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Who is the Most Sought-After Economist? Ranking Economists Using Google Trends

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Abstract: This paper uses Google Trends to rank economists and discusses the advantages and disadvantages of using Google Trends compared with other ranking methods, like those based on citations or downloads. I find that search intensity rankings based on Google Trends data are only modestly correlated with more traditional measures of scholarly impact; hence, search intensity statistics can provide additional information, allowing one to show a more comprehensive picture of academics' impact. In addition, search intensity rankings can help to illustrate the variety in economists' careers that can lead to fame and allows a comparison of the current impact of both contemporaneous and past economists. Complete rankings can be found at https://doi.org/10.7910/DVN/NHZJLA.

Keywords: economists, rankings, Google Trends, performance measurement

JEL Classifications: A11, B30

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1. Introduction

There is a long tradition in economics, and other disciplines, of ranking academics in terms of their output (see, for example, Coupé, 2003; Faria et al., 2007; Franses, 2014; Huston and Spencer, 2018; Lo et al., 2008; Sturm and Ursprung, 2017). Besides being a source of entertainment, such rankings have been argued to stimulate competition among academics and to provide both insiders, like economics departments considering hiring an economist, and outsiders, like journalists, public servants or graduate students, with low-cost information (see, for example, Medoff, 1989, or Osterloh and Frey, 2015, and the references therein).[1]

Over time, the 'objective' inputs for these rankings have changed: Hansen and Weisbrod (1972) ranked economists based on the number of papers and the number of pages published and Medoff (1989) ranked economists based on citations, while Seiler and Wohlrabe (2012) ranked economists on RePEc downloads and RePEc page visits, among other indicators.

Recently, a number of alternative measures of academic output, called 'altmetrics', like shares on Facebook or mentions on Twitter, have been proposed (see, for example, Ravenscroft et al., 2017). The Economist (2014), for instance, published a ranking of economists based on 'how much attention was paid to their utterances in the mainstream media, the blogosphere and in social media over a 90-day period up to December 11th 2014'. Compared with traditional citation-based metrics, altmetrics often have the advantage of also reflecting the non-academic impact (Thelwall, 2020). This advantage is important as more and more governments and research funders expect academic research to have an impact outside academia (see, for example, Gunn and Mintrom, 2017; Thelwall, 2021).

[1] At the same time, rankings have been criticized for crowding out intrinsic motivation and relying too much on unreliable peer review (Osterloh and Frey, 2015).

In this paper, I contribute to the literature on ranking academics by analysing another new way of measuring their impact: search intensity in Google.[2] Using Google search intensity to rank academics has a number of advantages but also disadvantages relative to other methods. The main advantage of using Google search intensity is that it captures the impact outside academic journals and working papers. Every time a Google search includes an economist's name, the search intensity statistics will rise, even if the search does not lead to a citation in an academic paper. One of the main disadvantages of using Google search intensity is that it is impossible to evaluate how precisely it is measured as there is no detailed information on how Google Trends, the Google website that provides the search intensity on Google, assigns searches to specific individuals.

Google Trends organizes searches in 'topics', aggregating searches for the same concept. For example, the 'Paul Krugman (American Economist)' topic aggregates searches for Paul Krugman, the economist, but excludes searches for other people named 'Paul Krugman'. Some, but not all, academic economists have an assigned topic. For this paper, I collected the Google Trends 'topic' for about 2000 economists and then analysed the rankings based on the search intensity of these topics. The Google Trends rankings presented in this paper are only moderately correlated (about 0.3) with a more traditional measure of academic performance, suggesting that search intensity can provide additional information about academics' impact and thus complement more traditional output measures, such as citation or paper counts.

Search intensity further allows me to highlight and compare the various career paths that economists can take as, among the economists who are most searched for on Google, there are

[2] There is a web page with a top 100 'digital' economists, which is based on various indicators of online influence including 'how often a name gets searched on Google': https://richtopia.com/top-lists/economists-2020/.

economists who earned their impact through their policy work, their blogs or their academic papers. I find, for example, that Paul Krugman and Christine Lagarde have about the same search intensity. Finally, search intensity allows me to compare the contemporaneous impact of both contemporaneous and past economists. For example, I find that the search intensity for Adam Smith is three times higher than the search intensity for Paul Krugman.

The rest of this paper is organized as follows. Section 2 evaluates the advantages and disadvantages of using Google Trends' search intensity data. Section 3 explains how search intensity data can be used to rank economists. Section 4 discusses the sources that I used to create my list of economists. Section 5 presents various rankings based on Google Trends data, while section 6 concludes.

2. The advantages and disadvantages of using Google Trends data

Google Trends provides information about how often people search for specific search terms in Google. Such information has already been shown to be valuable in many contexts. Google Trends data have, for example, been used in medicine to predict the flu (Ginsberg et al., 2009) and COVID-19 (Farzanegan et al., 2020). In economics, Google Trends data have been employed to forecast economic statistics, like unemployment or sales (for example, Choi and Varian, 2011). More generally, Jun et al. (2018) identified 657 academic papers that used Google Trends data.

Among these academic studies are a few studies that used Google Trends data in the context of the evaluation of academic research. Vaughan and Romero-Frias (2014), for example, correlated universities' academic reputation with their search volume, while Turki et al. (2020) compared two multidisciplinary journals, Nature and Science, using Google Trends. As far as I am aware, no academic papers have used Google Trends data to rank academics.

The biggest advantage of using Google Trends to rank academics is its comprehensiveness. First, like citation rankings, a ranking based on search intensity captures the interest in academics but in a different way. Citation rankings only 'register' an impact whenever a paper is cited by a researcher in a published paper or in a document that is available online. However, in many cases, interest in the work of an academic will not lead to a publication or a citation. Indeed, academics often search for and read articles that they do not cite.

Second, a ranking based on search intensity incorporates not only the interest of academics but also the interest of non-academics in both journal articles and 'popular' work that appears in the media. Students, for example, will search for and read economists' work for their assignments, but these assignments will typically not end up being published in hard copy or online. Similarly, reporters will search for and read, but not necessarily cite, academics' work for their media articles. In addition, civil servants and policy makers will search for and read, but not necessarily cite, academics' work for their policy work.

Measuring such a non-academic impact of an academic's work is increasingly important with many governments and research funders now being interested in knowing and evaluating both the academic and the non-academic impact of academic research (Nunn and Mintrom, 2017). For example, a quarter of the UK's Research Excellence Framework block grant funding from 2022 will be based on narratives that explain universities' impact on society (Thelwall, 2021). Similarly, in 2018, Australia organized an 'Engagement and Impact Assessment' for the first time in addition to its academia-focused 'Excellence in Research for Australia' assessment (Sawczak, 2019).

Besides comprehensiveness, Google Trends has the advantage of timeliness. Given the time that elapses between reading a paper and the citation being published, citation-based rankings reflect past interest, while Google Trends makes it possible to show recent interest, like the

interest in a given academic in the last month or even the last week. Rankings of downloads or website visits also have this advantage, but, as far I know, there is no public database that gathers comprehensive statistics of downloads across most journals or academics.[3]

Unfortunately, there are not only advantages of using Google Trends to rank academics; there are some drawbacks too. First, the accuracy of the ranking depends on how well Google is able to allocate searches to economists. Google does not make clear how it allocates searches to topics or which searches are allocated to which topics. On the Google Trends FAQ page,[4] the general principles are explained as follows:

> Topics are a group of terms that share the same concept in any language.
>
> If you search the topic 'London,' your search includes results for topics such as:
>
> • 'Capital of the UK'
>
> • 'Londres,' which is 'London' in Spanish

While Google can observe which links people click on after their search, this observation will not always correspond to what people were actually searching for; hence, Google Trends search intensity is an imperfect measure of the true interest in an economist. For example, economists with a common name might be less likely to have a topic in Google Trends because it is too hard to differentiate between different people with the same name; alternatively, if they are allocated a Google Trends topic, they might be more likely to be assigned searches meant to be for another person.

[3] RePEc, for example, can only measure downloads through the RePEc website and does not include downloads through other websites that offer access to journals and papers.

[4] https://support.google.com/trends/answer/4359550?hl=en

Second, while Google captures the search behaviour of many people, not everybody uses Google.[5] In China and Russia, alternative search engines are popular. Similarly, while Google captures a huge share of the search market, it will not capture all searches for economists as users of publication databases might rely on those databases' own search engines rather than on Google to find materials.

Note that citation databases are imperfect in similar ways: Martin-Martin et al. (2019) compared citations recorded by Google Scholar, Scopus and Web of Science and found that Google Scholar included 94% of citations, the Web of Science 35% and Scopus 43% of citations. Furthermore, citation databases tend to be biased towards English language journals (Mongeon and Paul-Hus, 2016).

Third, while citation statistics can be computed for anybody who has published a paper that has been indexed by a citation database like Google Scholar, Scopus or the Web of Science, search intensity is available only for academics who generate a sufficient number of searches as Google has a privacy threshold below which no search statistics are provided. This means that, for many economists, precise data are not available.[6] At the same time, the given search intensity is not just determined by academic publications but can be used to compare the impact of purely academic economists with that of economists who have chosen a non-purely academic career.

Fourth, just as citations can be manipulated (through self-citations or citation rings; see, for example, Davis, 2016), so can Google search intensity. The Google Trends Frequently Asked Questions page indeed mentions that:

[5] Google's market share in search is estimated to be over 90% (see https://www.statista.com/statistics/216573/worldwide-market-share-of-search-engines)

[6] Statistics on this are provided in section 4.

> While we have mechanisms in place to detect and filter irregular activity, these searches may be retained in Google Trends as a security measure: filtering them from Google Trends would help those issuing such queries to understand we've identified them. This would then make it harder to keep such activity filtered out from other Google Search products where high-fidelity search data is critical. Given this, those relying on Google Trends data should understand that it's not a perfect mirror of search activity. [7]

This means that an economist could create a network of computers that all frequently use Google to search for that economist's name, but some sophistication would be needed as Google Trends eliminates 'repeated searches from the same person over a short period of time'.

Finally, just as people stop citing concepts or methods that have become commonly used, people will search less for economists or papers that have become common knowledge. In addition, just as citations can be made for negative reasons, like providing an example of a bad paper, searches can also be performed for 'bad' reasons, such as an economist being caught behaving badly.[8] Note, however, that the rankings that I present below are based on an average of 64 monthly observations, so, with some exceptions, most events that only lead to a short-run spike in interest will have a limited effect on the average search intensity.

[7] https://support.google.com/trends/answer/4365533?hl=en&ref_topic=6248052

[8] As Google Trends put it (https://support.google.com/trends/answer/4365533?hl=en&ref_topic=6248052): 'Google Trends is not a scientific poll and shouldn't be confused with polling data. It merely reflects the search interest in particular topics. A spike in a particular topic does not reflect that a topic is somehow "popular" or "winning," only that for some unspecified reason, there appear to be many users performing a search about a topic. Google Trends data should always be considered as one data point among others before drawing conclusions.'

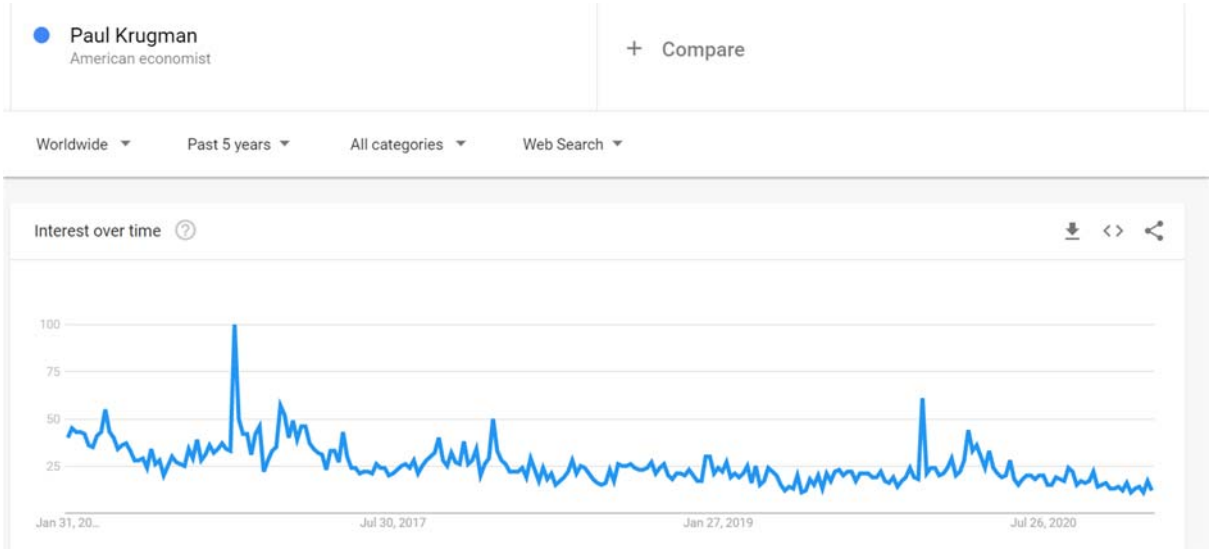
To summarize, rankings based on Google Trends share some of the disadvantages of traditional rankings but also have some unique advantages and disadvantages. Hence, rather than seeing Google Trends rankings as a substitute for the more traditional rankings, it is possible to use them as a complement to other methods of comparing academics.

3. Using Google Trends to estimate the relative impact of economists

Rather than reporting the number of times a given search term has been used, Google Trends reports an index of search activity (Stephens-Davidowitz and Varian, 2015). The number of queries for a given search is divided by the total number of searches at a particular point in time and in a particular geography. This ratio is then turned into an index, with the value of 100 being given to the maximum value reached in the time period under consideration. Depending on the time interval selected, one can obtain a weekly or a monthly index. As an example, Figure 1 gives the index for the topic 'Paul Krugman (American Economist)'. It graphs the evolution of the search intensity over the most recent five-year period worldwide.[9]

Figure 1: Search intensity for 'Paul Krugman (American Economist)' in Google Trends

[9] For the rankings, I use slightly more than five years (September 2015–December 2020) because, for this period, Google Trends gives monthly numbers. If one uses shorter periods, Google Trends returns more volatile weekly aggregates rather than monthly aggregates.



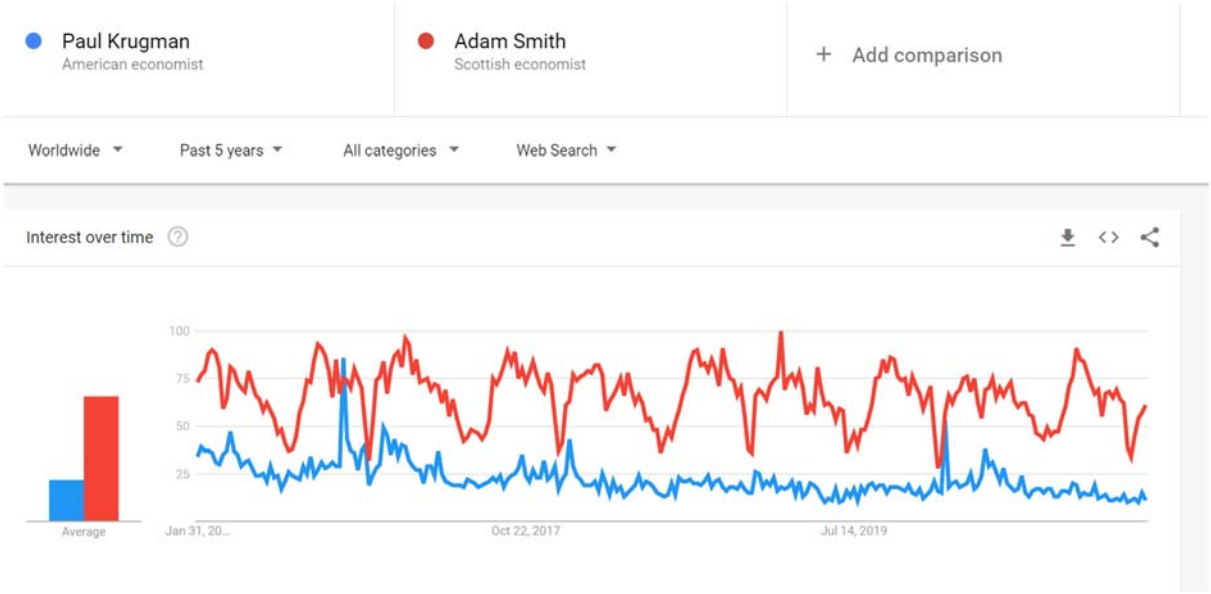
The highest search intensity for Paul Krugman occurred in November 2016[10], with the January 2021 level being about a tenth of that top level. Note that the way in which Google Trends provides results implies that the results of a standard Google Trends search for 'Paul Krugman (American Economist)' and the results of another standard Google Trends search for 'Adam Smith (Scottish Economist)' cannot be compared as the evolution of the index for Paul Krugman is relative to the highest level of search intensity for Paul Krugman while the evolution of Adam Smith's index is relative to Adam Smith's highest search intensity.

The 'compare' option of Google Trends, however, allows one to compare up to five search terms, each of which is measured relative to the highest search intensity ratio obtained for any of the search terms included in the search. Therefore, if one includes both Adam Smith and Paul Krugman in a Google Trends Compare search, one can compare their relative evolution.

In figure 2, it is apparent that the search intensity of Adam Smith has been higher than the search intensity for Paul Krugman in most of the last five years.

Figure 2: A comparison of the search intensity for Paul Krugman and Adam Smith

[10] Possibly related to the election of Donald Trump.



I used Pytrends, a Python module that allows one to automatize the interaction with Google Trends to estimate, using the Google Trends Compare option, the relative search intensity for economists who have a Google Trends topic assigned to them. Google Trends Compare only allows one to search for five economists at a time, but comparisons across more economists are possible if one economist is selected as a benchmark and included in searches using a changing set of four other economists every time. Since I needed to divide the search intensity by the search intensity of the benchmark, ideally I would have a benchmark that never has a search intensity index value of zero; that is, the benchmark needs to have a level of search intensity that is consistently high. I chose Paul Krugman, who ranked first in the perception ranking of economists reported by Davis et al. (2011), as the benchmark for the economists. Having established a benchmark, I could compute the evolution of the monthly search intensity over a period of time relative to the benchmark for each economist. I could then compute the

average of this relative search intensity over the five-year period September 2015–December 2020 and use the results to rank economists.[11,12]

There is an additional complication, however: Google Trends is based on a sample of all searches rather than the population of all searches, and it uses different samples at different points in time. This means that the evolution of an economist's search intensity is an estimate rather than a population statistic and can change over time. Figures 3a and b, for example, provide the results of the same Google Trends search for the topic 'Paul Krugman – American Economist' at 1300 points in time spread over more than a month. Figure 3a gives, for each search, the mean search intensity over the 5-year period. One can see that the mean varies over time: out of 1319 searches, I obtained 108 different values for the mean. While there is a substantial difference between the minimum (about 33) and the maximum (about 38) mean, the overall variation is rather limited (standard deviation of 0.95, which is about 2.5% of the mean of 35.4). In addition, the variation seems random; at least, there does not seem to be a clear pattern in the mean over time. Figure 3b contains the correlation between the evolution of the search intensity of the first search and the evolution of the search intensity for each

[11] One could argue that, rather than using an unweighted average, a weighted average could be computed, weighting time periods by the index for Paul Krugman. However, Paul Krugman's share in the total searches is influenced not only by his popularity but also by the evolution in the way in which people use Google searches. As Google has become more popular over time, non-academic searches seem to have increased and hence the intensity of the interest in academics in general seems to have declined over time. Note that Google Trends Compare also provides the unweighted average of the index; see, for example, the bars on the left of figures 1 and 2.

[12] A randomize who is included in a specific set of 5. A limited number of economists have a higher search intensity than Paul Krugman. Because numbers are rounded, this might affect the statistics of others that are included in the set with such high search intensity economists. To avoid this, I reran such sets without the high search intensity persons and used the numbers to compute the statistics for the non-high search intensity persons.

subsequent search. As one can see, the correlation between searches is very high (around 0.99) but not perfect.

Figure 3a: The mean search intensity for Paul Krugman at different points in time

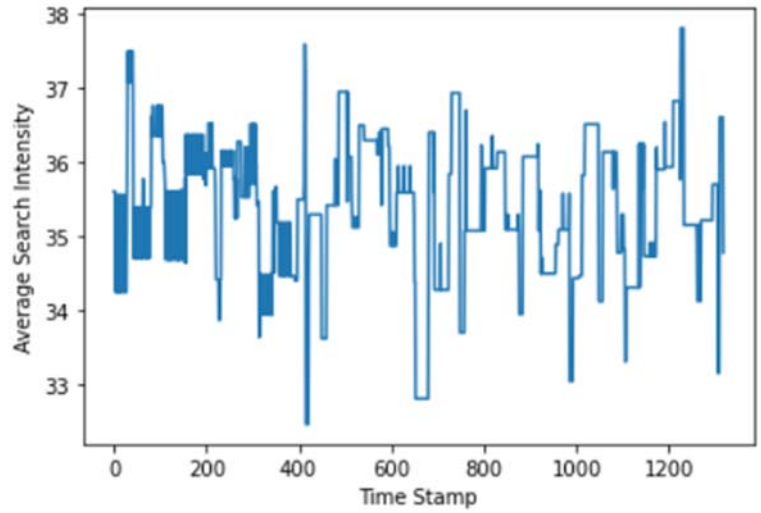
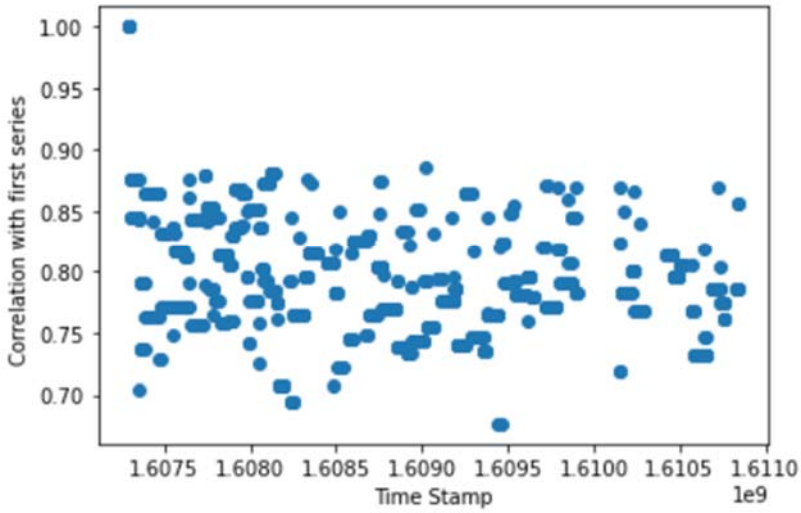


Figure 3b: The correlation between series reflecting the search intensity for Paul Krugman measured at different points in time



While, for search terms with a high search intensity, the sample information seems to be reasonably independent of the time when the series is obtained, this is less applicable to rarer search terms or more specific searches. For example, on average, the search intensity for the search 'Quarterly Journal of Economics – Peer Reviewed Journal' is about 10% of the search intensity for 'Paul Krugman – American Economist'. As the search intensity for 'Quarterly Journal of Economics – Peer Reviewed Journal' is lower, there is more variation over time (i.e. across samples): the standard deviation of the mean is about 6.5% of the mean (compared with 2.5% for Krugman), and the correlation over time is only about 0.80 (compared to 0.99 for Krugman). Similarly, if I restrict the searches for 'Paul Krugman –American Economist' to searches that are also categorized as 'economics', the standard deviation of the mean is about 7.5% of the mean (compared with 2.5% for any search related to Krugman) and the correlation is only about 0.90 (compared with 0.99 for any search related to Krugman). [13]

Because of this sampling issue, Stephens-Davidowitz and Varian (2015) recommended that, 'if very precise data is necessary, a researcher can average different samples'. To incorporate the sample uncertainty into the ranking, I therefore computed the ranking 25 times, approximately once every 12 hours over a period of 2 weeks, allowing me to provide the average rank across samples, the standard error of the estimated rank and the minimum and maximum ranks across samples for each economist.

4. Who is an economist?

[13] I compute rankings based on Worldwide Web search intensity. One could compute separate rankings by country or for different sources like search in Youtube but because these have lower search volumes, these are likely to be less stable.

Before I could apply the methodology described above, I needed to decide who I should consider as economists. I used 5 different sources. First, I used the list of winners of the Nobel Prize for economics (86 names). Second, I used the list of economists in the Encyclopaedia Britannica[14] (250 names). Third, I used the list of economists from Wikipedia[15] (1001 names). Fourth, I took all the economists from the classical period (18th/19th centuries) and later, who are mentioned on Wikipedia's history of economic thought page[16] (146 names). Finally, I used the RePEC top 5% of authors in December 2020[17] (3053 names).

These five sources define economists in very different ways. The RePEc list and the Nobel Prize list focus on academic economists. The Britannica and Wikipedia lists include historical figures with varying degrees of impact on economics (for example, Adam Smith and Karl Marx but also Plato and Aristotle) as well as economists who are active in politics or policy (like ministers or presidents of various countries). By combining these lists, I use a comprehensive definition of who is an economist, allowing me to compare the search intensity for different types of career paths. Besides an overall ranking of all economists, I will present separate rankings focused on 'academic' economists, a ranking for just Nobel Prize winners and a ranking for just RePEc economists.

To obtain the 'topics' for each of these economists, I used Python to perform a search for each economist's name in Google Trends, extracting the topics suggested by Google Trends (the topics that pop up when entering a search term).[18] Sometimes, Google Trends suggests multiple

[14] https://www.britannica.com/topic/list-of-economists-2024623

[15] https://en.wikipedia.org/wiki/List_of_economists

[16] https://en.wikipedia.org/wiki/History_of_economic_thought

[17] https://ideas.repec.org/top/old/2012/top.person.all.html

[18] I found a topic for about two-thirds of the economists in the top 750; 80% of these were identified using the automated search and 20% through the manual search.

topics or a topic different from the economist's name. I therefore manually checked the suggested topics for each economist.[19] After this manual check, the final list included 1963 economists with a Google Trends topic.

Table 1 gives, for each source, the share of economists who have a Google Trends topic. While all Nobel economists have a designated topic in Google Trends, only about 42% of the RePEc economists have a Google Trends topic. In fact, while 94% of the top 100 RePEc economists have a Google Trends topic, only about 26% of those appearing in the RePEc ranking between 1500 and 3000 have a Google Trends topic. This suggests that the Google Trends ranking can help to highlight differences in impact among relatively high-impact economists but that it will be less helpful in highlighting differences among relatively low-impact economists.

[Table 1 about here]

5. The ranking of economists

Table 2 gives the top 100 of the Google Trends ranking of economists for the period 2015–2020.

[Table 2 about here]

The economists are ranked based on their average rank over the 25 samples drawn from Google Trends (column II). Note that, for the top 100, the variation in rank across samples is small (columns III to V). The top-ranked economist has always been the same and the economist ranked 50th in terms of the average rank has the 48th place as his best rank and the 50th place as his worst rank, while the economist ranked 100th in terms of the average rank has the 96th

[19] If Google Trends did not make any suggestions, I googled the name to find possible spelling differences. This allowed me to find topics for additional economists. I did not follow this strategy for economists ranked below 1500 on the RePEc ranking as it no longer produced a reasonable number of additional topics.

place as his best rank and the 104th place as his worst rank. Looking outside the top 100 increases the variation across samples: for example, the economist ranked 1000th in terms of the average rank has the 830th place as his best rank and the 1619th place as his worst rank.

Historical figures clearly dominate the search intensity top ten. Plato, Aristotle and Karl Marx constitute the top three. They are followed by B. R. Ambedkar, John Locke and Thomas Aquinas, with Adam Smith taking the seventh place. Smith is followed by Max Weber, John Maynard Keynes and the top-ranking Nobel Prize winner, John Forbes Nash Jr.

Even within the top 10, there are clear differences in the average search intensity (column I): Plato, ranked first, has an average search intensity that is 5 times higher than Adam Smith, who is ranked 7th. Similarly, the average search intensity of the top-ranked Plato is about 100 times higher than the average search intensity of Eugene Fama, the economist ranked 100th. Browsing the top 100, one will further notice the abundance of historical figures and politicians and the relative scarcity of contemporaneous academics. Note further that Tyler Cowen of the Marginal Revolution blog, while not being among the 3000 plus RePEc top 5% economists, is ranked 104th in the Google Trends ranking. Clearly, there are multiple ways for economists to attract attention.

One can also notice the relative scarcity of female economists. Christine Lagarde, ranked 26th, is the female economist with the highest average search intensity. There are 6 more female economists in the top 100: Rosa Luxemburg, Sri Mulyani, Tansu Çiller, Gita Gopinath, Esther Duflo and Gloria Macapagal Arroyo. Finally, while there is little gender diversity, there is substantial geographic diversity, with economists from many different countries, both relatively rich and relatively poor countries.

The ranking of table 2 is based on the average monthly search intensity of an economist, relative to Paul Krugman's search intensity, over the period September 2015–December

2020.[20] This average across 64 months comes with considerable monthly variation; this is illustrated by column VI, which gives the ratio of the standard deviation in monthly search intensity divided by the average monthly search intensity for each economist. One can note that, for some economists, this ratio is huge; for example, for the 12th-ranked Benoit Mandelbrot, the standard deviation across months is 7 times bigger than the mean and, for the 14th-ranked Arthur Lewis, the standard deviation across months is 8 times bigger than the mean. The reason for this is that these economists' average is influenced considerably by a gigantic spike in their search intensity: both Mandelbrot and Lewis had a Google Doodle dedicated to them in 2020, which gave them a search intensity 100 times bigger than Paul Krugman in one given month even though in other months their search intensity is 5 to 20 times less than that of Paul Krugman. Other economists with big spikes in their searches (though less big and less influential than those caused by Google Doodle) are economists who died (like Kofi Annan) or economists who received the Nobel Prize in the period 2015–2020 (like Ester Duflo). Whether these spikes show an 'impact' or not, and hence should or should not be included, is debatable. Column VII of table 2 therefore gives the ranking of economists when removing the two months with the highest and lowest (relative) search intensity. While, for most economists, the ranks in the two rankings are similar, for those with spikes, the difference can be fairly substantial, especially for those with lower ranks.

The last column of table 2, column 8, gives the average rank for the period 2010–2015 using the same methodology that I used to compute the ranking for the period 2015–2020. Clearly, there is substantial stability in the rankings over time. Of the top 100 economists in 2015–2020, 83 were already in the top 100 in 2010–2015, and, for the top 100 of 2015–2020, the correlation between the ranks in the two periods is about 0.4. For the top 1000, the correlation is 0.83.

[20] This average is further averaged across 25 samples taken from Google Trends over a period of 2 weeks.

That being said, even in the top 100, there are some notable winners: Arthur Lewis and Benoit Mandelbrot received a clear boost from their Google Doodle, Raghuram Rajan jumped from around 60th to around 35th, Ali Babacan rose from about 92nd to about 43rd, Javier Milne rose from about 218th to about 54th and Alexander Van der Bellen, from outside the top 500, jumped to about 63rd. There are also some notable drops: Paul Krugman fell from 11th to 25th, Dominique Strauss-Kahn dropped from 12th to about 40th, Ben Bernanke fell from about 22nd to about 80th and Mario Monti fell from about 39th to about 105th. Outside the top 100, one can find even bigger movers: Stephanie Kelton jumped from outside the top 1000 to about 273rd and Gabriel Zucman jumped from about 600th to about 300th.

One objection to the overall ranking could be that it compares academic economists with others whose connection with or contribution to economic science is limited. Table 3 therefore focuses on a ranking of Nobel Prize winners only.[21]

[Table 3 about here]

John Forbes Nash Jr., Arthur Lewis, Milton Friedman, Paul Krugman and Friedrich Hayek are the most searched for Nobel Prize winners for economics, while Tjalling Koopmans, Reinhard Selten, Lawrence Klein, James Meade and Dale T. Mortensen have the lowest search intensity. Like the overall ranking, the Nobel Prize list shows that the ranking is fairly stable across samples: in the top 30, the difference between the minimum and the maximum rank is never more than 2 ranks. Like the overall ranking, the Nobel Prize list shows substantial variety in search intensity: John Forbes Nash Jr, who ranks first, has a search intensity that is about 5 times higher than Myron Scholes, who is ranked 10th, and a search intensity that is more than

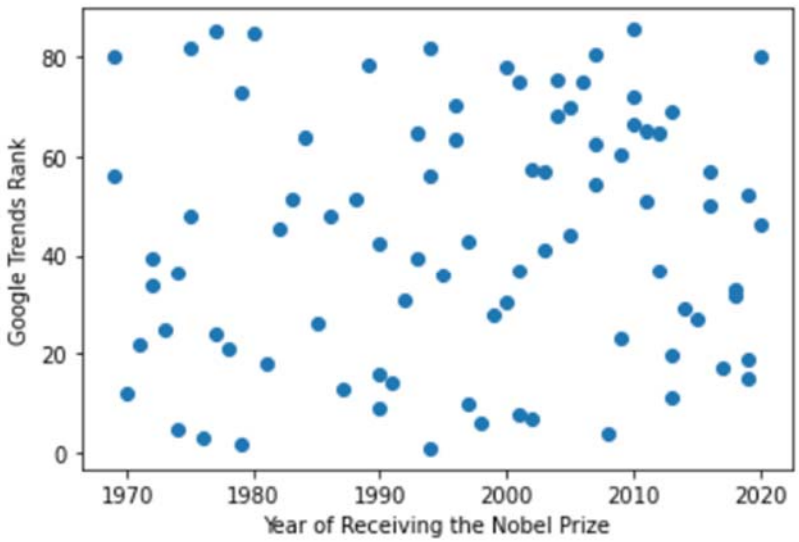
[21] Alternative methods to compare Nobel Prize winners can be found in the studies by Prinz (2017), who used the number of 'hits' that a search in Google returns (i.e. a proxy for the number of web pages that contain the name of the Nobel Prize winner), and Huston and Spencer (2018), who used network centrality.

1000 times higher than Dale T. Mortensen, the economics Nobel Prize winner with the lowest search intensity. Like the overall ranking, the Nobel Prize ranking of some is affected by short-run shocks: Abhijit Banerjee's average rank drops from about 15th to about 20th when eliminating the 2 months with his highest (and lowest) search intensity. Not surprisingly, his two highest months are around the time of the Nobel Prize announcement.

Finally, the last column of table 3, column 8, which gives the average rank for the period 2010–2015, again shows substantial stability in the rankings over time. The correlation between the ranks in the two periods is about 0.9. Notable changes are the increased search intensity for Arthur Lewis (because of the Google Doodle[22]) and some increases related to being awarded a Nobel Prize (for example, Abhijit Banerjee and Ester Duflo). Interestingly there is very little correlation between the year of the Nobel Prize and the Google Trends rank (or the Google Trends score).

Figure 4: Google Trends Rank and Year of Receiving the Nobel Prize

[22] Note that the trimmed average rank for Arthur Lewis is artificially low and due to rounding: the Google Doodle increased interest so much that his search intensity in other periods was rounded to zero. Hence, when excluding the outliers, the average search interest is zero while it would have been small if no rounding had occurred.



One can also illustrate this with the numbers for two of the 1994 Nobel Prize winners: John Nash has a search intensity that is about 1000 times higher than Reinhard Selten.

Table 4 focuses on the RePEc economists: here the top 10 consists of John Forbes Nash Jr., Benoit Mandelbrot, Milton Friedman, Paul Krugman, Raghuram Rajan, Janet Yellen, Amartya Sen, Thomas Piketty, Daniel Kahneman and N. Gregory Mankiw.

[Table 4 about here]

Like the overall ranking, the RePEc list shows that the ranking is fairly stable across samples: in the top 30, the difference between the minimum and the maximum rank is never more than 2 ranks. Like the overall ranking, the RePEc list shows substantial variety in search intensity: John Forbes Nash Jr, who ranks first, has a search intensity that is about 4 times higher than N. Gregory Mankiw, who is ranked 10th, and a search intensity that is about 60 times higher than John H. Cochrane, who ranks 100th. Like the overall ranking, the RePEc ranking of some is affected by short-run shocks (Nobel Prizes, death or scandals). Furthermore, like the overall ranking, there is substantial stability over time, with 78 economists being in the top 100 in both periods.

The RePEc also ranks economists, so I can compare the RePEc score and rank with the Google Trends score and rank. Clearly, the Google Trends top 10 is very different from the RePEc top 10. Andrei Schleifer, for example, ranks first in the RePEc ranking but 121st in the Google Trends ranking. Similarly, James Heckman ranks second in the RePEc ranking but 48th in the Google Trends ranking, while Daron Acemoglu appears third in the RePEc ranking but 24th in the Google Trends ranking. Only 32 economists are in both the RePEc top 100 and the Google Trends top 100.

Note that the Google Trends ranking and the RePEc ranking are also different in terms of gender distribution. While the RePEc top 500 (100) includes 21 (3) female economists, the Google Trends top 500 includes 44 female economists.

More generally, there is only a limited correlation (of 0.1) between the Google Trends score and the normalized RePEc score[23] and a modest correlation (of 0.33) between the Google Trends rank and the modified RePEc rank.[24] Clearly, the RePEc ranking and the Google Trends ranking measure different kinds of academic impacts.

6. Conclusions

Given that academic jobs typically consist of many different tasks (teaching, research, service, etc.), measuring academic performance is difficult. When evaluating the performance of academics, it is thus important to provide context and use various output measures rather than

[23] The normalized RePEc score takes the RePEc score relative to Paul Krugman's score and inverts the ratio so that more means a higher score, making it more comparable to the Google Trends score.

[24] The modified RePEc rank is the rank based on the RePEc score when only ranking those economists who are also included in the Google Trend rank,that is, excluding economists who have a RePEc score but no Google Trends score.

focusing on just one ranking or one just one type of ranking. In this paper, I used Google Trends to rank economists and analyse the advantages and disadvantages of using search intensity statistics compared with more traditional ranking methods based on counts of citations or publications. The main advantage of using search intensity is that it measures not just the impact of a scholar on academia but also the attention of the general public. However, search intensity is not a perfect measure of a scholar's output either; hence, search intensity rankings should be seen as complementary to other ways of measuring impact. That is, rather than treating a search intensity ranking as the only piece of evidence of performance or lack thereof, one can provide a richer sketch of an academic's performance by adding Google Trends to a set of performance indicators.

My analyses of the Google Trends search intensity data and the resulting rankings confirm that, while search intensity is positively correlated with other measures of academic impact, this correlation is far from perfect. This is consistent with search intensity capturing a different aspect of impact. This moderate correlation is consistent with contemporaneous economists achieving high search intensity scores not just through their academic work (like Nobel Prize winners) but also by writing blogs or obtaining highly visible administrative appointments in governments or international organizations. Search intensity data further suggest that the current impact of many top 'historical' economists is higher than that of many top contemporaneous economists.

At present, however, Google Trends can only be used to rank highly visible economists since the majority of economists are not searched for often enough to enter Google Trends and many of those who have obtained a Google Trends topic have negligible search intensity compared with the top economists. This problem could, however, be alleviated if Google made more precise data available, assigning topics to more economists and providing finer results than the

current rounded 0 to 100 index and results based on the population (or at least larger samples) of Google searches rather than on the current samples of searches.

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Table I – Share of Economists with a Google Trends Topic

Source	#	Share with Google Trends Topic (%)
RePEc Overall	3053	41.76
RePEc Top 100	100	94
RePEc Top 101-500	400	77.5
RePEc Top 501-1000	500	55
RePEc Top 1001-1500	500	40.4
RePEc Top 1500+	1500	25.7
Britannica	250	84.8
Nobel	86	100
Wiki History of Economic Thought	146	89.73
Wiki Economists	1001	97.4

Table 2: Google Trends Ranking of All Economists

#	Google Trends Name	Google Trends Descriptor	(I) Avg. Score	(II) Avg. Rank	(III) Std. Rank	(IV) Min. Rank	(V) Max. Rank	(VI) Std. Score	(VII) Trimmed Avg. Rank	(VIII) Avg. Rank 2010-2015
1	Plato	Athenian philosopher	15.74	1	0.00	1	1	0.27	1	1
2	Aristotle	Greek philosopher	13.31	2	0.00	2	2	0.33	2	2
3	Karl Marx	Philosopher	12.47	3	0.00	3	3	0.33	3	3
4	B. R. Ambedkar	Indian jurist	9.68	4	0.00	4	4	0.66	4	8
5	John Locke	English philosopher	4.24	5	0.00	5	5	0.38	5	4
6	Thomas Aquinas	Italian philosopher	3.30	6	0.00	6	6	0.27	6	5
7	Adam Smith	Scottish economist	3.17	7.04	0.20	7	8	0.29	7	6
8	Max Weber	Historian	3.10	7.96	0.20	7	8	0.34	8	7
9	John Maynard Keynes	Economist	1.90	9.04	0.20	9	10	0.26	9.08	9
10	John Forbes Nash Jr.	American mathematician	1.87	9.96	0.20	9	10	0.27	9.92	10
11	Vilfredo Pareto	Italian engineer	1.79	11.08	0.28	11	12	0.34	11	14
12	Benoit Mandelbrot	American-French-Polish mathematician	1.75	11.92	0.28	11	12	7.14	87.88	69.2
13	David Hume	Scottish philosopher	1.67	13	0.00	13	13	0.31	12	13
14	Arthur Lewis	Economist	1.56	14	0.00	14	14	8.00	1460.28	264
15	Friedrich Engels	Philosopher	1.32	15.08	0.28	15	16	0.32	13.28	18
16	Auguste Comte	French philosopher	1.30	16.08	0.49	15	17	0.33	13.96	16
17	Michael Porter	American academic	1.29	16.84	0.37	16	17	0.32	14.76	19.1
18	George Bernard Shaw	Playwright	1.25	18.04	0.20	18	19	0.25	16	15
19	Subramanian Swamy	Member of Parliament, Rajya Sabha	1.22	19.04	0.35	18	20	0.77	19.04	35.6
20	John Stuart Mill	Philosopher	1.21	19.92	0.28	19	20	0.31	17	20.1
21	Milton Friedman	American economist	1.16	21	0.00	21	21	0.27	18	17
22	Thomas Robert Malthus	English scholar	1.09	22	0.00	22	22	0.30	19.96	20.8
23	Ibn Khaldun	Philosopher	1.05	23.12	0.33	23	24	0.32	21	32.4
24	Manmohan Singh	Topic	1.04	23.88	0.33	23	24	0.78	22.96	25.7

25	Paul Krugman	American economist	1.00	25	0.00	25	25	0.00	22.04	11
26	Christine Lagarde	President of the European Central Bank	0.96	26	0.00	26	26	1.16	25.04	25.3
27	Kofi Annan	Ghanaian diplomat	0.91	27.04	0.20	27	28	2.62	32.12	38.7
28	John von Neumann	American-Hungarian mathematician	0.85	28.04	0.20	28	29	0.28	24	28
29	Ludwig von Mises	Economist	0.75	29.32	0.56	29	31	0.24	26.12	30
30	Jeremy Bentham	English philosopher	0.75	30	0.65	29	32	0.30	27.12	34.6
31	Friedrich Hayek	Austrian-British economist	0.73	31.2	0.82	29	33	0.25	27.88	27
32	Rosa Luxemburg	Philosopher	0.73	31.84	1.11	27	33	0.43	29.28	37
33	Helmut Schmidt	Former Chancellor of Germany	0.71	33.36	1.04	31	35	2.14	40.2	45
34	António de Oliveira Salazar	Former Acting President of Portugal	0.71	33.44	0.58	32	34	0.43	29.64	52.7
35	Raghuram Rajan	Indian economist	0.65	35.12	0.33	35	36	0.86	31.96	59.6
36	Janet Yellen	Former Chair of the Federal Reserve	0.63	35.96	0.35	35	37	1.46	39.56	47.7
37	Thomas Sowell	American economist	0.60	37.28	1.84	29	39	0.89	37.04	52.3
38	Mario Draghi	Italian economist	0.60	37.48	0.51	37	38	0.53	32.56	30.5
39	Amartya Sen	Indian economist	0.58	38.92	0.28	38	39	0.38	33.52	42.1
40	Dominique Strauss-Kahn	Former French Minister of the Economy, Finance and Industry	0.56	40.28	0.46	40	41	2.45	53.92	12
41	Edmund Burke	Statesman	0.55	40.72	0.46	40	41	0.25	35.04	43.9
42	David Ricardo	British economist	0.53	42.56	0.77	42	44	0.30	36.64	43
43	Ali Babacan	Turkish Politician	0.53	43.12	1.09	42	46	1.36	45.32	91.8
44	Thomas Piketty	French economist	0.53	44.04	1.14	42	46	0.44	41.8	34.8
45	Daniel Kahneman	Psychologist	0.52	45	0.91	43	46	0.30	38.64	64.1
46	N. Gregory Mankiw	American professor	0.52	45.28	0.89	43	46	0.23	38.96	32.6
47	Xenophon	Athenian philosopher	0.51	47	0.00	47	47	0.31	42.88	46.5
48	Li Keqiang	Premier of the People's Republic of China	0.48	48.84	0.75	48	50	0.51	44.16	58.3
49	Peter Schiff	American stock broker	0.48	49.04	0.89	48	50	0.68	46.64	40.7
50	Yanis Varoufakis	Former Member of the Hellenic Parliament	0.48	49.12	0.83	48	50	0.62	47.36	23.3
51	Stephen Harper	Former Prime Minister of Canada	0.46	51.32	0.48	51	52	1.63	57	23.4
52	Joseph Schumpeter	Economist	0.46	51.88	0.78	51	54	0.30	46.52	50.2
53	Juan Manuel Santos	Former President of Colombia	0.45	53.32	0.80	52	55	0.57	49.68	29.5

54	Javier Milei	Argentine economist	0.45	53.72	0.74	52	55	0.94	49.32	218.6
55	Alassane Ouattara	President of the Ivory Coast	0.44	54.76	0.52	53	55	0.75	52	59
56	Joseph Stiglitz	American economist	0.42	56	0.00	56	56	0.23	51	39.5
57	William F. Sharpe	American economist	0.39	57.2	0.41	57	58	0.32	53.12	62
58	José Luis Espert	Argentine economist	0.39	57.8	0.41	57	58	1.73	64.04	150.1
59	Myron Scholes	American-Canadian economist	0.37	59.4	0.50	59	60	0.28	55	54
60	Robert Reich	Former United States Secretary of Labor	0.37	59.6	0.50	59	60	0.42	56.64	73.1
61	Robert J. Shiller	American economist	0.36	61.16	0.37	61	62	0.26	57.36	49.1
62	Alexander Van der Bellen	President of Austria	0.35	62.28	0.94	61	65	1.90	68.6	532.4
63	Cesare Beccaria	Italian criminologist	0.35	63.12	0.97	62	65	0.35	59.08	65.9
64	Alan Greenspan	Former Chair of the Federal Reserve of the United States	0.35	63.76	0.66	62	65	0.33	60.48	56.4
65	Larry Kudlow	Director of the United States National Economic Council	0.34	65.48	1.05	63	67	2.18	77.16	158.4
66	Muhammad Yunus	Bangladeshi social entrepreneur	0.34	65.68	0.90	64	67	0.26	60.4	50.7
67	Sri Mulyani	Minister of Finance of Indonesia	0.33	66.52	0.82	64	67	0.80	62.6	117.2
68	Paul Samuelson	American economist	0.31	68	0.00	68	68	0.24	62.48	61.7
69	Benjamin Graham	American economist	0.29	69.08	0.28	69	70	0.35	65.04	77.7
70	Robert Solow	American economist	0.29	69.92	0.28	69	70	0.29	65.84	72
71	Tansu Çiller	Former Prime Minister of Turkey	0.28	71.04	0.20	71	72	0.84	70.2	85.8
72	Dan Ariely	American-Israeli professor	0.27	72.2	0.65	71	74	0.37	67.68	75.9
73	Ronald Coase	British economist	0.26	73.4	0.82	72	75	0.29	67.88	68
74	Jean-Baptiste Colbert	Former Chief minister of France	0.26	74.36	0.99	72	76	0.82	72.48	199.2
75	Arthur Laffer	American economist	0.26	74.44	0.96	73	76	0.49	70.76	70.1
76	Abhijit Banerjee	American economist	0.25	76	1.73	72	82	3.80	114.28	192.8
77	Paul Volcker	Former Chair of the Federal Reserve	0.24	77.4	0.87	76	79	0.63	76.48	67
78	Peter Kropotkin	Economist	0.24	77.48	0.65	76	79	0.31	72.64	84
79	Walt Whitman Rostow	American economist	0.24	78.88	0.60	77	80	0.44	74.36	100
80	Ben Bernanke	American economist	0.23	80.16	0.55	79	81	0.31	76.28	22.3
81	Robert Owen	Philanthropist	0.23	80.8	0.71	79	82	0.31	76.24	77
82	Jean Bodin	French jurist	0.22	81.88	0.44	81	83	0.49	80	80.3

83	Henri de Saint-Simon	French businessman	0.22	82.96	0.20	82	83	0.32	79	78.9
84	Harry Markowitz	American economist	0.21	84.16	0.37	84	85	0.32	81.08	85.6
85	William Pitt the Younger	Former Prime Minister of the United Kingdom	0.21	84.92	0.49	84	86	0.75	86.56	102.2
86	Richard Thaler	American economist	0.20	86.8	1.04	85	89	1.65	95.4	218.8
87	David Simon	American author	0.20	87.12	1.36	85	90	0.46	84.08	87.5
88	Thorstein Veblen	American economist	0.20	87.52	0.77	86	89	0.31	83.04	89
89	Nicolas de Caritat, marquis de Condorcet	French philosopher	0.19	88.68	0.80	87	90	0.26	83.44	75.4
90	Arnold J. Toynbee	British historian	0.19	90.04	0.79	88	92	0.28	85.36	80.7
91	Fischer Black	American economist	0.18	91.48	1.12	90	95	0.27	86.76	70.7
92	Gita Gopinath	American economist	0.18	91.96	0.93	90	93	1.53	98	218.6
93	Mark Carney	Economist	0.18	92.48	0.77	91	94	0.80	90.72	121.6
94	Daron Acemoglu	American-Armenian-Turkish economist	0.18	94.8	1.00	94	97	0.60	90.2	127.7
95	Alejandro Toledo	Former President of Peru	0.18	95	1.08	92	97	1.47	107.04	114.1
96	James Tobin	American economist	0.17	95.56	1.16	93	98	0.39	89.16	82.4
97	Esther Duflo	American-French economist	0.17	97.6	1.61	94	101	2.55	126.6	130.1
98	Alfred Marshall	Economist	0.17	98.8	1.55	96	102	0.37	92.24	107.8
99	Gloria Macapagal Arroyo	Former President of the Philippines	0.17	99.4	2.02	96	104	0.70	96.68	87.2
100	Eugene Fama	American economist	0.17	99.96	1.90	97	103	0.29	92.08	95.1
101	William Herschel	British-German astronomer	0.16	100.28	1.86	95	103	0.93	101.08	139.8
102	Irving Fisher	American economist	0.16	101.56	1.45	99	104	0.38	93.56	118.9
103	Mwai Kibaki	Former President of Kenya	0.16	102.68	1.52	100	105	2.23	133.16	121.6
104	Tyler Cowen	American economist	0.16	103.56	1.19	100	105	0.34	95.08	90.7
105	Mario Monti	President of Bocconi University	0.16	104.64	0.64	103	105	0.61	99.36	39.1

Avg. Score gives the search intensity, relative to Paul Krugman's search intensity, averaged over 64 months in the period 2015-2020 and averaged over 25 samples. Avg. Rank is the average across 25 samples of the ranking of average monthly relative search intensity. Std. Rank is the standard deviation across 25 samples of the ranking of average monthly relative search intensity. Minimum rank is the lowest rank across the 25 samples, maximum rank is the highest rank across the 25 samples. Std Score is the average,

across 25 samples, of the standard deviation across the 64 months of relative search intensity. The trimmed rank is like the average rank but the two lowest and highest months are excluded when computing the mean score. The average rank 2010-2015 is computed in the same way as the average rank for the period 2015-2020. Full table can be found at https://doi.org/10.7910/DVN/NHZJLA.

Table 3: Google Trends Ranking of Nobel Prize winners in Economics

#	Google Trends Name	Google Trends Descriptor	(I) Avg. Score	(II) Avg. Rank	(III) Std. Rank	(IV) Min. Rank	(V) Max. Rank	(VI) Std. Score	(VII) Trimmed Avg. Rank	(VIII) Avg. Rank 2010-2015
1	John Forbes Nash Jr.	American mathematician	1.87	1	0.00	1	1	0.27	1	1
2	Arthur Lewis	Economist	1.56	2	0.00	2	2	8.00	84.52	41.76
3	Milton Friedman	American economist	1.16	3	0.00	3	3	0.27	2	3
4	Paul Krugman	American economist	1.00	4	0.00	4	4	0.00	3	2
5	Friedrich Hayek	Austrian-British economist	0.73	5	0.00	5	5	0.25	4	4
6	Amartya Sen	Indian economist	0.58	6	0.00	6	6	0.38	5	6
7	Daniel Kahneman	Psychologist	0.52	7	0.00	7	7	0.30	6	10.76
8	Joseph Stiglitz	American economist	0.42	8	0.00	8	8	0.23	7	5
9	William F. Sharpe	American economist	0.39	9	0.00	9	9	0.32	8	9.76
10	Myron Scholes	American-Canadian economist	0.37	10	0.00	10	10	0.28	9	8
11	Robert J. Shiller	American economist	0.36	11	0.00	11	11	0.26	10	7
12	Paul Samuelson	American economist	0.31	12	0.00	12	12	0.24	11	9.48
13	Robert Solow	American economist	0.29	13	0.00	13	13	0.29	12	13
14	Ronald Coase	British economist	0.26	14.04	0.20	14	15	0.29	13	12
15	Abhijit Banerjee	American economist	0.25	14.96	0.20	14	15	3.80	20.4	28.96

16	Harry Markowitz	American economist	0.21	16	0.00	16	16	0.32	14	15
17	Richard Thaler	American economist	0.20	17	0.00	17	17	1.65	16.92	33.6
18	James Tobin	American economist	0.17	18.16	0.37	18	19	0.39	15.04	14
19	Esther Duflo	American-French economist	0.17	19.04	0.61	18	20	2.55	23.88	22.04
20	Eugene Fama	American economist	0.17	19.8	0.41	19	20	0.29	16.04	16
21	Herbert A. Simon	Economist	0.15	21	0.00	21	21	0.31	18	18
22	Simon Kuznets	Economist	0.14	22	0.00	22	22	0.36	19	22
23	Elinor Ostrom	American economist	0.12	23.2	0.41	23	24	0.31	21.04	17
24	Bertil Ohlin	Swedish economist	0.12	23.92	0.57	23	25	0.36	21.92	24.32
25	Wassily Leontief	Economist	0.11	24.88	0.33	24	25	0.31	22.8	19.12
26	Franco Modigliani	American-Italian economist	0.10	26.12	0.33	26	27	0.33	24.96	19.92
27	Angus Deaton	American-British economist	0.10	26.88	0.33	26	27	1.64	27.32	46.16
28	Robert Mundell	Canadian economist	0.09	28	0.00	28	28	0.41	26.04	25.72
29	Jean Tirole	French professor	0.08	29.12	0.33	29	30	0.33	27.96	22.36
30	James Heckman	American economist	0.07	30.48	0.82	29	33	0.35	29.24	27.76
31	Gary Becker	American economist	0.07	31	1.08	29	33	0.31	29.44	24.52
32	Paul Michael Romer	Senior Vice President of the World Bank	0.07	31.72	0.84	30	33	1.42	32.68	38.28
33	William Nordhaus	American economist	0.07	32.88	0.67	31	34	1.27	32.32	27.28

34	Kenneth Arrow	American economist	0.07	33.8	0.58	32	34	0.46	31	32.72
35	Robert Lucas Jr.	American economist	0.05	35.92	1.08	35	38	0.39	34.92	30.88
36	Gunnar Myrdal	Swedish economist	0.05	36.52	1.29	35	39	0.47	35.28	43.76
37	George Akerlof	American economist	0.05	36.84	1.03	35	38	0.45	36.2	31.32
38	Lloyd Shapley	American mathematician	0.05	36.96	1.17	35	39	0.43	35.8	40.28
39	Douglass North	American economist	0.05	39.28	0.94	36	41	0.42	38.24	37.36
40	Sir John Richard Hicks	British economist	0.05	39.56	0.71	38	41	0.56	38.72	51.92
41	Clive Granger	British economist	0.04	40.96	0.35	40	42	0.41	39.84	35.32
42	Merton Miller	American economist	0.04	42.28	0.46	42	43	0.40	41.2	34.8
43	Robert C. Merton	American economist	0.04	42.8	0.71	41	44	0.39	41.88	40.84
44	Thomas Schelling	American economist	0.03	43.92	0.40	43	45	0.46	42.92	45.2
45	George Stigler	American economist	0.03	45.44	0.77	45	48	0.49	44.16	53.04
46	Paul Milgrom	American economist	0.03	46.04	1.06	44	49	4.62	70.6	60.8
47	James M. Buchanan	American economist	0.03	47.84	1.37	46	52	0.67	46	74.28
48	Leonid Kantorovich	Mathematician	0.03	47.88	1.39	45	51	0.42	45.8	53.88
49	Bengt Holmström	Finnish economist	0.03	50	2.14	47	55	2.10	56.52	64.4
50	Christopher A. Sims	American university professor	0.03	50.96	2.23	47	56	0.44	47.84	40.4
51	Gérard Debreu	Economist	0.03	51.24	2.15	47	55	0.42	48.08	47.72

52	Maurice Allais	French physicist	0.03	51.4	2.20	49	57	0.42	48.04	45.52
53	Michael Kremer	American economist	0.02	52.32	2.82	46	59	2.77	63.48	72.08
54	Eric Maskin	American economist	0.02	54.36	2.10	51	59	0.44	50.28	51.92
55	John Harsanyi	American-Hungarian economist	0.02	55.88	2.33	52	61	0.64	51.68	32.64
56	Jan Tinbergen	Dutch economist	0.02	56.24	1.79	53	59	0.51	51.92	69.96
57	Robert F. Engle	American statistician	0.02	56.92	1.89	53	60	0.74	53.96	67.52
58	Oliver Hart	Economist	0.02	57	2.81	51	62	2.42	64.04	77.16
59	Vernon L. Smith	American economist	0.02	57.36	1.85	53	60	0.51	52.52	51.28
60	Oliver E. Williamson	American economist	0.02	60.2	1.85	55	65	0.61	55.8	55.8
61	Leonid Hurwicz	American-Polish economist	0.02	62.4	2.63	57	69	0.62	57.96	62
62	James Mirrlees	Economist	0.02	63.16	2.41	59	68	0.68	59.32	59.56
63	Richard Stone	British economist	0.02	63.64	2.22	60	69	0.67	59.6	63.24
64	Robert Fogel	American historian	0.02	64.44	2.52	60	69	0.70	60.44	66.2
65	Alvin E. Roth	American academic	0.02	64.76	2.63	60	68	0.70	61	59.44
66	Thomas J. Sargent	American economist	0.02	65	1.98	60	68	0.70	61.2	50.52
67	Christopher A. Pissarides	British-Cypriot economist	0.02	66.16	2.70	60	71	0.95	64.64	56.36
68	Edward C. Prescott	American economist	0.02	67.8	2.60	62	71	0.77	64.56	56
69	Lars Peter Hansen	American economist	0.01	68.8	2.24	62	73	0.97	66.32	42.68

70	Robert Aumann	American-Israeli mathematician	0.01	69.64	2.06	66	73	0.90	67.44	65.32
71	William Vickrey	American-Canadian professor	0.01	70.04	2.15	65	73	0.93	67.96	72.8
72	Peter Diamond	American economist	0.01	71.76	0.93	70	73	1.01	70.12	55
73	Theodore Schultz	American economist	0.01	72.56	1.39	69	76	1.10	71.04	77.46
74	Edmund Phelps	American economist	0.01	74.76	1.01	73	76	1.31	73.76	69.04
75	Michael Spence	American economist	0.01	74.96	1.02	73	77	1.42	73.96	77.56
76	Finn E. Kydland	Norwegian economist	0.01	75.16	1.03	73	77	1.31	74.08	71.6
77	Daniel McFadden	American professor	0.01	77.68	1.14	76	81	1.93	76.6	80.64
78	Trygve Haavelmo	Economist	0.00	78.04	1.14	76	80	1.89	76.76	72.84
79	Ragnar Frisch	Norwegian economist	0.00	80.04	1.86	76	84	2.51	78.76	84.08
80	Robert B. Wilson	American economist	0.00	80.04	1.67	77	83	6.67	83.84	84.2
81	Roger Myerson	American economist	0.00	80.56	1.58	78	83	2.50	78.96	78.52
82	Tjalling Koopmans	American-Dutch mathematician	0.00	81.72	1.24	78	83	2.73	79.84	84.08
83	Reinhard Selten	German economist	0.00	81.8	1.15	80	83	2.74	80.08	81.54
84	Lawrence Klein	American economist	0.00	84.56	0.82	84	86	4.83	83.48	79.84
85	James Meade	British economist	0.00	85.02	0.87	83	86	5.12	83.72	84.2
86	Dale T. Mortensen	American economist	0.00	85.38	0.63	84	86	6.05	84.32	68.68

Avg. Score gives the search intensity, relative to Paul Krugman's search intensity, averaged over 64 months in the period 2015-2020 and averaged over 25 samples. Avg. Rank is the average across 25 samples of the ranking of average monthly relative search intensity. Std. Rank is the standard deviation across 25 samples of the ranking of average monthly relative search intensity. Minimum rank is the lowest rank across the 25 samples, maximum rank is the highest rank across the 25 samples. Std Score is the average, across 25 samples, of the standard deviation across the 64 months of relative search intensity. The trimmed rank is like the average rank but the two lowest and highest months

are excluded when computing the mean score. The average rank 2010-2015 is computed in the same way as the average rank for the period 2015-2020. Full table can be found at https://doi.org/10.7910/DVN/NHZJLA.

Table 4: Google Trends Ranking of Economists who are in the Top 5% of RePEc

#	Google Trends Name	Google Trends Descriptor	(I) Avg. Score	(II) Avg. Rank	(III) Std. Rank	(IV) Min. Rank	(V) Max. Rank	(VI) Std. Score	(VII) Trimmed Avg. Rank	(VIII) Avg. Rank 2010-2015
1	John Forbes Nash Jr.	American mathematician	1.87	1.00	0.00	1	1	0.27	1	1
2	Benoit Mandelbrot	American-French-Polish mathematician	1.75	2.00	0.00	2	2	7.14	21.12	19.04
3	Milton Friedman	American economist	1.16	3.00	0.00	3	3	0.27	2	3
4	Paul Krugman	American economist	1.00	4.00	0.00	4	4	0.00	3	2
5	Raghuram Rajan	Indian economist	0.65	5.08	0.28	5	6	0.86	4.08	13
6	Janet Yellen	Former Chair of the Federal Reserve	0.63	5.92	0.28	5	6	1.46	7.32	9
7	Amartya Sen	Indian economist	0.58	7.00	0.00	7	7	0.38	4.92	8
8	Thomas Piketty	French economist	0.53	8.44	0.77	8	10	0.44	8.92	6
9	Daniel Kahneman	Psychologist	0.52	9.16	0.69	8	10	0.30	6.76	16
10	N. Gregory Mankiw	American professor	0.52	9.40	0.71	8	10	0.23	7	5
11	Joseph Stiglitz	American economist	0.42	11.00	0.00	11	11	0.23	10	7

12	William F. Sharpe	American economist	0.39	12.00	0.00	12	12	0.32	11	14.8
13	Myron Scholes	American-Canadian economist	0.37	13.00	0.00	13	13	0.28	12	11
14	Robert J. Shiller	American economist	0.36	14.00	0.00	14	14	0.26	13	10
15	Alan Greenspan	Former Chair of the Federal Reserve of the United States	0.35	15.00	0.00	15	15	0.33	14	12
16	Paul Samuelson	American economist	0.31	16.00	0.00	16	16	0.24	15	14.48
17	Robert Solow	American economist	0.29	17.00	0.00	17	17	0.29	16	19.96
18	Ronald Coase	British economist	0.26	18.04	0.20	18	19	0.29	17	18
19	Abhijit Banerjee	American economist	0.25	19.00	0.29	18	20	3.80	29.36	54.68
20	Ben Bernanke	American economist	0.23	19.96	0.20	19	20	0.31	18.08	4
21	Harry Markowitz	American economist	0.21	21.00	0.00	21	21	0.32	19.12	23
22	Richard Thaler	American economist	0.20	22.00	0.00	22	22	1.65	23.72	66.96
23	Gita Gopinath	American economist	0.18	23.00	0.00	23	23	1.53	24.96	67.48
24	Daron Acemoglu	American-Armenian-Turkish economist	0.18	24.36	0.64	24	26	0.60	21.6	30.92
25	James Tobin	American economist	0.17	24.88	0.60	24	26	0.39	21	21.2
26	Esther Duflo	American-French economist	0.17	25.96	0.73	24	27	2.55	31.96	33.08
27	Eugene Fama	American economist	0.17	26.80	0.41	26	27	0.29	22.6	24
28	Herbert A. Simon	Economist	0.15	28.00	0.00	28	28	0.31	25.84	26.28
29	Simon Kuznets	Economist	0.14	29.12	0.33	29	30	0.36	27	32.88
30	Lawrence Summers	Former Undersecretary for International Affairs	0.13	29.88	0.33	29	30	0.37	27.96	21.8
31	Kenneth French	Professor	0.12	31.00	0.00	31	31	0.81	31	31.84
32	Elinor Ostrom	American economist	0.12	32.00	0.00	32	32	0.31	29.88	25
33	Nouriel Roubini	Economist	0.11	33.00	0.00	33	33	0.80	32.88	16.72
34	James A. Robinson	Economist	0.10	34.32	0.63	34	36	2.19	47.04	57.8
35	Franco Modigliani	American-Italian economist	0.10	35.00	0.58	34	36	0.33	34.08	29.24
36	Angus Deaton	American-British economist	0.10	36.08	0.76	34	37	1.64	39.64	106.08
37	Olivier Blanchard	French economist	0.10	36.64	0.81	34	38	0.32	34.84	42.8
38	Hans-Werner Sinn	President of the Ifo Institute for Economic Research	0.09	37.96	0.20	37	38	0.60	36.08	47.44

39	Richard Posner	American jurist	0.08	40.12	1.42	39	44	0.46	38.92	26.76
40	Sergei Guriev	Russian economist	0.08	41.24	2.01	39	46	2.08	54.36	94.48
41	Hal Varian	Economist	0.08	41.92	2.25	39	47	0.32	38.84	42.24
42	Robert Pindyck	American economist	0.08	42.32	1.55	40	46	0.34	39.32	41.04
43	Dani Rodrik	Turkish economist	0.08	42.60	1.98	39	46	0.33	39.84	52
44	Jean Tirole	French professor	0.08	43.52	1.87	39	47	0.33	41	33.84
45	Alan Krueger	American economist	0.08	45.12	3.42	39	51	4.66	89.36	114.6
46	Xavier Sala-i-Martin	American economist	0.08	45.44	2.45	41	51	0.66	45.12	34.64
47	James Heckman	American economist	0.07	46.64	1.60	44	50	0.35	43.36	49.92
48	Gary Becker	American economist	0.07	47.60	2.08	42	51	0.31	43.72	37.64
49	Paul Michael Romer	Senior Vice President of the World Bank	0.07	48.92	1.71	45	53	1.42	53.56	79.76
50	William Nordhaus	American economist	0.07	50.76	1.45	48	54	1.27	53.4	49.16
51	Michele Boldrin	Politician	0.07	50.84	1.72	47	54	0.84	48.64	67.08
52	William Baumol	American economist	0.07	51.40	2.10	46	55	0.36	47.04	52
53	Steven Levitt	American economist	0.07	52.76	1.51	49	55	0.29	47.6	44.36
54	Kenneth Arrow	American economist	0.07	53.20	1.41	49	55	0.46	50	65.12
55	Jeffrey Wooldridge	American professor	0.07	54.64	0.95	51	56	0.31	49.92	55.2
56	Rudi Dornbusch	Economist	0.06	56.36	0.64	55	58	0.42	53.88	34.44
57	George J. Borjas	American economist	0.06	56.92	0.81	56	59	0.47	55	38.52
58	Kenneth Rogoff	American economist	0.06	58.32	0.63	57	59	0.33	56.72	28.12
59	Arvind Subramanian	Former Chief Economic Adviser to the Government of India	0.06	58.40	0.91	56	60	1.12	59.96	163.56
60	Emily Oster	American economist	0.05	61.36	1.85	59	67	1.10	62.6	159.52
61	Robert Lucas Jr.	American economist	0.05	61.56	1.36	60	65	0.39	59.28	62.28
62	Lloyd Shapley	American mathematician	0.05	63.20	1.80	60	67	0.43	60.72	87.36
63	George Akerlof	American economist	0.05	63.24	1.76	60	66	0.45	61.4	62.56
64	Tito Boeri	Italian economist	0.05	63.44	1.96	60	67	1.10	68.16	110.4
65	Paul Collier	British economist	0.05	64.36	3.19	60	73	0.43	62.2	54.96

66	Raj Chetty	American economist	0.05	66.16	1.77	63	70	0.58	64.8	148.36
67	Frederic Mishkin	American economist	0.05	66.44	2.02	62	70	0.34	63.44	58.68
68	Douglass North	American economist	0.05	67.68	2.04	63	72	0.42	65.88	76.64
69	Sir John Richard Hicks	British economist	0.05	68.52	1.58	65	72	0.56	67.24	130.16
70	Edward Glaeser	American economist	0.04	70.32	1.70	67	74	0.41	68.2	43.68
71	Stephen Ross	Professor	0.04	71.68	1.89	69	76	0.37	69.32	65.8
72	Clive Granger	British economist	0.04	72.92	1.73	71	76	0.41	70.36	70.4
73	Roland G. Fryer Jr.	American economist	0.04	74.48	2.95	69	81	1.66	84.36	177.96
74	Òscar Jordà	Economist	0.04	74.76	3.33	69	82	0.58	73.36	69.2
75	Alejandro Gaviria Uribe	Economist	0.04	75.40	3.23	71	84	0.79	75.04	136.28
76	Glenn Loury	American economist	0.04	76.72	3.32	70	83	1.54	83.92	666.66
77	Austan Goolsbee	American economist	0.04	78.04	4.10	70	85	0.44	73.64	55.72
78	Arvind Panagariya	Indian economist	0.04	78.52	2.65	74	84	1.79	96.8	167.76
79	Branko Milanović	American economist	0.04	79.60	2.71	74	84	0.62	75.24	311.4
80	Luis Garicano	Member of the European Parliament	0.04	79.76	4.37	71	85	1.06	79.92	113.16
81	Federico Sturzenegger	Former President of the Central Bank of Argentina	0.04	80.52	3.63	73	86	1.32	84.52	147.28
82	Merton Miller	American economist	0.04	80.92	2.69	75	85	0.40	74.84	69.32
83	Frank J. Fabozzi	American economist	0.04	81.00	2.36	75	85	0.46	76.24	54.28
84	Alberto Alesina	Italian economist	0.04	82.12	3.00	74	86	2.06	97.48	88.8
85	Robert C. Merton	American economist	0.04	82.36	3.19	74	86	0.39	76.6	89.08
86	Viral Acharya	Indian economist	0.03	87.32	1.57	85	90	2.21	124.48	758.48
87	David Teece	Topic	0.03	88.88	2.01	86	93	0.40	81.88	104.52
88	Robert Litterman	Topic	0.03	89.48	3.19	85	98	0.43	82.8	93.96
89	Kevin Hassett	American economist	0.03	89.76	2.62	86	95	1.72	108.24	335.52
90	Michael C. Jensen	American economist	0.03	90.08	3.24	86	99	0.44	83.72	78.32
91	Clemens Fuest	President of the Ifo Institute for Economic Research	0.03	91.28	3.74	86	101	0.55	85.56	195.32

92	Philippe Aghion	French economist	0.03	93.16	3.35	87	100	0.64	89	129.2
93	Atif Mian	Economist	0.03	93.72	4.14	86	103	5.48	218.84	300.92
94	Lasse Heje Pedersen	Danish economist	0.03	94.84	3.36	88	100	0.41	88.56	100.64
95	Justin Yifu Lin	Economist	0.03	95.44	4.61	86	105	0.58	90.92	70.28
96	Luigi Zingales	Professor	0.03	95.72	3.21	90	102	0.50	91.08	73.2
97	Jonathan Gruber	American professor	0.03	97.60	3.92	89	105	0.68	97.4	45.68
98	James H. Stock	American economist	0.03	98.76	3.46	93	108	0.40	91.48	89.48
99	George Stigler	American economist	0.03	99.56	4.52	92	111	0.49	94.04	132.88
100	John H. Cochrane	Economist	0.03	99.60	4.56	89	113	0.40	93.36	82.2

Avg. Score gives the search intensity, relative to Paul Krugman's search intensity, averaged over 64 months in the period 2015-2020 and averaged over 25 samples. Avg. Rank is the average across 25 samples of the ranking of average monthly relative search intensity. Std. Rank is the standard deviation across 25 samples of the ranking of average monthly relative search intensity. Minimum rank is the lowest rank across the 25 samples, maximum rank is the highest rank across the 25 samples. Std Score is the average, across 25 samples, of the standard deviation across the 64 months of relative search intensity. The trimmed rank is like the average rank but the two lowest and highest months are excluded when computing the mean score. The average rank 2010-2015 is computed in the same way as the average rank for the period 2015-2020. Full table can be found at https://doi.org/10.7910/DVN/NHZJLA.