Chapter 3   Economic Freedom in the Literature: What Is It Good (Bad) For?

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Scholars such as Adam Smith, David Ricardo, John Stuart Mill, Ludwig von Mises, F.A. Hayek, Milton Friedman, among many others have argued that an economic system based on private property, competitive markets, and free trade would yield good outcomes. In the words of Adam Smith, the "wealth of the nation" would be higher if countries pursued policies consistent with what he called a "system of natural liberty", or what we here would call economic freedom. To these advocates and those that follow in their footsteps, economic freedom brings about not only material prosperity but human flourishing in many dimensions. In contrast, other scholars, among them Karl Marx, J.M. Keynes, Abba Lerner, and Joseph Stiglitz, have argued that economic freedom leads to disastrous, or at least sub-optimal, outcomes especially in its effects upon business cycles and income equality. More recently, opponents of economic freedom have added concerns about the climate and the environment to the list.

Although the theoretical debate between these various camps is itself interesting, at the end of the day, whether economic freedom yields positive or negative outcomes is an empirical question. Since the first edition of the *Economic Freedom of the World* (EFW) (Gwartney, Lawson, and Block, 1996), scholars have used the EFW index in a multitude of different ways to examine these issues. About a decade ago, Hall and Lawson (2014) examined all the academic papers citing the EFW index from 1996 to early 2011, as listed in the Social Science Citations Index (SSCI), and attempted a cataloguing of the results. They summarized their findings this way:

> Of 402 articles citing the EFW index, 198 used the index as an independent variable in an empirical study. Over two thirds of these studies found economic freedom to correspond to a "good" outcome such as faster growth,

better living standards, more happiness, etc. Less than 4% of the sample found economic freedom to be associated with a "bad" outcome such as increased income inequality. The balance of evidence is overwhelming that economic freedom corresponds with a wide variety of positive outcomes with almost no negative tradeoffs.

This chapter is an update to that study and adds to the analysis those papers published and listed in the SSCI from 2011 to early 2022.[1] Including the original 402 papers identified by Hall and Lawson, this chapter includes an *additional* 901 papers, for a total of 1,303. More than twice as many citations of the EFW index were recorded in the last 11 years than in the first 15 years after the first publication. Figure 3.1 shows the cumulative citations of the EFW index by year.[2]

Figure 3.1: Cumulative citations of the EFW index, 1996 to April, 2022
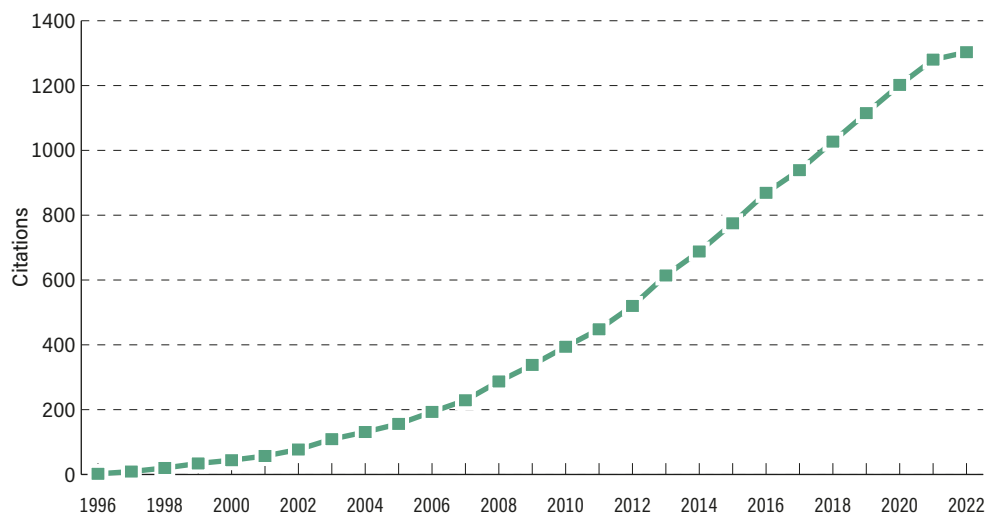
The primary purpose of this chapter is to assess whether the scholarly literature generally assesses the EFW index to be normatively good or bad relative to the various socio-economic outcomes found in the literature. Before turning to the analysis of the degree to which the EFW index has been found to be good or bad within this literature, we will look at who is writing what kinds of papers in what journals.

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1 The SSCI list was compiled on April 18, 2022. It is worth noting that the SSCI is a fairly exclusive list of academic journals. There were in fact many, many more academic citations of the EFW index over these years that were not tracked by the SSCI. Academic books, chapters in books, policy studies, and so on as well as many academic journals are simply not in the SSCI and, of course, the SSCI does not track references from popular media of which there are many. While the numbers from Google Scholar are clearly inflated because of self-cites and duplicate publications (e.g., a working paper, conference presentation, and the final journal article may be counted two or more times), that site reports over 12,000 citations to the EFW index.

2 Some of the increase in the number of papers being listed in the SSCI could be because the SSCI has added more journals to their list. The entire list of papers can be found here: <https://www.dropbox.com/s/8onka7wf8unw1dc/EFW%20SSCI%20Database%204.18.2022.xlsx>.

Top authors, journals, and fields citing the EFW index

Led by the indefatigable Christian Bjornsköv (Aarhus University) with 33 papers and the prolific Horst Feldmann (University of Bath) with 22, the authors with the most SSCI journal citations of the EFW index and shown in **figure 3.2.** These 20 authors accounted for fully 20% of all the citations. For a project conducted by American academics and published by the Fraser Institute in Canada, it is interesting to see that 11 of the 20 authors listed are based in Europe, and only two, Lawson and Murphy, have direct ties to the EFW project.

Figure 3.2: Top 20 authors using the EFW index

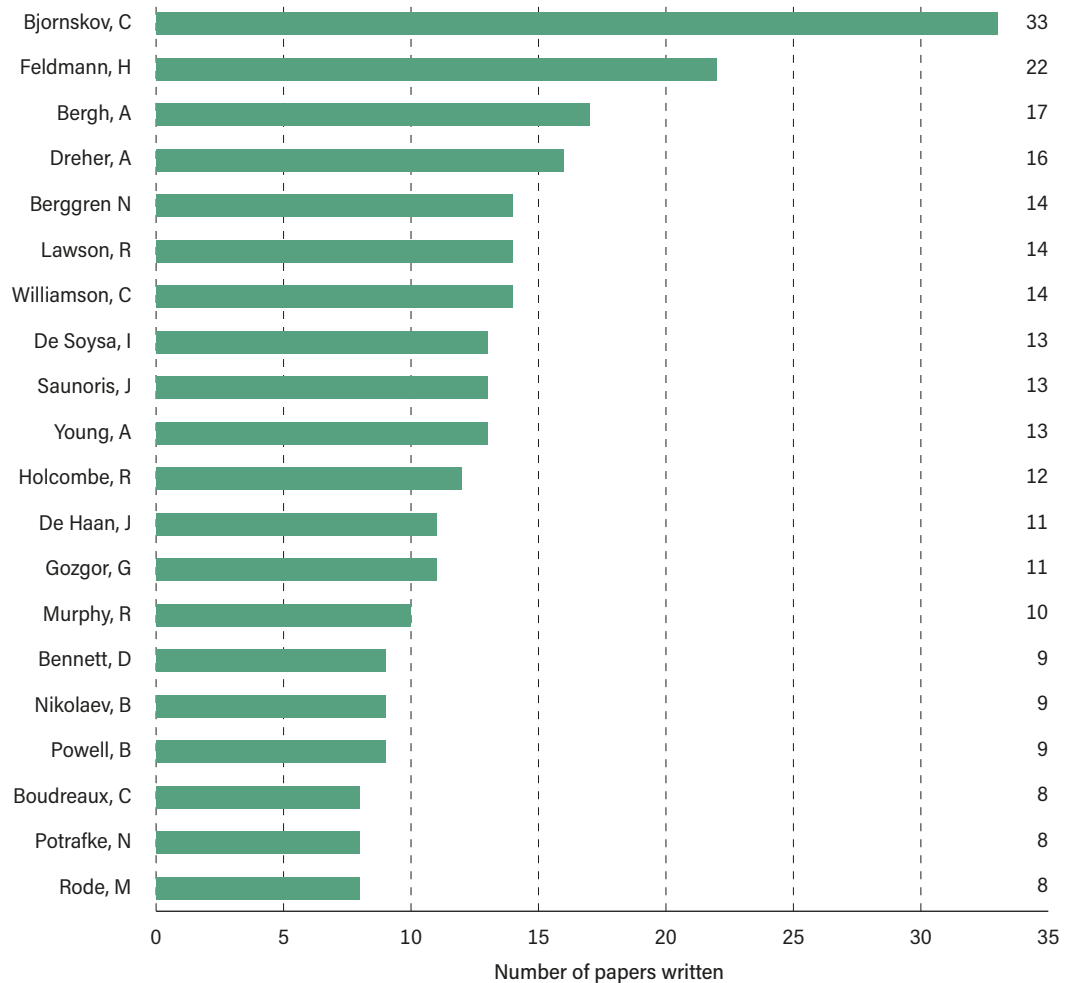| Author	Number of papers written
Bjornskov, C	33
Feldmann, H	22
Bergh, A	17
Dreher, A	16
Berggren N	14
Lawson, R	14
Williamson, C	14
De Soysa, I	13
Saunoris, J	13
Young, A	13
Holcombe, R	12
De Haan, J	11
Gozgor, G	11
Murphy, R	10
Bennett, D	9
Nikolaev, B	9
Powell, B	9
Boudreaux, C	8
Potrafke, N	8
Rode, M	8

Figure 3.3 reports the citation counts for the 20 (actually 21 because of a tie) journals citing the index most often. *Public Choice* leads the pack with 69 citations of the EFW index. In total, the journals listed in figure 3.3 account for 35% of all the citations. Later, we will examine how sensitive our ultimate findings are to the inclusion or exclusion of the most prominent authors and journals.

Figure 3.4 lists the fields represented by all papers citing the EFW index. Not surprisingly, economics journals dominate the list with 821 citations. Three business fields (business, business finance, and management) accounted for 331 citations combined, while political science and international relations teamed up for 330 citations.[3]

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3   Some journals cover more than one SSCI field so the total count is higher than the number of papers.

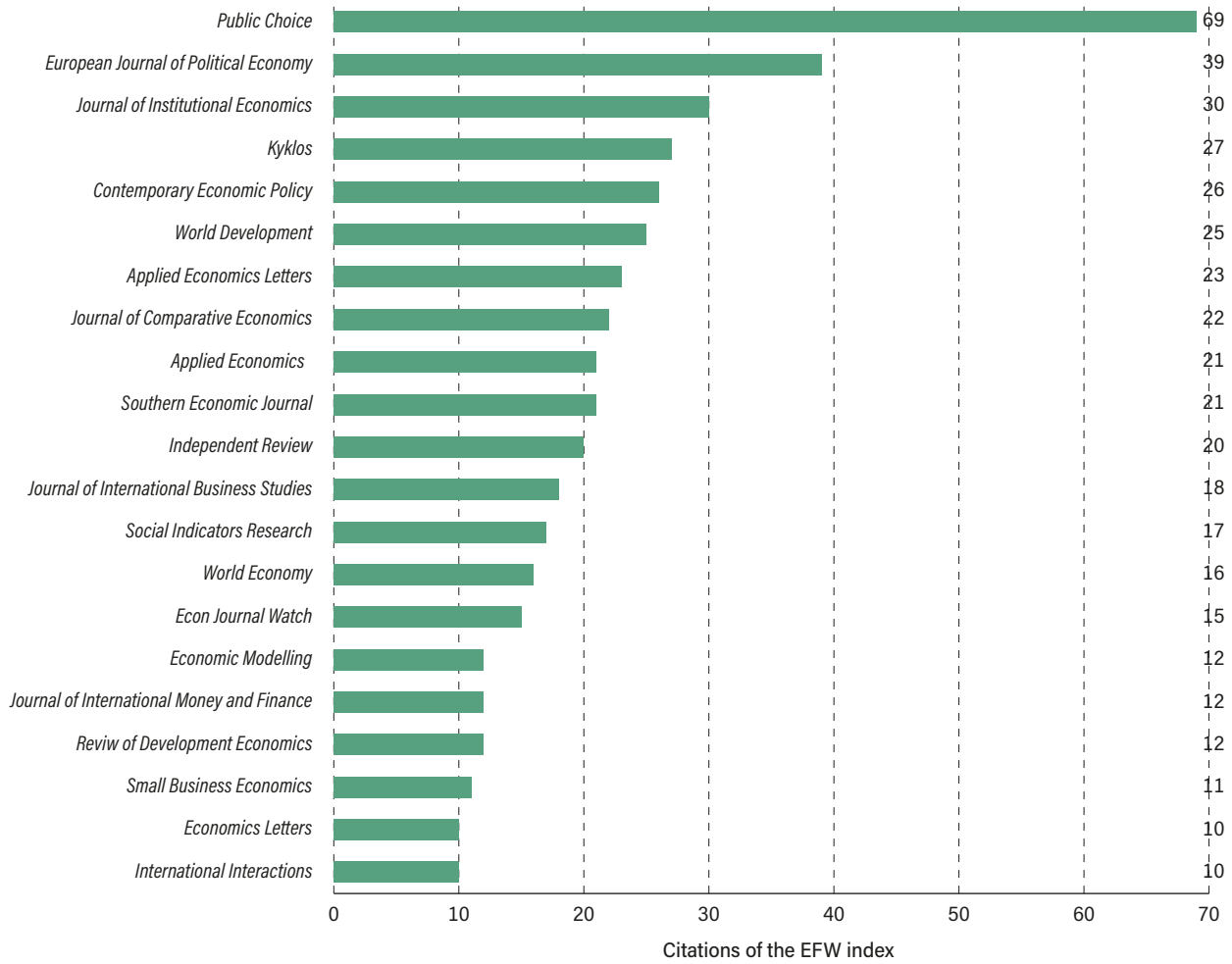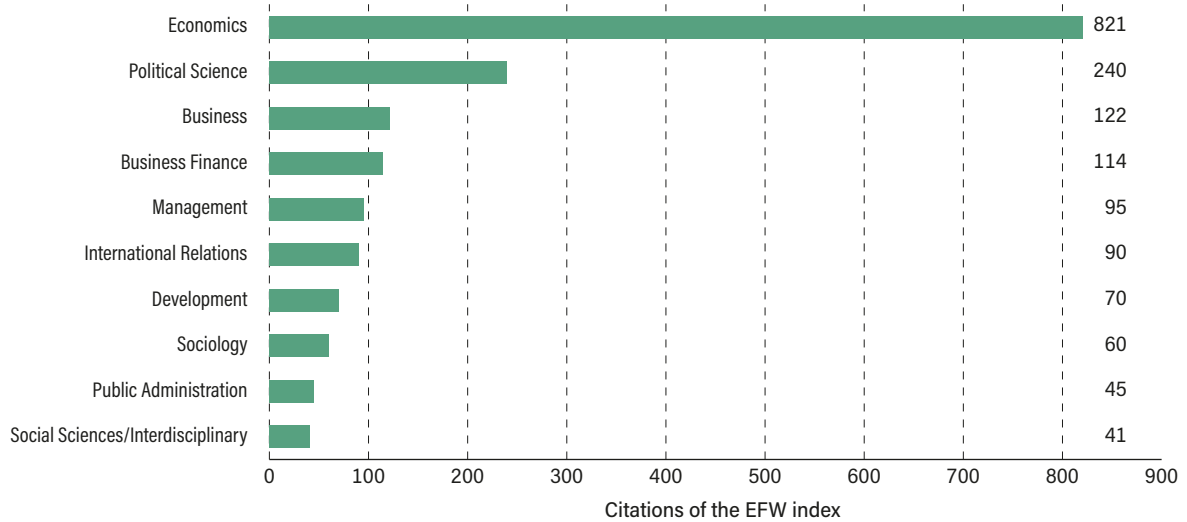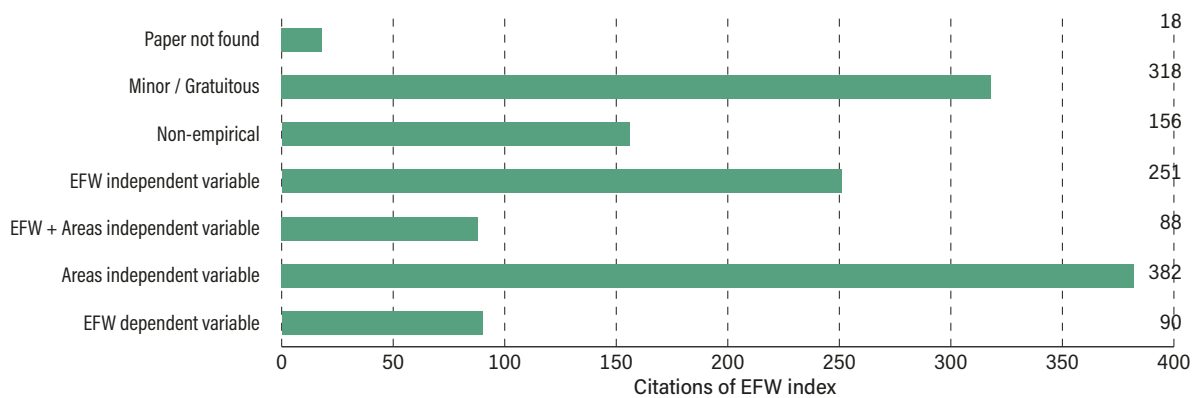## Figure 3.3: Journals with the most citations of the EFW index

Journal	Citations
Public Choice	69
European Journal of Political Economy	39
Journal of Institutional Economics	30
Kyklos	27
Contemporary Economic Policy	26
World Development	25
Applied Economics Letters	23
Journal of Comparative Economics	22
Applied Economics	21
Southern Economic Journal	21
Independent Review	20
Journal of International Business Studies	18
Social Indicators Research	17
World Economy	16
Econ Journal Watch	15
Economic Modelling	12
Journal of International Money and Finance	12
Reviw of Development Economics	12
Small Business Economics	11
Economics Letters	10
International Interactions	10

Citations of the EFW index

Figure 3.4: Most popular fields citing the EFW index

Field	Citations
Economics	821
Political Science	240
Business	122
Business Finance	114
Management	95
International Relations	90
Development	70
Sociology	60
Public Administration	45
Social Sciences/Interdisciplinary	41

Citations of the EFW index

How is the EFW index used?

Each of the papers was first coded for how the author(s) used the EFW index (figure 3.5). Of the 1,303 papers citing the EFW index: 18 could not be found;[4] 318 papers included only a very minor or gratuitous citation; 156 papers used the index in more substantial way but the paper did not have a clear empirical model expressed with a dependent variable as a function of various independent variables. The remaining 811 papers did employ a conventional empirical model. Of these, 90 papers used the level and/or change in the EFW index and/or one of its areas or components as the dependent variable.[5] For the purposes of this chapter, we will focus on the remaining 721 papers that use the EFW summary, area(s), component(s), and/or sub-component(s) as an independent explanatory variable(s); thus, this chapter increases the sample size from the 198 empirical papers examined by Hall and Lawson (2014) by 523 papers.

Figure 3.5: Types of citations and uses of the EFW index

	Citations of EFW index
Paper not found	18
Minor / Gratuitous	318
Non-empirical	156
EFW independent variable	251
EFW + Areas independent variable	88
Areas independent variable	382
EFW dependent variable	90

Each of the 721 empirical papers was coded for how the EFW index was used: 251 papers used only the summary EFW index; 88 papers used the summary EFW index and at least one area, component, or sub-component; and 382 papers used only at least one area, component, or sub-component but not the overall EFW index. In Hall and Lawson's study (2014), there were slightly more uses of the summary EFW index (n = 94) than of the areas, components, and sub-components (n = 84). Over the years, the authors of *Economic Freedom of the World* have expressed some discomfort with the practice of disaggregating the EFW index:

> Furthermore, there is reason to question whether the areas (and components) are independent or work together like the wheels, motor, transmission, driveshaft, and frame of a car. Just as these interconnected parts provide for the mobility of an automobile, it may be the combination of interrelated factors that brings about economic freedom. Which is more important for the

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4 Despite access to the library systems of three research universities and interlibrary loan requests, we could not locate these 18 papers.

5 Putting EFW on the "left-hand side" of the equation has become a more important part of the literature over time. Lawson, Murphy, and Powell (2020) provide a relatively recent review of 69 such papers.

mobility of an automobile: the motor, wheels, or transmission? The question cannot be easily answered because the parts work together. If any of these key parts break down, the car is immobile. Institutional quality may be much the same. If any of the key parts are absent, the overall effectiveness is undermined. (Gwartney, Lawson, Hall, and Murphy, 2021: 6)

Despite the authors' warning above, it is clear that disaggregating the index has become more popular. While we did not track which areas, components or sub-components were used most, Area 2 (Legal Structure and Property Rights) was clearly the most commonly used; Area 1 (Size of Government), Area 4 (Freedom to Trade Internationally), Area 5 (Regulation), and Component 5B (Labor Market Regulation) were also commonly used.

Is economic freedom positively or negatively linked to desirable outcomes?

After determining how the EFW index was used, the second step was to evaluate whether the EFW index (and/or its areas, components, and sub-components) was positively linked to a desirable dependent variable (or negatively linked to an undesirable dependent variable), in which case the paper was coded as a "good" result for economic freedom. If the EFW variable correlated positively with an undesirable outcome (or negatively with a desirable outcome), the paper was coded as a "bad" result. If the EFW variable was sometimes good, sometimes bad, generally insignificant, or conditional on other factors, then the paper was coded as a "mixed/null/uncertain" result.

This scoring process is obviously somewhat subjective but it was rarely difficult to code a paper. In determining whether the dependent variable was a good outcome or a bad outcome, a *ceteris paribus* (all things being equal) assumption was applied. Outcomes like economic growth, foreign direct investment (FDI), life expectancy, and happiness are clearly desirable outcomes, all things being equal, at least to most people. Likewise, outcomes like inequality and pollution are clearly undesirable outcomes, again, all things being equal and at least to most people. A few outcomes were impossible to classify as uniformly desirable or undesirable, even if holding all else equal, and in these cases, the papers were inevitably classified in the mixed/null/uncertain category. A good example of this would be those papers that looked at public opinions of various kinds as the dependent variable; we don't see any way to code people's opinions as either good or bad.

The papers under investigation showed varying levels of care with the data and econometric sophistication. We did not omit or attempt to correct any papers that we thought were flawed, and there were many such papers. All the papers passed through an editorial and peer-review process that led ultimately to final publication in an SSCI-indexed journal, and as a result they are all now are a part of the social scientific record. The bottom line is that it is simply not our place here to judge these papers a second time.

Among the entire group of 721 empirical papers, slightly more than half (50.6%, n = 365) of the papers were deemed to be good in that the EFW index variable was positively correlated with a good outcome. Only 4.6% (n = 33) were classified as bad. Lastly, some 44.8% (n = 323) of the papers fell into the mixed/

null/uncertain category. Compared with the findings of Hall and Lawson (2014) based on 198 papers, these updated numbers based on 721 papers indicate a lower percentage of positive results, more mixed/null/uncertain results, and about the same proportion of negative results (**figure 3.6**).

Figure 3.6: Normative outcomes associated with the EFW index, 2014 and 2022

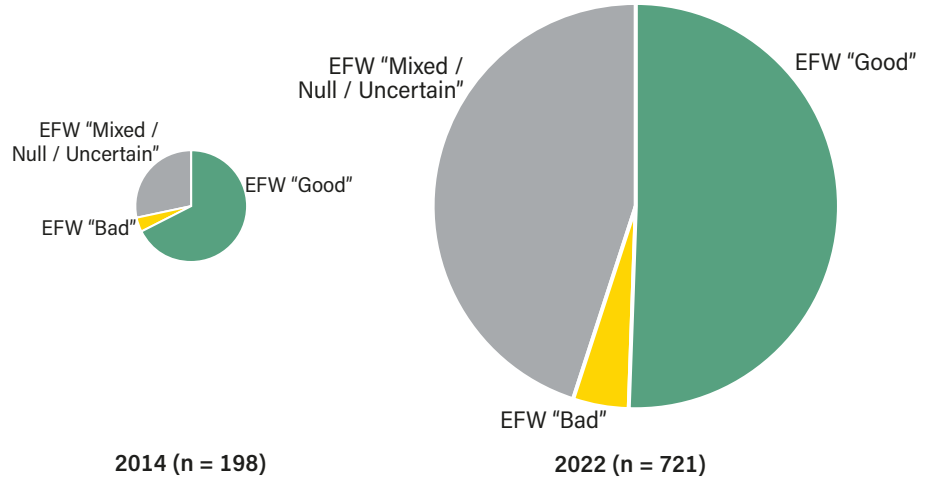2014 (n = 198)   2022 (n = 721)

Figure 3.7 breaks down the results based on how the EFW index was used. If the paper used the summary index only (or used the summary index along with some areas, components and/or sub-components), then it was about twice as likely to find a positive result as a mixed/null/uncertain result. In contrast, papers using only elements of the EFW index, such as ratings from Area 2, Legal Structure and Property Rights or component 5B, Labor Market Regulation, were much less likely to find a positive result and much more likely to find a mixed/null/uncertain one. Normatively bad classifications, while still fairly rare, were more than twice as likely when authors used areas, components, and sub-components than when they used just the summary index.

Figure 3.7: Normative outcomes (%) by use of EFW index, 2022
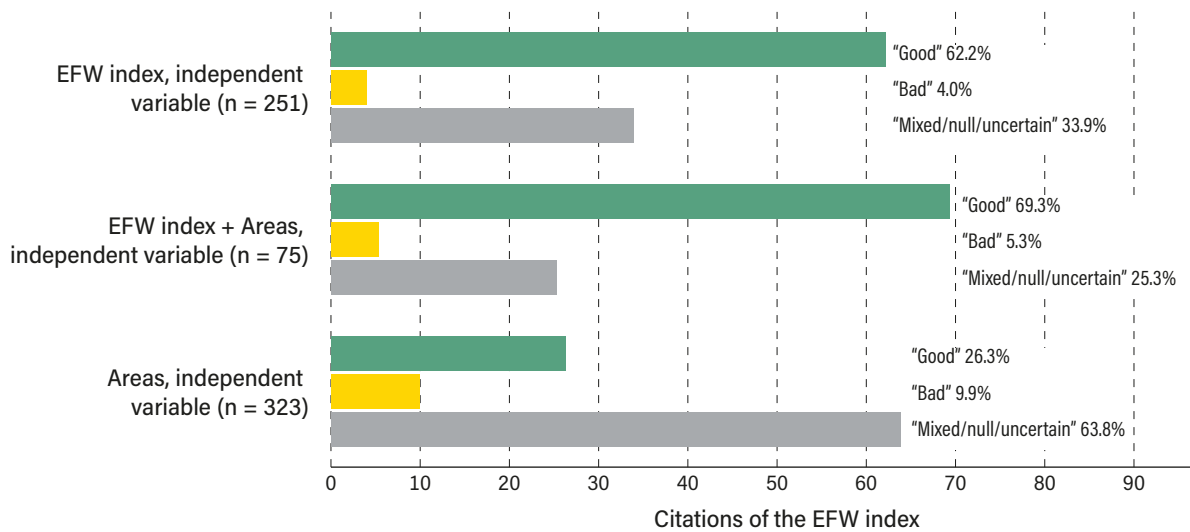
Diversity of dependent variables

With so many different dependent variables being used in these studies, it is almost impossible to summarize the outcome variables. The word clouds depicted in figures 8a and 8b illustrate the most common words describing the outcome variables when the EFW variable was coded positively (figure 3.8a) or negatively (figure 3.8b). As expected, the EFW index seems to clearly correspond in a good way with variables like economic growth, investment, and income. Inequality is shown to be a very common outcome among the papers classified as bad; that is, several papers found that the EFW index variable(s) correlated with greater income inequality.

Figure 3.8a: Most common words describing the outcome variables when the EFW variable was coded *positively*

Figure 3.8b: Most common words describing the outcome variables when the EFW variable was coded *negatively*

To gain some additional precision in our understanding of these results, we collected many of the papers into the following broad categories.

Conflict This refers to things like wars, civil unrest, and terrorist attacks.

Corruption and shadow economy Both measures of corruption, such as the Transparency International index, and the underground economy are in this category.

Entrepreneurship and innovation This groups covers papers looking at entrepreneurship, business starts and failures, as well as measures of innovation such as patent applications.

Environmental outcomes This includes CO_2 emissions and other measures of pollution as well as environmental outcomes like biodiversity.

Economic growth Primarily, this is growth in GDP per capita but this group includes some papers looking at growth by economic sector.

Human rights and social development This category includes those papers looking at the UN's Human Development index as well as those looking at social progress indicators like life expectancy, social trust, and so on.

Immigration and travel Papers on migrant (including refugee) and immigrant stocks and flows and papers on tourist travel are in this group. A positive outcome is recorded when higher levels of economic freedom increase the attractiveness of a jurisdiction to tourists and immigrants.[6]

Income and productivity Typically, this category uses GDP per capita but there are numerous papers looking at output per worker or total factor productivity.

Inequality Papers examining the effect of economic freedom on both income and wealth inequality are in this group.

Investment Papers looking at investment in both physical and human capital as the dependent variable are in this group; papers on foreign direct investment (FDI) are also here.
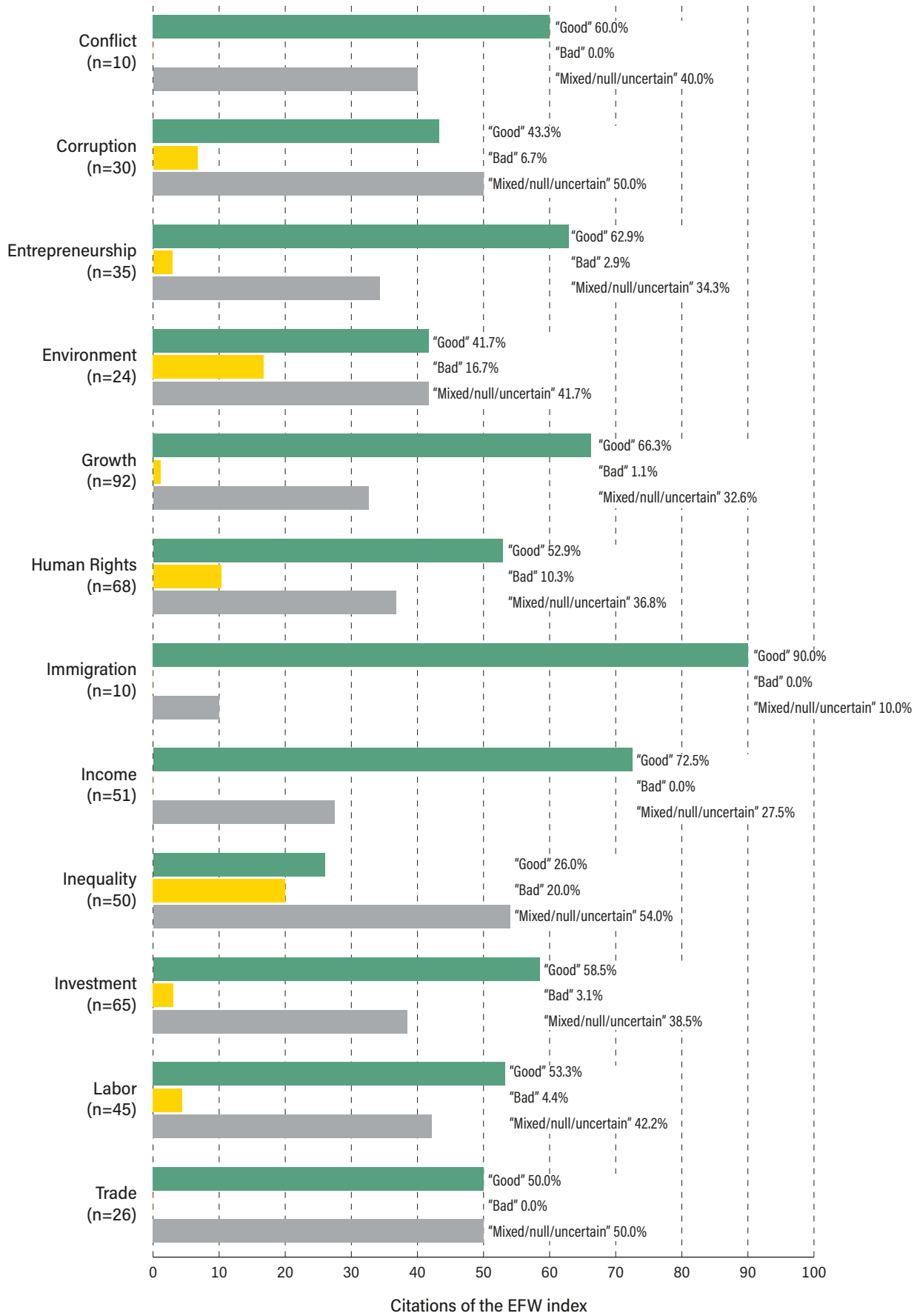
Labor market outcomes This category includes papers focused on unemployment, employment, wages, or labor-force participation.

Trade The papers looking at imports and/or export are collected in this category.

Figure 3.9 reports the good, bad, and mixed/null/uncertain breakdowns in these broad categories. In each category, the positive results outnumbered the negative results and, in most cases, positive results were the most common finding overall, even if including mixed/null/uncertain results. As expected, the EFW index variables were quite positively related to the more "economic" variables, such as growth, income, investment, labor, and trade. The only categories in which the negative results accounted for even double-digit shares were environmental outcomes, human rights, and social development, and inequality. But again, it is important to note that even in these categories, economic freedom was more commonly found to have a normatively good correlation with these outcomes than a bad correlation.

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6 While there is a vigorous public debate about the desirability or undesirability of immigrants, migrants, and refugees on various social outcomes such as jobs, wages, crime, social welfare spending, and so on, the social-science literature has generally not found immigrants to be associated with worsening social and economic conditions among natives, and there is little doubt about the welfare gains to the migrants themselves (Nowratsteh and Powell, 2021).

Figure 3.9: Normative outcomes (%) by dependent variable, 2022

Conflict (n=10)
- "Good" 60.0%
- "Bad" 0.0%
- "Mixed/null/uncertain" 40.0%

Corruption (n=30)
- "Good" 43.3%
- "Bad" 6.7%
- "Mixed/null/uncertain" 50.0%

Entrepreneurship (n=35)
- "Good" 62.9%
- "Bad" 2.9%
- "Mixed/null/uncertain" 34.3%

Environment (n=24)
- "Good" 41.7%
- "Bad" 16.7%
- "Mixed/null/uncertain" 41.7%

Growth (n=92)
- "Good" 66.3%
- "Bad" 1.1%
- "Mixed/null/uncertain" 32.6%

Human Rights (n=68)
- "Good" 52.9%
- "Bad" 10.3%
- "Mixed/null/uncertain" 36.8%

Immigration (n=10)
- "Good" 90.0%
- "Bad" 0.0%
- "Mixed/null/uncertain" 10.0%

Income (n=51)
- "Good" 72.5%
- "Bad" 0.0%
- "Mixed/null/uncertain" 27.5%

Inequality (n=50)
- "Good" 26.0%
- "Bad" 20.0%
- "Mixed/null/uncertain" 54.0%

Investment (n=65)
- "Good" 58.5%
- "Bad" 3.1%
- "Mixed/null/uncertain" 38.5%

Labor (n=45)
- "Good" 53.3%
- "Bad" 4.4%
- "Mixed/null/uncertain" 42.2%

Trade (n=26)
- "Good" 50.0%
- "Bad" 0.0%
- "Mixed/null/uncertain" 50.0%

Citations of the EFW index

Publication bias?

Finally, we turn our attention to the prospect that the preponderance of good findings (and relative paucity of bad ones) are the result of ideological bias or publication bias on the part of the authors and/or journals. First, we speculate that authors using the term "economic freedom" in the actual title of a paper are more likely to be sympathetic to liberal market policies and institutions of the type measured by the EFW index; likewise, we strongly suspect authors using the term "neoliberal" are more likely to be hostile to these ideas.

If we look only at papers using these terms, we do see some evidence of possible ideological bias. In figure 3.10, we see that over 70% of the 69 papers using the term "economic freedom" in the title were coded as good. Interestingly, while lower than in the overall sample, the papers using "economic freedom" in the title still reported negative results 3.4% of the time. The balance of the papers (25.8%) were coded as mixed/null/uncertain.

Figure 3.10: Normative outcomes (%) by word use, top authors and top journals, 2022
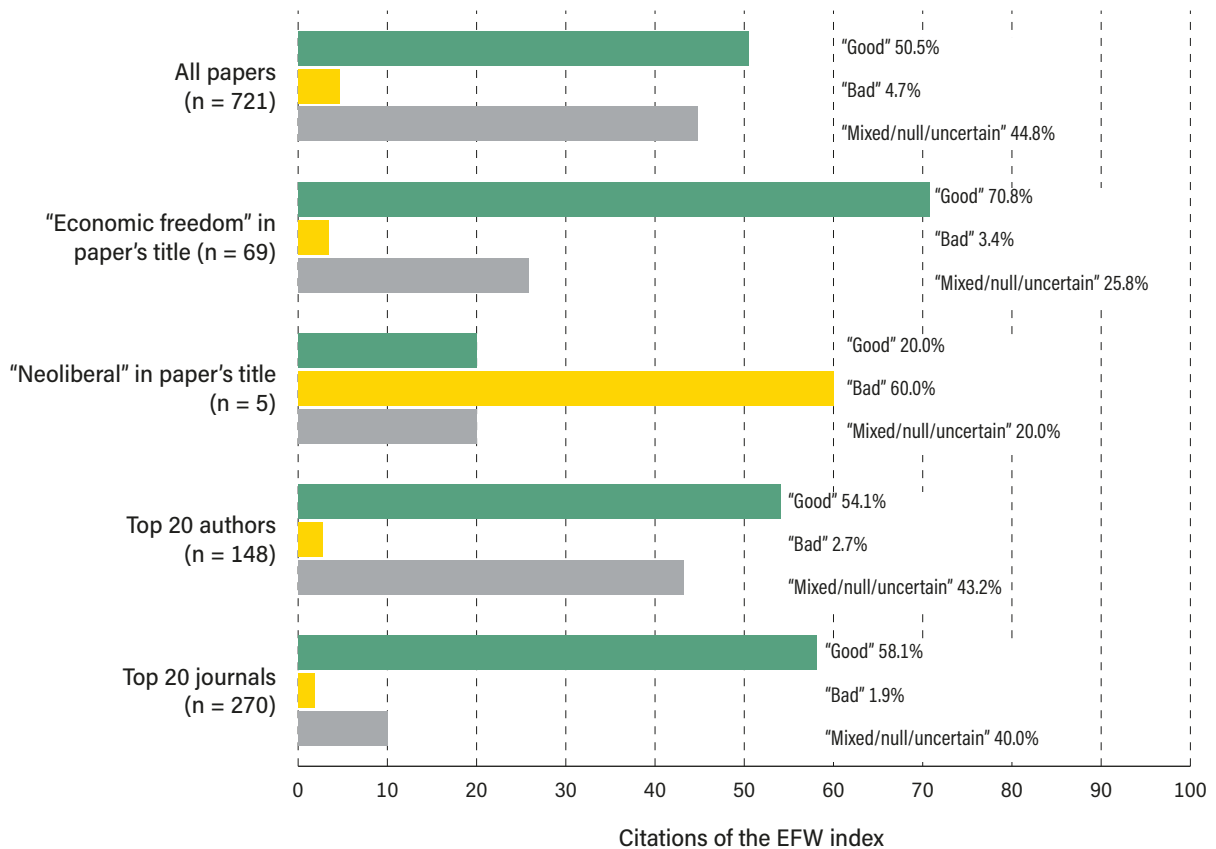
There were only five papers using the term "neoliberal" in the paper's title. Still, it is interesting to note that three of the five papers reported bad outcomes for the EFW index, while the other two papers were split between good and mixed/null/uncertain. Recall that in the overall sample of 721 empirical papers, slightly more than half, 364 papers (50.5%), found the EFW index to be correlated with a good outcome, 34 papers (4.7%) reported the EFW index to be correlated with a bad outcome, and 323 papers (44.8%) found mixed/null/uncertain results.

Obviously, any generalizations from this small sample, especially among the very few papers using "neoliberal", should be done with extreme care. Additionally, causation is hard to determine here. Do people who like (dislike) economic freedom and who are more likely to use such terms, experiment with empirical specifications and methods, commonly referred to as "p-hacking", until their regressions get their desired good (bad) results? Or are people who find good (bad) results more likely to use terms like "economic freedom" ("neoliberal")? Setting these cautions aside though, it does seem to be the case that authors using the terms "economic freedom" ("neoliberal") are more (less) sympathetic to the cause of economic freedom than those not using these terms.

Next, we examine the possibility of publication bias among journals and referees. Doucouliagos (2005) argued that publication bias among journal editors and referees was responsible for some of the positive EFW findings with respect to growth. Next, we reexamine this thesis. Figure 3.10 also reports the good/bad/mixed breakdowns among the 148 empirical papers published by the 20 most prolific authors (as shown in figure 3.2). For good measure, figure 3.10 additionally shows the results among the 270 empirical papers published in the 20 most common journals (as shown in figure 3.3).[7] Although the top authors and journals are slightly more (less) likely to report that the EFW index correlates with a good (bad) outcome than the overall sample, it does not appear that this effect is very strong as the results are not that far out of line with the larger dataset.

Conclusions

This chapter has updated the paper by Hall and Lawson (2014) that examined the 198 papers using the EFW index as an independent variable in a traditional empirical model through early 2011. This chapter added 523 papers to the original list, bringing the total number of empirical papers to 721. As in the earlier study, we find again that the bulk of the evidence suggests that economic freedom, as measured by the EFW index, corresponds with normatively good outcomes. Just over 50% of the papers report normatively good correlations while about 45% report mixed/null/uncertain results. Compared with the earlier article by Hall and Lawson, this chapter does find more mixed/null/uncertain and a lower percentage of good results. We believe the increased use of more and more sophisticated empirical methods plus additional calls from editors and referees for ever more robustness checks has contributed to the increase in mixed/null/uncertain results. In addition, more papers are disaggregating the EFW index, and these papers appear less likely to find a clean positive or negative result.

There are a few papers, about one out of 20, that reported a normatively bad outcome when analyzing data from the EFW index. This proportion is essentially unchanged from the finding of Hall and Lawson's earlier study. Importantly, there appears to be no consensus in the overall literature on these negative results; in every instance, at least as many other papers using the same or similar outcomes reported positive results.

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7 There are fewer papers listed for the top authors and the top journals in figure 3.10 than in figures 3.2 and 3.3 because figure 3.10 looks only at the empirical papers; that is, it omits the gratuitous, minor, or non-empirical citations that were included in figures 3.2 and 3.3.

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