ARE DISCLOSURES READABLE?
AN EMPIRICAL TEST

Uri Benoliel & Xu (Vivian) Zheng

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Uri Benoliel* & Xu (Vivian) Zheng**

A major goal of federal disclosure laws is to ensure that precontractual disclosure documents are readable, i.e., easily understood by the average disclosee. Focusing as a case study on 523 U.S. disclosures in the franchise industry, this Article empirically shows that disclosures are normally unreadable. Using the Gunning Fog Index linguistics readability tool, this Article indicates, inter alia, that prospective franchisees need, on average, more than twenty years of education to understand a franchise disclosure document on the first reading. This result undermines the readability goal of the federal franchise disclosure law since the highest level of education that most franchisees have completed is community college, which is normally the equivalent of fourteen years of education. The results of our study also show a significant positive relationship between the franchises' size and age and the readability of their disclosures.

The empirical results of this study have significant implications, not only for the franchise industry, but also for the institutional design and enforcement of federal disclosure regulations.

INTRODUCTION

Disclosure laws are one of the most popular types of regulation in American law.1 These laws typically require the “discloser” to give the

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“disclosee” a precontractual “disclosure” that contains information about, *inter alia*, the potential cost and benefits of a product or service provided by the discloser. Disclosure laws cover a wide range of products and services such as franchises, securities, employee-benefit plans, electronic fund transfers, product warranties, health plans, and consumer credits. A central goal of federal disclosure laws is to ensure that disclosures are readable, i.e., easily understood by an average disclosee. By ensuring the readability of disclosures, disclosure laws can assist disclosees in making better-informed judgments about whether they should buy a product or service.

Given the federal government’s goal of ensuring that disclosure documents are readable, an important empirical question arises: Are disclosure documents, in reality, readable? On a theoretical level, the readability of disclosures has already been disputed by legal scholars. For example, Professors Ben-Shahar and Schneider hypothesized that disclosures typically suffer from a “quantity problem,” namely that they are too long, thereby preventing disclosees from understanding the disclosed information. In the same vein as existing theoretical criticism on the readability of disclosures, this Article empirically shows that disclosures may suffer from another serious readability limitation besides the *quantity* problem: a syntax *quality* problem. Focusing as a case study on disclosures in the important franchise industry, this Article empirically shows that disclosures are often unreadable. More concretely, using the Gunning’s well-known linguistic readability index, this Article shows that the textual

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2. See, e.g., Dalley, supra note 1, at 1093–94.
3. See infra Subpart I.A.
4. Id.
5. See infra Part III.
7. Id. at 687 (“The overload problem is ubiquitous. . . . Forms become so long and elaborate that disclosees have problems assembling and organizing the information, and disclosees do not read them and cannot understand, assimilate, and analyze the avalanche of information.”); see also Susanna Kim Ripken, *The Dangers and Drawbacks of the Disclosure Antidote: Toward a More Substantive Approach to Securities Regulation*, 58 BAYLOR L. REV. 139, 161 (2006) (“In the securities markets, investors can be overloaded with overly dense, lengthy disclosure documents . . . .”). The “quantity problem” also implies that en masse disclosures across many disclosure subjects, such as home loan, privacy, medical care, and product labeling, are overwhelming. See Ben-Shahar & Schneider, supra note 6, at 690; Adam S. Chilton & Galit A. Sarfaty, *The Limitations of Supply Chain Disclosure Regimes*, 53 STAN. J. INT’L L. 1, 21–22 (2017); Sanne H. Knudsen, *Regulating Cumulative Risk*, 101 MINN. L. REV. 2313, 2350–2351 (2017); Zahr K. Said, *Mandated Disclosure in Literary Hybrid Speech*, 88 WASH. L. REV. 419, 459 (2013); Darren Guttenberg, Note, *Waiving Farewell without Saying Goodbye: the Waiver of Fiduciary Duties in Limited Liability Companies in Delaware, and the Call for Mandatory Disclosure*, 86 S. CAL. L. REV. 869, 914 n.212 (2013).
 Relative to the paramount importance of disclosures in U.S. law, there has been surprisingly little empirical study of their readability. One study, conducted by the United States Government Accountability Office (GAO), examined, *inter alia*, the readability of a written offer provided by credit card issuers to consumers, which discloses key information regarding the costs of using the card.9 The study, focusing on the readability of a small sample of one type of credit card provided by four of the largest credit card issuers,10 found that the written offers provided by issuers “were too complicated for many consumers to understand.”11 Another study, also conducted by the GAO, assessed the readability of sixteen “model notices,” namely templates created by the Department of Labor and the Internal Revenue Service to help pension-plan sponsors prepare disclosures to plan participants.12 The study found, *inter alia*, that the readability of the model notices examined in the study “might present a challenge for participants.”13

This Article attempts to make two significant contributions to the sparsity of existing empirical legal studies. First, it systematically examines the readability of a large sample of real-world disclosures (i.e., 523 disclosures). Second, in order to assist the authorities enforcing disclosure laws to monitor the readability of disclosures, this study statistically examines two potential predictors of poor disclosure readability: discloser’s size and age.

This Article is structured as follows: Part I provides a general context by reviewing the efforts made by state and federal government bodies to ensure that various legal texts, including disclosures, are readable. Part II presents data and discusses the methodology for empirically testing the readability of disclosure documents in the franchise industry. Part III discusses the normative implications of the empirical results.

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8. See infra Subpart II.E.
10. Id. at 6, 82.
11. Id. at 6.
I. THE READABILITY GOAL

A major phenomenon in U.S. consumer law is the Plain English Movement. The movement, led mainly by state and federal government bodies, aims to ensure that legal texts are written in a readable manner that can be easily understood by their targets, normally consumers. The movement’s goal is to prevent legal texts from being comprehensible only by lawyers.

The movement’s efforts to ensure textual readability focus on three major types of legal instruments: disclosures, consumer contracts, and federal regulations.

A. Disclosures

Federal disclosure laws, as part of the Plain English Movement, often aim to ensure that disclosures, as provided to disclosees, are readable. One central example, which is the focus of this study, is the Franchise Rule that governs the franchise industry. The Rule, enacted by the Federal Trade Commission (FTC), requires every franchisor to provide potential fran-


15. Felsenfeld, supra note 14, at 408; Michael S. Friman, Plain English Statutes: Long Overdue or Underdone?, 7 LOY. CONSUMER L. REP. 103, 108 (1995) (“The Plain English Movement has attempted over the years to alleviate the complexities which lawyers place on innocent laypersons.”); Wayne Schiess, What Plain English Really Is, 9 SCRIBES J. LEGAL WRITING 43, 53 (2003–2004) (“This goal—that the people affected by legal documents actually be able to comprehend them—is at the heart of the plain-English movement.”).

16. Felsenfeld, supra note 14, at 408.

17. See infra Subpart I.A.

18. See infra Subpart I.B.

19. See infra Subpart I.C.

chisees with an FDD containing information about the offered franchise, its officers, and its franchisees. The FDD is intended to allow potential franchisees to weigh the expected costs and benefits of the offered franchise before making a purchasing decision. In order to enhance the readability of FDDs, the Franchise Rule requires franchisors to provide FDDs that are written “clearly,” “legibly,” and in “plain English.” It furthermore requires that the language of FDDs be “understandable by a person unfamiliar with the franchise business.” Relatedly, the Rule requires that FDDs incorporate “short sentences” and “everyday language.”

Similarly, the general rules and regulations for the Securities Act of 1933, which aim to ensure that buyers of securities receive complete and accurate information before they invest in securities, require information to be disclosed in a “clear” and “understandable” manner. Furthermore, the rules and regulations require disclosures to apply “plain English principles,” “short sentences,” and “everyday words.”

Likewise, the Employee Retirement Income Security Act of 1974, enacted to protect the interests of employee benefit plan participants, requires that the disclosure of the terms and benefits of a plan be “written in a manner calculated to be understood by the average plan participant.” Similarly, the Electronic Fund Transfer Act, which establishes the rights of consumers in electronic fund transfer activities, requires information disclosed to consumers to be “clear and readily understandable.” Furthermore, the Magnuson–Moss Warranty Act requires that the disclosed information about the terms of a consumer product warranty be “simple

22. Id.
23. 16 C.F.R. § 436.6(b) (“Disclose all required information clearly, legibly, and . . . using plain English.”).
24. Id. § 436.1(o) (“Plain English means the organization of information and language usage understandable by a person unfamiliar with the franchise business.”).
25. Id. (stating that plain English “incorporates short sentences [and] definite, concrete, everyday language”).
27. Id. § 230.421(b).
28. Id. §§ 230.421(d)(1), (2).
30. Id. § 1022(a) (“The summary plan description . . . shall be written in a manner calculated to be understood by the average plan participant . . . .”).
32. Id. § 205.4(a)(1) (“Disclosures required under this part shall be clear and readily understandable . . . .”).
and readily understood." 33 In addition, the HIPAA Privacy Rule, which provides individuals a right to be informed of the privacy practices of their health plans, 34 requires information to be disclosed in “plain language.” 35 Finally, the Truth in Lending Act, aiming to promote the informed use of consumer credit, 36 requires information to be disclosed “clearly” to consumers. 37

B. Consumer Contracts

Several states, as part of the Plain English Movement, have adopted statutes that mandate readability standards of consumer contracts. 38 The purpose of these statutes is to ensure that consumer contracts are understandable, thereby allowing consumers to make well-informed decisions. 39 The statutes vary in coverage. 40 Some statutes only cover insurance policies. 41 Other statutes cover general consumer contracts. 42 These statutes

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33. 15 U.S.C. § 2302(a) (2012) (“[A]ny warrantor warranting a consumer product to a consumer by means of a written warranty shall . . . disclose in simple and readily understood language the terms and conditions of such warranty.”).
35. Id. § 164.520(b)(1) (“The covered entity must provide a notice that is written in plain language . . . .”).
37. Id. § 1632(a) (“Information required by this subchapter shall be disclosed clearly and conspicuously . . . .”). For additional disclosure laws requiring information to be disclosed “clearly” or in a “clear” manner, see 12 C.F.R. § 213.3(a) (2018) (Consumer Leasing Act); 12 C.F.R. § 1024.32(a)(1) (2018) (Real Estate Settlement Procedures Act of 1974); 12 C.F.R. § 1030.3(a) (2018) (Truth in Savings Act); 16 C.F.R. § 460.10 (2018) (The R-Value Rule).
38. See, e.g., Felsenfeld, supra note 14, at 408; Kimble, supra note 14, at 2; Friman, supra note 15, at 105–06; Harold A. Lloyd, Plain Language Statutes: Plain Good Sense or Plain Nonsense?, 78 LAW LIBR. J. 683, 687 (1986).
39. Stephen M. Ross, On Legalities and Linguistics: Plain Language Legislation, 30 BUFF. L. REV. 317, 331 (1981) (“Plain language legislation ultimately seeks to ensure that the meaning of a written agreement will be easily available to both parties, particularly to the individual consumer whose bargaining power is weak and who must often accept either a standard contract or no contract at all.”); Paul R. Timm & Daniel Oswald, Plain English Laws: Symbolic or Real?, 22 J. BUS. COMM. 31, 33 (1985) (“The purpose of plain English legislation is to produce understandable legal documents.”).
also vary in their specificity. Some statutes provide only general guidance on what readability standards are required in the legal text. For example, Montana’s readability statute simply requires consumer contracts to be written in a “clear and coherent manner using words with common and everyday meanings” and to be “appropriately divided and captioned by [their] various sections.” Other statutes take a considerably more detailed approach. These statutes mandate that documents satisfy a detailed set of objective syntactic requirements, relating, \textit{inter alia}, to the average number of words per sentence and the average number of syllables per word in the contract. For example, according to Connecticut’s readability statute, a consumer contract will be deemed readable if it meets several tests, including the following: (1) the average number of words per sentence is less than 22, and (2) the average number of syllables per word is less than 1.55.

\textbf{C. Federal Regulations}

Several presidential actions, in line with the Plain English Movement, aim to ensure that federal regulations are readable. First, in 1978, President Carter’s executive order required that all regulations coming from the federal government “shall be as simple and clear as possible.” Under this order, the head of each federal agency was responsible for determining that every significant new regulation is “written in plain English and is understandable to those who must comply with it.” Similarly, in 1998, President Clinton issued a memorandum directing federal agencies to use plain language, including short sentences. The memorandum particularly required the use of plain language in all proposed and final rulemakings published in the Federal Register. Similarly, in 2011, President Obama issued a new executive order, which stated that the U.S. regulatory system “must ensure that regulations are accessible, consistent, written in plain

\begin{thebibliography}{9}
  \bibitem{43} \textsc{Jeffrey W. Stempel \& Erik S. Knutsen}, \textsc{Stempel and Knutsen on Insurance Coverage} 2–92 (4th ed. 2016) (“The format and specificity of generic plain language statutes, both generalized laws and those focusing upon insurance policies, vary in approach and specificity.”);
  \textsc{Karlin, supra} note 40, at 531–32 (positing that federal and state readability statutes “vary . . . in their standards for readability”).
  \bibitem{44} \textsc{Mont. Code Ann.} § 30-14-1103 (West 2017).
  \bibitem{46} \textsc{Exec. Order No.} 12,044, 43 Fed. Reg. 12,661, 12,661 (1978).
  \bibitem{47} \textit{Id.} at 12,662.
  \bibitem{49} \textit{Id.} In addition, the memorandum required plain language to be used in all new documents other than regulations that explain how to obtain a benefit or service or how to comply with a requirement that the federal agencies administer or enforce. \textit{Id.}
\end{thebibliography}
language, and easy to understand.\footnote{50}

Given the state and federal goal of ensuring the readability of legal texts, an important question arises as to whether these texts are, in reality, readable. The purpose of the next Part of this Article is to address this question by empirically examining, as a case study, the readability of franchise disclosure documents in the franchise industry, as governed by the federal Franchise Rule.

II. THE EMPIRICAL TEST: ARE FRANCHISE DISCLOSURES READABLE?

A. The Franchise Industry

The franchising business model plays a vital role in the U.S. economy. It incorporates about 744,000 establishments.\footnote{51} These establishments, in turn, provide approximately 7.8 million jobs.\footnote{52} Furthermore, they annually produce goods and services worth about $710 billion, and contribute approximately $426 billion to the national GDP.\footnote{53}

The franchise industry is governed by a federal Franchise Rule, which requires each franchisor to provide potential franchisees with an FDD.\footnote{54} Each FDD in the franchise industry must contain twenty-three prescribed informational items about the franchise.\footnote{55} For example, item number 1 must disclose the general characteristics of the franchisor, such as the type of business organization used by the franchisor and its prior business experience.\footnote{56} Item number 7, as another example, should contain information about what franchisees should expect to spend as a preliminary investment for establishing their franchise unit.\footnote{57} Item number 12 must disclose the territorial rights that the franchisee may receive from the franchisor while operating the franchise unit (e.g., territorial exclusivity).\footnote{58}
B. Sample

Our sample is based on 523 FDDs, which were obtained in two stages. First, using a dataset from a 2017 edition of *Entrepreneur*, we identified a list of 988 franchisors. It should be noted that previous studies have estimated that *Entrepreneur*’s annual datasets capture, on average, around a third to a half of all U.S. franchisors. Importantly, some studies have also estimated that *Entrepreneur*’s datasets are representative of the population of franchisors operating in the United States. Therefore, *Entrepreneur*’s datasets are widely used as a source of data for empirical legal research on franchising.

Second, for these 988 franchisors, attempts were made to locate their publicly-available FDDs. Notably, we searched only for FDDs that are in a format which can be copied and pasted into an electronic text editor. Such format was needed in order to allow us to make each FDD compatible with the computerized readability test to ensure accurate results. The FDDs were located via a major government database of FDDs, the Wisconsin Department of Financial Institutions. Wisconsin is one of the only states that make the FDDs of franchisors registered in the state available online.


61. Shane & Foo, *supra* note 60, at 146 (“*Entrepreneur Magazine*’s list is representative of the population of business format franchisors operating in the United States.”); see also Shane et al., *supra* note 60, at 778.


63. For more details about the editing process and the computerized test used in this research, see infra Subpart II.C.

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normally in a format that can be copied to a text file. Using Wisconsin’s database, this study identified 523 compatible FDDs from different franchisors. These FDDs serve as the final sample for this empirical study.

C. Methodology

Among all franchisor FDDs in the sample, we tested the readability of disclosure item number 12 (“Item 12”), which concerns the territorial rights that the franchisee receives from the franchisor while operating the franchise unit. Out of the twenty-three disclosure items contained in each FDD, this study focused solely on the textual readability of Item 12 for two main, cumulative reasons. First, the process of testing the textual readability of all twenty-three FDD items across all 523 disclosure documents in the sample is too cumbersome. Each FDD, including its twenty-three disclosure items, is generally more than 200 pages long, and many exceed 350 pages in length. Each FDD must undergo a lengthy manual editing process before its readability can be accurately tested via a computer.

Second, the territory disclosure provided under Item 12 is one of the most important textual items for prospective franchisees. It provides information about one of the keys to a franchisee’s success: the geographic location of the franchised businesses. More specifically, Item 12 discloses

66. The FDDs were filed by the franchisors during the years 2016 and 2017. All the FDDs are on file with authors.
67. See supra note 58 and accompanying text.
69. For the editing process needed to test the readability of each text, see infra notes 92–94 and accompanying text.
71. CURRAN & MITCHELL, supra note 70, at 20 (“For many franchised businesses, location, location, location is one of the keys to success.”); M. Blen Gee, Jr., Franchise Disclosure Document –
whether the franchise is for a specific location or a location to be approved by the franchisor.\(^{72}\) It furthermore states the conditions under which the franchisor will approve the geographic relocation of the franchised business.\(^{73}\) It also discloses any restrictions on the franchisee in terms of soliciting orders from consumers outside of her franchise’s geographic location (e.g., via the internet).\(^{74}\)

Item 12 is one of the most important textual items, and was therefore tested in this Article for another reason. It allows prospective franchisees to assess the potentially significant risk of franchise encroachment. Franchise encroachment is the practice by which a franchisor essentially competes with its franchisee in one of three ways: (1) establishing franchisor-owned or other-franchisee-owned stores in the same geographic territory of its franchisee; (2) operating a franchise chain which competes with its existing franchisee; or (3) selling the same products as its franchisee through non-store channels, such as e-commerce.\(^{75}\)

Encroachment practices might significantly decrease the revenues of existing franchisees by drawing customers away from the existing unit.\(^{76}\) The significant decrease in the existing franchisee’s revenues, caused by encroachment practices, may lead the former’s business to fail.\(^{77}\) Importantly, Item 12 could allow franchisees to assess the risk of franchise encroachment before purchasing the franchise. It does so by disclosing, among other things, whether the franchisor grants an exclusive territory to its franchisees.\(^{78}\) In addition, if the franchisor grants an exclusive territory,
it must also disclose under Item 12 the circumstances that would permit the franchisor to modify or rescind exclusivity.\textsuperscript{79} Item 12 may furthermore enable franchisees to assess the risk of franchise encroachment by including the mandated disclosure of any plans on the part of the franchisor to operate a franchise system that would compete with its franchisees.\textsuperscript{80} Relatedly, Item 12 must disclose whether the franchisor reserves the right to use non-store channels of distribution—such as the Internet, catalog sales, telemarketing, or other direct marketing sales—to make sales within the franchisee’s territory.\textsuperscript{81}

Given the significance of Item 12—both in disclosing information about the geographic location of the franchise unit and the risk of franchise encroachment—its understanding and comprehension by prospective franchisees is essential.\textsuperscript{82} Consequently, the readability of Item 12 is important and is examined in this Article.

In order to measure the readability of Item 12, we used the Gunning Fog Index. This index is one of the most widely used measures of text readability.\textsuperscript{83} The index was originally introduced by Robert Gunning,\textsuperscript{84}

\begin{itemize}
\item \textsuperscript{79} Such circumstances may include, for example, a fall of the franchisee’s sales below a certain level or an increase in the population in the franchisee’s territory. \textit{See id. § 436.5(f)(5)(ii).}
\item \textsuperscript{80} \textit{Id. § 436.5(f)(6)(ii).}
\item \textsuperscript{81} \textit{Id. § 436.5(f)(6)(i).}
\item \textsuperscript{82} \textit{Curran & Mitchell, supra note 70, at 21 (stating that Item 12 “is critical to franchisees” and that “[f]ranchisors should strive to make this Item as clear as possible for the prospect”).}
\item \textsuperscript{83} \textit{See Aymen Ajina et al., Guiding Through the Fog: Does Annual Report Readability Reveal Earnings Management?, 38 Res. Int’l Bus. & Fin. 509, 512 (2016) (“The Fog Index has been used widely and has seen increasing use in the accounting literature.” (citation omitted)); Judith Bogert, In Defense of the Fog Index, Bull. Ass’n for Bus. Comm., June 1985, at 9 (1985) (“The Gunning Fog Index is the one most frequently cited in business writing textbooks.”); J. Efrim Boritz et al., Determinants of the Readability of SOX 404 Reports, 13 J. Emerging Techs. in Acct. 145, 146 (2016) (“A variety of readability metrics have been used in textual analysis of various corporate communications, the most common being the FOG Index.” (citations omitted)); Gus De Franco et al., Analyst Report Readability, 32 Contemp. Acct. Res. 76, 81 (2015) (“The Fog index (also known as the Gunning Fog Index) is one of the most widely used measures of readability.”); Reuven Lehavy et al., \textit{The Effect of Annual Report Readability on Analyst Following and the Properties of Their Earnings Forecasts,} 86 ACCT. REV. 1087, 1088 (2011) (“The Fog Index has been used in social science research for several decades . . . .”); Feng Li, \textit{Annual Report Readability, Current Earnings, and Earnings Persistence,} 45 J. Acct. & Econ. 221, 225 (2008) (“The Fog index . . . is a well-known . . . formula for measuring readability.”); Kin Lo et al., \textit{Earnings Management and Annual Report Readability,} 63 J. Acct. & Econ. 1, 6 (2017) (“The Fog Index has been used widely . . . .”); Lance N. Long & William F. Christensen, \textit{Does the Readability of Your Brief Affect Your Chance of Winning an Appeal?,} 12 J. App. Prac. & Process 145, 150 (2011) (“Of the many readability formulas, some of the more popular and accurate formulas that rely on sentence and word length include . . . . the Gunning Fog Index . . . .”); Brian P. Miller, \textit{The Effects of Reporting Complexity on Small and Large Investor Trading,} 85 ACCT. REV. 2107, 2114 (2010) (establishing that the Fog Index “provides a . . . widely accepted formula for measuring readability”).}
\item \textsuperscript{84} \textit{See, e.g., Robert Gunning, \textit{The Technique of Clear Writing} 31–45 (rev. ed. 1968); see also Li, supra note 83, at 225; Miller, supra note 83, at 2114.}
\end{itemize}
and developed and applied in computational linguistics literature. The index is based on the following two assumptions: (1) more words per sentence increase the probability that the text will be harder to read; (2) more syllables per word increase the probability that the text will be harder to read. Given these two assumptions, the Gunning Fog Index is based on a linear function of two variables: (1) average sentence length in words; (2) percentage of complex words, defined as words with three syllables or more. More specifically, the “fog value” of a text is calculated according to the following equation: (average number of words per sentence + percentage of complex words) * 0.4. Notably, based on empirical research, the sum of the average number of words and the percentage of complex words is multiplied by the constant 0.4 in order to approximate the fog value to the number of years of formal education a reader would need to read the text once and understand it well. For example, a fog value of 16 implies that the reader needs sixteen years of education, essentially a college degree, to comprehend the text on the first reading.

In order to test the fog value of Item 12 in each of the 523 FDDs in the sample, we applied the following editing process for each FDD: First, the FDD text, under disclosure Item 12, was extracted to a text editor. Second, all the heading items and tables were deleted from the extracted text since the fog readability test is designed for text rather than headings and

85. Lehavy et al., supra note 83, at 1093; Li, supra note 83, at 225; Miller, supra note 83, at 2114.

86. Bogert, supra note 83, at 10; Boritz et al., supra note 83, at 146; Li, supra note 83, at 222.

87. Ajina et al., supra note 83, at 513; Boritz et al., supra note 83, at 146; Preeti Choudhary et al., Boards, Auditors, Attorneys and Compliance with Mandatory SEC Disclosure Rules, 34 MANAGERIAL & DECISION ECON. 471, 479 (2013); Alastair Lawrence, Individual Investors and Financial Disclosure, 56 J. ACCT. & ECON. 130, 135 (2013); Lehavy et al., supra note 83, at 1093; Li, supra note 83, at 225; Lo et al., supra note 83, at 3.

88. Examples of polysyllables with more than three syllables are: disseminate, computational, and tetrahedron.

89. Ajina et al., supra note 83, at 513; Boritz et al., supra note 83, at 154 n.7; Choudhary et al., supra note 87, at 485 n.12; De Franco et al., supra note 83, at 81; Lawrence, supra note 87, at 135; Lehavy et al., supra note 83, at 1093; Li, supra note 83, at 225; Lo et al., supra note 83, at 6; Tim Loughran & Bill McDonald, Textual Analysis in Accounting and Finance: A Survey, 54 J. ACCT. RES. 1187, 1193 (2016); Russell J. Lundholm et al., Restoring the Tower of Babel: How Foreign Firms Communicate with U.S. Investors, 89 ACCT. REV. 1453, 1459 (2014); Miller, supra note 83, at 2114 n.7.

90. Nelda Spinks & Barron Wells, Readability: A Textbook Selection Criterion, 69 J. EDUC. FOR BUS. 83, 84 (1993); see also Ajina et al., supra note 83, at 513; Choudhary et al., supra note 87, at 479; De Franco et al., supra note 83, at 81; Lawrence, supra note 87, at 135; Lehavy et al., supra note 83, at 1093; Li, supra note 83, at 225; Lo et al., supra note 83, at 3; Loughran & McDonald, supra note 89, at 1193.

91. Loughran & McDonald, supra note 89, at 1194. Notably, there is another recognized measure of readability known as the Flesch–Kincaid Index, which is calculated as follows: (0.39 * average words per sentence) + (11.8 * average syllables per word) – 15.59. Li, supra note 83, at 225 n.4. The empirical results based on the Flesch–Kincaid Index are often similar to those based on the Fog Index. See, e.g., id.
tables. Third, periods (.) that were used in the text as part of a number, such as the decimal point in a number (e.g., 12.75), were removed. Such removal was necessary in order to prevent the computerized fog value calculator that we utilized from wrongly addressing such periods as the ends of sentences. For the same reason, periods used in abbreviations (such as *i.e.*, *e.g.*, *Inc.*, and *U.S.A.*) or as part of an internet address (such as in *www.* and *com*) were removed. Finally, semicolons (;) that were essentially used in the FDDs in place of commas, and which did not mark the ending of a sentence, were replaced with commas.

After undergoing this editing process, the text was then analyzed using Simon Bond’s well-known online fog value calculator. The calculator produced a fog value for each FDD in the sample.

**D. Data**

Table 1 summarizes the industries of the franchisors in our sample. These industries are varied. The most common type of industry is restaurants. The sample, however, does include other industries, such as maintenance, personal care, business services, and lodging.

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92. For a similar approach, see Lehavy et al., *supra* note 83, at 1093 n.10; Li, *supra* note 83, at 225.

93. The online fog value calculator that we used is Simon Bond’s calculator. See *infra* note 100.

94. For example, the semicolons in the following sentence were replaced with commas: “You will be awarded and may serve customers within a ‘Territory’ which shall be delineated by one or more of the following: zip codes; forward sortation areas; hard boundaries, such as streets, highways, rivers or other identifiable physical boundaries; or Census Tract.” FRANCHISE DISCLOSURE AGREEMENT, MAIDPRO 34 (2017), https://www.cards.commerce.state.mn.us/CARDS/security/search.do?documentId=%7b5249AB8C-5F19-4378-8B3D-DABA02510CE2%7d.

Table 1: Franchisors’ Industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restaurants</td>
<td>18.93%</td>
</tr>
<tr>
<td>Maintenance</td>
<td>13.58%</td>
</tr>
<tr>
<td>Personal Care</td>
<td>12.62%</td>
</tr>
<tr>
<td>Business Services</td>
<td>8.80%</td>
</tr>
<tr>
<td>Child-Focused Businesses</td>
<td>7.65%</td>
</tr>
<tr>
<td>Services</td>
<td>6.88%</td>
</tr>
<tr>
<td>Lodging</td>
<td>6.50%</td>
</tr>
<tr>
<td>Retail</td>
<td>5.74%</td>
</tr>
<tr>
<td>Home Improvement</td>
<td>4.59%</td>
</tr>
<tr>
<td>Automotive</td>
<td>3.63%</td>
</tr>
<tr>
<td>Recreation</td>
<td>2.49%</td>
</tr>
<tr>
<td>Health</td>
<td>2.10%</td>
</tr>
<tr>
<td>Pets</td>
<td>2.10%</td>
</tr>
<tr>
<td>Food Retail Sales</td>
<td>1.91%</td>
</tr>
<tr>
<td>Financial Services</td>
<td>1.53%</td>
</tr>
<tr>
<td>Tech</td>
<td>0.96%</td>
</tr>
</tbody>
</table>

Table 2 summarizes the statistical data of the three main characteristics of our sample franchisors, which was mainly obtained from the 2017 edition of *Entrepreneur*: (1) the number of franchisees in the franchisors’ systems; (2) the number of years that the franchisors have been selling franchises to franchisees; (3) the length of the franchisors’ FDDs, in PDF pages.96

Table 2: Franchisor Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Franchisees</td>
<td>661.62</td>
<td>147</td>
<td>3266.39</td>
</tr>
<tr>
<td>Years of Franchising</td>
<td>21.41</td>
<td>18</td>
<td>15.18</td>
</tr>
<tr>
<td>Length of FDD (in pages)</td>
<td>250.71</td>
<td>229</td>
<td>96.07</td>
</tr>
</tbody>
</table>

E. Results

This Subpart first reports the basic descriptive results of key features of the fog value variables. It then explores regression models of the fog value and the central characteristics of each franchisor examined in this study.

96. The data for the number of pages in each franchisor’s FDD was obtained using Adobe Acrobat Reader.
2018] Are Disclosures Readable? 253

1. Statistical Description

Our results indicate that FDDs are unreadable. Specifically, the results show that the fog value of Item 12 in the FDDs is very high. The fog median is 20.18, and the fog mean is 20.36. This value implies that prospective franchisees need, on average, more than twenty years of education to comprehend the FDD text on the first reading. However, empirical evidence indicates that the highest level of education that most franchisees have completed is community college, which normally requires fourteen years of education. Hence, franchisees normally lack more than six years of the education needed in order to understand the average FDD. Relatedly, according to the results of this study, the lowest fog value among the FDDs is 14.67, meaning that all the FDDs in our sample require a higher education than most franchisees do, in fact, have.

Furthermore, according to the results, in 80% of the FDDs, the average sentence length is longer than twenty-five words. This result also indicates that FDDs are unreadable, since according to numerous readability experts, the average sentence length of a text should not exceed twenty-five words, otherwise, the text is likely to be difficult to read.

Anecdotally, we found several FDDs with extremely long sentences, with much more than twenty-five words. To illustrate, the following 154-word sentence, which is difficult to read, was found in one of the FDDs:

97. See, e.g., supra notes 90–91 and accompanying text.
100. Simon Bond’s online fog value calculator, which we used, provides information about, inter alia, the number of major punctuation marks (e.g., periods) in the text and the number of words in the text. We independently calculated the average sentence length of each FDD by dividing the number of words in the text by the number of major punctuation marks.
In the event we or our affiliates acquire another chain or system, regardless of the number of outlets or units, or we or our affiliates are acquired by another chain or system, that operates and/or licenses/franchises units or stores that are the same or similar to Cellairis Business Units in that they have a substantially similar catalog, line or inventory of products and services, or similar theme or concept, we or our affiliates may, in addition to any other rights in this Agreement, establish, acquire or operate, or license/franchise others to establish and operate, units or stores under other systems or other marks, which units or stores may offer or sell products or services that are the same as, or similar to, the products and services offered from the Business Unit, regardless of these units’ or stores’ proximity to the Business Unit, or their actual or threatened impact on sales at the Business Unit . . . .

2. The Fog Value and Franchisor Characteristics

Table 3 reports the results for the standardized coefficients of regression analysis, which indicates the relationship between the fog value and the franchisor characteristics collected in this study. First, the results show a significant negative relationship between the number of franchisees in the franchisor chain and the fog value. As the number of franchisees decreases, the fog value increases—i.e., the FDD is less readable. One potential explanation for this result is that, normally, small-scale franchisors can offer their franchisees poor contractual terms compared with large franchisors that benefit from significant economies of scale. As a result, small franchisors might be prone to obfuscating the more adverse and disadvantageous terms of their franchise by making their FDDs more syntactically complex.

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104. See, e.g., Gary J. Castrogiovanni & George S. Vozikis, Foreign Franchisor Entry into Developing Countries: Influences on Entry Choices and Economic Growth, 3 NEW ENG. J. ENTREPRENEURSHIP 9, 12 (2009) (“Small franchisors . . . typically have fewer slack resources available for expansion than large franchisors.” (citation omitted)); Li-Tzang (Jane) Hsu & SooCheong (Shawn) Jang, Effects of Restaurant Franchising: Does an Optimal Franchise Proportion Exist?, 28 INT. J. HOSPITALITY MGMT. 204, 207 (2009) (“A large firm is often characterized by its ability to exploit economy of scale. This capability makes operations more effective, allowing large firms to perform more cost efficiently than small firms.” (citation omitted)); Steven C. Michael & James G. Combs, Entrepreneurial Failure: The Case of Franchisees, 46 J. SMALL BUS. MGMT. 73, 79 (2008) (“[V]ery young and small franchisors . . . have high chain-wide failure rates.” (citation omitted)); Scott A. Shane, Hybrid Organizational Arrangements and Their Implications for Firm Growth and Survival: A Study of New Franchisors, 39 ACAD. MGMT. J. 216, 221 (1996) (“When franchise systems are new and small, they lack many of the economies of scale available to larger systems, such as those in purchasing materials, handling administrative overhead, and promoting their brand names.”).

105. According to the “obfuscation hypothesis” managers have a “tendency to manipulate or arrange prose to enhance ‘good news’ with easier to read writing [sic], and mask ‘bad news’ with more difficult writing.” John K. Courtis, Annual Report Readability Variability: Tests of the Obfuscation
In addition, the results suggest that the fog value is highly associated with how long the franchisor has been franchising its business. This result means that the younger the franchising system, the less readable its FDD. One potential explanation for this result is that normally young franchisors, which lack franchise experience and an established brand name, can offer their franchisees poor contractual terms compared with experienced, well-established, and mature franchisors. Consequently, young franchisors might be prone to obfuscating the inferior terms offered by their franchise by making their FDDs less readable.

Lastly, the length of the FDD in PDF pages is highly and positively associated with the fog value. As the length of an FDD (or its linguistic quantity) increases, its readability (namely, its linguistic quality) decreases. This result implies that lengthy disclosures tend to include unreadable sentences, namely long sentences with many polysyllables.

### Table 3: Standardized Regression Estimates

|                        | Estimate | Std. Error | t value | Pr(>|t|) |
|------------------------|----------|------------|---------|----------|
| Intercept              | -0.001   | 0.043      | -0.000  | 1.000    |
| No. of Franchisees     | -0.140   | 0.045      | -3.145  | 0.002    |
| Years of Franchising   | -0.084   | 0.045      | -1.865  | 0.063    |
| Length of FDD (in pages) | 0.210    | 0.054      | 4.707   | 0.000    |

### III. DISCUSSION AND NORMATIVE IMPLICATIONS

Readable disclosures that are easily understandable by an average disclosee have the potential to produce several important social benefits.

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106. See, e.g., Michael & Combs, *supra* note 104, at 79 (“[V]ery young and small franchisors . . . have high chain-wide failure rates.” (citation omitted)); Shane, *supra* note 104, at 221 (“[N]ew franchise systems are at a competitive disadvantage vis-à-vis established systems.” (citation omitted)); Miles A. Zachary et al., *Franchise Branding: An Organizational Identity Perspective*, 39 J. ACAD. MARKET. SCI. 629, 634 (2011) (“[Y]oung firms face greater obstacles such as dependence on unfamiliar stakeholders, lower levels of legitimacy, and difficulties competing against established organizations than do older firms. Young franchisors are no exception to the liabilities of newness.” (citations omitted)).

107. See *supra* note 105.
First, they are likely to reduce disclosee misunderstanding, thereby increasing the probability that disclosees will make better-informed judgments about whether they should buy a product. In addition, readable disclosures save disclosees time, since they can be read and comprehended faster than unreadable disclosures. Consequently, readable disclosures are likely to motivate disclosees to read disclosures in the first place. By motivating disclosees to read disclosures, readable disclosures are likely to increase competition among disclosers hoping to attract well-informed disclosees. Finally, readable disclosures can reduce the consultation fees incurred by disclosees, since they help the disclosees’ advisers to make better recommendations to their clients.

Disclosers, however, do not fully internalize the social benefits of readable disclosures that disclosees enjoy. In addition, disclosers may have an incentive to make their disclosures less readable than is socially desirable in order to obfuscate poor contractual terms. Consequently, and as witnessed in the results of this case study, disclosers are unlikely to produce readable disclosures that are socially desirable.

In order to encourage disclosers to produce readable disclosures that are socially beneficial, we advise policymakers to take the following

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108. Disclosure Requirements and Prohibitions Concerning Franchising and Business Opportunities; Final Rule, 72 Fed. Reg. 15,444, 15,464 (Mar. 30, 2007) (to be codified at 16 C.F.R. pts. 436 & 437) (projecting that enhancing the legibility and understandability of disclosure documents in the franchise industry will reduce “the likelihood of franchisee . . . . confusion, or misunderstandings”); Joseph Kimble, Writing for Dollars, Writing to Please, 6 SCRIBES J. LEGAL WRITING 1, 3 (1996–1997) [hereinafter Kimble, Writing for Dollars] (“To most nonlawyers, the benefits of plain language are intuitive. If readers understand plain language better, then no doubt they’ll like it better than the dense, impersonal prose of most public documents. And because they understand it better, they’ll make fewer mistakes in dealing with it . . . .”); see also Joseph Kimble, Answering the Critics of Plain Language, 5 SCRIBES J. LEGAL WRITING 51, 64 (1996) [hereinafter Kimble, Answering the Critics].

109. Arthur Levitt, Introduction to SEC, OFFICE OF INV’R EDUC. & ASSISTANCE, A PLAIN ENGLISH HANDBOOK: HOW TO CREATE CLEAR SEC DISCLOSURE DOCUMENTS 3 (1998) (“The benefits of plain English abound. Investors will be more likely to understand what they are buying and to make informed judgments about whether they should hold or sell their investments.”).

110. Kimble, Writing for Dollars, supra note 108, at 7 (“[R]eaders strongly prefer plain language in public and legal documents, . . . . they find it faster . . . . to use . . . .”); see also Kimble, Answering the Critics, supra note 108, at 63.

111. Kimble, Writing for Dollars, supra note 108, at 30 (“There you have the ultimate value of plain language in public documents: it motivates readers to read.”); Miller, supra note 83, at 2108 (“[F]aced with more complex reports, investors may elect not to process the report because doing so is too costly.”); Serafin, supra note 14, at 711 (“Most investors typically will not read any document that is vague or difficult to understand. Therefore, to improve investor knowledge, the prospectuses must be inviting and readable for investors.”) (footnote omitted).

112. 15 U.S.C. § 2302(a) (2012) (“In order to . . . improve competition in the marketing of consumer products, any warrantor warranting a consumer product to a consumer by means of a written warranty shall . . . . disclose in simple and readily understood language the terms and conditions of such warranty.”).

113. Levitt, supra note 109, at 3 (“Brokers and investment advisers can make better recommendations to their clients if they can read and understand these documents quickly and easily.”).
cumulative steps: First, policymakers should provide a clear mechanism to determine what constitutes a readable disclosure. At this stage, disclosure laws often do not provide such a mechanism. 114 For example, the Franchise Rule requires FDDs to incorporate “short sentences,” 115 without explaining what constitutes a short sentence or what should be the average length of a sentence. Instead, the Rule could require, inter alia, that the average number of words per sentence be less than twenty-five, thereby increasing the probability that the disclosure will be readable. 116 Second, policymakers should add to disclosure laws a deterring sanction against failure to comply with the disclosure law’s readability standards. At this stage, disclosure laws, such as the Franchise Rule, often lack a clear and deterring readability sanction. 117 Third, authorities enforcing disclosure laws should closely monitor the readability of disclosures. Specifically, they should regularly select a random sample of disclosure documents and review their readability. Since the results of our study indicate that the disclosure documents of smaller firms and younger firms tend to be less readable, 118 enforcement authorities should put more effort into monitoring the disclosures issued by such firms.

CONCLUSION

One of the main goals of disclosure laws is to ensure that pre-contractual disclosure documents are readable. By ensuring the readability of disclosures, disclosure laws can assist disclosees in making better-informed judgments about whether they should buy a product or service. Focusing as a case study on disclosures in the important franchise industry, this Article empirically shows that disclosures are often unreadable. While franchisees need, on average, more than twenty years of education to comprehend the disclosure text on the first reading, most of them have only completed community college, which normally requires fourteen years of education.

Policymakers willing to promote the readability of disclosures should clearly define statutory readability standards, back these standards with an adequate sanction, and monitor the compliance of disclosers with these standards. Otherwise, the readability goal of disclosure laws might remain an empty slogan rather than a reality.

114. See, e.g., Timm & Oswald, supra note 39, at 37.
116. For legal writing experts who recommend that the average sentence not exceed twenty-five words, see supra note 101.
117. See Timm & Oswald, supra note 39, at 36.
118. See supra Section II.E.2.