Diversity in the Federal Government

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Executive Summary

The Department of Commerce is the federal agency in charge of leading the country's economy and science fields. Its agencies are leading the country in economic recovery from disasters, developing business, setting national standards, and many other scientific endeavors. The Department of Commerce has identified that it is under-represented in Hispanic employees. The agency calculates that its inclusive rate is 50% for Hispanics. Even with increased recruitment and relationships with Hispanic Serving Institutions, the agency has been unable to increase its Hispanic representation.

Using the socio-ecological model as a framework, this research surveyed college students who are about to graduate or have graduated and are looking for employment. Using three socio-ecological levels of Individual, Interpersonal, and Community, college students were surveyed on their interest in employment with the federal government, and the ways they go about looking for employment in today's social media driven world. The Department of Commerce's documents were reviewed for Organizational level context, as well as examining recent hires from a sub-bureau within the Department of Commerce.

The survey delivered data that was analyzed to determine if there were differences between Hispanic participants and the other groups in the survey to understand why Hispanics are under-represented in the Department of Commerce. The analysis of the data revealed that Hispanics have a less favorable view of the federal government compared to other groups. From the documentation review, it was also determined that the Department of Commerce does not have a well-developed Diversity and Inclusion Strategic Plan. Finally, an analysis was conducted of the Department's recent hiring of 102 employees. It was determined that while the bureau did a great job of hiring women, it only hired six Hispanic employees.

From the data analysis and documentation review, I made recommendations at the following levels of the socio-ecological model:

Recommendation	Effects
1. Critical Diversity – address inequity; openly seek and hire minorities at senior levels	Organization, Community
2. Website Upgrade – review external postings; add context to Careers page to add meaning, and salary/benefits	Organization; Individual
3. Accountability – Senior Executive Service evaluation tied to diversity	Organization, Community, Interpersonal, Individual
4. Strategic Plan – Develop Department of Commerce Strategic Plan	Organization,

	Community, Individual
5. Partnering with External Organizations – Hispanic Serving Institutions	Community, Interpersonal, Individual

The socio-ecological model is a review of the system that recognizes decisions made at one level will have impacts throughout the system. These recommendations are a good starting point for making changes that will hopefully increase Hispanic participation within the Department of Commerce in the future.

Introduction

There are fifteen executive departments in the Executive Branch of the federal government, which include the Department of Justice, Department of State, and Department of Defense, as well as the Department of Commerce. The United States Department of Commerce created in February 1903, occupies the largest office building in Washington, D.C., located in the Herbert C. Hoover Building in Washington, D.C., which is only two blocks away from the White House ("Herbert Hoover Building," n.d.). While not as high profile as some other departments of the executive branch, the mission of the Department of Commerce affects the lives of everyday Americans. The Department of Commerce is made up of twelve Bureaus and fourteen Offices ("Bureaus and Offices," n.d.), whose mission is to promote job creation, economic growth throughout the United States, as well as conducting research and development ("About," n.d.). Anyone who receives a weather forecast or surf conditions can thank the National Weather Service and National Oceanic and Atmospheric Administration, respectively ("National Weather," n.d.; "National Oceanic," n.d.). This year the Census Bureau is taking the decennial census to count every person in the country ("U.S. Census," n.d.). The National Telecommunications and Information Administration oversees the spectrum of radio and television broadcasts for the federal government ("National Telecommunications," n.d.). After the hurricanes ripped through Puerto Rico, the U.S. Virgin Islands, Florida, and Texas, the Economic Development Administration provided hundreds of millions of dollars to local communities to help rebuild ("U.S. Economic," n.d.). All of the agencies as well as twenty-one other agencies within the Department of Commerce provide a wide range of economic and scientific support to the country. All of the organization's bureaus and office headquarters are located within the Washington, D.C. metropolitan area ranging from Springfield, VA to Frederick, MD. Over 46,000 employees make up the Department of Commerce (About, n.d.).

Types of Federal Employees

As the nation's largest employer, there are several different types of employees that make up the structure of the federal government. Federal law has three types of services that federal employees fall into: competitive service, excepted service, and Senior Executive Services (Shimabukuro & Staman, 2019).

Competitive service involves either political appointees or career federal employees ("Categories of Federal," 2019). Political appointees are appointed by the President of the United States who names people directly to positions within the government. Presidents can nominate people to entry-level positions such as mailroom attendant up to department secretaries. College students who worked hard on a presidential campaign can get nominated by the President for a position in the government. Career federal employees have to apply, interview and accept job offers from agencies just like everyone else looking for employment. However, all applicants must apply through the single point of entry for all federal applications – USAjobs.gov (USAJOBS, n.d.).

Senior Executive Service is the government's C-suite level executives. They can be Chief Financial Officers, Chief Information Officers, or any positions whose non-government positions would be equivalent to a C-suite executive ("Policy, Data, Oversight," 2020.). Excepted service employees are those positions that the Office of Personnel Management, the Human Resources for all federal agencies, determines that they do not need to fill competitively. These career positions vary from field to field depending on the agency and usually are very hard to fill positions ("Categories of Federal," 2019).

While there are many types of federal employees, such as contractors and uniformed services, the focus of this research is the career employees in the competitive service. This is the only area that hiring managers have a direct impact on in their organizations. Political appointees must have some type of political connection to the President of the United States to get nominated for any position in the federal government. Hiring managers have no impact or say in the nomination process and must accept all political appointments into the organization whether or not they think the political appointee is qualified or not ("Policy, Data, Oversight," 2020.).

The Department of Commerce, like all departments in the federal government, hires all of its career employees through its single point of entry, USAjobs.gov. All prospective employees, and even current federal employees looking for other opportunities, must apply for job postings through USAjobs.gov. All federal agencies also must post all jobs on USAjobs.gov. Hiring managers have to create position descriptions and pay grade determinations before posting jobs to USAjobs.gov and then they sort, screen, interview, and select candidates for open positions. This process can take months from start to finish.

Definition of the Problem

The Department of Commerce is challenged with promoting diversity. Diversity in the workplace has a number of positive effects, one of which is the increased profitability within the private sector (Hunt et al., 2018). Because the Department's core mission is to help America's economy grow, it must reflect the private sector as well as the states, and local jurisdictions that it supports. The Department of Commerce has studied diversity and has also noted the under-representation of Hispanics within the Department. Other demographics such as African Americans and Asian-Americans are within their expected participation within the Department ("Annual Report," 2018).

The Department of Commerce determined the underrepresentation of Hispanics by comparing the Bureau of Labor's civilian labor force for a group of people against the Department's representation of that group. The Bureau of Labor defines the civilian labor force as "the number of people who are either working or actively looking for work" ("Labor Force," n.d.) The Department of Commerce calls this the Inclusion Rate (Bartolomei, 2018). To determine the

Inclusion Rate, the Department's representation rate is divided by the civilian labor force rate. For example, the Bureau of Labor determines that a group's civilian labor force is 10%, and that group represents 5% of the Department of Commerce's total workforce, then 5% is divided by 10% for an Inclusion Rate of 50%. (Bartolomei, 2018).

The Department of Commerce determined the male Hispanic Inclusion Rate at 47% and the female Hispanic Inclusion Rate at 54%, the lowest of any group in the Department of Commerce. The Inclusion Rate for Alaskan Native males was 61%, American Native females 70%, and People with Disabilities 73%. The Department of Commerce found that the underrepresentation is worse by the fact that the Department loses Hispanic employees at a higher rate than any other demographic. The Department of Commerce reported that the overall turnover of all employees is 6.4%, while the turnover is 6.9% for Hispanic men and 7.1% for Hispanic women (Bartolomei, 2018).

The Hispanic population was estimated to be nearly 60 million in 2019 (Noe-Bustamante et al., 2020) with a growing rate of an educated workforce. Between 2000 and 2016, the Hispanic population enrolled in college increased from 18% to 35% for men and increased from 25% to 44% for women (Brey et al., 2019). Even with the rising Hispanic population, and an educated workforce, federal agencies are not consistent in the hiring of Hispanics.
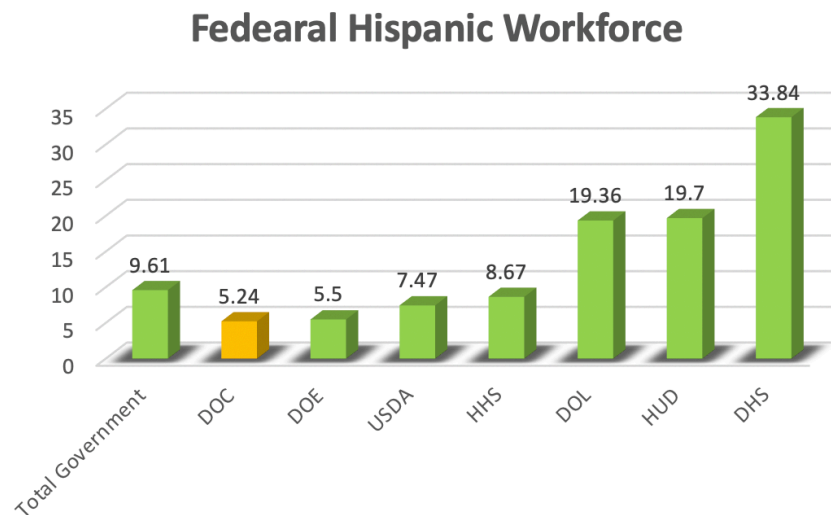
Figure 1. Annual Report on the Federal Workforce: Form 462 and MD-715 Data FY 2018

From a cross-section of seven federal agencies, the Department of Commerce had the lowest percentage of all agencies for Hispanic career employees with just 5.24% of its total workforce. The average Hispanic workforce percentage across all federal agencies was 9.61% (Figure 1). The Department of Homeland Security had the largest percentage of Hispanics with 33.84% or a total of 45,926 Hispanic employees, more than all of the employees in the Department of

Commerce. The Customs and Border Patrol, an agency within the Department of Homeland Security leads all agencies with 20,625 Hispanic employees ("Annual Report, " 2018).

Before the Department of Commerce tries to match the Department of Homeland Security's recruiting effort, the agency should understand the reasons that prevent Hispanic employment. Commerce is below a 50% Inclusion Rate, which lags behind all other federal agencies. Understanding the reasons will help the Department focus its efforts to attract and increase Hispanic employment.

In today's business environment, many businesses have to sell their managers and executives for the business case for diversity. The Department of Commerce should not have to sell its bureaus and offices on the business case for diversity as President Obama issued two Executive Orders for diversity. The first Executive Order, 13583 – Establishing a Coordinated Government-wide Initiative to Promote Diversity and Inclusion in the Federal Workforce ("Executive Order 13583," 2011), was created to make the government a model for diversity hiring. The second is Executive Order 13171 – Hispanic Employment in the federal government ("Executive Order 13171," 2000). With these two executive orders, there is not a need to build a business case for diversity for the Department.

The Department of Commerce has taken a number of steps to increase its Hispanic hiring. The US Patent and Trade Office participated in job fairs in Puerto Rico at the University of Puerto Rico, Mayaguez (Harris, 2018). The Office also has a Chapter of the Society of Hispanic Professional Engineers, which they leverage prior to visiting a school to let its members know that the Patent and Trade Office is coming to a job fair. The Department of Commerce also has relationships with professional Hispanic Serving Institutions, such as the National Council of Hispanic Employment Program Managers, League of United Latin American Citizens, Society of Advancement of Chicanos and Native Americans in Science, and the Hispanic Association of Colleges and Universities (Harris, 2018). Even with these efforts, the Agency still struggles to attract qualified Hispanic applicants; this indicates that the problem of practice could be beyond simple recruiting of the Hispanic population. An increase in recruiting will definitely help; however, the agency needs to understand why some minorities want to work for the Department of Commerce and some do not.

Research Questions

In the past, federal agencies have not actively recruited candidates. At job fairs, one could expect to see the U.S. Department of State as well as several federal law enforcement agencies. Rarely agencies such as the Minority Business Development Administration or the Bureau of Statistical Analysis would show up at job fairs. Recently, many federal agencies have begun to advertise on job boards such as Indeed.com and LinkedIn. Links on those boards would lead the applicant to USAJobs.gov, the main portal for all federal agencies. In order to best determine where to

emphasize the Department's efforts, this research will center on why Hispanics are not applying to the Department of Commerce and will focus on college students as well as recent college graduates.

There are several models and frameworks which could explain why people and organizations choose each other. The Attraction-Selection-Attrition (ASA) model attends to the individual and organizational aspects of knowledge. It seeks to answer what applicants and organizations see in each other, why people are drawn to some agencies, and why they leave (Schneider et al., 1995). However, the ASA model ignores external forces that are at play when people make decisions about a life-changing decision, such as job selection.

The socio-ecological model explains the combination of effects of the individual and the environment that the individual occupies (Salihu et al., 2015). This model notes five hierarchical levels: Individual, Interpersonal, Community, Organization, and Policy. Some literature combines the Organizational and Policy into one called Societal (Salihu, et al., 2015). This research will focus on four of the five hierarchical levels of the socio-ecological model. The first focus level is the Individual; this is the person's knowledge and actions within the world he or she occupies. The second focus level is the Interpersonal – the relationships with friends, family, professional relationships, and how this influences the person's actions. The third focus is the Community, the relationship between the person and the organizations that surround the person. At the outermost level is the Organization. Some researchers include Policy beyond the Organizational level. Some researchers combine these two levels (Carhart et al., 2018; Rowe et al., 2012; Stokols, 1996). At this level, the research will review Department of Commerce documentation and data.

By focusing on the levels of the socio-ecological model, this research is intended to determine why Hispanics are not applying to the Department of Commerce. Bond and Haynes (2014) suggest the individual and environment are continually adapting to each other. It would seem that the individual is changing faster than organizations such as the federal government can adapt.

The socio-ecological framework will work best in this research, particularly with the focus on college students and recent college graduates - those who have graduated within the last few years. The assumption of the socio-ecological model revolves around the multi-layered environment that shapes the way people see the world they live in. Applicants do not make decisions in a vacuum but are influenced by the social structures that they live in. This social structure includes peer groups, as well as the many communities the applicant belongs to. While people believe that they are deciding on careers and employment based on what they like to do, interpersonal relationships and community play a part in that decision. Husbands and wives, who are in a committed relationship, frequently do not make career decisions without consulting each

other. African American applicants are influenced by their interpersonal relationships as well as their community in deciding on a career in law enforcement (Kaste, 2014; Hartman, 2015). The Black Lives Matter movement has cast a negative aspect of law enforcement as a career, showing that the community has a part in influencing career choices. Individuals are shaped continuously by people within and outside their networks. As more Hispanics join the ranks of the U.S. Border Patrol, they must navigate the levels of the socio-ecological model to justify working in an agency that could be viewed as hurting people of their same ethnicity (Prieto, 2015). While these are negative examples of Individual, Interpersonal, and Community aspects of socio-ecology, there are also positive influences. For example, mentors help shape and guide their mentees on career choices. Social and professional networks influence individuals in their job searches. This research seeks to determine both the negative and positive influences and to what effect these forces have in decision making.

The factors that influence these are an individual's identity. Do the identities of some groups cause an affinity or aversion to work for the federal government? Other factors are the friends' and families' knowledge, attitudes, and understanding. The current political climate has grown more divisive in recent years, and attitudes toward the federal government can impact applicants toward the federal government.

While Hispanics are represented well in all branches of the U.S. military, and other federal agencies such as the Department of Homeland Security, this doesn't translate to the Department of Commerce workforce. One way in which the community could impact individual behavior could be through collective beliefs. For example, the civil service exam used to exist for anyone wanting a career in federal employment, and if there was a belief that the exam was still required within that community, it could impact application decisions.

While the above are possible explanations for reduced Hispanic applicants, they are not the target for this research project. This project seeks to determine if groups have a positive or negative opinion of the federal government. Based on these factors, the research questions are:

> At the individual level of the socio-ecological model:
> - What are the characteristics that applicants look for in a position that would enable them to have a favorable opinion if working for the U.S. government?
>
> At the interpersonal level of the socio-ecological model:
> - How do interpersonal relationships impact potential applicants?
>
> At the community and organization level:
> - What influence does the community have on applicants who apply for federal employment?
> - What barriers exist that prevent diversity hiring?

Literature Review

There is a lot of literature on diversity, often called Diversity Management. When focused on the federal government, the literature can be divided into three study focuses: building a business case for diversity, if diversity can increase job satisfaction, and leadership effects on diversity. Within the problem of practice, there is a small number of researchers who focus on the Hispanic workforce. Diversity Management rose from the negative reaction from politicians and majority groups to Affirmative Action plans who saw it as replacing qualified majority workers with unqualified minority and women workers (Agocs & Burr, 1996; Herring & Henderson, 2015). Affirmative Action laws and regulations are designed to solve hiring inequities, while diversity programs were designed to decrease the same inequities through a change in organizational culture.

Many researchers such as Bond and Haynes (2014), Lee et al. (2020), as well as others, acknowledge the wide range of findings when it comes to Diversity in organizations. Some researchers found diversity as a moderating variable to increasing productivity (Choi, 2008), while others found that diversity leads to low job satisfaction and eventually high turnover (Jackson, et al., 2003) or increased group conflicts because diversity can lead to decreased productivity (Herring & Henderson, 2015). Despite the conflicting research on diversity, it is still a goal of the federal government to have a diverse workforce as stated by Presidential Executive Orders.

Building a business case for diversity has resulted in a wide array of research and books. Jackson et al. (2003) found that 75% of research in diversity was on the effects of diversity on building a business case. Herring and Henderson (2015) have built a case for diversity by showing the increased profitability of companies through a diverse workforce. Companies that have high-level diversity produce more revenue and bring in more customers than compared to companies with low levels of diversity. Since the federal government does not produce a product or service to sell but rather provides services to the general public, researchers focus on team or organizational performance. Government agencies that have effective diversity management policies have better performance (Choi & Rainey, 2010). Similarly, Moon and Christensen (2020) found that a high level of racial diversity leads to higher organizational performance. The business case in this context is that high organizational performance implies the taxpayer is getting their dollars' worth from federal employees. To get this high level of performance, the federal government needs to effectively manage diversity.

The second area of diversity research on the federal government, centers on job satisfaction. Moon and Jung (2018) determined there was a high level of employee job satisfaction when there was a high level of racial representation in management. Choi (2008) found that federal agencies who are able to effectively manage diversity had better Federal employee job

satisfaction, and the federal agencies that did not manage diversity effectively had negative job satisfaction. Negative job satisfaction did not necessarily mean that the organization would have higher turnover; rather, turnover in context with diversity was harder to determine. These findings suggest that diversity can have a positive benefit to organizations as long as the organization can get buy-in from leadership and management.

Researchers have determined that there is a relationship between leadership and diversity outcomes. Researchers Pitts (2009), and Kellough and Naff (2004) showed that accountability is a necessary agent of change, especially when it comes to increasing diversity within an organization. Kellough and Naff's (2004) research on federal agency diversity noted that performance ratings should be based on achieving diversity-related goals. Pitts (2009) argues that diversity should be a core competency for leaders. His research showed that diversity management is strongly related to job satisfaction, especially for minorities. The researchers conclude that leaders have a role to play in the diversity of their organizations, rather than it simply being an issue that the Human Resources can resolve.

Research on Hispanic diversity within the federal government is minimal and the topics vary. Pepas (2006) noted that organizations that wanted to hire Hispanics should take note of what characteristics Hispanics look for in employers – loyalty and community service. Both Heyman (2002) and Prieto (2015) interviewed Hispanic Border Patrol agents along the Mexican/US Border. Heyman (2002) stated that Hispanic officers relied on their citizenship more so than their ethnicity, and issues of identity are difficult to overcome. Prieto (2015) suggested that the Border Patrol, a federal law enforcement agency within the Department of Homeland Security, has an active diversity recruiting for Hispanics to shield the federal government against charges of racism, rather than actually supporting diversity in the workplace. Matthews et al., (2017) researched Hispanic underrepresentation within the Department of Defense civilian workforce, and suggested barriers to entry such as education and location. However, Lewis et al. (2013) found that variables such as English fluency, education, military service, age, sex, gender, and race doesn't fully explain why minorities are underrepresented in the federal government. There could be other barriers to entry, such as immature professional networks.

Many researchers who have studied the federal government have used existing data files from federal government sources (Choi, 2008; Choi, & Rainey, 2010; Kellough & Naff, 2004; Lee, et al., 2020; Moon & Christensen, 2020; Moon & Jung, 2018; Pitts, 2009). The main data files include the Central Personnel Data File and the Federal Human Capital Survey, which changed in 2010 to the Federal Employee Viewpoint Survey (FEVS) ("Federal Employee Viewpoint," n.d.). The 2019 FEVS asked 101 questions across 10 topic areas, two of which are performance and satisfaction ("Governmentwide Management Report," 2019). The same questions are asked every year to track federal employee attitudes over time ("Federal Employee Viewpoint," n.d.)

No researchers have developed their own surveys to focus on diversity in the federal government but rather depended on the survey results from the government.

Out of 101 questions, the FEVS only asks one question about diversity: "Policies and programs promote diversity in the workplace (for example, recruiting minorities and women, training in awareness of diversity issues, and mentoring)" ("Federal Employee Viewpoint," n.d.). This question only scored a 59% positive score in the 2019 FEVS – which is defined as Strongly Agree or Agree ("Governmentwide Management Report," 2019). Asking one question on diversity and lumping three other issues (recruiting, training, and mentoring) into the question will not help in researching diversity in the federal government.

The survey does ask 9 questions on job satisfaction and 18 questions on performance. This could explain why so many researchers use job satisfaction and performance in researching diversity. However, these two variables were not directly related to diversity in the FEVS. This doesn't truly gauge federal employees' perceptions on diversity. There is a large gap in research on barriers that prevent candidates from federal employment or even if the federal government has a diverse workforce.

Only a small number of researchers have studied the federal government to see how diversity plays a role in increasing performance or job satisfaction, thereby justifying Equity, Diversity, and Inclusion policies for the federal government. As the nation's largest employer, and with numerous Executive Orders, laws, and regulations, some federal agencies still struggle with finding a diverse workforce. This research surveys potential candidates on their views of employment, with a particular emphasis on their views on employment with the federal government. The generalizations can then be applied to develop solutions for the Department of Commerce in its problem of practice in hiring more Hispanic workers.

Theoretical Framework

The socio-ecological framework utilizes a multi-layered system analysis of the organizations and how the layers influence each other. Bronfenbrenner (1979) theorized that the individual is like the inner doll in a Russian doll. An individual within an organization is affected by his or her own knowledge and experience. The individual is also affected by interpersonal relationships such as teams, and groups the individual is a part of. These in turn affect the organizational system. Organizational systems are within the larger context of the policies that run the organization. All of these are affected up and down the system. Bronfenbrenner (1979) called these layers the microsystem, mesosystem, exosystem, and the macrosystem (see Figure 2).
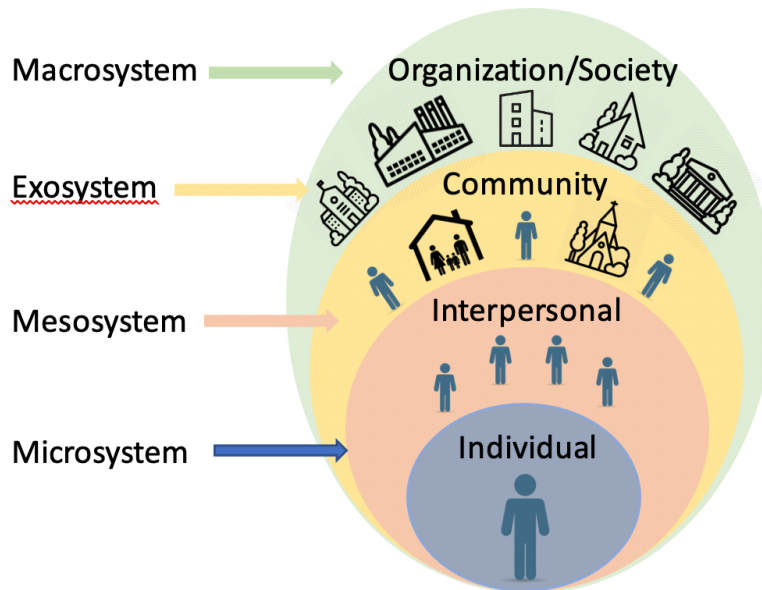
Figure 2. Socio-ecological System

Social scientists have interpreted Bronfenbrenner's system into four or five layers, the Individual, Interpersonal, Community, and Organization. Some social scientists consider the society as its own level within the system, while others expanded or collapsed the levels to meet their research study needs (Carhart et al., 2018; Rowe et al., 2012; Stokols, 1996). The socio-ecological model is often used in medical research. Carhart et al., (2018) conducted a stakeholder analysis on HPV vaccination rate. The authors recognize that there are complex situations across all levels of the socio-ecological framework that create barriers to vaccination. The authors conducted qualitative research where they interviewed 31 stakeholders over the phone. From the socio-ecological framework, they identified barriers at the Individual, Interpersonal, Organizational, and Community levels. From these interviews, they also identified facilitators to mitigate the barriers at each level. They also pointed out that actions or inactions at any level had effects on the other levels. This study is important because the authors shaped the socio-ecological model slightly differently than other researchers – they held the Community level above the Organizational level in the hierarchy. Their unit of analysis for the socio-ecological model changed at each level. Rowe et al. (2012) as well as Stokols (1996) take this approach in their research in physical activity and health promotion respectively.

Figure 2 above shows the dynamic between all the levels within the system. The surrounding environment influences the individual just as much as the individual influences his or her environment (Salihu et al., 2015). Decisions and actions at one level will have impacts that are felt at other levels. Stokols (1996) describes this system theory as an "interdependence" and "interconnections" between several settings. Within the problem of practice for increasing equity, diversity, and inclusion within the Department of Commerce, decisions made at the

Organization level will impact all the levels. This may seem intuitive from the casual bystander but often decisions are made without regard to the impacts.

The lowest level is the Individual level. This encompasses what the individual knows, his or her knowledge of the organization in which they work, his or her experiences that shaped them thus far in life, and beliefs or perceptions that influence his or her understanding of the system that they occupy. What the individual knows or doesn't know impacts decisions as well as behavior. The individual can gain knowledge through formal or informal education or from their network (Bronfenbrenner, 1979).

The Interpersonal level consists of the shared knowledge between the individual and his or her network. This network includes the person's friends, family, co-workers, supervisors, teachers, and any influences in his or her life (Salihu et al., 2015). They all play a role in exerting some knowledge or influence on the individual and the individual on his or her network. In some cultures, knowledge from family is highly regarded and should be trusted first before trusting outsiders. This knowledge can be positive and sometimes it can be negative. Salihu et al. (2015) described how African American women did not trust medical clinical trials because of what happened to the African American men from the Tuskegee syphilis research. This knowledge is passed down from family or shared among friends. This then forms the individual's understanding of the system.

The next level is the Community. Culture, ethnic background, religious upbringing, or the community of practice are examples of the Community within the socio-ecological framework (Salihu et al., 2015). They all play a part in influencing an individual's attitudes, perceptions, behavior, or knowledge. Within an organizational context, a community can be the community of practice of a profession such as lawyers or accountants. Or a community can be the different offices that have different functions. The community in this context are the things that the group has in common.

The Organizational level of the socio-ecological framework consists of the cultural values of the organization, which makes it distinct from other organizations (Salihu et al., 2015). It also can consist of policies and procedures that the organization adheres to. From a Society viewpoint this means the cultural norms of that society.

The socio-ecological framework has been used by many different fields of social science research. Social scientists have used the socio-ecological lens to look at healthcare, public health administration, environmental studies, and education. For example, Michell et al., (2018) use the socio-ecology model as a framework to look at inequity in computer science education for girls and found that there were issues at all levels that contributed to the low representation of girls in the computer science field. At the Organizational level, there is a stigma that computer science is

a boy's field, and not welcoming to girls. At the Community they found that teachers did not have enough knowledge to promote computer science to girls. At the Interpersonal level, girls were discouraged by their parents from pursuing computer science, because parents felt that computer science was just for playing games. Finally, at the Individual level, girls felt that computer science was dominated by boys, and the girls were automatically the out-group. This shows how the socio-ecological framework can be used to identify a multi-layered look at diversity. The socio-ecological framework is not used to determine whether or not women or girls will be profitable within computer science (i.e. building a business case for diversity) or whether girls enjoy computer science (i.e. job satisfaction). Instead, the socio-ecological framework was used to look throughout the system for barriers that contribute to the exclusion of a group. Once these barriers can be identified, they can be remedied. In the current context, the socio-ecological framework is used as a lens to determine if there are any barriers to Hispanics in applying for work with the federal government.

In this problem of practice, the survey participants occupy a socio-ecology outside of the Department of Commerce. Within this research, survey participants are examined with the three levels of the socio-ecological framework: Individual, Interpersonal, and Community to determine what in their context either enables or deters them from applying to positions within the Department of Commerce. While the participants are definitely part of Society, their Organization is different for each participant because they all attend different schools. They are not part of the Department of Commerce, which is the center of the research, therefore, the survey focuses on the Individual, Interpersonal, and Community, and not Organization. Researchers as such Rowe et al., (2012) and Stokols (1996) demonstrated that the model is adaptive to the needs of the researcher and not a fixed concept of layers that must be examined.

Methods

Recruitment

College students in their final year, close to graduation, or recent college graduates were chosen as participants of the survey. This demographic was chosen because they are most likely to be looking for jobs in the near future. They should be the target demographic for the Department. Professionals, people between jobs, or those unemployed and seeking work would be more difficult to sample from. The Department doesn't keep a list of people who applied, nor would they provide it if they did keep the list. College students provide a clear population of individuals about to enter the workforce and apply to jobs and therefore are an appropriate population for the Department of Commerce to target and examine. Within the D.C. metropolitan area, there are a number of public and private schools that can be used to recruit participants. The snowball method was chosen as the best way to reach college students. The Department of Commerce had a list of a small number of college students who were former Department of Commerce interns. These college students were asked to pass along the survey to other college students. This also

worked within the socio-ecological framework of interpersonal relationships that affect each other within the system. Participants were asked to forward the survey to everyone in their network. As an incentive, a gift card of $100 was provided to one randomly chosen person to complete the survey. Participants were asked in the survey to provide additional names or to forward the survey to everyone in their network. They were also asked to provide the email of the person who forwarded the survey. Each referral who took the survey gave the participant who provided the referral with an additional chance to win the gift card.

Because this relied on referrals in the snowball, the participation rate is unknown as the number of referrals in the participants' networks was not reported to the researcher. The original 12 participants who were given the survey were from Virginia, New York, and Nevada. The 12 participants were able to provide 76 survey participants who completed the survey within a 2-month period. I decided to end data collection by the end of March 2020 as most college students had already transitioned out of in-person classes to online learning because of the COVID-19 pandemic that shut down many college campuses. Additionally, participants were no longer responding to participant emails to complete the survey by the end of March 2020.

The 76 participants took the survey in the two months the survey was available. Participants came from New York, New Jersey, Virginia, Washington D.C., Nevada, and California. The median age was 27 years old. Of the 67 participants who identified their gender, 32 were female and 35 were male. There was a total of 20 Hispanic, 27 white, 6 African American, 2 Native American, and 21 Asian participants. While this does not reflect the actual percentage of each demographic of American society, it is a result of socio-ecology. It reflects the interpersonal factors and the snowball method of sampling and provided a diverse sample with which to examine differences across race.

Survey

The survey questions focused on the socio-ecology at the individual, interpersonal, and community levels. Questions were answered on a 5-point Likert scale, where five equaled strongly agree, one equaled strongly disagree, and three equaled Neutral/No Opinion.

The federal government was defined in this survey as executive departments, such as the Department of Education, Department Homeland Security, Department of Commerce, etc. However, military service was not considered as employment in the federal government. While employment in the federal government generally only requires a background check, military service requires a more in-depth background check, drug screening, physical assessment, mental assessment, and a contract for 8 years of service. Not everyone can qualify for military service. Also, military service is generally not equitable to corporate jobs. However, most federal government jobs/careers have an equivalent job/career in the corporate world.

There are many job characteristics that researchers have used to determine what job seekers are looking for. Researchers have looked at factors such as advancement, using one's ideas, work conductions (Jurgensen, 1947), occupation size, earnings, unemployment level (Athanasou, 2003), job security, benefits (Kim, 2010), commuting time, and friendliness of coworkers (Sullivan & To, 2013). From all these factors, only a few were seen across all of these studies. These include pay (Athanasou,, 2003; Jurgensen, 1947; Kim, 2010), benefits (Kim, 2010; Sullivan & To), job security (Kim, 2010, Petrone, 2015); and promotion/advancement (Jurgensen, 1947; Kim 2010; Petrone, 2015). These were used to develop the survey at the three levels of the socio-ecology framework. Finally, there is a growing use of social media, as an influencer, in job searches (Sender & Korzynski, 2020). This can lead to additional research in itself but will only influence one question at the individual level to determine how college students are searching for jobs. This will help inform the Department of Commerce on how best to focus its recruiting efforts.

The survey consisted of 31 questions. The first 6 questions consisted of an introduction, which then asked the participants race, sex, race, location, name of college attending or graduated, and age. Race was taken from the US Census Bureau on how the federal government counts race on the census. These included white, black/African American, Hispanic/Latino, Asian/Pacific Islander, and Native American. To eliminate multiple categories of bi-racial participants, those participants who chose more than one racial/ethnic category were not included in the final sample.

Questions 7 to 20 were centered on the Individual level of the socio-ecological framework (see Appendix A). The questions focused on what individuals consider important for a job or in a career. The questions centered around starting salary, benefits, and how important that is to the individual participants. They also focused on the problem of practice for the Department of Commerce as a federal agency that needs to recruit and hire more Hispanics.

Questions 21 to 25 centered around the Interpersonal dimension of the socio-ecological framework. The questions were developed from the socio-ecological model of interpersonal relationships in which the participants occupied. Questions centered around how the interpersonal relationship of friends, family, and social network influenced the participant in his or her decision making when it came to career choices.

Questions 26 to 31 formed the Community level of the socio-ecological framework. These questions were developed from the community in which participants live in. The questions focused on how the community played a part in the participants' views of the federal government.

Scoring

The questions were then scored for means for the entire population and by race for Hispanic, white, African American, Asian, and Native American. Excel was used with the Statistical Analysis add-on package installed. Raw data was used to calculate means, standard deviations, and variance using Excel formulas for each race demographic.

Organizational Documents and Data

The organization's documentation was also reviewed (Table 1). Documentation consisted of Equal Opportunity Forms for the Department's racial categories (Bartolomei, 2018), as well as Equity, Diversity, and Inclusion Strategic Plans that are part of the public domain and available for everyone to review. The Office of Personnel Management acts as the Human Resources department for all federal agencies. The Office of Personnel Management has for public review the Government-wide Diversity Strategic Plan as well as the Federal Equal Opportunity Recruitment Program Report to Congress ("Federal Equal," 2018).

The Department of Commerce recently hired a large number of employees; racial demographics, sex, and date of hire were available. No other information such as education level or age was available. The Department was able to hire over 100 new employees in a short time period. This was because Congress gave the Department of Commerce a total of $2.7 billion in supplemental funding in response to natural disasters and the on-going COVID-19 pandemic. Supplemental funding allowed 2% of the funding on administrative costs, which includes hiring employees.

At the Department of Commerce level, a review of the organization's website was examined. The pages examined included the Mission, Careers/Employment pages, and its web presence on the job hosting site LinkedIn.

Table 1. List of Federal government and Department of Commerce Documents Reviewed

Document Review List		
Document	*Year*	*Source*
US Department of Commerce EEOC Form 715-02 Part A-D	2018	Dept of Commerce Office of Civil Rights
US Department of Commerce Federal Equal Opportunity Recruitment Program Report Fiscal Year 2018	2018	Dept of Commerce Office of Civil Rights
US Dept of Commerce Diversity and Inclusion Strategic Plan FY 2017 – FY 2021	2017	Dept of Commerce Website
Senior Executive Service Report	2017	US Office of Personnel Management Website

US Office of Personnel Management   2016   US Office of Personnel Management Website
Governmentwide Inclusion Diversity Strategic
Plan

US Office of Personnel Management Federal   2016   US Office of Personnel Management Website
Equal Opportunity Recruitment Program Report to
Congress

Findings

The demographic characteristics of the survey participants are in Table 2. The focus of the survey revolved around college students who would graduate in the near future and begin looking for work opportunities. Smith and Nichols (2015), and DeVaney (2015), define Millennials as being born between 1980 and 2000. 94.4% of the survey participants are considered "Millennials."

Table 2. Demographics Characteristics of the survey

Age (years)	N	% (total)	Gender		
18 - 26	55	77.5%	Male	32	45.1%
27 - 36	9	12.7%	Female	35	49.3%
>36	3	4.2%	Missing	4	5.6%
Missing	4	5.6%			
Race					
White	27	35.5%	Native American	2	2.6%
Hispanic	20	26.3%	Asian	21	27.6%
African American	6	7.9%			

The survey questions were focused around 3 levels of the socio-ecological model: Individual, Interpersonal, and Community. Three ANOVA tests were conducted across the 4 core groups of Hispanics, whites, African Americans, and Asians to compare their answers across the three levels. There was no significant difference between the groups at any of the levels.

Table 3. ANOVA Individual Analysis SUMMARY

Groups	Count	Sum	Average	Variance
Hispanic Individual	18	68.63	3.81	0.14
White Individual	23	91.00	3.96	0.22
Black Individual	5	19.00	3.80	0.48
Asian Individual	18	73.32	4.07	0.14

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.72	3	0.24	1.25	0.30	2.76
Within Groups	11.48	60	0.19			
Total	12.19	63				

Table 4. ANOVA Interpersonal SUMMARY

Groups	Count	Sum	Average	Variance
Hispanic Inter	18	70.75	3.93	0.78
White Inter	23	85	3.70	0.59
Black Inter	5	19.8	3.96	0.63
Asian Inter	18	66.4	3.69	0.55

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	0.88	3	0.29	0.46	0.71	2.76
Within Groups	38.12	60	0.64			
Total	39.00	63				

Table 5. ANOVA Community Analysis SUMMARY

Groups	Count	Sum	Average	Variance
Hispanic Community	18	59.57	3.31	0.38
White Community	23	71.67	3.12	0.28
Black Community	5	14.33	2.87	0.44
Asian Community	18	61.67	3.43	0.26

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	1.76	3	0.59	1.86	0.15	2.76
Within Groups	18.91	60	0.32			
Total	20.67	63				

Because there was no difference between the groups at the three levels, an analysis was conducted based on a focus of topic areas.

Focus Topic Analysis

While the survey was developed around the 3 levels of socio-ecology, it consisted of questions that focused on participants' feelings toward salary, career opportunities, and attitudes toward the federal government. These questions were pulled together into these topics and each individuals' scores were averaged and compared (See Appendix B). ANOVA testing (See Appendix C) revealed that there were no differences between individual groups in salary and career opportunities. This is expected for both salary and career opportunities. Harrington et al. (2015) researched Millennials in their career searches. They discovered that salary, benefits, and job security were all topics within the Individual socio-ecology level that were ranked 2, 3, and 4, respectively, in the level of importance for Millennials in employer selection criteria. Harrington's et al., (2015) research confirmed the findings of this research that salary ($\mu = 4.17$), security ($\mu = 4.57$), and benefits ($\mu = 4.39$) were important to all groups (See Appendix E Question 7, 9 & 11). Only career growth in Harrington et al., (2015) (which was not tested here)

was more important than salary, benefits, and job security. This is counter to anecdotal suggestions that recruiting experts believed Millennials didn't care about salary, benefits, and job security, and that Millennials were more willing to take on work with lower pay because they wanted mobility rather than security (Harrington, et al., 2015). Pay, benefits, and job security are important to Millennials, as it turns out there is little difference between generations (Smith & Nichols, 2015).

The career opportunities topic focused on where the study participants looked for jobs, where they get job information from, and who influences their decision making. ANOVA testing (See Appendix C) revealed that there was no significant difference between Hispanics, whites, African Americans, and Asians, suggesting they all have similar feelings in this topic. Harrington et al. (2015) found that the top job search method that Millennials used was a referral from a friend or family. This is consistent with this research that found survey participants learned about job opportunities from friends or family (μ=3.86; See Appendix E Question 22).

Also, within the career opportunities topic, the main focus was using the internet for job searches. Survey participants had a high score for using the internet for job searches (μ=4.27; See Appendix E, Question 20). Harrington et al. (2015) found that Millennials' second most popular way to look for jobs was researching employers on-line, followed by searching a company's website, and followed by applying on-line for jobs. This is because Millennials are more tech-savvy, having grown up with computers, and digital media at an early age (Smith & Nichols, 2015). With this background and knowledge of computer use, Millennials use information technology with ease, and with increased frequency.

The last focus topic was attitudes toward the federal government. An ANOVA test revealed that there was a significant difference within the attitudes toward the federal government (See Appendix C). Follow up 2-sample t-tests revealed that Hispanics (M = 2.74) had the lowest average, which was significantly different than whites (M = 3.46), whose attitude toward the federal government was highest (See Appendix D). Whites, African Americans, and Asians' scores showed no differences. Blancero et al. (2018) found that Hispanic Millennials are "Cosmopolitan." This means that Millennials, especially Hispanic Millennials, have a world view and are able to move freely across cultural boundaries more so than previous generations. They are looking for careers that reflect their worldview, and it is possible that the federal government does not provide Hispanics with careers that provided them with the worldview they are looking for. Munier et al., (2015) found distrust in the federal government stemmed from immigration policy and an overall distrust of the political process. Hispanics believed that the Obama Administration did not follow through on a lot of promises, creating distrust between the Hispanic community and the federal government (Munier et al., 2015). Michelson (2007) found that Hispanics distrust the federal government because Hispanics believe the federal government is racist, and therefore Hispanics don't look for careers in the federal government. Even

Hispanics who worked as Border Patrol Agents were called "traitors" by their community (Prieto, 2015). This was because the Hispanic community believed that immigration laws hurt their community, while Hispanic Border Patrol Agents saw their job as providing respect to those they arrest (Prieto, 2015).

Organizational Data

Federal Equal Opportunity Recruitment Program Report to Congress Fiscal Year 2016

The FEORP Report provides an overview of the federal workforce and includes information such as demographics by Executive Department, pay of each ethnic group, and total counts of each ethnic group. Table 6 summarizes the federal workforce for 2016 by race and ethnic groups.

Table 6. Composition of the Federal Workforce 2016[1]

	Federal Workforce	Commerce Workforce	Senior Exec Service	Commerce Senior Exec[2]	2016 US Population
White	63.6%	64%	78.8%	81.5%	76.9%
Hispanic	8.6%	5.2%	4.6%	4.9%	18.5%
African American	18.2%	16.8%	11.4%	8.9%	13.3%
Asian	5.8%	12.7%	3.2%	4.5%	5.7%
Male	56.8%	55.3%	64.7%	No Data	49.2%
Female	43.2%	44.7%	35.3%	No Data	50.8%

The 2016 US Population is provided for comparison ("National Population," n.d.). When compared to the 2016 U.S. population, the federal workforce is similar for Asians. African Americans are over-represented, while whites and Hispanics are under-represented. The Department of Commerce is fairly represented for African Americans and Asians; as depicted, the Hispanic population is underrepresented. The upper levels of management (Pay Grades 14/15) are also mostly white, and the white workforce rates compared to other groups decreases going down the pay grade scale, while African American and Hispanic workforce rates increased

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[1] Data for this table came from multiple sources: Federal Workforce and Senior Executive Service came from the FEORP 2016, Department of Commerce workforce came from Annual Report on the Federal Workforce: Form 462 and MD-715 Data Tables for FY 2017 and FY 2018, Department of Commerce Senior Executive Service data came from fedscope.opm.gov, and the 2016 US Population came from National Population by Characteristics: 2010-2019.

[2] Data for Senior Executive Service came from fedscope.opm.com, an interactive site to provide information by agency, did not have Gender as a selection.

at the lower pay grades (See Appendix F for race by pay grade). The picture dramatically changes for the Senior Executive Service.

Senior Executive Service Report 2017

The Senior Executive Service Report 2017 (2018) showed that there was no improvement in the demographics of Senior Executive Service participation from 2013 to 2017. The Senior Executive Service is predominately white (78.8%) and male (64.7%) across all federal agencies. The Department of Commerce is more homogeneous at 81.5% white (see Table 6). Herring and Henderson (2015) call this segregated diversity, where an organization has diversity, but ethnic minority groups make up lower levels, while the senior leaders are predominately white men. Segregated diversity does meet the need for a diverse workforce, where the goal is a proportional representation of groups. This is what the federal and Department of Commerce workforce looks like: minimally good representation for African Americans and Asians, and wanting to increase Hispanic representation, which meets the goal of Segregated Diversity for proportional representation. The federal government has a predominately white male Senior Executive Service. The Department of Commerce is also predominately white, meeting the definition of segregated diversity. While the federal government's Senior Executive Service is predominately white men, it is not as homogeneous as Fortune 500 companies whose CEOs are 90% white men (Flory et al., 2018).

Across all federal agencies, the Senior Executive Service saw a decline of 3.2% from 2016 to 2017, losing a total of 266 senior leaders. There is no data for the Department of Commerce attrition rates for Senior Executive Service. Even in declining numbers, white senior leaders fared better than all other racial groups. From 2016 to 2017 white Senior Executive Service leaders declined by 2.6%, while Senior Executive Service leaders who identified as Hispanics declined by 6.7%, African Americans declined by 8.6%, and Asians declined by 5.1% ("Senior Executive," 2018). There was no data for male / female attrition rates. The report does not state the reason why more minorities left senior leadership positions.

Pitts (2009) as well as Kellough and Naff (2004) suggest that organizations have accountability in order to meet diversity goals. This means that senior leaders are held accountable for the diversity of their organization. In the federal government, holding senior leaders accountable is reflected in their performance evaluation, in which they are evaluated through the Senior Executive core competencies. The core competencies are: 1. Leading Change, 2. Leading People, 3. Results Driven, 4. Business Acumen, 5. Building Coalitions (Policy, Data, Oversight, 2020). Within Leading People is the sub-competency Leveraging Diversity. It is defined as "Fosters an inclusive workplace where diversity and individual differences are valued and leveraged to achieve the vision and mission of the organization" (Policy, Data, Oversight, 2020). Diversity is not a core competency but rather a sub-competency.

Governmentwide Inclusive Diversity Strategic Plan 2016.

The 2016 Governmentwide Inclusive Diversity Strategic Plan is the implementation of President Obama's Executive Order 13583. This Executive Order was to coordinate the Diversity and Inclusion plan across all federal agencies. The 2016 Plan defined Diversity, Inclusion, and Inclusive Diversity:

- We define workforce diversity as a collection of individual attributes that together help agencies pursue organizational objectives efficiently and effectively.
- We define inclusion as a set of behaviors (culture) that encourages employees to feel valued for their unique qualities and experience a sense of belonging.
- We define inclusive diversity as a set of behaviors that promote collaboration amongst a diverse group. ("Governmentwide Inclusive," 2016)

Most important is that the plan defined the Vision Statement: "Our Strategic Vision is to serve as the Nation's model employer by leveraging diversity and fostering inclusion to deliver the best public service possible" ("Governmentwide Inclusive," 2016). By stating that the Government wants to be a model employer, it sets a very high goal to achieve. The plan also identifies that leaders play a critical role in diversity, something that Kellough and Naff (2004) recommend.

Department of Commerce Documents and Web Presence

The Department of Commerce Diversity and Inclusion Strategic Plan FY 2017 – FY2021 ("Diversity and Inclusion," 2017) mirrors major parts of the Governmentwide Inclusive Diversity Strategic Plan. This is problematic because without a Department of Commerce plan, leaders will not know the priorities such as hiring more underrepresented groups. A specific individualized plan will create a roadmap for managers and leaders to accomplish diversity and inclusion goals. In addition, an individualized plan will help managers and leaders overcome issues that are specific to the Department.

A review of the Department of Commerce's web presence was conducted. The Department of Commerce's Careers page had very little information on it. There were only links to other sites such as USAJobs.gov, the main portal for all federal government jobs. This is problematic as survey participants use the internet/social media for job searches rather than job fairs with 83% agreeing or strongly agreeing. This was seen across all race and ethnic groups, with an average score of 4.27, there was no statistical difference between groups for using the internet for job searches (See Appendix F, Question 20).

With a vast majority of participants using the internet for job search, 49% of participants do not know where to look for federal jobs, even with the prevalence of job hosting sites such as LinkedIn, Indeed.com, and many other popular job sites. The job website LinkedIn was reviewed

to see the Department of Commerce's web presence and job postings were reviewed to see if they provided context such as the meaningfulness of the job posting in order to compare to the survey responses. The survey question related to meaningfulness of a job resulted in a high score (M = 4.50; See Appendix E Question 13), and ANOVA testing revealed that Hispanic means were not significantly different from other groups. All groups want to look for jobs that have meaning. This is not surprising as Smith and Nichols (2015) found that Millennials want meaningful work, so it is important to provide context for job seekers that the job is meaningful. This means that applicants want work that provides some usefulness to society, and not just to collect a paycheck.

An examination of the Department of Commerce on the internet revealed poor web presence. Even though bureaus within the Department of Commerce advertise on LinkedIn, a recent posting had very little information or context that participants, especially Hispanic participants, want, such as making a meaningful impact.

See Figure 3 for a representative example. In the summary, it states that the applicant will be part of a team that consists of 12,000 employees. It would be unlikely that an employee can have meaningful work as part of a 12,000-employee organization without the proper context. What is the Department of Commerce doing that will entice the applicant who is looking for meaningful work to click 'Apply?' There is not much context for the applicant from this job posting in terms of meaningful work.

Figure 3. LinkedIn Job Posting

Survey participants felt strongly about salary (μ =4.17), job security (μ = 4.57), benefits (μ = 4.39), and diversity (μ = 4.00) (See Appendix E, Questions 7, 9, 11, and 15). Only salary is addressed in this job posting. This is also a very large salary range: $70,000 to $100,000/year. The only context is the seniority level of "Associate."
This by itself is ambiguous as "Associate" has different meanings in different fields. This gives the impression that salary can be negotiated up to the high end. Benefits and job security, two important areas that survey participants want in a job were not addressed. There is little context for an applicant to see if they are a good fit for this organization.

The job posting states that this agency has been "ranked as one of the best places to work in the federal government." Even with this statement, there is no context as to what that means. Does this mean best for salary, best for job security, best for diversity, best in terms of worker satisfaction? By what authority does the agency have to say they are the best? This could have been deliberately described this way to drive potential applicants to find out exactly what that means, enticing the applicant to click 'Apply.'

Figure 4. Redirected Site from LinkedIn 10/7/20

If 'Apply' is selected, the applicant is redirected to another site. This second site is another job posting site called Neuvoo (see Figure 4). Neuvoo has just as little information or context as the LinkedIn posting. It is unclear why this is happening, but it was not a mistake as Neuvoo served as the redirect site after selecting 'Apply' several times. It could be LinkedIn is selling additional job postings to another site.

There are a number of issues with the Neuvoo site. The Neuvoo site actually has an ad, then two different job titles, with the actual job "Strategic Planning Manager," sandwiched between the ad and second job title for another company. The Neuvoo site has a salary of $100k instead of the original salary range of $74k - $100k.

It takes another click on the Neuvoo site to finally land on the USAJobs.gov site (see Figure 5). It is then discovered that the job is for internal candidates only. A person not familiar with this term, "Internal to an Agency" will not know that only federal employees of that bureau can apply for this position. A person seeking employment who is not currently a federal employee with the bureau that posted the position will not be allowed to apply. Both the LinkedIn and the second job posting site contain little information that highlights the important work the Department of Commerce is doing.
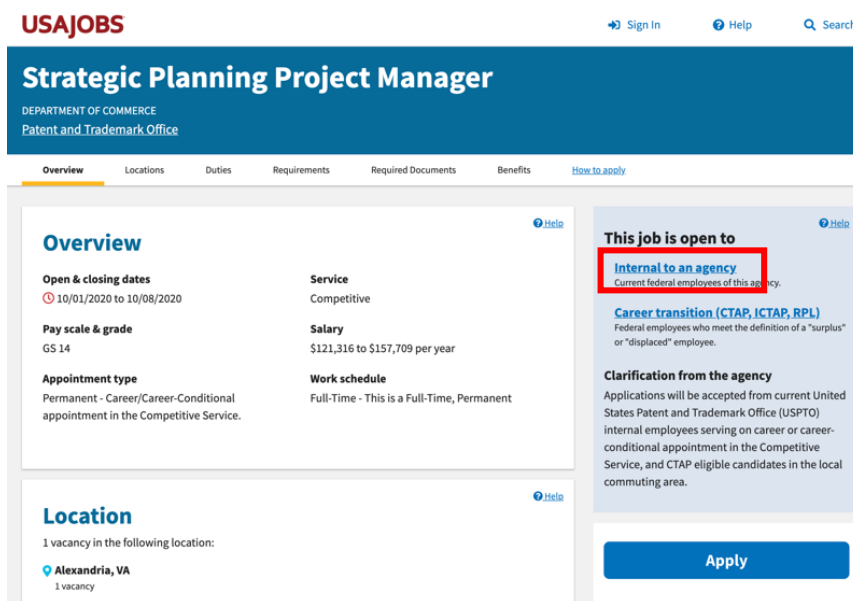
Figure 5. USAJobs Job Posting 10/7/20

Recent Hires of the Department of Commerce

Table 7 shows the Department of Commerce's hiring for the past year under each of the supplement funding bills, as well as their regular annual funding called Salary and Expenses. Salary and Expenses funding is used to hire permanent employees, while the supplement funding, Disaster 1, Disaster 2, and CARES, are used to hire temporary employees. The Department of Commerce hired only six Hispanic applicants.

Table 7. Recent Hires Demographics of a Department of Commerce Sub-Bureau

Recent Hire by Funding, Pay Scale, and Ethnicity					
Gender	Male	Female			
	42	60			
	41.2%	58.8%			
Permanent	Disaster 1	Disaster 2	CARES	Total	
23	5	7	67	102	
22.5%	4.9%	6.9%	66.7%		
White	Hispanic	Black	Asian	Other	Total
80	6	11	1	4	22
78%	6%	10.8%	1%	3.9%	21.6%

On closer examination of the Hispanic recent hires from the above list, one was hired specifically to work in Puerto Rico to assist in disaster recovery efforts. Three Hispanics were hired in the Regional Office that geographically has a large representation of Hispanics. Only two were hired in the Headquarters Office in which 33 people were hired or 6% of the HQ total hires.

Unfortunately, this in line with the overall percentage of Hispanics hired in the Department. The Hispanic pay grades were distributed within the middle pay grades: GS11 – 2 hires, GS12 – 3 hires, GS13 – 1 hire. The total Hispanic hires represented five women and one man.

Only one Asian person was hired in this cohort. This person was hired in a Headquarters office in which there are already two other Asians. No other Asians were hired in any office, and the three represent 75% of the Asian population in the bureau.

The Department did not improve in minority hiring. One possible explanation for the lack of diversity hiring could be an indication of unconscious bias on the part of hiring managers. Akram (2017) researched unconscious bias through an Active Representation lens and identified four types of unconscious bias against women. However, there were 60 women hires, and they were evenly distributed within all the pay grades. Oberai and Anand (2018) identified seven types of unconscious bias: Halo Effect, Affinity Bias, Conformity Bias, Cloven Hoof Effect, Attribution Bias, Beauty Bias, and Confirmation Bias. The lack of diversity hiring at a time when the bureau could hire from their own social networks should be a concern to the Department of Commerce. Within the socio-ecological framework, if the hiring managers used their professional social network and hired a predominately white --although female-- workforce, leadership should re-examine how resumes were solicited, reviewed, and selected.

Recommendations

Recommendation 1: Organizational level – Critical Diversity

The document review of Department of Commerce employees by race, race by pay grade (See Appendix F), and the Senior Executive Service (See Table 6) showed a predominantly white upper management and senior leaders. As pay grades decreased, the rates of Hispanics and African American participation rates increased. From these participation rates, of note is the fact that the overwhelming majority of senior leadership positions within the Department are white at 81.5%; it seems that the Department of Commerce has segregated diversity that embraces a multicultural aspect (Herring & Henderson, 2015). The Department of Commerce also has all the aspects of multiculturalism, such as celebrating group differences with recognition months (Bond & Haynes, 2014). The Department holds diversity days such as Hispanic recognition, Asian American Pacific Islander Appreciation Month, and other cultural awareness.

However, segregated diversity is not where the Department needs to be. The Department of Commerce must move from Segregated Diversity to Critical Diversity (Herring & Henderson, 2015). Critical Diversity aligns with the Department's mission as an ideal employer and has the positive affect of increasing employee satisfaction. This means that the Department must openly seek minorities to fill high level and high visibility positions within the Department. Critical Diversity means addressing the inequity within an organization and fixing those inequities

(Herring & Henderson, 2015). Having a diverse senior leadership within the Department will signal that the agency is serious about Equity, Diversity, and Inclusion. Moon and Jung (2018), through a representative bureaucracy lens, found federal management teams that reflect the racial representation of the population or its workforce has higher employee satisfaction.

Recommendation 2: Organizational level – Website Upgrade

The review of the Department of Commerce web presence revealed poor use of its job posting and its own Careers website. McDonald (2017) showed that a bad website sends the message that the organization doesn't care about the prospective client. In this case, the message is the Department of Commerce does not place a heavy emphasis on diversity for open positions. At the Organizational level, the Department of Commerce's bureaus must review all external job postings and add context for job applicants. The Department must ensure that all job postings to commercial job posting sites are open to the general public. Internal candidates, who are federal employees, already know where to go to find current job postings across the federal government and posting these positions to commercial sites is unnecessary.

Figure 6. Department of Commerce Careers Page

Second, the Department must add context to the job posting to make it meaningful to the candidate. USAJobs.gov site, the Department can add that context to commercial job posting sites. The Department of Commerce website should have an employment page or mission page that shows the impact the Department is making on the community. On examination of the Department of Commerce Careers page, it only has links to the USAJobs.gov site (see Figure 6). There is no context on why applicants should choose the Department of Commerce. While this may be standard for federal government websites, if the Department wants to attract people it must do a better job of selling itself on its own website. This should come at very little cost to the agency as it owns and operates its own site.

Flory et al. (2018) found that adding context to job advertisements such as the percentage of minorities hired the prior year, the company's commitment to diversity, and CEO's supporting diversity had a significant positive impact on minority application and selection. Applying changes at the Organizational level to its Careers webpage (see Figure 6), adding context that the
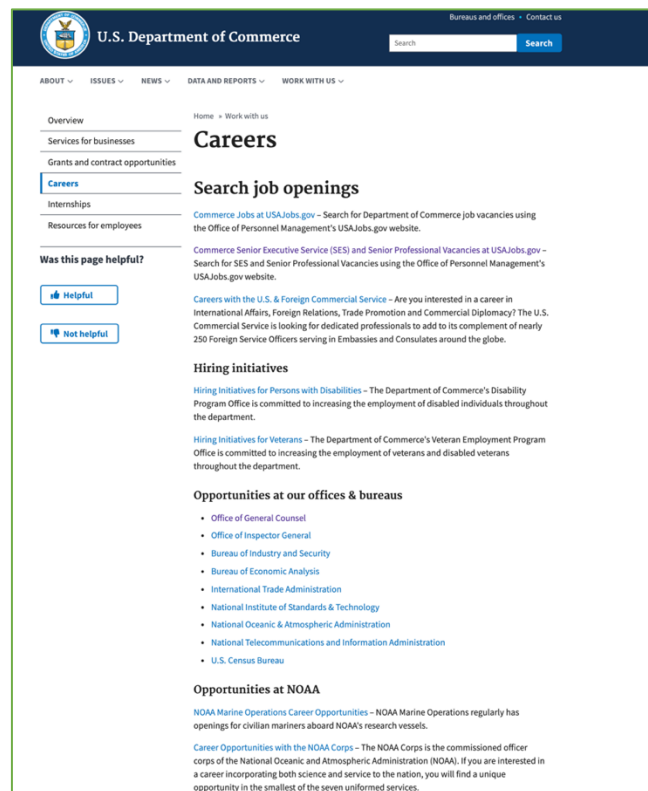
Department of Commerce supports diversity, and the meaningfulness of work will have a positive effect on the Individual level. Survey participants wanted jobs and careers that were meaningful. Meaningful work scored a 4.50 on the survey, and there was no significant difference between the groups. Millennials are looking for meaningful jobs, which means the Department of Commerce needs to provide that context. The only way to get that context is by storytelling through the Department's Careers page. The Department of Commerce is helping communities rebuild from natural disasters, helping minority businesses develop and grow, and providing scientific services such as emergency weather notifications, all of which should be highlighted as the reason someone wants to work for the Department of Commerce. The Careers page should not just be a page full of links to job postings. The Careers page should be about the reasons someone wants to work for the Department of Commerce. Flory el al., (2018) found that this context is especially appealing to African Americans and Hispanics, the core group that the Department of Commerce is targeting. The webpage is one thing that the Department can control and make changes to with little costs.

Job security was very important to the survey participants, with an average score of 4.57, and Hispanics scoring the highest with 4.72 (See Appendix E Question 9). Again, the Careers page should convey the message that the federal government provides job security. Government jobs are not dependent on sales, or financial markets as many non-governmental jobs are. Once an employee passes his or her probationary period, they become a "Permanent" employee. As the name implies, employees can continue to have a job as long as they are a good performer. Despite the rhetoric, the current Administration has not reduced the size of the federal government (Tate, 2019). While the media acknowledges federal job security, it often portrays federal government jobs in a negative light because it is very hard to fire a federal government employee (Watson, 2016). The media only looks at permanent federal employees from the point of view of the government's inability to fire a poor performer. However, the Department must sell this in a positive light. The Department of Commerce is providing vital services that cannot be interrupted. This is why federal employees have job security.

Recommendation 3: Organizational level – Accountability

A review of the Senior Executive Service core competencies revealed that Leveraging Diversity was not a core competency, but a sub-competency within Leading People. Kellough and Naff's (2004) first recommendation is to link diversity to performance ratings and compensation awards for senior leaders. If this does not happen then the organization will not move forward with diversity initiatives. The Department of Commerce cannot change the Senior Executive Service Core Competencies because this change will have to be approved by the Office of Personnel Management. Instead, the Department can add diversity as a core competency on its own senior leaders' performance and evaluation plans. Senior leaders must have diversity as a core competency rather than having diversity buried as a component of a core competency. Making

senior leaders report out on their performance and evaluation plans will institutionalize diversity goals (Stanley et al., 2019). Within the socio-ecological model, this change at the Organization should be felt at other levels. Pitts (2009), while not using the socio-ecological model as his framework, showed that at the Individual level minorities responded to strong diversity management by reporting higher job satisfaction. Tying performance awards to diversity achievement also has positive effects. Even symbolic awards that are tied to diversity can show increased performance. In addition, these non-monetary awards can positively influence employees to strive for those awards (Stanley et al., 2019).

The recent hiring of 102 employees at a bureau within the Department of Commerce presents some worrying data that the recent hires were not representative or diverse. Only six Hispanics were hired out of 102 total hires. Although the sub-bureau did do an excellent job in hiring women, its diversity is an issue with 78.4% white new hires. Because diversity is not on the senior leader's performance and evaluation plan, no senior leader will have to explain the poor performance of hiring minorities. This could also be the result of the Department of Commerce's lack of a Diversity and Inclusion Strategic Plan that could address the Department's needs in hiring minorities, and especially Hispanics.

Recommendation 4: Organization level – Strategic Plan

Review of Department of Commerce Diversity and Inclusion Strategic Plan FY 2017-2021 revealed that it mirrored many parts of the Office of Personnel Management's 2016 Governmentwide Inclusive Diversity Strategic Plan. A detailed and specific Department of Commerce Diversity and Inclusion Strategic Plan will help focus leaders accomplish the Department's goals. For example, the Department of Homeland Security, who leads all departments in Hispanic employees, has very specific goals and performance measures to reach out to all groups in the country ("Inclusive Diversity," n.d.). Department of Homeland Security specifies goals to reach out to and increase percentages of people with disabilities, veterans, and minority groups. ("Inclusive Diversity," n.d.) The Department of Commerce should come up with very specific goals to help guide managers and leaders.

According to Stanley et al. (2019), developing the diversity plan is the first step to organization change. For the diversity plan to be successful, there must be leadership commitment. The only way to gain leadership commitment is by making diversity and inclusion a part of the senior leaderships' evaluation (Kellough & Naff, 2004; Pitts, 2009).

The Department of Commerce must review its Diversity and Inclusion Strategic Plan to develop its own plan to address the issues within the agency. While the Diversity and Inclusion Strategic Plan is important, care must be taken in developing a plan that is aspirational rather than

statements of achievements. This can backfire and employees do not support diversity because they believe that diversity goals have been achieved (Carnes et al., 2019).

If Hispanic employees are under-represented by the Inclusion Rate, then a plan should be developed within the Diversity and Inclusion Strategic Plan to address this. This is the plan that all bureaus and offices within the Department will review to develop their own plans. This is the single document that all bureaus within the Department will be looking to for guidance. However, this lack of guidance will result in poor diversity hiring as demonstrated by the recent hiring surge (See Table 7). The Department's Strategic Plan should also include Hispanic Serving Institutions. The Department of Commerce must let bureaus know how to fully utilize and develop relationships with these organizations to increase diversity hiring.

Recommendation 5: Community level – External Organizations

The participant survey revealed that Hispanic participants had low levels of trust in the federal government, with a mean score of 2.74. Hispanics also had a low score for believing the federal government was a diverse place to work with a score of 2.76 (See Appendix E Question 16). Hispanics have a lower view of the federal government than that of other groups, especially when compared to whites. One way to improve Hispanic attitudes toward the federal government is to develop relationships with the community in which Hispanics study and work. This can be done through the Hispanic community of practice within the Hispanic Serving Institutions. Matthews et al. (2017) found that Hispanic students had a lack of awareness of federal career opportunities. This is similar to survey participants' low score of 2.77 (See Appendix E Question 18) on where to look for opportunities in the federal government. Hispanic Serving Institutions should be used to fill the knowledge gap of federal career opportunities by increasing social and professional networks (Matthews et al., 2017). By developing relationships with Hispanic Serving Institutions, the people within those organizations, acting as "empowering agents," can provide a sounding board for the Department of Commerce (Garcia & Ramirez, 2018). The Department has many Diversity and Inclusion days; the organizations in the Hispanic Serving Institutions should be invited to all of the multicultural events happening within the Department. This can help alleviate and improve attitudes toward the federal government. The Department should also take part in events that the Hispanic Serving Institutions hold. The Department of Commerce can then tell its story to these participants and how the agency has a positive impact on the community. Developing the Community of Practice relationship will eventually have a positive impact on the community, where the participants reside.

Also, any job postings to USAJobs.gov should be sent to all of the Department's social networks such as the Hispanic Serving Institutions. The Department of Commerce should also use their ties with the Hispanic Serving Institutions to gain connections to nearby colleges and universities to establish networks with professors and staff. Garcia and Ramirez (2018) recognize that

Hispanic Serving Institutions can act as advocates for Hispanic students to build their networks. It is important for Hispanics to develop their professional networks as they tended to be immature or not developed enough to provide good contacts (Lewis et al., 2013). The survey participants demonstrated that they are not utilizing their professional networks to look for opportunities. According to Beaman and MacGruder (2012), high-quality referrals can come from social networks. Through these connections, the Department of Commerce can let their professional network know that the agency is looking to hire more Hispanics. The Department can then send the college network job postings to enlist their help in referring quality candidates, as well as asking faculty and staff to focus on highly qualified minority students. Social networks act as a way of sorting applicants. Only applicants who are verified, through social networks, as high-quality applicants are forwarded to employers. Galeotti and Merlino (2014) found that between 30% to 50% of jobs come from social networks. 50% of survey participants reported that they received career opportunities from professors and counselors. By informing faculty and staff of career opportunities, they will utilize their social networks to inform their students. The Department of Commerce can get quality candidates by cultivating its relationship with Hispanic Serving Institutions.

The survey reported that participants looked to professors or career counselors for job and career opportunities. Within the Washington D.C. metropolitan area there are numerous colleges and universities. The Department of Commerce can increase its accessibility to interns from local universities, asking universities to refer more minority candidates. From a Department of Commerce's cohort of interns in 2019, 30% went on to become federal government employees either with the Department of Commerce or with another agency in the federal government.

By reaching out to colleges, and Hispanic Serving Institutions, the Department of Commerce is leveraging interpersonal relationships as well as fostering the interpersonal relationships between professors and students. These students will then utilize their social networks to inform their friends and family of opportunities.

Summary of Recommendations

The table below represents a summation of the recommendations and the effects on the socio-ecological model. The five recommendations have effects on all the levels of the socio-ecological framework.

Table. 8. Recommendations	**Effects**
1. Critical Diversity – address inequity; openly seek and hire minorities at senior levels	Organization, Community
2. Website Upgrade – review external postings; add context to Careers page to add meaning, and salary/benefits	Organization; Individual

3. Accountability – Senior Executive Service evaluation tied to diversity	Organization, Community, Interpersonal, Individual
4. Strategic Plan – Develop Department of Commerce Strategic Plan	Organization, Community, Individual
5. Partnering with External Organizations – Hispanic Serving Institutions	Community, Interpersonal, Individual

Discussion

The socio-ecological model provided a lens by which to examine possible barriers and ways to overcome those barriers for Hispanic candidates. The problem of practice involves the low levels of participation of Hispanics; as a result, this has led to a poor Inclusion Rate.

At the Individual level of the socio-ecological model, the research question asked what are the characteristics that applicants look for employment that would give them a favorable opinion to work for the U.S. government? From the survey, it was determined that today's college students, the Millennial generation, are no different from past generations. They are looking for careers that pay them well, have good benefits, and job security. Additionally, they are looking for meaningful careers. To get Millennials interested in federal opportunities, the Department should revamp its Careers page to add context to make federal careers appealing.

The Interpersonal level of the socio-ecological model asked how interpersonal relationships impact potential applicants. The research found that survey participants aren't using their networks. Interpersonal relationships can have a positive effect on applicants. Interpersonal relationships form social networks that provided job referrals that make up 20% of job hires. The social networks did not just provide any job referrals but very high-quality candidates (Feffer, 2015).

The Community research question asked what influence the community has on applicants who apply for federal employment. For the Hispanic community, there is a negative attitude toward the federal government, which could explain why the Department of Commerce has a low Inclusion Rate for both Hispanic men and women. Exploring opportunities with Hispanic Serving Institutions can help alleviate the negative feelings by showcasing how the federal government is a good career.

Also, the Community level seeks to understand if there are barriers that prevent diversity hiring. The Department of Commerce hired 102 employees over a short period of time, but only six Hispanic employees. The Department doesn't have its own well-developed Strategic Diversity and Inclusion plan that addresses the low levels of Hispanic employees, which has resulted in a low Inclusion Rate. The Department's senior leaders most likely will not have to explain why so few minorities were hired, because they are not accountable for diversity initiatives. Therefore, barriers do exist in the form of lack of a Strategic Diversity and Inclusion plan, and lack of senior leadership accountability.

Using the socio-ecological model is a good way to look at the entire Department of Commerce. An examination needs to be done in both the system in which the applicant is coming and the system in which the Department of Commerce operates. Recruiting should not be looked at as a Human Resources only event; it is an activity that involves the entire agency that affects every level. Organizational policies, leadership and employee composition, and management matter. The Department of Commerce not having its own Diversity and Inclusion Strategic Plan (*Organizational level*) reveals to the employee (*Individual level*) that Diversity and Inclusion is not important to the organization. Hispanic Serving Institutions (*Community and Interpersonal levels*) can help socialize opportunities to applicants (*Individual level*).

Federal employment is a long and difficult process. The Department of Commerce can help ease this difficulty through a number of actions such as adding context to its website. This will help candidates understand what the Department of Commerce does, and its impact on the country. It can develop a detailed strategic plan on diversity. This will help managers understand that the Department has aspirational goals set forth by President Obama's Executive Orders for diversity in the federal workforce and convey to the applicant that the Department values diversity. Finally, the Department of Commerce can continue to develop its relationship with external organizations to help build connections to a highly qualified diverse workforce.

Limitations

This research relied on surveys of college students who are currently looking for jobs or will be looking in the near future. The survey provided an overall look at participants' perceptions of what they wanted in careers, where they looked for careers, and feelings toward the federal government. The survey did not provide the context in which to understand these answers. A detailed discussion with survey participants would have given a deeper understanding of the survey answers. One way to provide this detailed information would have been a qualitative method such as interviews or focus groups. A qualitative analysis in which interviews may reveal such answers and help plan to mitigate those concerns should be a consideration for future research or analysis. Future research needs to look into the reasoning of why working for the federal government is seen so poorly within the Hispanic community.

The planned design for this study was to conduct focus groups of survey participants, as a means to provide context to the survey. However, the COVID-19 pandemic resulted in colleges shutting down campuses and sending students home by the end of March. Students then transitioned to all online learning. It was therefore not possible to conduct focus groups. The focus groups could have provided more details on why certain groups felt the way they did. Scheduling and locating college students during the pandemic proved problematic. It was determined that there was enough data to continue the analysis; there was no way to predict or mitigate the pandemic.

The survey relied on snowball sampling. This provided a large sample of 76 participants. A negative drawback of this type of sampling is that it is not random resulting in sampling bias (Baltar & Brunet, 2012). The snowball sampling captured college students on both coasts of the United States. Even though there was a range of college students, they lack experience in both work and government understanding. The generalizations about the entire U.S. government from college students who lack experience is a limitation.

Not all federal agencies are struggling to find Hispanic employees. This research focused on the problem of practice for the Department of Commerce but did not ask questions about the Department. Besides reviewing the Department of Homeland Security's Inclusive Diversity Strategic Plan, no additional research was conducted about other federal departments regarding comparisons on strategic planning, workforce demographics, or other variables that contribute to success in hiring Hispanics. Such a comparison may have revealed information that could possibly be of benefit for this research as well as the Department of Commerce.

Conclusion

The socio-ecological model provided a framework to look at the system as a means to examine the complexity of those seeking future employment against that of the federal government as a potential employer. Documentation and data were analyzed at the Organizational level, and a survey was taken to examine the attitudes of young job seekers. The survey revealed Individual issues of Hispanics not favoring federal employment, as well as Interpersonal issues of under-utilized social networks. Organizational data revealed under-developed strategic planning for diversity, and possible unconscious bias against minorities. Recommendations were made to fill the gaps between the socio-ecological levels in hopes of improving the hiring of Hispanics. The systems overview provided a more complete picture than simply hiring additional Hispanics; rather the systems overview provided more context in which the agency can develop plans to mitigate or investigate further.

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Appendix A. Survey

Q7. High starting pay/salary is a consideration for employment with an agency/organization.

Q8. When looking for a job, I look at the pay/salary first.

Q9. Job security is important to me.

Q10. I look for the stability of a company when I evaluate a job opportunity.

Q11. The amount of benefits is a factor when looking for a job.

Q12. Being able to have an impact on the community is essential in my decision for a company.

Q13. Having meaningful work is essential to me.

Q14. The Federal government is an excellent place to start looking for a career.

Q15. The diversity of an organization is essential to me.

Q16. The Federal government is a diverse place to work.

Q17. I have seen the following at my college/university Job Fairs or at other Job Fairs (check all that apply). (A listing of Department of Commerce Bureaus were given: Economic Development Administration, Bureau of Economic Analysis, Census Bureau, National Oceanic and Atmospheric Administration, Minority Business Development Administration, National Telecommunication and Information Administration, Bureau of Industry and Security, US Patent and Trademark Office, National Institute of Standards and Technology, and National Technical Information Service, I have not attended any job fairs, and I have not seen any of the listed agencies)

Q18. I know where to look for job/career opportunities with Federal Agencies.

Q19. I am interested in job/career opportunities with Federal Agencies.

Q20. I primarily use the internet/social media for job searches.

Q21. The opinions of my friends/family have an impact on my decisions.

Q22. I learned about job/career opportunities from friends/family.

Q23. My family helps me make decisions on career opportunities.

Q24. I have an influence on my friends/family on decisions they make,

Q25. My professors, career counselors, friends or family have told me about job/career opportunities.

Q26. I have been told it is too difficult to pass the civil service exam

Q27. I want to get a job that reflects my community standards

Q28. The people of my community (family, friends, neighbors) affect my decisions about my career.

Q29. Working for the Federal government will enhance my standing within my community.

Q30. If I were to work for the Federal government, my community would not be in favor of it.

Q31. My community supports the Federal government in all aspects.

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Appendix B. Focus Group Survey Questions

Salary, Job Security, and Benefits Focus Topic
Q7. High starting pay/salary is a consideration for employment with an agency/organization.
Q8. When looking for a job, I look at the pay/salary first.
Q9. Job security is important to me.
Q10. I look for the stability of a company when I evaluate a job opportunity.
Q11. The amount of benefits is a factor when looking for a job.

Career Opportunity Focus Topic
Q20. I primarily use the internet/social media for job searches.
Q21. The opinions of my friends/family have an impact on my decisions.
Q23. My family helps me make decisions on career opportunities.
Q25. My professors, career counselors, friends or family have told me about job/career opportunities.

Government Attitude Focus Topic
Q14. The Federal government is an excellent place to start looking for a career.
Q16. The Federal government is a diverse place to work.
Q18. I know where to look for job/career opportunities with Federal Agencies.
Q19. I am interested in job/career opportunities with Federal Agencies.
Q29. Working for the Federal government will enhance my standing within my community.
Q31. My community supports the Federal government in all aspects.

Appendix C. Focus Group ANOVA

Anova: Single Factor / Salary

SUMMARY

Groups	Count	Sum	Average	Variance
Hispanic	18	77.80	4.32	0.23
White	23	98.80	4.30	0.15
AA	5	22.01	4.40	0.15
Asian	18	77.20	4.29	0.12

ANOVA

Source of Vari	SS	df	MS	F	P-value	F crit
Between Grou	0.06	3	0.02	0.11	0.95	2.76
Within Group	9.90	60	0.16			
Total	9.95	63				

Anova: Single Factor / Career Opportunities

SUMMARY

Groups	Count	Sum	Average	Variance
Hispanic	18	75.92	4.22	0.38
White	23	83.25	3.62	0.81
AA	5	20.50	4.10	0.21
Asian	18	68.50	3.81	0.45

ANOVA

Source of Vari	SS	df	MS	F	P-value	F crit
Between Grou	3.95	3	1.32	2.41	0.08	2.76
Within Group	32.78	60	0.55			
Total	36.74	63				

Anova: Single Factor / Government Feelings

SUMMARY

Groups	Count	Sum	Average	Variance
Hispanic	18	49.33	2.74	0.64
White	23	79.50	3.46	0.38
AA	5	16.83	3.37	0.58
Asian	18	54.00	3.00	0.70

ANOVA

Source of Vari	SS	df	MS	F	P-value	F crit
Between Grou	5.76	3	1.92	3.43	0.02	2.76
Within Group	33.57	60	0.56			
Total	39.32	63				

Appendix D. 2 Sample T-test Gov't Attitudes Between Groups

Hispanic and White Gov't Attitude
t-Test: Two-Sample Assuming Equal Variances

	Hispanic	*White*
Mean	2.74	3.46
Variance	0.64	0.38
Observations	18	23
Pooled Varian	0.50	
Hypothesized	0	
df	39	
t Stat	-3.23	
P(T<=t) one-ta	0.00	
t Critical one-	1.68	
P(T<=t) two-ta	0.00	
t Critical two-	2.02	

Hispanic and Asian Gov't Attitude
t-Test: Two-Sample Assuming Equal Variances

	Hispanic	*Asian*
Mean	2.74	3.00
Variance	0.64	0.70
Observations	18	18
Pooled Varian	0.67	
Hypothesized	0	
df	34	
t Stat	-0.95	
P(T<=t) one-ta	0.17	
t Critical one-	1.69	
P(T<=t) two-ta	0.35	
t Critical two-	2.03	

White and African American Gov't Attitude
t-Test: Two-Sample Assuming Equal Variances

	White	*AA*
Mean	3.46	3.37
Variance	0.38	0.58
Observations	23	5
Pooled Varian	0.41	
Hypothesized	0	
df	26	
t Stat	0.28	
P(T<=t) one-ta	0.39	
t Critical one-	1.71	
P(T<=t) two-ta	0.78	
t Critical two-	2.06	

Hispanic and African American Gov't Attitude
t-Test: Two-Sample Assuming Equal Variances

	Hispanic	*AA*
Mean	2.74	3.37
Variance	0.64	0.58
Observations	18	5
Pooled Varian	0.63	
Hypothesized	0	
df	21	
t Stat	-1.56	
P(T<=t) one-ta	0.07	
t Critical one-	1.72	
P(T<=t) two-ta	0.13	
t Critical two-	2.08	

Whiat and Asian Gov't Attitude
t-Test: Two-Sample Assuming Equal Variances

	White	*Asian*
Mean	3.46	3.00
Variance	0.38	0.70
Observations	23	18
Pooled Varian	0.52	
Hypothesized	0	
df	39	
t Stat	2.01	
P(T<=t) one-ta	0.03	
t Critical one-	1.68	
P(T<=t) two-ta	0.05	
t Critical two-	2.02	

African American and Asian Gov't Attitude
t-Test: Two-Sample Assuming Equal Variances

	Variable 1	*Variable 2*
Mean	3.37	3.00
Variance	0.58	0.70
Observations	5	18
Pooled Varian	0.68	
Hypothesized	0	
df	21	
t Stat	0.88	
P(T<=t) one-ta	0.19	
t Critical one-	1.72	
P(T<=t) two-ta	0.39	
t Critical two-	2.08	

Appendix E. 2 Survey Scores for Population and All Groups

	Pop μ	Hispanic $\bar{x}$	White $\bar{x}$	African Am $\bar{x}$	Asian $\bar{x}$
Q7 High salary	4.17	d3.89	4.30	4.60	4.39
Q8 Look at Salary First	3.83	3.83	3.96	4.00	3.67
Q9 Job Security	4.57	4.72	4.52	4.20	4.53
Q10 Job Stability	4.46	4.61	4.43	4.00	4.50
Q11 Job Benefits	4.39	4.56	4.26	4.00	4.50
Q12 Community Impact	4.12	4.35	3.61	3.60	4.50
Q13 Meaningful Career	4.50	4.44	4.48	4.00	4.72
Q14 Fed Excel Start Career	3.20	2.83	3.48	2.80	3.44
Q15 Diversity is important	4.00	4.17	3.52	4.40	4.17
Q16 Fed Gov't is diverse	3.13	2.76	3.70	2.80	2.94
Q18 Know where Fed Opps	2.77	2.28	3.22	3.60	2.61
Q19 Interested in Fed Ops	3.33	2.94	3.78	2.80	3.28
Q20 Social Media Job Search	4.27	4.56	4.00	4.60	4.11
Q21 Opinion Friends /Family	3.96	4.39	4.04	4.00	3.94
Q22 Job from Friends/Family	3.86	4.06	3.91	4.00	3.83
Q23 Family help w/ Decisions	3.68	4.12	3.65	3.80	3.78
Q24 Influence on Friends	3.81	4.22	3.39	4.40	3.83
Q25 Professors Career Opps	3.21	3.22	3.39	3.60	3.06
Q26 Too Difficult Civil Exam	2.93	3.22	2.48	2.80	2.94
Q27 Job Reflect Community	4.13	4.50	3.87	4.20	4.06
Q28 Community affect decision	3.49	3.83	3.35	4.00	3.56
Q29 Fed Gov't & Community	3.16	2.65	3.52	2.00	3.50
Q30 Fed Gov't Comm Favor it	2.54	2.89	2.26	2.00	2.61
Q31 Comm Spts Fed Gov't	3.10	2.89	3.26	2.20	3.50

Appendix F: Department of Commerce Pay Grade by Race/Ethnic Group

	White	Hispanic	AA	Asian	Native Am	Hawaiian	More 1
GS15	1714	96	307	422	8	0	23
	66.7%	3.7%	11.9%	16.4%	0.3%	0.0%	0.9%
GS14	4394	328	1158	2116	21	0	79
	54.3%	4.1%	14.3%	26.1%	0.3%	0.0%	1.0%
GS13	3576	331	1043	811	12	8	89
	60.9%	5.6%	17.8%	13.8%	0.2%	0.1%	1.5%
GS12	2769	444	1259	583	44	9	126
	52.9%	8.5%	24.1%	11.1%	0.8%	0.2%	2.4%
GS11	1044	201	552	192	11	7	45
	50.9%	9.8%	26.9%	9.4%	0.5%	0.3%	2.2%
GS10	39	0	22	0	0	0	0
	63.9%	0.0%	36.1%	0.0%	0.0%	0.0%	0.0%
GS9	688	146	403	180	7	0	35
	47.2%	10.0%	27.6%	12.3%	0.5%	0.0%	2.4%
GS8	148	18	112	6	0	0	5
	51.2%	6.2%	38.8%	2.1%	0.0%	0.0%	1.7%
GS7	532	83	389	129	4	0	37
	45.3%	7.1%	33.1%	11.0%	0.3%	0.0%	3.2%
GS6	505	59	160	19	9	0	19
	65.5%	7.7%	20.8%	2.5%	1.2%	0.0%	2.5%

Pay Grade by Race/Ethnic Group