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IS A BAN ON NON-COMPETES SUPPORTED BY EMPIRICAL EVIDENCE?

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ABSTRACT

The U.S. Federal Trade Commission (FTC) has proposed a rule to declare virtually all non-compete agreements unfair methods of competition under Section 5 of the FTC Act and therefore, illegal. However, the empirical literature on non-compete agreements cited by the FTC in its Notice for Proposed Rulemaking ("NPRM") shows mixed results on earnings, job creation, firm formation, entrepreneurship, training, investment, and firm value. Evidence in other current studies also does not support an economy-wide ban. The FTC concludes that the proposed rule would yield net benefits even though by its own admission it lacks the information necessary to conduct a cost-benefit analysis ("CBA"). The agency says alternatives to non-competes—such as non-disclosure agreements and non-solicitation agreements—are comparably effective in protecting investments, but research on this question is virtually non-existent.

This Article argues that the FTC's CBA in its NPRM is flawed and incomplete—assuming away uncertainty, ignoring costs, and failing to show that earnings effects are real, not transfers. Then, this Article proposes that—instead of implementing an economy-wide ban—regulators should focus on more targeted inquiries in industries or occupations where evidence is more conclusive, such as those involving low-wage workers.

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INTRODUCTION

The FTC has proposed a rule to declare virtually all non-compete agreements unfair methods of competition under Section 5 of the FTC Act and therefore, illegal.[1] The FTC defines a non-compete clause in its NPRM as one "that typically blocks the worker from working for a competing employer, or starting a competing business, within a certain geographic area and period of time after the worker's employment ends."[2] Under the rule, employers would be barred from including non-compete

1. *See* 16 C.F.R. § 910 at 3–4 (2023), https://www.ftc.gov/system/files/ftc_gov/pdf/p201000noncompetenprm.pdf [https://perma.cc/QX9G-RZGJ] [hereinafter "NPRM"].

2. *Id.* at 2.

clauses in contracts and would be required to retroactively remove non-competes from existing contracts.[3]

To support its decision to ban non-compete clauses in employment contracts, the FTC interprets and interpolates research literature that yields mixed results in ways that support the proposed rule while dismissing results that contradict the FTC's narrative.[4] No objective review of the literature supports a conclusion that a ban on non-competes across the entire economy would be net positive.[5] Additionally, the FTC performs a flawed CBA that conflates transfers with economic effects and assumes certainty where there is none.[6]

The FTC's NPRM cites to literature and news stories showing that in some circumstances firms can abuse non-competes.[7] The FTC provides examples at the beginning of the NPRM highlighting how individuals, particularly those in low-wage occupations, can be subject to non-competes that both hardly seem justified and take advantage of workers' lack of information or bargaining power.[8] Since employers have used broad non-competes that are hard to justify, investigations into the use of non-competes in examples like those, and in certain sectors, may be necessary.

The NPRM also cites to literature showing that non-competes can serve important roles in employment contracts.[9] For example, the NPRM acknowledges that non-competes both encourage employers to create and share trade secrets and incentivize employers to invest in human capital through training.[10] Non-competes can protect trade secrets and encourage firms to invest more in training when a firm knows that a new employee will not simply take training or sensitive knowledge elsewhere.[11] Some jobs entail a lot of worker investment, including out-of-pocket costs for advanced training.[12] Firms may be less willing to make these investments if they cannot reap the returns over a reasonable period of time.[13] Non-competes can also lower labor costs by lowering costs associated with

3. *Id.* at 3–5.
4. *Id.* at 12–48.
5. *Id.*
6. *See id.* at 101, 156.
7. *Id.* at 7–11.
8. *Id.*
9. *Id.* at 45.
10. *See id.* at 47.
11. *Id.*
12. *Id.* at 45–47.
13. *Id.*

replacing workers.[14] By restricting the availability of non-competes, the FTC may lose these benefits and increase employer incentives to automate jobs away from humans and towards machines.

However, the FTC argues that other mechanisms, such as non-disclosure and non-solicitation agreements, can achieve those same results for employers.[15] But the research simply has not yet estimated the effectiveness of different mechanisms on employer investment in different sectors or occupations.[16]

The NPRM frequently cites the prevalence of non-competes across the economy as a justification of its proposed rule.[17] The FTC "estimates that approximately one in five American workers—or approximately 30 million workers—is bound by a non-compete clause."[18] It is understandable that regulators might want to examine non-competes, given the large share of workers they cover. At the same time, that large share of workers covered means that a federal administrative rule would affect a large share of the economy, so the Commission should be particularly careful about its stated support for and the potential effects of its proposed rule.[19] Yet, in this NPRM, the Commission shows no such caution taken before seeking to impose this broad rule on nearly all employment contracts across all states, industries, and occupations.[20]

Overall, the evidence cited by the FTC does not make it clear whether such a sweeping prohibition would enhance welfare.[21] Banning non-competes because some employers abuse them is not sensible. Not all mergers are outlawed because some are anti-competitive. An outright ban should be reserved for practices that are almost always anti-competitive and have no significant pro-competitive rationales and are always anti-competitive.[22] It is highly unusual for a rulemaking to be the

14. *Id.*

15. *Id.* at 108.

16. *Id.* at 188.

17. *Id.* at 17–18.

18. *Id.* at 76.

19. *See, e.g.*, *id.* at 184 (discussing that "firms may employ in-house counsel, outside counsel, or human resource specialist . . . [f]or many firms, this process would likely be straightforward . . . [f]or other firms, it may be more difficult and require more time").

20. *Id.* at 143.

21. This Article does not address the question of whether the FTC has legal authority to promulgate its proposed rule.

22. *See, e.g.*, NPRM, *supra* note 1, at 142 (where the FTC notes the possibility of unanticipated factual scenarios where a non-compete clause would not "implicate

vehicle for such a change to employment practices absent adjudicatory or legislative intervention.[23] In an adjudicatory proceeding, an accused employer's behavior could be analyzed under the rule of reason to determine whether potential harms are outweighed by pro-competitive benefits.[24] However, the FTC presumes illegality on all employers for all non-compete clauses without regard for length of time or employer motivations for contract terms.[25]

In the following sections, this Article will discuss both the state of the literature surrounding non-competes and the FTC's interpretation of it. This Article will highlight the uncertainty inherent in the literature and the problems of assuming away that uncertainty. To be clear, this Article is not criticizing the authors of the cited literature or the research itself. In most cases, the Article finds that the work is careful, assumptions and results reported clearly, and weaknesses discussed honestly. The issue is that the FTC selectively relies on results that support its proposed rules and dismisses contradictory results, uncertainties, and caveats, behaving as if the research is settled, when it is not. The agency should instead focus its attention more narrowly on research that specifically identifies where non-competes may be problematic and where targeted interventions could lead to desired effects in labor markets.

I. EMPIRICAL EVIDENCE DOES NOT SUPPORT AN ECONOMY-WIDE BAN ON NON-COMPETES

The FTC proposes a rule that, with some limited exceptions, would apply to the entire economy.[26] No research cited by the FTC shows that non-competes are always harmful everywhere.[27]

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anticompetitive concerns" and where a rebuttable presumption may be more appropriate than a categorical ban).

23. *See, e.g.*, *id.* at 155 (where the FTC proposes potential reporting requirements on all employers in all industries).

24. *See generally* FTC, The Antitrust Laws, Guide to Antitrust Laws, https://www.ftc.gov/advice-guidance/competition-guidance/guide-antitrustlaws/antitrust-laws [https://perma.cc/8H8B-W8M7].

25. *See generally* NPRM, *supra* note 1, at 182 (applying compliance costs across firms in the U.S. economy).

26. NPRM, *supra* note 1, at 204 (proposing application of the rule to all firms without an exemption for small entities).

27. *Id.* at 12, 69 (claiming non-compete clauses are unfair methods of competition broadly for workers and employers, while the evidence presented focuses on specific cases and situations).

A. EMPIRICAL EVIDENCE IS MIXED AND HEAVILY CAVEATED

The FTC cites a few dozen empirical studies in the NPRM.[28] In this literature, scholars caveat the strength of their conclusions on the causal impacts of non-competes and encourage more research and data-gathering on unanswered questions.[29] Even though the literature is rather recent in vintage and researchers themselves have not yet confirmed causal effects or impacts of non-competes on the entire economy, the FTC treats these findings as conclusive enough for an economy-wide rule.[30]

1. Earnings

In the NPRM, the FTC claims that non-competes adversely affect competition in labor markets by reducing wages for workers across the labor force.[31] The FTC cites several studies on the effects of non-competes on earnings, claiming that they "found that increased enforceability of non-compete clauses reduces workers' earnings across the labor market generally and for specific types of workers."[32] The NPRM places great weight on evidence of lower wages even though the

28. *Id.* at 12.

29. *See, e.g.*, *id.* at 130 (discussing "there has been little empirical research on the prevalence of non-compete clauses between the seller and buyer of a business" and "[f]or these reasons, the Commission believes it may be appropriate to exempt non-compete clauses between the seller and buyer of a business from coverage under the Rule."); *id.* at 154 ("The Commission encourages commenters to submit data or other evidence that could inform the Commission's consideration of this issue [regarding franchisor/franchisee non-compete clauses].").

30. *Id.* at 2 (justifying a change in rule based on research in recent decades).

31. NPRM, *supra* note 1, at 3; *id.* at 15 ("Non-compete clauses affect competition in labor markets through their use in the aggregate. The effect of an individual worker's non-compete clause . . . may be marginal or may be impossible to discern statistically. However, the use of a large number of non-compete clauses across a labor market markedly affects the opportunities of all workers in that market . . . .").

32. *Id.* at 19.

evidence on this is mixed[33] and appears to depend to a great extent on whether employees are well-informed.[34]

Although several studies do reach this conclusion—with caveats—some studies that the FTC cites conclude the opposite. The table below shows the studies the FTC cites, what the FTC claims, caveats by the authors, and other results the FTC does not discuss.

Table 1: Caveats about Earnings in the Literature

Study	Results FTC Cites	Caveats
Starr (2019)[35]	"If a state that does not enforce non-compete clauses shifted its policy to that of the state with an average level of enforceability, earnings would fall by about 4%."[36]	[Starr]: "[]I cannot disentangle whether the observed effects are driven by those who are bound by noncompetes, by changes in the use of noncompetes, or by indirect effects on the market as a whole."[37] "Results suggest that the incidence of training is 14% higher in an average enforceability state relative to a non-enforcing state. The positive relationship

33. *See, e.g.*, Camila Ringeling et al., *Noncompete Clauses Used in Employment Contracts Comment of the Global Antitrust Institute* 9–10 (GEO. MASON U. L. & ECON. Rsch. Paper Series, 20–04), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3534374 [https://perma.cc/AU5G-GN4F]; Bruce H. Kobayashi, *Antitrust, Non-Competition and No-Poach Agreements in Digital Industries*, THE GAI REPORT ON THE DIGIT. ECON. 712–13 (Feb. 7, 2020) [hereinafter "Kobayashi"], https://gaidigitalreport.com/wp-content/uploads/2020/11/Kobayashi-Antitrust-Non-Competition-and-No-Poach-Agreements-in-Digital-Industries.pdf [https://perma.cc/V6P4-UCFK].

34. *Id.*

35. Evan Starr, *Consider This: Training, Wages and the Enforceability of Covenants Not to Compete*, 72 I.L.R. REV. 783, 799 (2019).

36. NPRM, *supra* note 1, at 20.

37. Starr, *supra* note 34, at 795.

		between enforceability and training is strongest when the training content is meant to upgrade skills and when it is firm-sponsored."[38]
Lipsitz and Starr (2021)[39]	"[W]hen Oregon stopped enforcing non-compete clauses for workers who are paid hourly, their wages increased by 2-3% . . ."[40]	[By FTC]: "Caution is recommended in interpreting this extrapolation [extrapolating beyond low-wage workers in Oregon], however, since results from one segment of the workforce within one state may not necessarily inform outcomes that would occur in the rest of the country."[41]
Johnson, Lavetti, and Lipsitz (2020)[42]	"Decreasing non-compete clause enforceability from the approximate enforceability level of the fifth-strictest state to that of the fifth-most-lax	[By Johnson et al.]: "The overall effect of NCA enforceability on earnings is ambiguous."[44]

38. *Id.* at 785. Starr notes that "firms in higher enforceability states do provide more training to their workers but that the workers do not experience the returns to such training; rather, they experience wage losses." *Id.* at 786. While consistent with the FTC's claim of lower wages, additional training is an economic benefit of non-competes that the FTC should include in its CBA, but does not. NPRM, *supra* note 1, at 156.

39. Michael Lipsitz & Evan Starr, *Low-Wage Workers and the Enforceability of Noncompete Agreements*, 68 MGMT. SCI. 143, 143 (2021).

40. NPRM, *supra* note 1, at 20.

41. *Id.* at 167.

42. Matthew S. Johnson et al., *The Labor Market Effects of Legal Restrictions on Worker Mobility* (2020), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3455381 [https://perma.cc/P5KE-LFSG].

44. Johnson et al., *supra* note 46, at 11.

	state would increase workers' earnings by 3-4%."[43]	
Balasubramanian, Chang, Sakakibara, Sivadasan, and Starr (2022)[45]	"When Hawaii stopped enforcing non-compete clauses for high-tech workers, earnings of new hires increased by about 4%."[46]	[By FTC]: "Caution is recommended in interpreting this extrapolation, however, since results from one sector within one state may not necessarily inform outcomes that would occur in the rest of the country."[47]
Starr, Frake, and Agarwal (2019)[48]	"[W]hen the use of non-compete clauses in a given state and industry combination increases by 10%, the earnings of workers who do not have non-compete clauses, but who work in that same state and industry, go down by about 6.12% more when that state has an average enforceability level, compared with a state which does not enforce non-compete clauses."[49]	[By FTC]: "[A]vailable data does not allow for an estimate of the magnitude of transfers versus the total increase in economic benefit."[50]

At least one other study addresses the question of the effect of non-compete on wages, although it reaches a different conclusion.[51] The FTC

43. NPRM, *supra* note 1, at 19–20.

45. Natarajan Balasubramanian et al., *Locked In? The Enforceability of Covenants Not to Compete Clauses and the Careers of High-Tech Workers*, 57 J. HUM. RES. S349 (2022).

46. NPRM, *supra* note 1, at 21.

47. *Id.* at 165.

48. Evan Starr et al., *Mobility Constraint Externalities*, 30 ORG. SCI. 961 (2019).

49. NPRM, *supra* note 1, at 25.

50. *Id.* at 171.

51. *See* Donna S. Rothstein & Evan Starr, *Mobility Restrictions, Bargaining, and Wages: Evidence from the National Longitudinal Survey of Youth 1997*, BUREAU OF LAB.

cites this study to support its position that non-competes are common throughout the economy.[52] The FTC notes that the study is based on "an often-used labor survey conducted by the Bureau of Labor Statistics, rather than a one-off survey directed solely at calculating the prevalence of non-compete clauses."[53] However, the Commission neglects to report that this study found that use of non-competes was associated with *higher* wages, which is inconsistent with the FTC's discussion of the literature in its section on non-competes and wages.[54]

Mixed results are not surprising given that non-competes, particularly when viewed across the entire economy, can have positive *and* negative effects.[55] The NPRM argues that non-competes impede labor mobility and the efficient matching of openings with workers.[56] However, banning non-competes can also prevent the efficient matching of openings with workers.[57] If non-competes are available and if workers are fully informed before accepting employment that comes with a non-compete, workers can then match themselves better with jobs according to their preference for mobility. Workers who value mobility more will be less willing to sign restrictive non-competes. Workers who agree to non-competes would, all other things being equal, receive a wage premium for giving up some mobility (in the same way that workers who take physically risky jobs get a risk premium).

In addition, banning non-competes would impede the efficient matching of workers with firms through acquisition.[58] The purpose of many acquisitions, particularly in the tech sector, is to acquire the human capital–the expertise of the employees.[59] A potential acquirer will be less interested in acquiring a firm if its employees can go elsewhere or even

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STAT. MONTHLY LAB. REV. (2021), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3974897 [https://perma.cc/9RSA-AGA8].

52. *Id.*

53. NPRM, *supra* note 1, at 17.

54. *See* Starr et al., *supra* note 52, at 14. "[T]he NCA-wage differential is lower for workers that do not bargain over wages, have less education, have lower ability, or live in a state that enforces NCAs." *Id.* at 1.

55. *See, e.g.*, NPRM, *supra* note 1, at 179.

56. *Id.* at 3.

57. *See, e.g.*, *id.* at 26.

58. *See generally* FTC Hearings on Competition and Consumer Protection, FTC Hearing #3: Multi-Sided Platforms, Labor Markets, and Potential Competition, Oct. 15–17, 2018 (discussing nascent competition in digital technology markets).

59. *Id.*

start a new firm to compete with their former employer.[60] To the extent that the Commission considers acquisitions, whether nascent or mature, to be pro-competitive or welfare-enhancing, it should view human capital as an asset that produces economic value through profitable output.

Firms may be able to find alternative contractual arrangements to incentivize them to invest in human capital, but other arrangements could possibly be more expensive or less efficient. The NPRM acknowledges the incentive effects as it includes an exception for founders and key employees who have at least a 25% ownership interest in the acquired firm, but this is a limited exception.[61] Many key employees many have less than a 25% ownership interest.[62]

The proposed ban may increase wages for a subset of workers.[63] But, as the FTC acknowledges and we discuss in more detail below, some of this increase represents a transfer rather than a real economic benefit.[64] To the extent that increased wages are not accompanied by increased efficiencies, the changes in earnings would lead to increased consumer prices.

Other workers may see lower wages due to an inability to earn a wage premium associated with agreeing to a non-compete.[65] Workers would be unable to match themselves with firms according to the strength of their preferences for mobility.[66]

A structural model for the effect of a ban on non-competes on labor markets should consider effects on investment, acquisition, wages, and labor mobility. Without recognition of these effects, the Commission treats the labor market as a monolith in which all workers in all occupations in all locations are identical and presumes that effects of a ban on non-competes are entirely predictable and one-directional. The reality, of course, is far more complicated.

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60. *Id.*

61. *Id.*

62. *Id.* Firms with more than 4 employees will have employees who do not have 25% ownership interest as a "substantial owner, substantial member, or substantial partner." *See id.*

63. NPRM, *supra* note 1, at 155.

64. *Id.* at 161.

65. *Id.*

66. *Id.*

2. Job Creation and Entrepreneurship

The FTC "believes, with respect to job creation rates, the evidence is inconclusive."[67] This Article agrees that given that only two studies examine the question and each is heavily caveated.[68] However, two cited studies find that non-competes are associated with *more*, not *less*, job creation.[69] The FTC describes "[o]ne study . . . estimates the job creation rate at startups increased by 7.8% when Michigan increased non-compete clause enforceability,"[70] while, "[a]nother study finds that several increases in non-compete clause enforceability were associated with a 1.4% increase in average per-firm employment at new firms (though not necessarily total employment)."[71] The FTC theorizes one possible explanation for these results that would support its proposed rule; they argue that the composition of the size of new entrants will change because smaller firms are less likely to enter with non-compete clause enforcement.[72] Firm-level and individual-level effects have yet to be established, and the FTC hypothesizes a reason for why the second study observes job growth; the agency argues that if total employment does not necessarily increase from non-compete clause enforceability,[73] but increased average job creation is observed from new firms, it might be because the average entering firm was relatively larger."[74]

Unlike the FTC, the authors of the studies do not suggest that the results show causality.[75] That is, they do not suggest that non-competes themselves create jobs.[76] They discuss many possible explanations for their results.[77] Starr, et al. note that studying the issue requires careful consideration of many factors that affect employment and firms:

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67. *Id.* at 29.
68. *Id.* at 28.
69. *Id.*
70. *Id.* at 28 (citing Gerald A. Carlino, *Do Non-Compete Covenants Influence State Startup Activity? Evidence from the Michigan Experiment* 16 (Fed. Res. Bank of Phila. Working Paper 21–26, 2021)).
71. NPRM, *supra* note 1, at 28 (citing Evan Starr et al., *Screening Spinouts? How Noncompete Enforceability Affects the Creation, Growth, and Survival of New Firms,* 64 MGMT. SCI. 552, 561 (2018)).
72. NPRM, *supra* note 1, at 29.
73. *See* Starr et al., *supra* note 74.
74. NPRM, *supra* note 1, at 29 (citing Starr et al., *supra* note 74).
75. *See* Starr et al., *supra* note 74.
76. *Id.*
77. *Id.*

> Also, our results indicate that, to understand the overall effect of enforceability, we need to not only examine individual-level mobility . . . but also consider firm-level outcomes, because enforceability affects new firm formation and their growth in ways different from those at the individual level. Furthermore, our results highlight how studying the aggregate effect on employee mobility may mask important differential effects across different types of firms.[78]

The FTC notes that Jeffers[79] found that "decreases in non-compete clause enforceability were associated with an 8.6% increase in departure rates of workers, and a 15.4% increase in within-industry departure rates of workers."[80] However, the author also discusses a tradeoff.[81] She notes that "increases in the enforceability of non-compete agreements lead to widespread declines in employee departures, specifically in knowledge-intensive occupations. Established firms that rely more on these knowledge-intensive occupations increase their investment rate in physical capital. However, new firm entry in corresponding sectors declines."[82]

The FTC cites a conclusion by Samila and Sorenson,[83] who "found when non-compete clauses are more enforceable, rates of entrepreneurship, patenting, and employment growth slow."[84] Those authors, however, also say "[t]he overall effect of non-compete clauses on outcomes other than mobility therefore remains an open question."[85]

3. Training and Investment

The FTC acknowledges that the evidence suggests that non-competes increase investments in training and other types of investment, noting that, "[a]ny investment which is lost due to the inability of firms to use non-compete clauses would likely represent the greatest cost of the

78. Starr et al. (2018), *supra* note 74, at 568.

79. *See* Jessica Jeffers, *The Impact of Restricting Labor Mobility on Corporate Investment and Entrepreneurship* (Apr. 2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3040393 [https://perma.cc/GPT2-M5CA]. The NPRM cites a 2019 version of the paper at 47. NPRM, *supra* note 1, at 31. The most recent appears to be 2023.

80. NPRM, *supra* note 1, at 31.

81. Jeffers, *supra* note 82, at 1.

82. *Id.*

83. NPRM, *supra* note 1, at 38.

84. Sampsa Samila & Olav Sorenson, *Noncompete Covenants: Incentives to Innovate or Impediments to Growth*, 57 MGMT. SCI. 425, 432 (2011), https://www.jstor.org/stable/41060682 [https://archive.ph/PZRK7].

85. *See* Samila & Sorenson, *supra* note 87, at 425; *see also* NPRM, *supra* note 1.

proposed rule."[86] Indeed, the NPRM cites a study that found the value of publicly traded firms increased by nine percent due to an increase in non-compete enforceability.[87] The agency should not be so quick to disregard this number, given that the market cap of the firms in the S&P 500 is more than $30 trillion.[88] We are not suggesting the value of the market would fall by nine percent due to the proposed rule; instead, as the FTC acknowledges, the costs may be high and it should spend some effort to explore this question further.[89]

4. A Large Share of the Evidence Relies on a Single Survey

The FTC's decision to rely so extensively on a single survey for such a sweeping proposal seems unwise. The NPRM relies heavily on the 2014 Noncompete Survey Project, which is a unique survey of 11,505 people about non-competes, conducted by Evan Starr, J.J. Prescott, and Norman Bishara.[90] The authors described the survey methodology in a follow-up paper.[91] The Qualtrics survey was conducted online between April 22, 2014, and July 25, 2014, over a three-month period.[92] The 100-question survey took, on average, 27 minutes to complete and subjects were paid

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86. NPRM, *supra* note 1, at 47.

87. *See* Kenneth A. Younge & Matt Marx, *The Value of Employee Retention: Evidence from a Natural Experiment*, 25 J. ECON. & MGMT. STRATEGY 652, 652 (2016).

88. S&P 500 MARKET CAP, https://ycharts.com/indicators/sp_500_market_cap [https://perma.cc/3GM3-Y5LA].

89. NPRM, *supra* note 1, at 135.

90. *See* Evan P. Starr et al., *Noncompete Agreements in the U.S. Labor Force*, 64 J.L. & ECON. 53, 53 (2021).

91. *See* James J. Prescott et al., *Understanding Noncompetition Agreements: The 2014 Noncompete Survey Project,* 2016 MICH. ST. L. REV. 369, 370 (2016).

92. *Id.* at 397.

> In the end, we settled on using Qualtrics, a reputable online survey company with access to more than 10 million verified panel respondents. The target size for this data-collection project was 10,000 completed surveys. We were able to control the characteristics of the final sample through the use of quotas.

Id. Eight subcontractors of Qualtrics administered the survey questions, including ClearVoice, GMI, Sample Strategies, SSI, Innovate, Toluna, Precision Sample, and Samplify. *Id.* at 429. "Only 35.3% of the ClearVoice panel and 51% of the Sample Strategies panel is employed full-time relative to the 82% full-employment rate for the whole of the U.S. labor force." *Id.*

$1.50 to complete the questions.[93] Of 700,000 invitees, 79,328 began taking the survey, 28,824 were not in the sample of interest, 28,906 (57.2%) did not finish the survey, and 11,505 survey responses remained after self-employed, public employees, and other categories were dropped, for a 1.5% response rate.[94] The authors spent considerable time with weights and imputation methods to clean the data.[95] The data was weighed to reflect 2012 American Community Survey ("ACS") demographics, and oversamples or over-represents, the survey responses from residents of Colorado, Oregon, Massachusetts, and Florida.[96]

A significant portion of the empirical evidence cited in the NPRM is derived from the 2014 Noncompete Survey Project results.[97] The NPRM also cites to three other papers based on the same data set, and one additional paper that repeats statistics from it.[98] The following eleven facts are derived from the single survey:

> 1. Prevalence — 18% work under non-competes, 38% at some point; same rate as states that enforce[99]
>
> 2. Prevalence — 53% workers are hourly[100]
>
> 3. Knowledge of Enforceability — 37% did not know, 11% was misinformed[101]

93. *Id.* at 404–05, 432 ("Respondents who attempted the survey but did not finish it were paid only 10¢. By comparison, respondents who actually completed the survey either received $1.50, were entered into a sweepstakes drawing for various online rewards, or were awarded credits to play a particular online game.").

94. *Id.* at 407, 453.

95. *Id.* at 397.

96. *Id.* at 405.

97. *See generally* NPRM, *supra* note 1. This is not meant to be a criticism of the 2014 survey. To the contrary, it provides valuable new information on non-competes.

98. *See, e.g.*, Lipsitz & Starr, *supra* note 39; J.J. Prescott & Evan Starr, *Subjective Beliefs About Contract Enforceability,* 10 J. OF LEGAL STUD. (2022); Evan Starr, Justin Frake, & Rajshree Agarwal, *Mobility Constraint Externalities*, 30 ORG. SCI. 961, 966 (2019); Rachel Arnow-Richman et al., *Supporting Market Accountability, Workplace Equity, and Fair Competition by Reining In Non-Disclosure Agreements* 2–6 (UC-Hastings Rsch. Paper, forthcoming 2022); NPRM, *supra* note 1, at 18.

99. *See* NPRM, *supra* note 1, at 15–16 (citing Starr et al. (2021), *supra* note 101).

100. *Id.* at 16 (citing Lipsitz & Starr, *supra* note 39).

101. *Id.* at 18 (citing Prescott & Starr, *supra* note 100).

4. Bargaining Power — 10.1% bargained, 7.9% consulted lawyer[102]

5. Earnings — non-compete usage is associated with 6.6% higher earnings in the model[103]

6. Indirect Earnings — when the use of non-compete clauses by employers increases, that drives down wages for workers who do not have non-compete clauses but who work in the same state and industry[104]

7. Labor Mobility — a non-compete clause was associated with a 35% decrease in the likelihood a worker would leave for a competitor[105]

8. Training — no statistically significant impact on either training or the sharing of trade secrets[106]

9. Knowledge of Enforceability — where non-compete clauses are unenforceable, workers are covered by non-compete clauses at roughly the same rate as workers in other states[107]

10. Non-Disclosure Agreements — 33% and 57% of U.S. workers are subject to at least one NDA[108]

11. Transfer or Social Benefit — available data does not allow for an estimate of the magnitude of transfers versus the total increase in economic benefit[109]

The FTC's reliance on a single survey for such a sweeping proposal seems unwise given general survey challenges including: selection bias, framing, and truthful responses.[110] Self-reporting by respondents means that the authors could not validate or verify the accuracy of their responses. And the authors had to make decisions and assumptions that

102. *Id.* at 18 (citing Starr et al., *supra* note 93).
103. *Id.* at 22 (citing Starr et al., *supra* note 93).
104. *Id.* at 25 (citing Starr, Frake & Agarwal, *supra* note 101).
105. *Id.* at 32 (citing Starr et al., *supra* note 93).
106. *Id.* at 46 (citing Starr et al., *supra* note 93).
107. *Id.* at 85 (citing Starr et al., *supra* note 93).
108. *Id.* at 98 (citing Arnow-Richman, Carlson, Lobel, Roginsky, Short, Starr, 2022, citing Starr, Prescott, & Bishara, 2021).
109. *Id.* at 171 (citing Starr, Frake, Agarwal, *supra* note 101).
110. *See* Prescott et al., *supra* note 101.

could affect results, as is true in all surveys and research.[111] They filled in missing data for "maybe" responses; added a question while the survey was already in the field;[112] and excluded "all self-employed individuals, government employees, and those who indicated that they were both unemployed and not looking for work."[113]

The novelty of the Starr, Prescott, Bishara paper and the 2014 Non-Compete Survey Project shows that the labor economics literature on non-competes has considerable room for additional study and research.[114] Funding additional survey work, perhaps using other methods like discrete choice experiments, would go a long way in building our understanding of non-competes in the economy.

The NPRM also relies on a 2017 phone survey by Alexander Colvin and Heidi Sierholz to determine that 49.4% of establishments have at least some employees under a non-compete agreement.[115] The telephone survey conducted between March to July of 2017 included 634 establishments in its sample size.[116] Colvin & Sierholz estimate that "somewhere between 27.8% and 46.5% of private-sector workers are subject to non-competes.[117] Applying this share to today's private-sector workforce of 129.3 million means that somewhere between 36 million and 60 million private-sector workers are subject to non-compete

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111. *Id.*

112. *Id*. at 66.

> Our goal was to impute values for many different variables [see Table 18 for details], some of which were missing because of the cleaning process we describe above in Section OF4 and others because we added the relevant question to the survey while the survey was in the field. In addition, as we explain in the article, we also aimed to impute whether the 'maybe' individuals are currently or have ever been bound by a non-compete. Because we sought to impute missing values across multiple variables, we employed Stata's chained multiple imputation command, which imputes missing values for all variables in one step.

Id.

113. Prescott et al., *supra* note 94, at 397.

114. *Id.*

115. *See* NPRM, *supra* note 1, at 184 (citing Alexander J.S. Colvin & Heidi Sierholz, *Noncompete Agreements*, ECON. POL'Y INST. (2019), https://files.epi.org/pdf/179414.pdf [https://perma.cc/SZ49-Q557]).

116. *Id.*

117. *Id.*

agreements."[118] Not only is the range of this estimate overly broad, but the estimate is also 2x another estimate that 18% of employees are under a non-compete agreement in the peer-reviewed Starr, Prescott, Bishara study.[119] In their survey, Colvin & Sierholz claim that the difference in the estimates is explained by a change in the incidence of non-compete agreements in just the last 3 years and that self-reported results in the 2014 online survey were biased downwards by forgetful or unknowledgeable workers:

> The difference likely is attributable to the fact that the surveys were three years apart, suggesting that the use of noncompetes is growing. It also likely is attributable to the fact that ours was a survey of business establishments, while the earlier instrument was a survey of workers in the private sector or in a public health care system. While businesses know whether their workers are subject to non-compete agreements, workers may not know or remember they are covered by a non-compete, and thus may underreport being subject to them.[120]

The Colvin & Sierholz survey has not been peer-reviewed as far as the authors of this Article can tell.

B. Research Is Silent on Whether Alternatives Are Equally Effective

The FTC acknowledges that non-competes can have benefits, at least in theory, pointing out that "the most common justification for non-compete clauses is they increase employers' incentives to make productive investments in, for example, trade secrets, customer lists, worker training, and capital investment."[121] Additionally, firms may be reluctant to share information with employees if they can walk out the door with those secrets the next day.[122] This reduces the value of the intellectual property—and therefore the incentive—to create it in the first place. Sharing less information internally would make operations less efficient, thus raising costs.[123] Those costs are presumably passed on to consumers in the form of some combination of higher prices, lower

118. *Id.* at 2.
119. Starr et al., *supra* note 93, at 53.
120. *Id.* at 2.
121. NPRM, *supra* note 1, at 104.
122. Treasury Report, *infra* note 129, at 7.
123. *Id.*

quality, and fewer new products.[124] Other forms of intellectual property protection, such as non-disclosure requirements, may be less efficient and more difficult to enforce.[125]

Another way of looking at this, as described in a report by the U.S. Treasury, is that non-competes solve:

> a 'hold-up' problem: *ex ante*, both worker and firm have an interest in sharing vital information, as this raises the worker's productivity. But *ex post*, the worker has an incentive to threaten the firm with divulgence of the information, raising his or her compensation by some amount equal to or less than the firm's valuation of the information. Predicting this state of affairs, the firm is unwilling to share the information in the first place unless it has some legal recourse like a non-compete contract.[126]

The FTC acknowledges the existence of evidence supporting this theory in the NPRM:

> there is evidence non-compete clauses *increase* worker training and capital investment (e.g., investment in physical assets, such as machines). Non-compete clauses may *increase* an employer's incentive to train their workers or invest in capital equipment because workers bound by non-compete clauses are less likely to leave their jobs for competitors.[127]

Nevertheless, the FTC believes that alternatives to non-competes, such as non-solicitation agreements, non-recruitment agreements (no-poaching), and non-disclosure agreements, can be equally effective in providing employers the incentive to invest in training and capital investment.[128] Yet, no literature seems to exist comparing the effectiveness of these other mechanisms to non-competes. The sole support for the FTC's belief in the effectiveness of other mechanisms stems from

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124. *Id.*

125. *See* Kobayashi, *supra* note 37, at 712.

126. Office of Economic Policy, *Non-Compete Contracts: Economic Effects and Policy Implications* 7, U.S. DEP'T OF THE TREASURY (Mar. 2016) [hereinafter "Treasury Report"], https://home.treasury.gov/system/files/226/Non_Compete_Contracts_Econimic_Effects_and_Policy_Implications_MAR2016.pdf [https://perma.cc/TST5-2X2N].

127. NPRM, *supra* note 1, at 91–92 (emphasis added).

128. *See id.* at 99–101.

> three states in which non-compete clauses are generally unavailable to employers today: California, North Dakota, and Oklahoma. In these three states, employers generally cannot enforce non-compete clauses, so they must protect their investments using one or more of the alternatives described above. The [enforcement] experiences of these states suggest the alternatives described above are fundamentally viable for protecting valuable firm investments.[129]

Although these statements are correct, it does not necessarily follow that other mechanisms for protecting investments and trade secrets are equally effective.[130] The economic literature has started to investigate the bundled nature of other employment restrictions with non-compete agreements, but it has only just begun to investigate the incidence of other types of clauses.[131] One paper cited by the NPRM investigates the impact of these other restrictions in natural experiments of non-compete agreements.[132]

Balasubramanian et al. embark on one of the only studies that look at the interaction of these different types of employment restrictions by gathering data in a 2017 study of Payscale.com employees.[133] They write, "[h]owever, the literature has largely ignored other closely related and widely discussed contract terms that firms can use to achieve similar goals . . . ."[134] The NPRM acknowledges the variety of other types of provisions,[135] but does not cite studies other than Balasubramanian et al.'s study that isolates the effect of non-competes alone.[136]

Based on Balasubramanian et al.'s paper, the NPRM estimates that "97.5% of workers with non-compete clauses are also subject to a non-solicitation agreement, non-disclosure agreement, or a non-recruitment agreement, and 74.7% of workers with non-compete clauses are also

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129. *Id.* at 100.

130. *See infra* note 136.

131. *Id.*

132. NPRM, *supra* note 1, at 10.

133. *See* Natarajan Balasubramanian et al., *Employment Restrictions on Resource Transferability and Value Appropriation from Employees*, 1 (2023), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3814403 [https://perma.cc/G3KQ-FZBG].

134. *Id.* (estimating 24.2% of workers from a 2017 Payscale.com survey were subject to NCA but that all three of the other restrictive employment covenants were bundled with non-competes 74.7% of the time).

135. *See* NPRM, *supra* note 1, at 10–11.

136. *Id.*

subject to all three other types of provisions."[137] The potential interaction of employment restrictions other than non-competes is important for conclusions regarding non-competes alone.[138] Results from Balasubramanian et al. reveal heterogeneity in the incidence of each of four alternatives of employment restrictions.[139] In a table in their paper, the authors cover four post-employment restrictions: non-compete agreements ("NCA"), non-solicitation agreements ("NSA"), non-recruitment agreements ("NRA"), and non-disclosure agreements ("NDA").[140] The authors organize these restrictions in rows with descriptions of each restriction in the columns with details on the prohibited type of action in each agreement, the type of capital that is meant to be protected, the willingness of a court to enforce, typical difficulty in proving the violation, typical duration of time, and typical geographic scope.[141]

The authors also show in a chart the incidence of post-employment restrictions for each of the 4 types of restrictions and support those findings with firm-level survey data.[142] The authors also list out statistics on variation in the distribution of restrictions by occupation and industry.[143] Eighteen categories of industries ranging from agriculture and hunting to accommodation and food services are listed, along with twenty-one categories of occupations ranging from management to legal to construction and extraction.[144]

Event studies, natural experiments, and difference-in-differences studies should include controls for these three other types of alternative restrictions in order to isolate the causal effect of NCAs. Without incorporating these other possible causes of labor outcomes, the existing literature may be missing important results through omitted variable bias.

137. *Id.* at 185.
138. *Id.*
139. *Id.*
140. Balasubramanian et al., *supra* note 136, at 37, tbl. 1.
141. *Id.*
142. *Id.* at 34, fig. 1.
143. *Id.* at 50, tbl. A8.
144. *Id.*

C. SCHOLARS OF NON-COMPETES DO NOT APPEAR TO SUPPORT A FULL BAN

Several of the researchers the FTC cites apparently do not agree that the state of the literature supports an overall ban.[145] University of Maryland Professor Evan Starr, the most-cited scholar in the NPRM, co-authored a March 2023 *Slate* op-ed about non-competes, in which he concluded that "policymakers probably shouldn't be too concerned about banning non-competes for at least 80 percent of workers, because firms aren't either.[146] Rather, the debate over non-competes should probably be limited to the top wage earners, perhaps just the top 5 to 10 percent."[147]

But the proposed rule does not focus only on low wage workers or exempt the top wage earners from the rule, nor does it even allow that there should be a debate.[148] The proposal has one exception, "where the party restricted by the non-compete clause is an owner, member, or partner holding at least a 25% ownership interest in a business entity."[149] If an author of the research the FTC cites to support the FTC's proposed ban cannot conclude that his research supports a total ban, it is unlikely that the Commission can justify its own conclusion that a total ban is supported by that same research.

In a 2020 review of the literature, Ringeling, et al. point out two other cases in which authors of studies on non-competes commented on the uncertainty remaining in the literature.[150] One comment made in 2020 noted that scholars do not yet have a baseline for concluding that non-competes are detrimental for overall economic welfare and that tradeoffs may be context-specific and heterogeneous.[151] During a 2020 FTC conference on non-compete agreements, Ohio State University Professor Kurt Lavetti, also cited in the NPRM, presented a slide stating:

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145. Evan Starr & Tayuka Hiraiwa, *Companies Say They Need Noncompete Clauses. Here's How We Know That's Not True.*, SLATE (Mar. 16, 2023), https://slate.com/business/2023/03/noncompete-clauses-washington-research-ban-ftc.html [https://perma.cc/5UBQ-Z67D].

146. *Id.*

147. *Id.*

148. NPRM, *supra* note 1.

149. *Id.* at 5.

150. *See* Ringeling, et al., *supra* note 37, at 14–15.

151. Kurt Lavetti, F.T.C., Presentation: *Economic Welfare Aspects of Non-Compete Agreements* 55 (Jan. 9, 2020), https://www.ftc.gov/system/files/documents/public_events/1556256/non-compete-workshop-slides.pdf [https://perma.cc/J3NX-WWUE].

> Empirical evidence has convincingly shown that strengthening NCA laws reduces *average* earnings and worker mobility.
>
> - Still far from reaching a scientific standard for concluding NCAs are bad for overall welfare
> - Also don't yet fully understand the distribution of effects on workers
> - Welfare tradeoffs are likely context-specific, and may be heterogeneous . . . .[152]

In another comment on the literature made in late 2019, John McAdams, an economist whose work the NPRM does not cite, noted the necessity of further research that could take into account new sources of data to determine causal impacts of non-competes on labor markets.[153] In a review of the non-compete literature, McAdams explains the lack of evidence for likely effects of broad prohibitions and the need to gather more evidence that is better than the datasets in the current literature.[154] He notes that the more credible studies are narrowly focused on particular occupations or specific policy changes that may be difficult to generalize to the entire U.S. labor market:

> Although the literature has made important strides in studying non-competes and their effects on workers, firms, and end consumers, further work is needed. Due to the limited availability of data and a paucity of natural experiments (e.g., law changes) to assess the impact of non-competes, much of the literature relies on cross-sectional comparisons of signers and non-signers, or high-enforceability states and low-enforceability ones. *The more credible empirical studies tend to be narrow in scope*, *focusing on a limited number of specific occupations (e.g., executives) or potentially idiosyncratic policy changes with uncertain and hard-to-quantify generalizability (e.g., banning non-competes for technology workers in Hawaii).* There is little evidence on the likely effects of broad prohibitions of non-compete agreements. Further research, perhaps exploiting more recent

152. *Id.*

153. John M. McAdams, *Non-Compete Agreements: A Review of the Literature* 4, (FTC Working Paper, Dec. 2019), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3513639 [https://perma.cc/2R44-KRQC].

154. *Id.*

> law changes or new sources of data, is necessary to establish the causal impact such agreements have on market participants.[155]

None of these scholars suggest that current research supports the kind of rule the FTC is proposing.[156]

II. THE FTC'S CBA IS FLAWED AND INCOMPLETE

The NPRM estimates a benefit of $250 billion from a 3.3% increase in wages across the labor force from the ban on non-compete agreements.[157] This is the lower end of a range, which is 3.3% increase in wages, and at the upper end of the range, 13.9% increase would amount to a $1.053 trillion increase in annual wages across the entire labor market.[158] It estimates the costs of rewriting contracts to comply with the rule across the economy to be about $1.5 billion.[159] It also acknowledges that "firm investment in worker training and capital assets would fall," but does not attempt to quantify the effect.[160]

The FTC's CBA in the NPRM is flawed and incomplete.[161] It concludes the CBA yields net benefits even though, by its own acknowledgment, it lacks the information necessary to do the calculation.[162] It assumes away all uncertainty and calculates benefits as if completely certain they will appear.[163] Finally, while the FTC acknowledges that "some" of the earnings increases are transfers rather than economic benefits, it simply counts the entire estimated increase as an economic benefit.[164]

155. *Id.* (emphasis added).
156. *Id.*
157. NPRM, *supra* note 1, at 162.
158. *Id.* at 163.
159. *Id.* at 187.
160. *Id.* at 159.
161. *Id.*
162. *Id.*
163. *Id.*
164. *Id.*

A. THE NPRM ASSUMES THE CBA YIELDS NET BENEFITS BUT ACKNOWLEDGES IT LACKS INFORMATION TO CALCULATE COSTS AND BENEFITS

The FTC notes that it is difficult to quantify many of the costs and benefits: "The nature of the estimates [] creates substantial difficulty in calculating a bottom-line present value of the net benefit to the economy of the proposed rule."[165] Yet, despite its acknowledgement of an incomplete CBA and an inability to calculate a "bottom-line present value" the Commission "believes the substantial labor and product market benefits of the proposed rule would exceed the costs, and additionally would persist over a substantially longer time horizon than some of the one-time costs of compliance and contract updating."[166] By its own acknowledgment, the Commission's belief is just that—a belief not confirmed by analysis.[167]

B. THE NPRM ASSUMES AWAY ALL UNCERTAINTY

The FTC calculates the benefits as if it knows with certainty what the effects of the rule will be:

> The Commission finds substantial benefits of the proposed rule: workers' earnings would likely increase by $250-$296 billion annually (though some portion of this represents an economic transfer from firms to workers), new firm formation and competition *would* increase, health care prices *would* fall (and prices in other markets may fall), and innovation *would* increase . . . .[168]

But the FTC itself acknowledges the uncertainty in the literature, which is particularly lacking in certainty on firm formation, competition, health care prices, and innovation.[169] However, in its analysis, the Commission simply assumes that all those effects will occur regardless of the state of the literature.[170] The many caveats and mixed results in the research make such certainty inappropriate. A large literature on coping

165. *Id.*
166. *Id.*
167. *Id.*
168. *Id.* at 159 (emphasis added).
169. *Id.*
170. *Id.*

with uncertainty in CBA exists; the FTC should take it into account, or at least acknowledge it.[171]

C. THE NPRM MUST SHOW THAT EARNINGS EFFECTS ARE REAL, NOT TRANSFERS

A CBA distinguishes between monetary transfers and real economic effects.[172] A change in earnings is a transfer—either from employers to workers or vice-versa—not a change in real economic output, unless it causes a change in behavior or reflects real labor market changes.[173] Increased wages are a real benefit to workers and a real cost to employers (some or all of which is likely to be paid by consumers in the form of higher prices), but it is not in itself an economic effect in the sense of the gain or loss of real resources.[174]

Economic effects, whether costs or benefits, occur through changes in labor mobility, investment, firm formation, and innovation which do create changes in the gain or loss of productivity.[175] The NPRM acknowledges this issue of defining economic goals for its proposed rule, particularly whether a *transfer* of wages from employers to employees could generate *economic* benefits to the economy as a whole:

> It is difficult to determine the extent to which the earnings effects discussed above represent *transfers versus benefits*. In the context of this analysis, *transfers* refer to "monetary payments from one group to another that do not affect total resources available to society." *In other words, transfers do not represent a net benefit or cost to the economy as a whole.* Broad increases in earnings when non-compete clauses are prohibited may simply represent a transfer of income from firms to workers (or, if firms pass labor costs on to consumers, from consumers to workers). There may, however, be a related benefit if the earnings increase of workers is related to market power or efficiency in the labor market. In other words, if a prohibition on non-

171. *See, e.g.*, Daniel A. Graham, *CBA Under Uncertainty*, 71 AM. ECON. REV. 715–25 (1981).

172. *See generally* Principles of Welfare Economics, Principles of Microeconomics, MIT OPEN COURSEWARE, https://ocw.mit.edu/courses/14-01sc-principles-of-microeconomics-fall-2011/pages/unit-4-welfare-economics/principles-of-welfare-economics [https://perma.cc/US33-WFHQ]/.

173. *Id.*

174. Wage changes can have indirect real effects, however, by changing the relative price of different inputs.

175. *Id.*

> compete clauses leads to a more efficient allocation of labor in the market, *perhaps* due to a rebalancing of power between workers and employers which decreases monopsony power, then the resulting earnings increases *may* represent a net benefit to the economy.[176]

In other words, the increase in earnings the FTC believes will flow from the rule are economic benefits only to the extent they improve the functioning of the labor market and, therefore, the behavior and productivity of workers and firms.[177] While the FTC acknowledges this issue, it does not incorporate it into its CBA, but instead, simply classifies all earnings increases as benefits.

Whether these increases in earnings are benefits hinges almost entirely on the extent to which eliminating non-competes changes worker and firm behavior and productivity rather than, say, changes in wage negotiation outcomes.[178] Of all the research the FTC cites, apparently only "two studies suggest there are market-level dynamics governing the relationship between earnings and the enforceability of non-compete clauses: that restrictions on the enforceability of non-compete clauses impact competition in labor markets by alleviating frictions and allowing for more productive matching."[179]

A 2019 study by Starr et al., the FTC notes, "demonstrates when the use of non-compete clauses by employers increases, that decreases wages for workers who do not have non-compete clauses but who work in the same state and industry."[180] Previously, however, the Commission noted that the methodology this paper uses makes assigning causality difficult and "[a]s a result, the Commission gives these studies minimal weight."[181]

The NPRM discusses the FTC's views on the validity of different research methods early in the report:

> the Commission *does not believe that studies* examining the association between non-compete clause use—rather than enforceability—and earnings *are sufficiently probative* of the effects of non-compete clauses on earnings. *The Commission's concern is that non-compete clause use and earnings may both be determined by one or more confounding factors*. It may be the case, for example, that employers who rely most on trade secrets both pay more and use non-

176. NPRM, *supra* note 1, at 170 (emphasis added).
177. *Id.*
178. *Id.*
179. *Id.* at 172.
180. *Id.* at 171 (citing Starr et al., *supra* note 34).
181. *Id.* at 24.

> compete clauses at a high rate (which would not necessarily be captured by the control variables observed in studies of non-compete clause use). This means these studies do not necessarily inform how restricting the use of non-compete clauses through a rule would impact earnings. This methodological limitation contrasts with studies examining enforceability of non-compete clauses, in which changes in enforceability are "natural experiments" that allow for the inference of causal effects, since the likelihood that other variables are driving the outcomes is minimal. A "natural experiment" refers to some kind of change in the real world that allows researchers to study the impact of the change on an outcome. In a natural experiment, the change is effectively random, uninfluenced by other factors which could have simultaneously affected the outcome. In such situations, it is therefore most likely the change itself caused any impact that is observed on the outcomes.
>
> The belief that studies of non-compete clause use *do not reflect causal estimates* is shared by the authors of at least one of the studies of non-compete clause use. As noted in Starr et al., '[o]ur analysis of the relationships between non-compete use and labor market outcomes . . . is best taken as descriptive *and should not be interpreted causally*.' As a result, the Commission gives these studies *minimal weight*.[182]

The FTC relies on the 2019 study by Starr et al. to link earnings changes to real productivity changes even though earlier in the report, the NPRM notes that the study's findings are not conclusive.[183] The NPRM noted that,

> this study relies on use of non-compete clauses, as well as cross-sectional differences in enforceability of non-compete clauses, to arrive at their conclusions. While this approach calls into question the causal relationship outlined in the study, the authors employ tests to increase confidence in the causal interpretation; however, the tests rely on what data the authors have available, and therefore cannot rule out explanations outside of the scope of their data.[184]

Of the two studies on which the FTC hangs its link between increased earnings and real economic effects, one uses a methodology the FTC believes cannot determine causality.[185]

182. *Id.* at 23–24 (emphasis added).
183. *Id.*
184. *Id.* at 25–26 (citing Starr et al., *supra* note 34).
185. *Id.*

III. THE FTC SHOULD FOCUS ON AREAS WHERE EVIDENCE IS MORE CONCLUSIVE

Just as the research does not demonstrate that non-competes are always harmful, it also does not demonstrate that they always yield benefits. The prevalence of non-competes differs across parts of the economy, as do their effects. The NPRM fails to discuss in detail the heterogeneity in non-compete agreement usage across industries and occupations.[186]

Even though studies have conducted surveys to collect data on the usage of agreements, the empirical literature is still nascent so scholars do not know much about the effects of restrictions in each of these industries or occupations.[187] The NPRM cites studies in four specific labor markets: high tech workers in Hawaii,[188] physicians,[189] hourly workers,[190] and CEOs.[191] The Commission provides advice that it should take to heart itself when it notes in discussing the Hawaii example, that "[c]aution is recommended in interpreting this extrapolation, however, since results from one sector within one state may not necessarily inform outcomes that would occur in the rest of the country."[192]

Still, these few sector-specific studies are instructive insofar as they narrowly focus on the context of a particular labor market. The differing institutional details in each occupation and geographic location highlight

186. *Id.* at 165–68. The NPRM also does not address heterogeneity in length of non-compete agreements. *Id.* Non-competes can vary by length of time by 12 months, 18 months, 1 year, 2 years, or more. *Id.*

187. *See id.* at 165.

188. *See id.* (high tech workers in Hawaii, but FTC extrapolates results from a ban only on new non-competes to a total ban in the U.S. to estimate an increase in worker wages).

189. *See id.* at 165–66 (earnings growth among physicians, but taking the effect of enforceability into account, the estimated effects could differ).

190. *See id.* at 167–68 (hourly worker wages, but FTC caveats that results from one segment in one state "may not necessarily inform outcomes that would occur in the rest of the country").

191. *See id.* at 168 (One study showed that wages of CEOs would increase with a ban of non-compete clauses, but this finding comes from a study that ignores heterogeneity and implements linear extrapolation; a second study finds that non-compete usage decreases as enforceability decreases, or in other words, if non-competes cannot be enforced, they will not be implemented, which creates limitations on how well any extrapolations can be made on the impact and effects of a non-compete ban.).

192. *Id.* at 165.

the danger of assuming that all labor markets are identical.[193] Comparing the studies with each other, the effects of non-competes may differ substantially across occupation and industry.[194]

Some of this variability can be observed in a graphic included in the Supplemental Materials Appendix of Starr, Prescott and Bishara paper, which shows a heat map of incident rates of non-competes in 19 industry categories and 22 occupation categories.[195] The graphic shows that some industries, such as professional, scientific, and technical and information industries have higher rates of non-competes, particularly for managers and computer or mathematical occupations.[196] The incidence of non-competes is less frequently observed in other occupations such as grounds maintenance, legal occupations, and farm, fish, or forestry occupations.[197] The heat map shows the variability in the combination of industry and occupation level.[198]

Narrower investigations may be justified. It makes sense to investigate where theory supporting non-competes is weak, reasons for believing workers do not necessarily understand what they are signing are strong, and empirical evidence suggests they are problematic.[199] Such instances do not imply problems everywhere. Research that examines the effects of non-competes across the economy without separating out the different effects by sector and worker type shows, at best, averages across the economy, which do not mean that the results are identical across the economy.

The NPRM addresses the sector-specific studies in short sections on four groups, citing one paper for each except for CEOs, which has two papers.[200] With the exception of the hourly wage study, either the FTC or

193. *See* Balasubramanian et al., *supra* note 136.

194. *Id.*

195. *See* Starr et al., *supra* note 93, supp. app., fig. OA5.

196. *Id.*

197. *Id.*

198. *Id.*

199. *See generally* NPRM, *supra* note 1, at 152 (The FTC asks if "different standards should also be applied to other highly paid or highly skilled workers who are not senior executives, including specifically how such a category should be defined."). A narrow investigation of applying a non-compete ban on one or two types of workers would be reasonable before a categorical ban on all worker types and industries.

200. *Id.* at 168.

the authors heavily caveat the results even for the sector discussed.[201] If the Commission believes these results highlight problems in specific areas, it should investigate further.

For example, both theory and empirical evidence suggest that low-wage workers are the most likely to be harmed by non-competes.[202] Such workers generally have less education and may be less able to understand the nature of a contract they are signing. While employers of even low-wage workers invest in training, it probably costs them less to invest in low-wage workers than it costs them to invest in higher wage workers. Additionally, low-wage workers are less likely to possess sensitive information. Lipsitz and Starr find that non-competes may significantly reduce earnings of hourly workers.[203] This combination of theory and empirical findings may highlight real problems.

But it is difficult to believe that the same problems always exist for high-wage workers at the other end of the spectrum. The effect of non-competes on wages depends greatly on whether workers are well-informed.[204] The evidence shows that, in higher wage settings, workers who are informed that their job offer entails a non-compete have 9.7% higher earnings.[205] They also are 4.3% more likely to have information shared with them, 5.5% more likely to have received training in the previous year, and are 4.5% more likely to report job satisfaction compared with employees without non-competes.[206] At the very top, one would expect CEOs to carefully study contracts they sign when choosing to lead an organization. And one of the two studies the FTC cites found that higher enforceability of non-competes was associated with higher CEO earnings.[207]

The potential major market failure appears to be due to asymmetric information, which suggests that a disclosure requirement could be a

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201. *Id.* Of the two papers on CEOs, one found that lower enforcement of non-competes led to lower wages, implying a wage premium for enforceable non-competes and seemingly undercutting the FTC's own argument. *See* Omesh Kini et al., *CEO Noncompete Agreements, Job Risk, and Compensation*, 34 REV. FIN. STUD. 4701, 4707 (2021). Additionally, it is difficult to believe that CEOs lack information about the contracts they sign or need FTC rules to help them get the best deal for themselves in compensation negotiations.

202. *See generally* Lipsitz & Starr, *supra* note 39.

203. *See id.* at 144.

204. Starr, et al., *supra* note 34, at 12.

205. *Id.*

206. *Id.*

207. NPRM, *supra* note 1, at 168.

preferable alternative to banning the use of non-competes.[208] The Commission acknowledges that "disclosure of non-compete clauses to workers prior to acceptance of a job offer may increase earnings, increase rates of training, and increase job satisfaction for that worker,"[209] but rejects the disclosure alternative on the ground that non-compete clauses "in the aggregate . . . are negatively affecting competitive conditions in labor markets—including impacts on workers who are not bound by non-compete clauses—and in markets for products and services."[210] This is a *non-sequitur*. Especially given the pro-competitive effects of non-competes, the evidence doesn't support the conclusion that when workers are properly informed non-competes will have ubiquitous adverse effects on markets. In fact, there is good reason to believe the opposite—that the effect could be positive.

CONCLUSION

The FTC asked the public for comments on the strength of the empirical evidence to support a categorical ban on non-compete agreements. The empirical literature, in its current development, does not support a ban on non-competes in all U.S. labor sectors all-across occupations and industries. The FTC admits the current state of the empirical literature is inconclusive and its CBA is incomplete.[211] Nevertheless, the Commission seeks to ban non-competes across all industries and occupations. Investigations into the use of non-competes in certain areas, like among low-wage workers, may be justified, but the research does not support such an extensive prohibition.

208. *Id.* at 155.
209. *Id.*
210. *Id.*
211. *Id.* at 156.