | 10 | long term interest       | 6  |
| at the rate                     | 10 | long term interest rates | 6  |
| exchange rate stability         | 9  | interest rates have      | 5  |
| nominal exchange rate           | 9  | annual growth rate       | 5  |
| of interest rates               | 8  | interest rates by        | 5  |
| interest rates are              | 8  | interest rates in        | 5  |
| at the rate of                  | 8  | raise interest rates     | 5  |
| growth rate of                  | 8  | rate in the              | 5  |
| high interest rates             | 7  | interest rates the       | 5  |
| nominal exchange rate stability | 7  |                          |    |

和RATE搭配的功能词构成RATE的语法搭配型式,即RATE出现在什么样的语法环境里。比如,at和of主要出现在at a/the rate of这样的搭配组合中,up出现在rates are up,而on则主要出现在"名词+on interest rate"中。例(1)~(3)展示了这些介词和RATE的具体搭配用法。

- (1) VAT at a rate of 25% is charged on the total cost of goods, including freight, insurance and import duties.
- (2) Decisions **on** interest rates are taken by a Monetary Policy Committee in the Bank, consisting of

nine members: five of these come from within the Bank.

(3) they really are being left behind because everybody was talking about competition and lower prices, and long-distance rates are **up**, cable rates are **up**, pay phone rates are **up**, wireless rates are gonna go **up** because of new subsidies.

上述词丛中除了(at)the rate of,最为凸显的就是和interest(s), exchange, growth, return 构成的词丛, 如: the exchange rate, higher/lower interest rates, raise interest rates, rate of return, rate of growth。其中缘由大概在于,"利率"(interest

rate)、"汇率"(exchange rate)这些金融工具对经济/商务活动影响甚大,是市场经济中商务人士必须关注的话题,这从2词词丛interest rates(131次),exchange rate(66次),interest rate(31次)等的高频中可以更好地显示出来;而"回报率"(rate of return)和"增长率"(rate of growth)是投资时须考虑的要素。例(4)~(6)给出了这些词丛在商务文本中的用法。

- (4) In 1993, **falling interest rates** provided the market with an abundance of mortgage loans to be purchased or originated at below-market prices and allowed the mortgage loans to be sold on the secondary market at a premium.
- (5) Our Mexican operation is trading significantly ahead of last year (a 77% increase in peso terms) despite the weak economy although **the exchange rate** has affected our sales in terms of sterling.
- (6) The outcome, so far, has been an **unemployment rate** of 4.5 per cent, combined with the lowest annual **inflation rate** since 1965.

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搭配词中的higher, lower, high, nominal, long, term, annual等则主要修饰interest rate (s), exchange rate, growth rate, 出现在high/higher/low interest rates, long term interest rate, nominal exchange rate, annual growth rate等词丛中,如例(7)所示。

(7) The **annual growth rate** of M4 and M4 lending **fell**, however, to 11.2 per cent, and 9.0 per cent, respectively.

搭配词中的rise, increase等主要用来描述利率、汇率的升降,属于描述商务活动和经济趋势的词。有趣的是,这两个搭配词并没有出现在3词以上的词丛中。通过观察下面的索引行(见图1),不难发现increase和RATE其实有着较高的共现率,但因为其形式多变(如increase,increases,increased等),且RATE前的词也不是特别固定,故而increase没有出现在3词以上的词丛中。

同样的原因也能解释为什么rise也没有出现 在3词以上的词丛中,如图2的索引行所示。

JIM PAYMAR reporting: Tyler, the FedEx rate increase comes at a time when a survey is maintained. It is now years since our last rate increase and due to raises in costs, with propel even greater growth. Mr. GROTE: The rate increase is good news for stockholders. PAYMAR: And the revenue derived from the rate increase may help FedEx pay for its in 1994. During 1993, lower interest rates increased the amount of servicing right: growth, Wolzien says he expects cable rate increases to slow in the coming year, out the competitors, we'll see sort of what rate increases they're trying to do. Then we'll

professors that voted together - backing a rate rise. The non-academics said rates
Committee - although the expectation of a rate rise to counter home-grown inflationary
was that there would need to be an interest rate rise of 1/2 per cent certainly before the
economic case for an immediate interest rate rise. But the choice between a 1/4-point
of the committee present agreed to the rate rise, but only after considerable
markets reason, must mean a slowdown in rate rises. + GOLD fixed at \$281.60 in
economists are expecting further interest rate rises to curb inflation, with base rates
have been either spent or saved, interest rate rises are starting to bite and the engine
to continuing uncertainty on the future of rate rises, and done nothing to prevent the

图2

# 2. RATE搭配特征所展现的商务信息

如何能通过RATE的搭配特征考察其蕴藏的商务信息呢?考虑到interest, exchange是RATE最重要的搭配词,下文将以interest rate和exchange rate为研究对象,在上述研究的基础上进一步深入。

有两点发现值得深入探讨。首先,本研究肯定了Nelson(2000)的发现,即:利率上升是商业人士较为害怕且也谈论较多的,而利率降低时人们谈论得较少,而且interest rate多出现在积极语义韵中。例(8)告诉我们,低利率意味着投资者可以从股票中得到高于把钱存银行的回报;

例(9)则强调,高利率对那些借债严重的房地 产公司是一场灾难。

- (8) **Low interest rates** mean investors will automatically pile into shares for **better returns** than they can get at the bank and building society.
- (9) Those **high interest rates** have been **disastrous** for the heavily borrowed property companies.

进一步的调查发现,提升利率往往是控制通 胀(inflation)的一种方式(如例10),但这一 举措往往会减少就业(如例11)。

(10) The United States economy can grow faster before it needs to be slowed down by **higher** 

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#### interest rates to stop inflation taking off.

(11) The single currency may-in the long runbe a good idea. But many economists say Europe is still too regulated for it to work now-lots of large European industries remain in state hands, and there are hugely varying **inflation** records around the continent. Monetary union will impose one level of interest rates on everyone and so threatens to **make** the jobless problem even worse in the short term.

本研究的另一重要发现是: 所有的risk,基本上都和interest rate有关(见图3),而所有的stability则都和exchange rate有关(见图4)。在索引行549~561中,尽管有些rate前没有interest,但通过扩展语境发现,rate所指代的是interest rate。

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modeling can solve your bank's rate risk dilemma. Only complete treasury time, every banker knows that controlling rate risk and managing cash flow is essential. into the budgeting process Integrate rate risk into the profitability management agreement to reduce its exposure to interest rate risk associated with its guarantee of ESOP review and thorough understanding of all likely rate risk situations. Creating Realistic Rate example: To not only measure but manage rate risk, a bank must deal with both complex level. After all, you are trying to measure rate risk on your entire institution. And, to get can create comprehensive, realistic models of rate risk - with a fully compatible option pricing products can model all of the complexities of rate risk. Even fewer can generate actual run off is designed to: Identify all elements of rate risk Quantify the impact of each element at to arrive at a complete understanding of the rate risk inherent in your institution. Reports normally are in the buyer's currency; - Interest rate risks. The Company has entered into an
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on the purpose and value of exchange rate stability. First, it is important to recognise necessary condition for sustainable exchange rate stability between their currencies, one important to recognise that nominal exchange rate stability is not an end in itself. An with a reasonable degree of nominal exchange rate stability, and that some movement in likely to be able to sustain nominal exchange rate stability if they also achieve price stability, not guarantee complete nominal exchange rate stability. However, since price stability in a considerable degree of nominal exchange rate stability. If the single currency area the possible benefits of nominal exchange rate stability for both the "in" and the "out" - or has demonstrated, nominal exchange rate stability cannot be achieved on a

出现这种搭配的原因,大概和"利率"、 "汇率"的固有特点相关。"利率"是央行调控 货币供给(money supply)的三大法宝之一:利 率太低,会减少储蓄,钱从银行流向市场,造成 流动性泛滥,从而推高资产泡沫;而利率过高, 则有吸引热钱(hot money)来套利的风险。可 见,利率风险是必须防范的一个棘手问题。

"汇率"问题则和国际商务乃至国家战略

关系密切。自1973年"布雷顿森体系"(Breton Wood System)破灭后,世界逐步进入了"浮动汇率制"(floating exchange rate system)时代。"汇率"是否稳定,对国际贸易有重要影响。比如,奥巴马政府一直迫使人民币升值的重要原因在于:(1)人民币升值会改变美国在中美贸易中的逆差(trade deficit)状况,从而提高就业率,使奥巴马在中期选举中处于有利地位;

(2)人民币升值会大幅减少美国所欠中国的债务,并吸引热钱到中国,推高中国的资产泡沫。 所以,汇率稳定(exchange rate stability)问题是 商务人士谈论较多的一个话题。

# 五、结语

语料是语言研究的基础。由于信息技术的飞速发展,电子语料已经成为最重要、最有效率的一种语料表现形式。本文通过对RATE的个案研究显示,基于语料库的商务英语搭配分析,不但可以揭示商务英语主题词的语言特征,还可以帮助研究者更好地理解商务信息。

语料库应用于商务英语研究领域时,研究者能客观地辨别自然发生的语言形式,提供丰富的相关例证,这些例证只凭直觉或在基于小型文本的研究中很可能会被忽视。例如,尽管一个熟悉商务英语文本的人,不借助语料库仅凭直觉就可以说出一些商务英语的语言特征,如RATE可以和interest,exchange,inflation,growth等词共现,却很难发现interest rate risk及exchange rate stability这样的语言现象以及其背后的商务内涵。

本文对商务英语词汇能力发展研究的启迪是: 搭配是一个重要的语言形式, 搭配知识则是学习者词汇深度知识的重要方面之一; 因此, 当我们调查大学生商务英语词汇能力的发展时, 不能局限于学生是否能识别某一词语(如本研究中的RATE), 还应调查学生的搭配知识是否随着商务英语学习的纵深而提高。

由于本研究所依赖的语料库仅有百万词,可能另外一些在商务语境中与RATE共现的搭配词未能被识别出来。未来的研究可以在更大规模商务英语语料库的基础上进一步调查RATE的搭配特征,从而发现更多的语言形式及潜藏的商务信息。

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