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Description of document: Equal Employment Opportunity Commission (EEOC)
Investigating a Relationship between Economic Downturns
and EEOC Charge Filings, Phase I and Phase II reports,
2020

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09/29/2021

Re: FOIA No.: 820-2021-006881
OEDA Research Project

Your Freedom of Information Act (FOIA) request, received on 07/20/2021, is processed. Our search began on 08/3/2021. All agency records in creation as of 08/3/2021 are within the scope of EEOC's search for responsive records. The paragraph(s) checked below apply.

[X] Your request is granted in part and denied in part. Portions not released are withheld pursuant to the subsections of the FOIA indicated at the end of this letter. An attachment to this letter explains the use of these exemptions in more detail.

[X] You may contact the EEOC FOIA Public Liaison Stephanie D. Garner for further assistance or to discuss any aspect of your request. In addition, you may contact the Office of Government Information Services (OGIS) to inquire about the FOIA mediation services they offer.

The contact information for OGIS is as follows: Office of Government Information Services, National Archives and Records Administration, 8601 Adelphi Road-OGIS, College Park, Maryland 20740-6001, email at ogis@nara.gov; telephone at (202) 741-5770; toll free 1-877-684-6448; or facsimile at (202) 741-5769.

The contact information for the FOIA Public Liaison is as follows: Stephanie D. Garner, EEOC FOIA Public Liaison, Office of Legal Counsel, FOIA Division, Equal Employment Opportunity Commission, 131 M. Street, N.E., Fifth Floor, Washington, D.C. 20507, email to FOIA@eeoc.gov, telephone at (202) 921-2542; or fax at (202) 653-6034.

[X] If you are not satisfied with the response to this request, you may administratively appeal in writing. Your appeal must be postmarked or electronically transmitted in 90 days from receipt of this letter to the Office of Legal Counsel, FOIA Division, Equal Employment Opportunity Commission, 131 M Street, NE, 5NW02E, Washington, D.C. 20507, email to FOIA@eeoc.gov; online at <https://eeoc.arkcase.com/foia/portal/login>, or fax at (202) 653-6034. Your appeal will be governed by 29 C.F.R. § 1610.11.

[X] See the attached Comments page for further information.

Sincerely,

/s/Sdgarner

 Stephanie D. Garner
 Assistant Legal Counsel
foia@eeoc.gov
 202-921-2542

Applicable Sections of the Freedom of Information Act, 5 U.S.C. § 552(b):

Exemption(s) Used:

- | | |
|--|------------------------------------|
| <input type="checkbox"/> (b)(3)(A)(i) | <input type="checkbox"/> (b)(6) |
| <input type="checkbox"/> § 706(b) | <input type="checkbox"/> (b)(7)(A) |
| <input type="checkbox"/> § 709(e) | <input type="checkbox"/> (b)(7)(C) |
| <input type="checkbox"/> § 107 of the ADA | <input type="checkbox"/> (b)(7)(D) |
| <input type="checkbox"/> § 207 of the GINA | <input type="checkbox"/> (b)(7)(E) |
| <input type="checkbox"/> (b)(4) | <input type="checkbox"/> (b)(7)(F) |
| <input checked="" type="checkbox"/> (b)(5) | |

(b)(5): Exemption (b)(5) to the Freedom of Information Act (FOIA), 5 U.S.C. § 552(b)(5) (2016), as amended by the FOIA Improvement Act of 2016, Pub. L. No. 114-185, 130 Stat. 538, permits withholding documents that reflect the analyses and recommendations of EEOC personnel generated for the purpose of advising the agency of possible action. This exemption protects the agency's deliberative process and allows nondisclosure of "inter-agency or intra-agency memorandums or letters which would not be available to a party other than an agency in litigation with the agency." 5 U.S.C. § 552(b)(5). The exemption covers internal communications that are deliberative in nature. *National Labor Relations Board v. Sears, Roebuck & Co.*, 421 U.S. 132 (1975); *Hinckley v. United States*, 140 F.3d 277 (D.C. Cir. 1998); *Mace v. EEOC*, 37 F. Supp. 2d 1144 (E.D. Mo. 1999). The purpose of the deliberative process privilege is to "allow agencies freely to explore alternative avenues of action and to engage in internal debates without fear of public scrutiny." *Missouri ex. rel. Shorr v. United States Corps of Eng'rs.*, 147 F.3d 708, 710 (8th Cir. 1998). Disclosure of preliminary assessments and opinions would create a chilling effect on the Commission staff's ability to freely and openly deliberate and discuss ideas, strategies, and recommendations, thereby impairing the Commission's ability to effectively and efficiently enforce applicable federal EEO laws by investigating charges and complaints, litigating and adjudicating cases, promulgating regulatory and sub-regulatory guidance, conducting outreach and education activities, and other related activities. Records may be withheld under this exemption if they were prepared prior to an agency's decision, *Wolfe v. Dep't of Health and Human Services*, 839 F.2d 768, 775, 776 (D.C. Cir. 1988) (en banc) and for the purpose of assisting the agency decision maker. *First Eastern Corp. v. Mainwaring*, 21 F.3d 465, 468 (D.C. Cir. 1994). See also, *Greyson v. McKenna & Cuneo and EEOC*, 879 F. Supp. 1065, 1068, 1069 (D. Colo. 1995). Records may also be withheld to the extent they reflect "selective facts" compiled by the agency to assist in the decision-making process. *A. Michael's Piano, Inc. v. Federal Trade Commission*, 18 F.3d 138 (2d Cir. 1994). An agency may also withhold records to the extent that they contain factual information already obtained by a requester through prior disclosure. See *Mapother, Nevas, et al. v. Dep't of Justice*, 3 F.3d 1533 (D.C. Cir. 1993).

DOCUMENTS WITHHELD PURSUANT TO EXEMPTION (b)(5) TO THE FOIA:

Phase I Report 2 – Draft portions withheld in full (pages 2-7)

Comments

This is in response to your Freedom of Information Act (FOIA), request. You request a copy of the three most recent administrative status reports associated with the OEDA research project: Impact of COVID-19 on the EEOC's Mission. I also request a copy of the Phase I report and a copy of the Phase II report, if completed. Your request is granted in part and denied in part.

Attached for your review is the following:

Economic Impact on EEOC Charge Filings Phase 1 Report, with redactions (8 pages)

Economic Impact on EEOC Charge Filings Phase II Report, granted in full (19 pages)

For a full description of the exemption codes used please find them at the following URL:

<https://eeoc.arkcase.com/foia/portal/login>

This response was prepared by Tracy L. Smalls, Government Information Specialist, who may be reached at 202-921-2541.



Office of Enterprise
Data and Analytics

Investigating a Relationship between Economic Downturns and EEOC Charge Filings Phase I Research Report

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Benjamin Overholt
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Moriah Willow

Office of Enterprise Data and Analytics

July 31, 2020

Executive Summary

This report presents results from descriptive analyses that assess the question of whether there may exist a relationship between the economic downturn due to the COVID-19 pandemic and the EEOC's mission. Our work is guided by the specific question posed to OEDA by the Office of the Chair (OCH) of whether there may be a correlation between unemployment and EEOC charge filings. **The results presented below provide support that charge filings likely are associated with economic conditions.** Using data from the Bureau of Labor Statistics and internal EEOC data on historical charge filings, we examine both visually and statistically whether charge filings may be related to the monthly unemployment rate specifically. We visually observe that charge filings tended to increase in the months after each of the three recessions that occurred between 1990 and 2019. Increases in charges did not occur with the same timing or to the same degree however. We also find a statistically significant association between unemployment and charge filings across the three decades. Our observations that monthly charge filings do not change in lock-step with unemployment, however, indicates that charge filings also likely are affected by other factors such as policy changes, political environment, and/or social change, to name just a few. Our results provide support to continue investigating the nature and timing of the relationship between economic conditions and charge filings.

(b) (5)

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References

- Boulware, Karl David, and Kenneth N. Kuttner. 2019. “Labor Market Conditions and Discrimination: Is There a Link?” *AEA Papers and Proceedings* 109 (May): 166–70.
- Griffin Jr., Christopher L. 2016. “Explaining ADA Employment Discrimination Charges over the Business Cycle.” *University of Cincinnati Law Review* 84 (3): 737–92.
- Juban, Rusty, and Lara Gardner. 2020. “To File or Not to File? How EEOC Claims Change with the Economy.” *Labor Studies Journal*, Published online January 6, 2020, downloaded on May 6, 2020. <https://doi.org/10.1177/0160449X19897403>.
- Schrader, Sarah von, and Zafar E. Nazarov. 2016. “Trends and Patterns in Age Discrimination in Employment Act (ADEA) Charges.” *Research on Aging* 38 (5): 580–601.
- U.S. Bureau of Labor Statistics. 2020. “Labor Force Statistics from the Current Population Survey.” Downloaded on May 6, 2020. <https://www.bls.gov/cps/tables.htm>.



Office of Enterprise
Data and Analytics

Investigating a Relationship between Economic Downturns and EEOC Charge Filings Phase II Research Report

Michelle Barro
Elizabeth Haile
Mark Leach
Kevin Malloy
Michelle Thomas
Justin West

Office of Enterprise Data and Analytics

December 21, 2020

Executive Summary

This report presents additional results that address the question of whether there may exist a relationship between the economic downturn due to the COVID-19 pandemic and the EEOC's mission. It follows a previous "Phase I" report, dated July 31, 2020, that described an association between monthly EEOC charge filings and the national unemployment rate. This report builds on the descriptive results regarding charge filings by including analyses of monthly inquiries and accounting for potential intervening factors that may also be related to inquiries and charge filings.

We first examine both visually and statistically whether inquiries and charges appear to be related to the monthly unemployment rate as we found for charge filings. We also introduce dynamic regression models to estimate the statistical relationship between the rates of inquiries and charges to economic and policy factors, as well as lagged effects over time. Results provide support that EEOC charge filings are associated with economic conditions, as measured by the unemployment rate and periods of recessions. The same is not necessarily true when including inquiries in the analysis. Forecasts for EEOC inquiries and charges are presented out to August 2023. The estimates generally show a cyclical yet steady volume of inquiries and charges over the next three years.

Introduction

This report builds on the previous Phase I report and presents more comprehensive analyses of the nature of the relationship between economic conditions and the EEOC's mission. Our work continues to be guided by the Office of the Chair's (OCH) original question to OEDA of whether there may be a correlation between unemployment and EEOC charge filings. In our briefing of the Phase I report findings on August 31, 2020, the Chair and the COO requested that OEDA also include analyses of inquiries. To these ends, the present report provides results for the following:

1. Descriptive analyses of trends both in inquiries and in charge filings relative to the unemployment rate;
2. Multivariate analyses of the relationships between inquiries and charge filings and the unemployment rate that account for other factors that may cause variation in inquiries and charge filings; and,
3. Monthly inquiry and charge filing forecasts.

The results presented below provide further support that EEOC charge filings are associated with economic conditions, as measured by the unemployment rate and periods of recessions. The same is not necessarily true when including inquiries in the analysis.

The report proceeds as follows: We first describe the data sources, measures, and methods that we use to analyze and model the relationships between inquiries and charges with the unemployment rate, as well as other economic and policy factors. We then present descriptive trends that show such relationships historically. And then we present model and forecast results.

Data and Methods

Data

While there are a variety of measures that indicate the health of the economy, we focus on the seasonally-adjusted monthly unemployment rate for its familiarity as an economic indicator and because it largely encapsulates workers' experiences in the labor market in a given month. We downloaded labor force and unemployment statistics from the Bureau of Labor Statistics website (U.S. Bureau of Labor Statistics 2020), which are based on data collected in the Current Population Survey (CPS), a monthly survey of households and the primary source of official monthly unemployment statistics for the U.S. civilian labor force ages 16 years and older. We acquired seasonally-adjusted monthly unemployment rates and seasonally-adjusted monthly civilian labor force population for January 1990 to August 2020 from the BLS website. This expands the period assessed in the Phase I report to include the first eight months of 2020, during the COVID-19 pandemic. Data regarding the history of U.S. recessions came from the National Bureau of Economic Research (National Bureau of Economic Research 2020). Dates and political party affiliations of past U.S. Presidents were obtained through the White House (White House 2020). Information about major EEOC-related laws and policies was obtained through the EEOC (U.S. EEOC 2020).

Employment discrimination inquiry and charge data, as well as monetary benefits obtained by EEOC, were extracted from the Integrated Mission System (IMS) production environment. IMS does not include inquiries prior to June 2002 and does not include all charges filed with the EEOC

prior to January 1990. We thus limit our analyses of inquiries and charges to after these months, respectively. As discussed with the Chair and the COO in our August briefing, monthly charge and inquiry frequencies for January 1, 1990 to August 31, 2020 were aggregated and categorized into four “buckets” based on whether an inquiry was filed with EEOC or a Fair Employment Practices Agency (FEPA), and based on the latest status of the inquiry. The buckets are defined as follows:

- Bucket 1 – Inquiries filed with EEOC that are open;
- Bucket 2 – Inquiries filed with EEOC that became charges;
- Bucket 3 – Inquiries filed with EEOC that closed without becoming charges; and,
- Bucket 4 – Inquiries filed with a FEPA.

Modeling Inquiries and Charges

In the report for Phase I, we examined a simple static relationship between charges and the unemployment rate where the estimated effects of unemployment rate on charge rates are modeled as instantaneous. Now we introduce dynamic regression models to estimate the statistical relationship between the rates of inquiries and charges to economic and policy factors, as well as lagged effects over time. Specifically, autoregressive models were estimated which use previous periods of inquiry and charge rates, in addition to economic and policy factors, to explain current periods of inquiry and charge rates. These economic and policy factors, as well as lagged rates of inquiries and charges, are called “explanatory factors.” The following explanatory factors were examined:

- Unemployment rate;
- Monetary benefits attained by EEOC;
- Political party of President in office;
- Policy 1 – Civil Rights Act (CRA) of 1991 (effective 11/21/1991);
- Policy 2 – Title I of the Americans with Disabilities Act (ADA) of 1990 (effective 7/26/1992);
- Policy 3 – Title II of the Genetic Information Nondiscrimination Act (GINA) of 2008 (effective 5/21/2008);
- Policy 4 – ADA Amendments Act of 2008 and Lilly Ledbetter Fair Pay Act of 2009 (effective 1/1/2009 and 1/29/2009, respectively);
- Recession 1 – July 1990 to March 1991 (Savings and Loan Crisis and Gulf War Recession);
- Recession 2 – March to November 2001 (Dot-Com Crash and 9/11 Terrorist Attack);
- Recession 3 – December 2007 to June 2009 (The Great Recession); and,
- Recession 4 – February 2020 to present (COVID Recession).

We estimate three models to estimate the effects of economic and policy factors. First, we combine Buckets 1 to 4 to address how overall inquiry and charge filings with EEOC and FEPAs are affected by the explanatory factors from June 1, 2002 to August 31, 2020. The second model examines how EEOC’s workload is affected over this same period with Buckets 1 to 3 combined. Finally, Bucket 2 is examined separately to address how EEOC charges are affected from

January 1, 1990 to August 31, 2020.¹ For each analysis, we calculate monthly values per 100,000 civilian labor force population (CLFP) to account for the possibility that changes in monthly inquiry or charge filings may be due to changes in the number of people in the labor force.^{2,3} Model construction was guided by standard regression and lag diagnostic methods by assessing stationarity, cross-correlations, variance inflation factors, autocorrelation, and Akaike information criterion values. Models were estimated using heteroskedasticity- and autocorrelation-consistent errors. Results of the full models (i.e., all explanatory factors included in estimation) are presented in the following section.

Forecasts

The autoregressive models were then used to estimate monthly forecasts out to three months from the last period of the data. Statistically insignificant explanatory factors were dropped from the models to construct the short-run forecasting models. Since data were available to August 31, 2020 at the time of data set construction, the forecasts presented are for months already passed (i.e., September to November 2020). Autoregressive models with economic and policy factors are conducive for short-run forecasts only since each additional explanatory factor in the model also requires a forecasted value.⁴ Long-run monthly forecasts are estimated out to August 2023 using the exponential smoothing method, such that only previous periods of inquiries and charges are used to guide the forecasts. Short- and long-run forecasts are jointly presented in the following section for EEOC and FEPA inquiries and charges (Buckets 1 to 4 combined), EEOC inquiries and charges (Buckets 1 to 3 combined), and EEOC charges (Bucket 2).

Results

Trends in Unemployment, Inquiries, and Charges

Between 1990 and 2020, the monthly unemployment rate ranged between a low of 3.5 percent in 2019 and a high of 14.7 percent in 2020. Figures 1-3 illustrate unemployment trends compared to the rate of EEOC and FEPA inquiry and charge filings from June 1, 2002 to August 31, 2020, the rate of EEOC inquiry and charge filings for the same period, and the EEOC charge filings rate from January 1, 1990 to August 31, 2020, respectively. Particularly illustrated in Figure 3, the trend in unemployment (blue line) is relatively smooth from month to month with dramatic increases during recessionary periods in 1990-1991, 2001, 2007-2009 and 2020. Unemployment increased from 5.2 percent to 7.7 percent due to the 1990-1991 recession, from 3.8 percent to 6.2 percent due to the 2001 recession, from 4.7 percent to 10.0 percent during the Great Recession, and from 3.5 percent to 14.7 percent during the current recession. The number of EEOC charges also notably decreased from 18,007 charges in January 2020 to 11,934 charges in May 2020 and,

¹ The time period varies for Bucket 2 (compared to Buckets 1 to 4 and Buckets 1 to 3) due to differences in the availability of historical inquiry and charge data in IMS.

² The Bureau of Labor Statistics defines the labor force as including both those who are employed and those who are unemployed and looking for work.

³ The civilian labor force population grew from 125 million in 1990 to 164 million in 2019.

⁴ For example, if unemployment rate is used as an explanatory factor when forecasting inquiries and charges, then each future period being forecasted for inquiries and charges requires a forecasted value for future periods of unemployment rate as well. When using a forecasted value as an explanatory factor within a forecast model, the forecasting error increases exponentially from period to period as the uncertainty of each forecast increases.

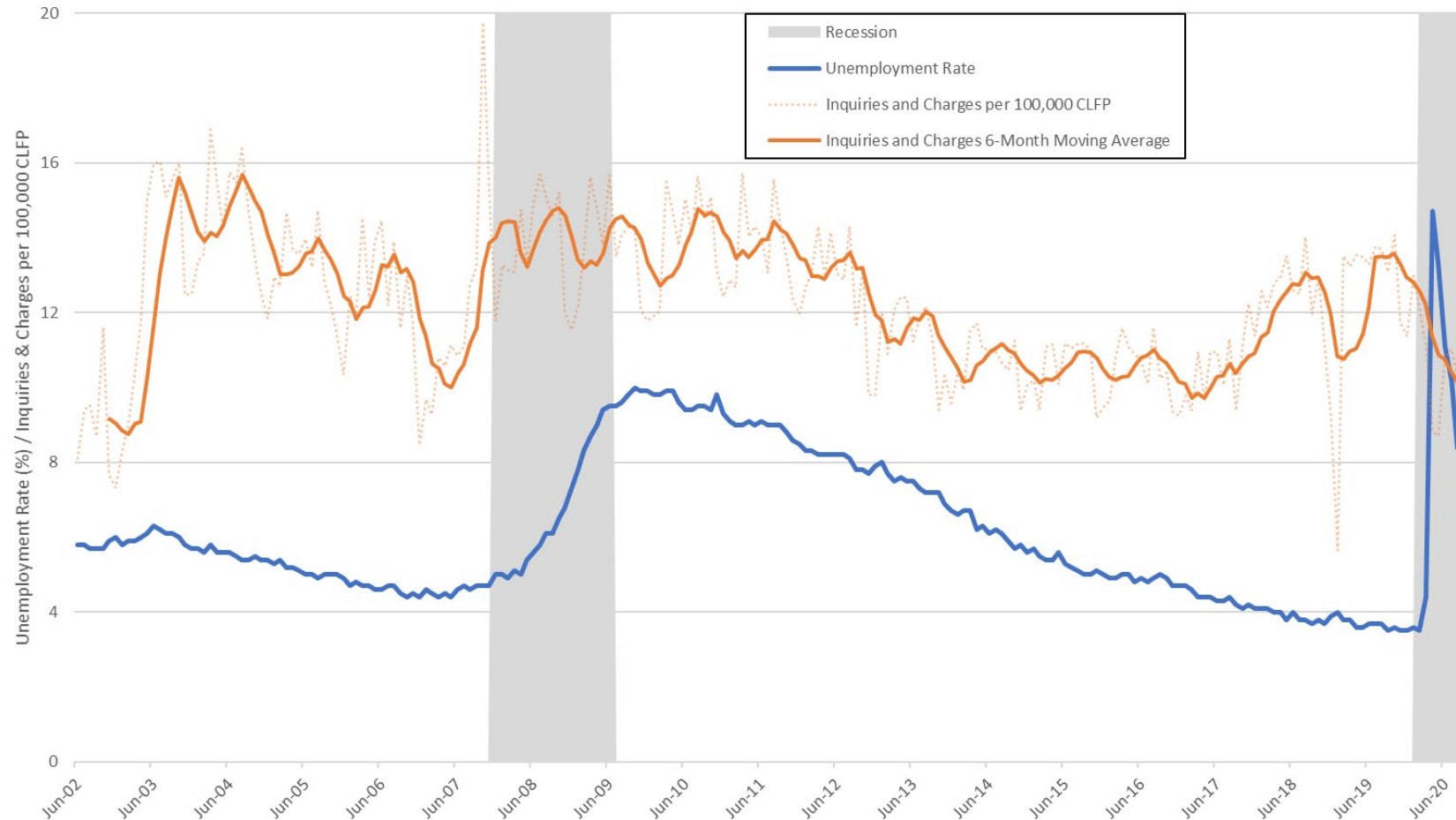
as of August 2020, did not fully recover to pre-COVID Recession values (i.e., 14,723 charges in August 2020).

By contrast, monthly inquiry and charge filings per 100,000 CLFP (light dotted orange line) in Figures 1 and 2 tend to fluctuate more month-to-month. For easier comparison between the trends, a smoothed trend line is included in each figure which depicts the six-month moving average in monthly inquiry and charge filings (thick orange line). While we observe that the inquiry and charge trend line and unemployment tend to vary together to some degree, the relationship between the two trends is not perfectly correlated.⁵ A similar finding is depicted in Figure 3, such that monthly charge filings per 100,000 CLFP (light dotted orange line) tend to fluctuate more than unemployment month-to-month. Comparison of the six-month moving average (thick orange line) and unemployment also depicts a relationship where the two trends move together to some degree but are not perfectly correlated.⁶ These relationships are further examined along with additional economic and policy factors in the following section.

⁵ Inquiries began to be entered into IMS in 2001, but all inquiries may not have been entered into the system as a matter of policy for another one or two years. It is thus difficult to determine whether the increases in 2002 and 2003 are real or an artifact of changes in data entry in IMS.

⁶ More detailed observations regarding Figure 3 can be found in the Phase I report.

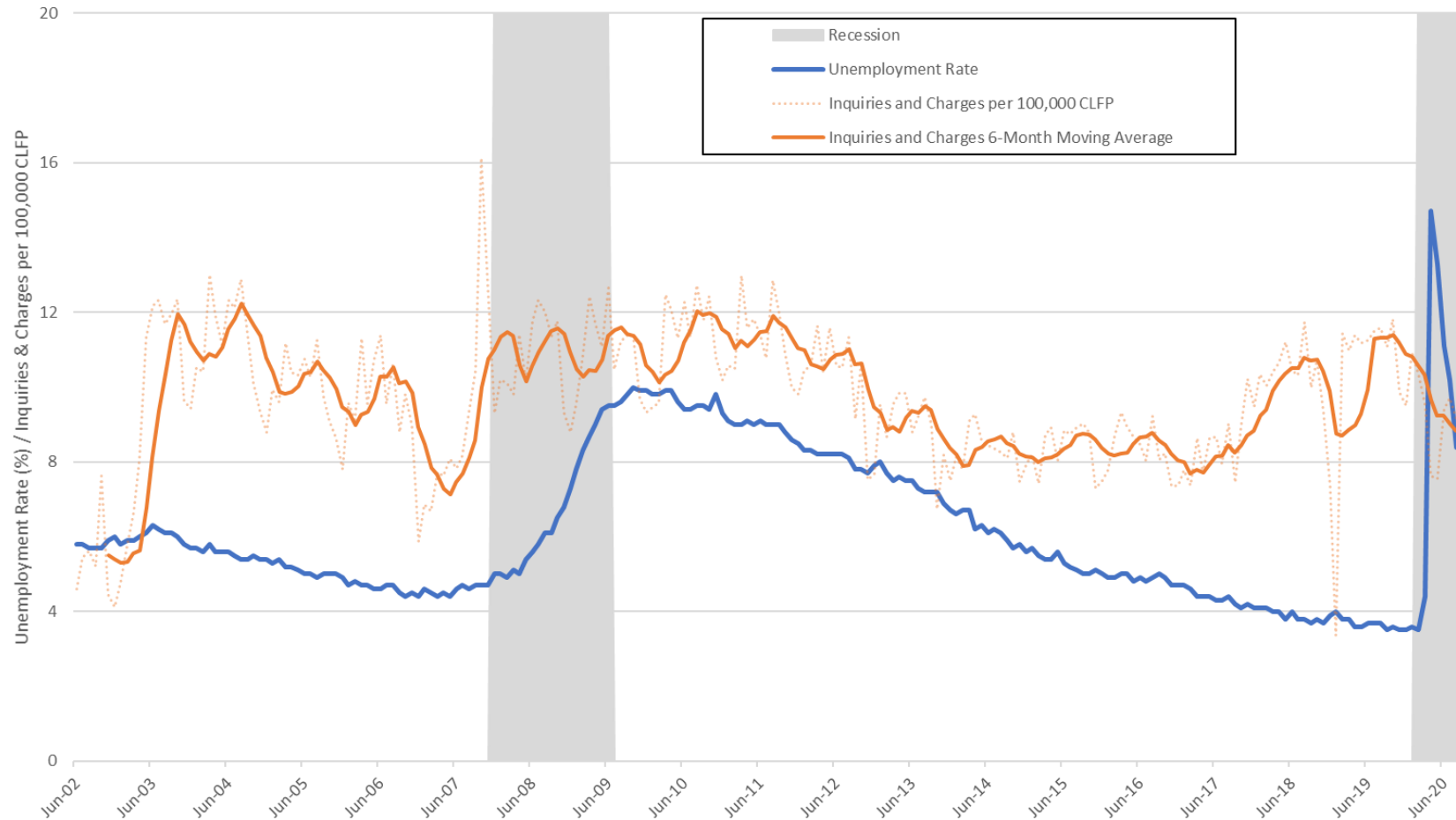
Figure 1. Seasonally-Adjusted Monthly Unemployment Rates and Rates of Monthly EEOC and FEPA Inquiry and Charge Filings per 100,000 CLFP, June 2002 – August 2020



Sources: Bureau of Labor Statistics and EEOC Integrated Mission System (IMS).

Note: IMS does not include inquiries prior to June 2002, and as such, pre-June 2002 data are not shown.

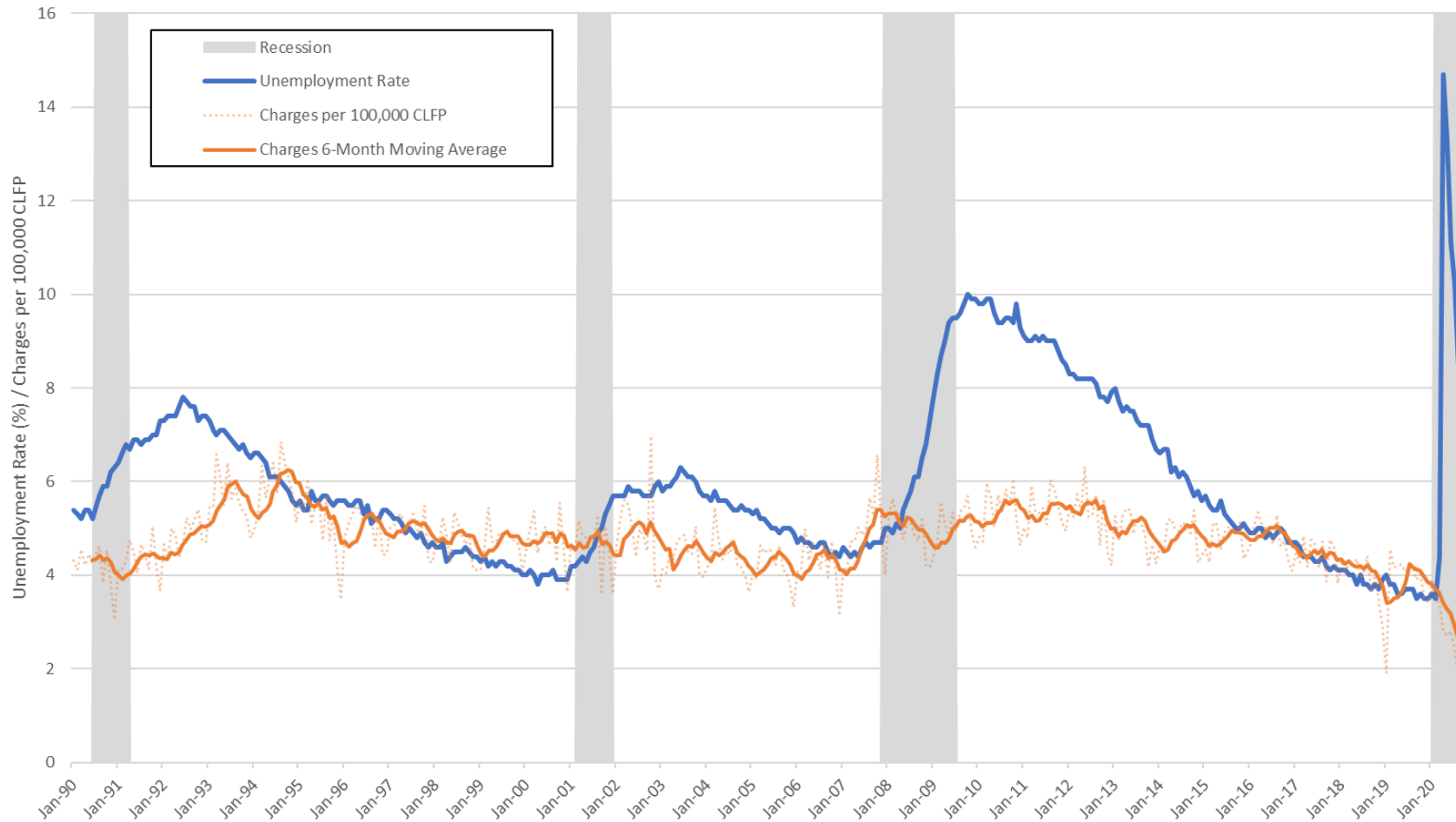
Figure 2. Seasonally-Adjusted Monthly Unemployment Rates and Rates of Monthly EEOC Inquiry and Charge Filings per 100,000 CLFP, June 2002 – August 2020



Sources: Bureau of Labor Statistics and EEOC Integrated Mission System (IMS).

Note: IMS does not include inquiries prior to June 2002, and as such, pre-June 2002 data are not shown.

Figure 3. Seasonally-Adjusted Monthly Unemployment Rates and Rates of Monthly EEOC Charge Filings per 100,000 CLFP, January 1990 – August 2020



Sources: Bureau of Labor Statistics and EEOC Integrated Mission System (IMS).

Note: IMS data do not represent all charges filed with the EEOC prior to 1990. As such, pre-1990 data are not shown.

Estimated Effects of Economic and Policy Factors

Table 1 presents results for three models which estimate the effects of the economic and policy factors on inquiry and charge filings. Model 1 estimates monthly values of EEOC and FEPA inquiries and charges combined per 100,000 CLFP (Buckets 1-4) between June 1, 2002 and August 31, 2020, while Model 2 estimates monthly values of EEOC inquiries and charges per 100,000 CLFP (Buckets 1-3) for the same period. Model 3 estimates monthly values of EEOC charges per 100,000 CLFP (Bucket 2) between January 1, 1990 to August 31, 2020. The table shows estimates for how much each factor affected inquiry and charge filings (labeled as “Coeff.” in the table), as well as whether the estimated effect was statistically significant (i.e., percent chance, labeled as “Pr > |t|” in the table). In other words, could we expect the estimated effect to have occurred by chance?⁷

Table 1. Results of autoregressive models for Models 1 to 3

	EEOC and FEPA Inquiries and Charges (Model 1)		EEOC Inquiries and Charges (Model 2)		EEOC Charges (Model 3)	
	Coeff.	Pr > t	Coeff.	Pr > t	Coeff.	Pr > t
Intercept	2.74*	<0.01	1.78*	0.01	1.96*	<0.01
Unemployment rate	0.15	0.10	0.13	0.06	0.06*	<0.01
Monetary benefits attained by EEOC	<0.01	0.81	<0.01	0.56	<0.001	0.48
Political party of President in office	0.48	0.18	0.47	0.12	-0.22*	<0.01
Policy 1 – CRA	-	-	-	-	-0.12	0.47
Policy 2 – ADA 1990	-	-	-	-	0.24	0.13
Policy 3 – GINA	-0.16	0.57	0.10	0.70	-0.13	0.13
Policy 4 – ADA 2008 and Lilly Ledbetter	-0.06	0.84	0.21	0.44	-0.11	0.19
Savings and Loan Crisis & Gulf War Recession	-	-	-	-	0.04	0.67
Dot-Com Crash & 9/11 Terrorist Attack	-	-	-	-	0.07	0.57
The Great Recession	0.30	0.38	0.21	0.43	0.10	0.37
COVID Recession	-1.54*	<0.01	-1.09*	0.01	-1.16*	<0.01
Inquiries and charges per 100,00 CLFP (1 month prior)	0.55*	<0.001	0.68*	<0.001	-	-
Inquiries and charges per 100,00 CLFP (2 months prior)	0.13*	0.05	-	-	-	-
Charges per 100,00 CLFP (1 month prior)	-	-	-	-	0.30	<0.001
Charges per 100,00 CLFP (2 months prior)	-	-	-	-	0.14	0.01
Charges per 100,00 CLFP (3 months prior)	-	-	-	-	0.09	0.05
Number of observations	217		218		356	
Model Adjusted-R ²	0.53		0.54		0.51	

*Coefficient statistically significant at 5 percent level of significance.

⁷ A 5 percent level of significance is used to determine statistical significance.

Results for EEOC and FEPA inquiries and charges (Model 1) can be interpreted such that unemployment rate, monetary benefits attained by EEOC, political party of President in office, Policies 3 (GINA) and 4 (ADA 2008 and Lilly Ledbetter), and The Great Recession were not statistically significant in explaining EEOC and FEPA inquiries and charges per 100,000 CLFP (Buckets 1 to 4 combined) from 2002 to 2020 since the estimated probabilities were greater than 0.05 for each coefficient. The COVID Recession, however, shows a statistically significant effect such that inquiries and charge filings with EEOC and FEPAs decreased by 1.54 per 100,000 CLFP, holding all else constant. This decrease is evident in Figure 1 as the six-month moving average for inquiries and charges per 100,000 CLFP (thick orange line) decreases beginning in January 2020 and continues into August 2020. Model 1 includes two lags, such that first lag is the rate of inquiry and charge filings (i.e., Buckets 1 to 4 per 100,000 CLFP) for the prior month, and the second lag is the rate two months prior. The coefficients for these lags are statistically significant and can be interpreted such that the rate of inquiry and charge filings in one period depended on what it was in previous periods, up to two months. In other words, periods of high inquiry and charge rates tended to follow periods of high inquiry and charge rates, while periods of low inquiry and charge rates tended to follow periods of low inquiry and charge rates.

Results for EEOC inquiries and charges (Model 2) can be interpreted in a similar manner – unemployment rate, monetary benefits attained by EEOC, political party of President in office, Policies 3 (GINA) and 4 (ADA 2008 and Lilly Ledbetter), and The Great Recession were not statistically significant in explaining EEOC inquiries and charges per 100,000 CLFP (Buckets 1 to 3 combined) from 2002 to 2020 since the estimated probabilities were greater than 0.05 for each coefficient. The COVID Recession shows a statistically significant effect in which inquiry and charge rates for EEOC filings decreased by 1.09 per 100,000 CLFP, which is also evident in the decrease in the six-month moving average (thick orange line) in Figure 2. This model includes one lag for the inquiry and charge filing rate for one month prior which was statistically significant.

For EEOC charges (Model 3), the unemployment rate has a coefficient of 0.06 and probability equal to less than 0.01. Since the dependent variable is EEOC charges per 100,000 CLFP (Bucket 2) over the period of 1990 to 2020, we estimate that as the unemployment rate increases by 1 percent, the number of EEOC charge filings increased by 0.06 per 100,000 CLFP in the same month, holding all else constant. This effect is statistically significant since the probability is less than 0.05 (i.e., estimated probability is less than 0.01 for this coefficient). Political party of President in office was also significant, such that the rate of charge filings with EEOC (i.e., Bucket 2) decreased by 0.22 per 100,000 CLFP. Recession 4 is also estimated to have a significant effect in which the rate of charge filings decreased by 1.16 per 100,000 CLFP. This model includes three lags which are significant, indicating that the rate of charge filings in one period depended on what it was in previous periods, up to three months. Significant effects were not found for the monetary benefits attained by EEOC, Policies 1 to 4, and Recessions 1 to 3.

Forecasts

Short- and long-run forecasts jointly are presented for EEOC and FEPA inquiries and charges (Buckets 1 to 4 combined), EEOC inquiries and charges (Buckets 1 to 3 combined), and EEOC charges (Bucket 2) in Figures 4-6, respectively. Short-run forecasts were estimated for three months beyond the last month of inquiry and charge data available (i.e., September to November 2020), while long-run forecasts are presented out to August 2023. Historical values,

along with forecasts (middle orange line) and confidence intervals (top and bottom orange lines), are illustrated in each figure. While the forecasts for EEOC and FEPA inquiries and charges (Figures 4 and 5, respectively) appear primarily flat, the forecasts for EEOC charges in Figure 6 present a cyclical yet decreasing trend. This forecasted decreasing trend is likely due to a downward trend which began in 2012 and then largely driven by the sharp decrease in EEOC charges during the current recession. An alternative forecast using only the exponential smoothing method and does not include historical values of EEOC charges during the current recession to forecast charges is presented in the appendix – the result is a cyclical steady trend.

Figure 4. Forecasts for EEOC and FEPA inquiries and charges (Buckets 1 to 4 combined) from September 2020 to August 2023

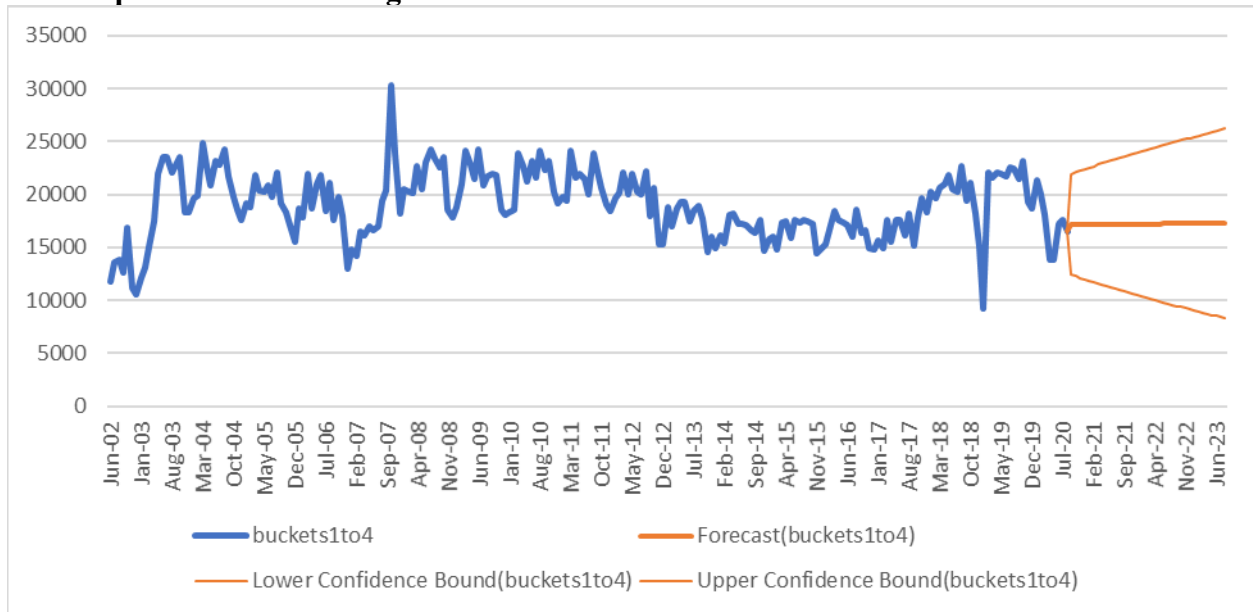


Figure 5. Forecasts for EEOC inquiries and charges (Buckets 1 to 3 combined) from September 2020 to August 2023

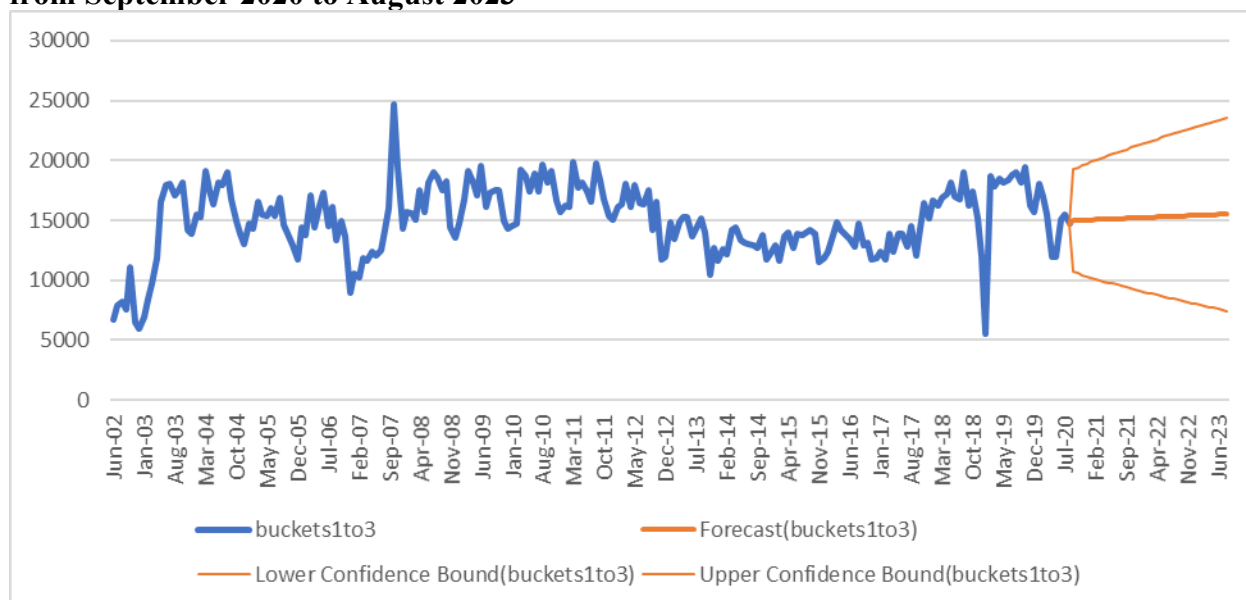
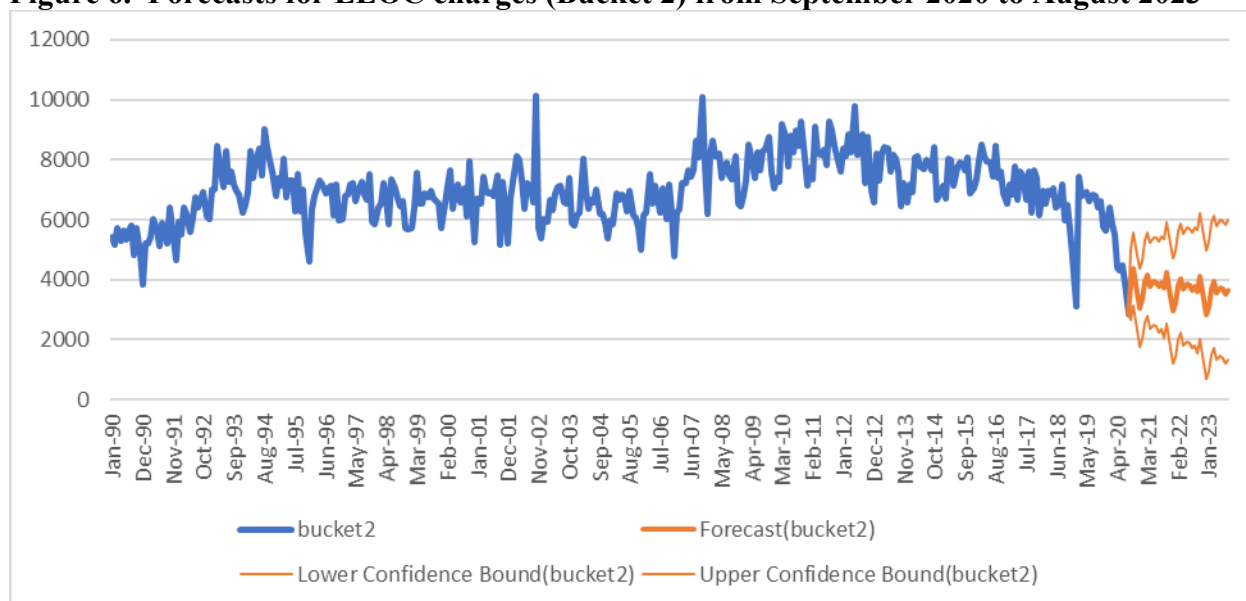


Figure 6. Forecasts for EEOC charges (Bucket 2) from September 2020 to August 2023



Conclusions

The analyses presented in this report are guided by OCH's question to OEDA of whether EEOC charge filings are associated with economic conditions and with unemployment specifically. To investigate this question, we used economic and policy data from the Bureau of Labor Statistics, National Bureau of Economic Research, The White House, and EEOC, as well as inquiry and charge filings data from EEOC's Integrated Mission System to estimate the effects of these

economic and policy factors on inquiry and charge rates. Our analyses show evidence that a relationship between economic conditions and the volume of EEOC charge filings likely exists. While unemployment tended to play a role in charge filing rates with the EEOC over the past three decades, the current recession was a significant factor affecting inquiry and charge rates when assessing rates over the past decade with EEOC and FEPAs. While specific policies did not have statistically significant effects on overall inquiry and charge rates, it is possible that the policies examined influenced inquiries and charges but that the effects are diluted since inquiries and charges were not assessed by type of inquiry or charge, such as disability, sex, and equal pay.

Forecasts for EEOC inquiries and charges were also estimated using relevant economic and policy factors out to three months (i.e., November 2020), while historical trends of inquiry and charge filings were used to forecast three years out (i.e., August 2023). The forecasts generally indicate a cyclical yet steady trend of inquiries and charges for EEOC and FEPAs overall over the next three years. When including historical values during the current recession, EEOC charge filings are projected to decrease on average; however, a steady trend is predicted if the recent sharp decrease in charge filings during the current recession is not used to forecast these values out to August 2023.

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*Appendix*Forecasts for EEOC and FEPA Inquiries and Charges

Table 2 provides the corresponding short- and long-run forecast values presented in Figure 4.

Table 2. Forecasts for EEOC and FEPA inquiries and charges (Buckets 1 to 4 combined) from September 2020 to August 2023

Period	Forecast	Lower Confidence Bound	Upper Confidence Bound
20-Sep	16,212	11,909	20,514
20-Oct	15,863	10,910	20,816
20-Nov	15,617	10,240	20,995
20-Dec	17,181	11,972	22,390
21-Jan	17,183	11,835	22,532
21-Feb	17,186	11,701	22,671
21-Mar	17,188	11,569	22,808
21-Apr	17,191	11,439	22,943
21-May	17,193	11,311	23,076
21-Jun	17,196	11,185	23,207
21-Jul	17,198	11,060	23,336
21-Aug	17,200	10,937	23,464
21-Sep	17,203	10,816	23,590
21-Oct	17,205	10,696	23,714
21-Nov	17,208	10,578	23,838
21-Dec	17,210	10,461	23,960
22-Jan	17,213	10,345	24,081
22-Feb	17,215	10,230	24,200
22-Mar	17,218	10,116	24,319
22-Apr	17,220	10,003	24,437
22-May	17,222	9,892	24,553
22-Jun	17,225	9,781	24,669
22-Jul	17,227	9,671	24,784
22-Aug	17,230	9,562	24,898
22-Sep	17,232	9,453	25,011
22-Oct	17,235	9,346	25,124
22-Nov	17,237	9,239	25,235
22-Dec	17,240	9,133	25,346
23-Jan	17,242	9,027	25,457
23-Feb	17,244	8,922	25,566
23-Mar	17,247	8,818	25,676
23-Apr	17,249	8,714	25,784
23-May	17,252	8,611	25,892
23-Jun	17,254	8,509	25,999
23-Jul	17,257	8,407	26,106
23-Aug	17,259	8,305	26,213

Forecasts for EEOC Inquiries and Charges

Table 3 presents the corresponding short- and long-run forecast estimates presented in Figure 5.

**Table 3. Forecasts for EEOC inquiries and charges (Buckets 1 to 3 combined)
from September 2020 to August 2023**

Period	Forecast	Lower Confidence Bound	Upper Confidence Bound
20-Sep	14,944	11,112	18,776
20-Oct	14,964	10,481	19,447
20-Nov	15,008	10,112	19,905
20-Dec	15,028	10,327	19,730
21-Jan	15,044	10,217	19,871
21-Feb	15,059	10,109	20,010
21-Mar	15,075	10,003	20,146
21-Apr	15,090	9,899	20,281
21-May	15,106	9,797	20,414
21-Jun	15,121	9,696	20,546
21-Jul	15,136	9,597	20,676
21-Aug	15,152	9,500	20,804
21-Sep	15,167	9,403	20,931
21-Oct	15,183	9,308	21,057
21-Nov	15,198	9,215	21,181
21-Dec	15,213	9,122	21,305
22-Jan	15,229	9,031	21,427
22-Feb	15,244	8,940	21,548
22-Mar	15,260	8,851	21,669
22-Apr	15,275	8,762	21,788
22-May	15,291	8,675	21,906
22-Jun	15,306	8,588	22,024
22-Jul	15,321	8,502	22,141
22-Aug	15,337	8,416	22,257
22-Sep	15,352	8,332	22,372
22-Oct	15,368	8,248	22,487
22-Nov	15,383	8,165	22,601
22-Dec	15,398	8,082	22,715
23-Jan	15,414	8,000	22,827
23-Feb	15,429	7,919	22,940
23-Mar	15,445	7,838	23,051
23-Apr	15,460	7,758	23,163
23-May	15,476	7,678	23,273
23-Jun	15,491	7,599	23,383
23-Jul	15,506	7,520	23,493
23-Aug	15,522	7,441	23,602

Forecasts for EEOC Charges

Table 4 presents the corresponding short- and long-run forecast estimated presented in Figure 6.

Table 4. Forecasts for EEOC charges (Bucket 2) from September 2020 to August 2023

Period	Forecast	Lower Confidence Bound	Upper Confidence Bound
20-Sep	3,256	1,805	4,707
20-Oct	3,070	1,530	4,610
20-Nov	2,925	1,318	4,531
20-Dec	3,063	1,775	4,351
21-Jan	3,325	2,002	4,647
21-Feb	3,936	2,579	5,293
21-Mar	4,160	2,770	5,551
21-Apr	3,782	2,359	5,206
21-May	3,950	2,494	5,406
21-Jun	3,909	2,421	5,397
21-Jul	3,759	2,240	5,279
21-Aug	3,885	2,335	5,435
21-Sep	3,711	2,046	5,375
21-Oct	4,235	2,542	5,929
21-Nov	3,448	1,726	5,170
21-Dec	2,947	1,197	4,698
22-Jan	3,209	1,431	4,988
22-Feb	3,820	2,014	5,627
22-Mar	4,045	2,211	5,879
22-Apr	3,667	1,805	5,528
22-May	3,834	1,946	5,723
22-Jun	3,794	1,878	5,709
22-Jul	3,644	1,701	5,586
22-Aug	3,770	1,800	5,739
22-Sep	3,595	1,531	5,660
22-Oct	4,120	2,030	6,210
22-Nov	3,333	1,217	5,448
22-Dec	2,832	691	4,973
23-Jan	3,094	928	5,260
23-Feb	3,705	1,514	5,896
23-Mar	3,929	1,714	6,145
23-Apr	3,551	1,311	5,792
23-May	3,719	1,454	5,984
23-Jun	3,678	1,388	5,968
23-Jul	3,528	1,214	5,843
23-Aug	3,654	1,315	5,993

Alternative Forecast for EEOC Charges

The alternative forecast for EEOC charges does not use historical values from the current recession to forecast out to August 2023. These forecasted values are presented in Table 5 and Figure 7 below. Figure 7 presents a cyclical yet steady trend between January 2020 and August 2023.

Table 5. Forecasts for EEOC charges (Bucket 2) from January 2020 to August 2023

Period	Forecast	Lower Confidence Bound	Upper Confidence Bound
Jan-20	5,530	4,418	6,642
Feb-20	6,625	5,479	7,772
Mar-20	6,964	5,783	8,144
Apr-20	6,716	5,502	7,930
May-20	6,827	5,581	8,074
Jun-20	6,579	5,301	7,858
Jul-20	6,524	5,214	7,834
Aug-20	6,954	5,613	8,295
Sep-20	6,213	4,841	7,585
Oct-20	6,747	5,345	8,149
Nov-20	5,970	4,538	7,401
Dec-20	5,479	4,018	6,940
Jan-21	5,531	3,962	7,099
Feb-21	6,626	5,030	8,221
Mar-21	6,964	5,341	8,587
Apr-21	6,716	5,067	8,366
May-21	6,828	5,152	8,504
Jun-21	6,580	4,878	8,282
Jul-21	6,524	4,796	8,253
Aug-21	6,954	5,200	8,709
Sep-21	6,213	4,434	7,993
Oct-21	6,748	4,942	8,553
Nov-21	5,970	4,140	7,801
Dec-21	5,479	3,623	7,335
Jan-22	5,531	3,586	7,477
Feb-22	6,626	4,657	8,596
Mar-22	6,964	4,971	8,958
Apr-22	6,717	4,700	8,734
May-22	6,828	4,787	8,869
Jun-22	6,580	4,516	8,645
Jul-22	6,525	4,437	8,613
Aug-22	6,955	4,843	9,066
Sep-22	6,214	4,079	8,349
Oct-22	6,748	4,590	8,906
Nov-22	5,971	3,789	8,152

Period	Forecast	Lower Confidence Bound	Upper Confidence Bound
Dec-22	5,480	3,275	7,684
Jan-23	5,532	3,248	7,815
Feb-23	6,627	4,321	8,933
Mar-23	6,965	4,637	9,293
Apr-23	6,717	4,367	9,068
May-23	6,829	4,456	9,202
Jun-23	6,581	4,186	8,975
Jul-23	6,525	4,108	8,942
Aug-23	6,955	4,517	9,394
Sep-23	6,214	3,754	8,675
Oct-23	6,749	4,266	9,231
Nov-23	5,971	3,467	8,476
Dec-23	5,480	2,954	8,006

Figure 7. Forecasts for EEOC charges (Bucket 2) from September 2020 to August 2023

