Strategic Management and Job Satisfaction:
Agency-Level Effects in the Federal Government

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TABLE OF CONTENTS

EXECUTIVE SUMMARY

As strategic planning and human capital strategies become more regulated in the United States government, a decision must be made by federal agency heads. Will agencies fully participate and buy into the process of participative strategic planning and management or will they comply with regulations and reforms merely for the sake of compliance with little further effort? The intent of this study is to show that agencies that choose to do more than simply comply with GPRA and implement strategic planning and management can benefit from their increased effort in by increasing job satisfaction in their workforce.

The Government Performance and Results Act is a piece of legislation passed in 1993 that required agencies to complete strategic plans, performance plans, and performance reports in an effort to, among other things, improve government management through the gathering and measuring of agency results and reporting those results to Congress. Since 1993, presidents have implemented management reforms that will satisfy the requirements of GPRA in hopes that agency performance will improve. Agencies that are able to link their performance outcomes to their resources and inputs are better able to justify their budgets and lawmakers are better able to justify expanding or constricting certain programs based on performance results. However, without a clear plan for each agency, goals and outcomes can be ill-defined. While every reform is somewhat different, the general goal is to create better-performing agencies. Integrated workforce strategies that increase job satisfaction will help to better performance.

To determine the effect of strategic planning and management on job satisfaction, a data set was created from two sources: the Strategic Management of Human Capital (SMHC) scorecards required by the President's Management Agenda and the aggregate agency-level survey results from the Federal Employee Viewpoint Surveys. SMHC scorecard results for the fourth quarters of 2003, 2005, and 2007 were combined with the survey results from 2004, 2006, and 2008, respectively. A model was created using this data and three regression analyses (ordinary least squares, random-effects, and fixed-effects) were estimated. The OLS and random-effects regression models found three significant variables: current status score of green, goal contribution, and participative management. These variables positively affect the level of job satisfaction in federal agencies. The fixed-effects regression model has four statistically significant variables: progress score of green, goal contribution, encouragement, and empowerment. It should be noted, however, that not all of these variables are significant at the 95% confidence interval.

Based on these results, I do not recommend a specific course of action for agencies or the federal government except that further study is needed into the effects of participative strategic planning and management on job satisfaction. As the federal government continues to compete for the best workforce, the needs and satisfaction of their human capital will become increasingly important. While human capital strategies may not be part of the central mission of the agency, they are important to the success and performance of the government.

<u>INTRODUCTION</u>

In 1993, President Bill Clinton signed the Government Performance and Results Act (GPRA), a piece of legislation that sought to improve government management by enforcing more Congressional oversight in performance decisions. The goal of this legislation was to better measure performance in the United States government. Performance measures have been used in the private sector for years as a means of linking resources to outputs and outcomes and while this has also been done in the public sector, the implementation of performance measures has been operationally difficult in the public sector. GPRA was passed with bipartisan support encouraging this linkage as a means of increasing accountability and transparency. Upon signing the legislation, President Clinton said, "The law simply requires that we chart a course for every endeavor that we take the people's money for, see how well we are progressing, tell the public how we are doing, stop the things that don't work, and never stop improving the things that we think are worth investing in" (Radin 2000, 117).

GPRA is a results-based reform aimed at requiring federal agencies to create strategic goals and then to report the progress toward those goals through performance reports. The Senate Committee on Government Affairs (1993) reported that "The purpose of S. 20, the Government Performance and Results Act of 1993, is to improve the efficiency and effectiveness of Federal programs by establishing a system to set goals for program performance and to measure results." GPRA developed a system of program performance measurement that utilized three key elements: a five-year strategic plan, annual performance plans, and annual performance reports. These elements would allow managers in the agencies to have a great deal of discretion as to how their plans and reports were put together with the overall goal of accountability (Radin 2000).

Strategic plans were to be used as the long-term planning guide for the agencies. They combined the mission of the agencies with appropriate goals necessary to work toward that mission. The annual performance plans linked the strategic plan to the daily operational function. The inclusion of the agency managers encouraged a sense of middle-manager ownership of the plan as a means of creating buy-in and continued support. The annual performance reports were the final element of GPRA and were used to report performance back to the managers. These reports allow the agencies to formally detail the outputs and outcomes associated with the resources used (U.S. Senate Committee on Governmental Affairs 1993). GPRA had a lot of potential to transform the federal government into an organization that combined financial and performance information for better decision-making and less paperwork. The implementation process, however, has shown that managers and agencies have done the bare minimum to comply with GPRA rather than embrace the spirit of the legislation (Radin 2000).

In 2001, President George W. Bush developed a strategy for performance improvement that would be used as a means of supplementing the GPRA requirements, which, in his administration's opinion, did not sufficiently use performance information for program management. This new reform was the President's Management Agenda (PMA). Instead of being a piece of legislation, PMA was a management reform that changed the way the federal government would capture performance results and apply them to the management of agency programs. President Bush intended for PMA to be a citizen-centered approach that would focus on results and would promote innovation within the agencies much like the private sector does. PMA created five government-wide initiatives: Strategic Management of Human Capital, Competitive Sourcing, Improved Financial Performance, Expanded Electronic Government, and

Budget and Performance Integration. In addition to these five government-wide initiatives, PMA also set forth nine program-specific initiatives (U.S. Office of Management and Budget 2002).

Each initiative was assigned short-term and long-term goals as well as priorities for reaching those goals. The five government-wide initiatives were intended to be "mutually reinforcing" so they were interdependent on one another. For example, Strategic Management of Human Capital involved the restructuring and planning of the federal workforce which had a direct impact on the Budget and Performance Integration initiative. This was how PMA linked performance to budgeting – through results (Office of Management and Budget 2002). In addition to using these results to determine an agency's PMA initiative scores, the OMB also used them to give them a Program Assessment Rating Tool (PART) score. PART was also a accountability reform enacted by President Bush designed to determine the effectiveness of federal agencies (Petrovsky 2011).

Throughout the history of accountability reforms, some agencies have been able to implement these reforms with little difficulty and added expense while others have seen the costs associated with planning and evaluation increase (Committee on Science, Engineering, and Public Policy 2001). This difference in implementation costs was likely due to agencies having existing planning and performance measures that complied with GPRA already integrated into their processes. The GPRA legislation and administration-implemented PMA were established in the name of good government and it is likely that every administration will introduce its own plan for management reform (although it must still comply with GPRA or later legislation). Since these reforms can be recycled years down the road and repackaged as a new reform, the important question one must ask is how truly effective was the reform? Did it meet its goals and objectives? Were its requirements realistic?

This paper will include a description of the problem and research question, a review of pertinent performance, management, and strategic planning literature as well as a review of the President's Management Agenda and the Federal Employee Viewpoint Surveys. A section for the research design and the analysis of my dataset, including the use of three regression models, will follow with limitations and comments on the need for further study at the end.

PROBLEM STATEMENT

This paper will focus on the Strategic Management of Human Capital (SMHC) initiative of PMA and its goals and will analyze whether an organization that engages in strategic planning of human capital finds its employees, on average, to be better satisfied with their jobs. One of the goals of the SMHC initiative was to increase job satisfaction among federal employees (U.S. Office of Management and Budget 2002). Given the amount of money spent on federal strategic planning, the question of whether the goals of PMA were met is of interest to public sector managers as well as the general public (since it is tax dollars that are used).

Within this paper, I will relate legislated requirements of GPRA to PMA and to the intended results of the SMHC initiative. I will research the link between strategic planning and job satisfaction in U.S. federal agencies during the Bush administration years. Drawing on academic literature, I hypothesize that strategic planning at the agency level, as prescribed by GPRA and the PMA, has had a positive effect on the job satisfaction of federal employees and that the SMHC initiative has been effective in accomplishing one of its goals: to increase job satisfaction.

LITERATURE REVIEW

A great deal of research has been performed to examine the relationship of various workplace factors and job satisfaction, particularly in the private sector where the market controls much of what an employer can offer to its employees. Job satisfaction among federal employees has been falling over the years and this decline worries federal managers as it relates to performance and accountability. Established motivation and satisfaction theories indicate that public-sector employees should have higher job satisfaction than their private-sector counterparts but that is not the case in every study (deLeon and Taher 1996, 401).

These theories state that both intrinsic and extrinsic rewards contribute to the level of job satisfaction. Intrinsic rewards are rewards that an individual feels within himself or herself like responsibility or recognition. These rewards are personal and are based on the individual's personal value system. There are two types of extrinsic rewards: organizational and social. Organizational extrinsic rewards are work benefits like pay and security. Examples of social extrinsic benefits are friendships and communication skills (deLeon and Taher 1996, 402). Public sector employees generally have higher levels of intrinsic and extrinsic satisfaction due to the nature of their jobs (deLeon and Taher 1996, 409). These jobs are generally professional positions that allow for a degree of autonomy. When compared to private sector blue-collar employees, public sector employees generally enjoy better job security and protections, higher pay, and they have a better education. All of these factors should lead to higher rates of job satisfaction but research indicates that private sector employees, including blue-collar employees, generally have similar levels of job satisfaction with very different levels of motivation (public sector employees having lower levels of motivation, which researchers believe is due to them lowering the expectations to maintain their level of job satisfaction) (deLeon and Taher 1996).

The National Commission on the Public Service (1989, ix) characterized the decline in federal employee job attitudes as a "quiet crisis". This crisis is the anticipated effect of a flood of high-level federal employees leaving government service without a strong pool of younger workers to take their place (National Commission on the Public Service 1989). Federal civil service is no longer an attractive place to work and the government is unable to recruit and retain the best workforce because of the perception that they will not be happy working there. It is widely acknowledged that higher job satisfaction results in lower turnover rates and lower absenteeism (Kim 2002). Organizations that seek to increase job satisfaction would therefore realize cost savings by reducing turnover and absenteeism.

Job Satisfaction

Simply, job satisfaction is the extent to which employees like their work (Agho, et. al. 1993, 1007). The level of satisfaction has been measured in a variety of ways including employee-reported motivation and through consequences of satisfaction like turnover, absenteeism, and commitment, and based on a variety of factors or determinants (to be explained below). Job satisfaction is not, however, satisfaction with a specific dimension of an employee's responsibility. Instead, it is an "overall affective orientation on the part of individuals toward work roles" (Kalleberg 1977, 126). In other words, job satisfaction is the overall feeling, positive or negative, that a person feels toward their work. The satisfaction of the individual dimensions of an individual employee's position combines into the overall job satisfaction level.

Job satisfaction is one of the most studied variables of organizational research because researchers often theorize that there is a connection between job satisfaction and job performance, an idea that is important to employers (McCue and Gianakis 1997). Other researchers study job

satisfaction because the work experiences of employees, in of themselves, are important. Still others feel that job satisfaction is directly related to the mental and physical health of the employees and is therefore important to study (Kalleberg 1977).

Different researchers have found different factors to be determinants of job satisfaction as well as different reasons for why job satisfaction is important to organizations. Kim (2002) found that managers who engaged in a participative management style had employees with higher levels of job satisfaction. In this study, participative management style, participative strategic planning processes, and effective supervisory communications all correlated positively with high levels of job satisfaction. Kim found that agencies can benefit from considering employee and management development programs that include training on participative management and empowerment.

Daley (1986) studied job satisfaction from the perspective of humanistic management, which focuses on human motivation and the organization-human relationship. Daley said that "the attitudes or perceptions of employees with regard to the organization are in themselves important factors contributing to its ultimate success (1986, 131)." His study focused on factors in three groups: factors within the job environment, factors within the workplace environment, and factors within the perceptions of organizational success.

Ting (1997) stated that there are three determinants of federal employee job satisfaction. They are job characteristics, organizational characteristics, and individual characteristics. He states that some factors affecting satisfaction will overlap these three characteristics but, for the most part, they are distinct categories. Job characteristics have to do with the specific functions associated with doing the actual job. They include all of the tasks associated with the job function as well as pay rate and skill utilization. Organizational characteristics include those factors that

describe the work environment in which the work is performed. Last, the individual

characteristics are those factors unique to the individual performing the work such as their

specialized ability or knowledge. Ting's empirical research indicates that job and organization

characteristics have the greatest impact on federal employee job satisfaction.

Strategic Planning

Job satisfaction is a human capital characteristic that is often cited in strategic plans.

Organizations do this to show their workforce that the happiness of their employees is important.

Strategic planning is the "systematic process for managing the organization and its future

direction in relation to its environment and the demands of external stakeholders, including

strategy formulation, analysis of agency strengths and weaknesses, identification of agency

stakeholders, implementation of strategic actions, and issue management" (Berry and Wechsler

1995. 159). In the private sector, firms use strategic planning to establish the priorities that will

be most profitable. However, instead of using a strategic plan to focus on being competitive,

public sector organizations generally use strategic planning to improve performance and provide

services to residents (Boyne and Walker 2010).

An effective strategic plan can set the direction for an organization and it can

communicate a cooperative effort to accomplish the goals of the organization (Boyne and Walker

2010). The success of strategic planning in an organization depends on several different factors.

First, there must be a champion of the plan who is responsible for encouraging others to believe

and trust in the plan and to continuously work toward its success. Strategic plans are user-driven

and depend on having buy-in from staff at every level in order to work. Buy-in can be achieved

by creating a participative process for developing the strategic plan. This participation leads to a

sense of ownership, which makes them want to follow the strategic plan because they had a voice in creating it. Strategic plans often drive changes to the cultural and structural dimensions of an organizational, which have a direct impact on the organization's staff. (Bryson 1988).

Strategic planning can be a costly venture for organizations to implement. Whether there are dedicated staff planners, the planning team consists of staff pulled from their regular duties, or outside consultants are hired to facilitate and develop the plan, the costs can be high. Traditionally, strategic planning is judged on the success of an organization with regard to its outputs and outcomes of services and products. Governments provide services to the citizenry and their success is often based on some measure of employee effectiveness, efficiency or customer service. For many government agencies, there are no tangible products produced. Because of the service-based nature of the government, agencies have a high degree of human capital and as such, the satisfaction of the workforce is important.

Berry and Wechsler report that over half of the surveyed state employees stated that one important objective of their strategic planning process was to assess their personal leadership skills in the agency. This kind of participative leadership has been shown to be a significant factor in previous studies of job satisfaction, including studies by Ting (1997) and Kim (2002). Since strategic planning incorporates goals and methods of progress from each department or function of an organization, I assert that a participative strategic plan (or lack thereof) can greatly determine an employee's personal job satisfaction.

Theories and Models

In analyzing job satisfaction, scholars have developed theories to explain what factors determine the level of satisfaction or happiness. Some theories are "bottom-up" in the sense that

they analyze determinants of job satisfaction in terms of universal human needs; if a person's

basic needs are met them that person will be happy. That indicates that happiness can be

measured as a summation of the individual small pleasures a person experiences while offsetting

that level of happiness by also accounting for painful experiences. Other theories follow a "top-

down" approach that acknowledges a "global propensity to experience things in a positive way"

where that propensity determines how they interact in the world (Sousa-Poza and Sousa-Poza

2000, 519).

One such bottom-up theory developed by Rainey and Steinbauer (1999) is a theory of

government effectiveness that examines the characteristics of effective government entities and

their effect on the motivations of the workers. Effectiveness, as they define it, is achieved when

an agency performs well in discharging the administrative and operational functions pursuant to

their mission. Rainey and Steinbauer use this broad definition of effectiveness in order to include

in their theory many different factors that affect whether a government entity is effective or not.

They specifically cite the relationship an agency has to its stakeholders as a main factor as well as

their autonomy, stakeholder desire to achieve their mission, the strength of the organizational

culture, the strength of organizational leadership, the utilization of technology, organizational

professionalism and the different types of motivation that affect the employees (public service,

mission, task, altruism).

There are inherent difficulties with measuring performance and effectiveness in a

government agency. Specifically, the politics involved in determining the measures and impacts

of performance are rife with conflict. To address these measuring difficulties, Brewer and Selden

(2000) create a theoretical taxonomy model that differentiates between an organization's internal

and external performance. This model allows them to treat the organizations and the individuals

within the organization independently to determine effectiveness, which ultimately measures organizational performance. They define two categories of factors that impact organizational performance: agency-level factors and individual-level factors. Because the motivations of the agency leadership and the individual may be different, these factors do not necessarily move together. That kind of goal incongruence can lead to different levels of internal and external efficiency, effectiveness and fairness. Brewer and Selden specifically state that Human Capital and Capacity, the employees and their ability to do the work of the agency, is a main factor within the agency-level factors that contributes to organizational performance. This is because people are the organizations most important asset in the service-delivering government (2000, 692).

Similarly, Hackman and Oldham (1975) created a method for measuring the potential a position has for high job satisfaction. This method is called the Motivating Potential Score (MPS) and it is used to measure the intrinsic qualities of a position: task variety, task identity, task significance, autonomy, and feedback. They also call these qualities the five core job dimensions. These dimensions are used in a mathematical equation used to arrive at the MPS.

According to their theory, the higher the MPS, the higher the job satisfaction score. The MPS is found using the following formula (1975, 160):

$$\text{MPS} = \frac{(\text{Skill Variety} + \text{Task Identity} + \text{Task Significance})}{3} \times (\text{Autonomy}) \times (\text{Feedback}).$$

These five dimensions create the three "critical psychological states" that lead to high job satisfaction: experienced meaningfulness of work, experienced responsibility for outcomes of work, and knowledge of the results of the work activities. Although not explicitly stated, strategic planning and the act of participating in a workplace's strategic planning process falls under the "experienced meaningfulness of work," which is the combination of task variety, task identity,

and task significance, because these dimensions encompass the act of both contributing to and impacting the organization and the lives of the stakeholders.

Case Studies

Two previous studies have been done connecting job satisfaction and strategic planning. Kim (2002) addressed the question of the effect of strategic planning on job satisfaction in a study of Clark County, Nevada. Kim set out to determine, among other things, 1) if "employees who believe that managers in their units use participative management style are more likely to express higher levels of satisfaction with their jobs," and 2) if "employees who perceive strategic planning processes in their work units as more participative are more likely to express higher levels of satisfaction with their jobs."   Kim analyzed individual level data: She conducted a survey of municipal employees in Clark County, Nevada and found that managers' use of participative management and participative strategic planning processes were positively associated with higher levels of employee job satisfaction.

Daley (1986) used a survey of public sector employees in Iowa to determine the role of the factors he labels as determinants of organizational success. He defined organizational success as a three-fold concept that combined organizational effectiveness, public responsiveness, and job satisfaction. Also analyzed at the individual level, Daley's study found that public sector employees in Iowa derived a sense of purpose and personal significance from their jobs that contributes positively to organizational success.

PRESIDENT'S MANAMGEMENT AGENDA

Strategic Management of Human Capital Initiative

PMA contained five initiatives for government-wide reform aimed at targeting high priority functions across 26 agencies. The goal of PMA was to improve overall government performance. These high priority functions were developed to better manage the work of the federal government and the millions of people that the federal government employs. One of the five high priority reforms, Strategic Management of Human Capital, sought to make government more citizen-centered (U.S. Office of Management and Budget 2002, 13).

There were short-term and long-term results expected as a result of implementing the SMHC initiative (U.S. Office of Management and Budget 2002, 14). In the short-term, the SMHC initiative sought to link human capital strategies to the agencies' mission, vision and values. It was also intended that the SMHC initiative would work to incentivize high-performing workers in an effort to recruit and retain the best and brightest in the fields. The initiative required that agencies create their "core competencies" to maximize flexibility and allow agencies to operate effectively and efficiently.

The OMB expected that long-term results from the SMHC initiative would include improved service, performance, citizen satisfaction, and government employee job satisfaction. The initiative also sought to develop a high-performing, highly adaptable workforce that would be prepared to meet current and future government needs. It was intended that high performance would become a part of agency culture, which would change the reputation of civil service and would encourage increased productivity and accountability (U.S. Office of Management and Budget 2002, 15).

Agency Scorecards

       The OMB and the agencies worked together to report on the progress the agencies made toward the PMA reform. The OMB used a scoring rubric for each initiative to give the agencies a stoplight scorecard. The stoplight scorecard reported a score of red, yellow or green to indicate an agency's current status and progress status toward satisfaction of the initiatives outlined by the PMA. For each of the five initiatives, there was a scoring rubric that tells an agency how to achieve a certain score. A score of green indicated that the agency had been successful in meeting the goals and standards of the initiative. Yellow indicated mixed results and red was an indication that there was a serious flaw in achieving the standards set in the rubric. Each of the 26 federal agencies was scored on each initiative (Mercer 2012). Table 1 depicts the rubric used by the OMB to determine the stoplight scores. PMA scorecard results are available on various websites archived from the Bush Administration (See Appendix A).

Table 1: SMHC Scorecard Rubric (Mercer 2012)

Green	Yellow	Red

Agency:
  o Implemented a comprehensive Human Capital Plan that is fully integrated with the agency's overall strategic plan and annual performance goals, analyzes the results relative to the plan, and uses them in decision making to drive continuous improvement;
  o Analyzed existing organizational structures from service and cost perspectives and is implementing a plan to effectively deploy, restructure, delayer and use competitive sourcing, E-Gov solutions, as necessary; and has process(es) in place to address future changes in business needs;
  o Succession strategies, including structured leadership development programs, result in a leadership talent pool and agency meets its targets for closing leadership competency gaps;
	Agency:
	  o Developed, documented and communicated throughout the agency a comprehensive Human Capital Plan that:
	• Clearly aligns with the agency's mission, strategic plan, and annual performance goals;
	• Fully addresses the Human Capital Assessment and Accountability Framework (HCAAF);
	• Incorporates metrics, including timelines for implementation; and
	• Designates accountable officials;
	  o Analyzed existing organizational structures from a service delivery perspective, using redeployment and de-layering as necessary;
	  o Implemented succession strategies, including structured leadership development programs, to assure continuity of leadership, sets targets for closing leadership competency gaps, and has implemented gap closure strategy;
		Agency:
		  o Lacks a comprehensive Human Capital Strategy:
		  o Has not done analysis or initiated steps to ensure that its organization structure is optimal for service delivery;
		  o Has not identified leadership gaps and implemented succession strategies to assure continuity of leadership;
		  o Has not implemented a performance appraisal system for SES and managers that is linked to agency mission, goals and outcomes, effectively differentiate between various levels of performance, and provides consequences based on performance;
		  o Has not identified

o Demonstrates that it has performance appraisal and awards systems for all SES and managers, and more than 60% of the workforce, that effectively: link to agency mission, goals, and outcomes; hold employees accountable for results appropriate for their level of responsibility; differentiate between various levels of performance (i.e., multiple performance levels with at least one summary rating above Fully Successful); and provide consequences based on performance. In addition, at a beta site, there is evidence that clear expectations are communicated to employees; rating and awards data demonstrate that managers effectively planned, monitored, developed and appraised employee performance; and the site is ready to link pay to the performance appraisal systems. The agency has significantly increased the size of the beta site and is working to include all agency employees under such systems; o Reduced under representation, particularly in mission-critical occupations and leadership ranks; established processes to sustain diversity; o Meets targets for closing competency gaps in mission critical occupations (i.e., agency-specific, human resources management, information technology, and leadership), and integrates appropriate competitive sourcing and E-Gov solutions into gap closure strategy; o Meets 45-day time to hire standard, 45-day standard to notify applicants of hiring decision for 50% of hires, targets for hiring process improvements based on CHCO Council criteria; o Sets and meets aggressive SES hiring timelines progressing toward a 30-day average; **AND** o Periodically conducts accountability reviews with OPM participation, taking corrective and improvement action based on findings and results, and providing annual report to agency leadership and OPM for review and approval.	o Implemented merit-based appraisal plans and awards programs that link to agency mission, goals and outcomes; hold employees accountable for results appropriate for their level of responsibility; differentiate between various levels of performance; and provide consequences based on performance for all SES and managers. Implementing, at a beta site, performance appraisal and awards systems that are fair, credible and transparent; assure managers are competent in their role as managers; hold managers accountable for managing employee performance, as reflected in their performance plans and ratings; and include employee involvement and feedback. The agency is working to include all agency employees under such systems; o Implemented strategies to address under representation, particularly in mission critical occupations and leadership ranks; o Conducted a workforce analysis to identify, set targets, and address competency gaps in mission critical occupations, (i.e., agency-specific, human resources management, information technology, and leadership), and developed short- and long-term strategies to close gaps, including targeted employee development and recruitment and retention programs; o Has regular, auditable system(s) for collecting and analyzing data on stages of the hiring process and sets a target for time from closing of announcement until offer is made (e.g., average of 30 days for SES and 45 days for all non-SES); **AND** o Has developed an OPM-approved accountability system, based on the HCAAF; the system uses outcome measures to make human capital decisions, demonstrate results, and drive continuous improvement in human capital standards. The system includes conducting periodic accountability reviews with OPM participation, taking corrective and improvement action based on findings and results, and providing an annual report to agency leadership and OPM for review and approval.	underrepresentation or implemented strategies to address it; o Has not implemented a workforce planning system to identify and address competency gaps in mission critical occupations to create a quality workplace that continues to attract and retain talent; o Has not made progress toward meeting aggressive hiring time standards and does not make use of hiring flexibilities; **OR** o Has not developed a planning and accountability system using metrics to evaluate performance on all of the Human Capital Standards.

FEDERAL EMPLOYEE VIEWPOINT SURVEY

The Federal Employee Viewpoint Survey (formerly known as the Federal Human Capital Survey) is a survey administered by the Office of Personnel Management. The survey is used to discover, among other things, the level of job satisfaction among federal employees. OPM first started the survey in 2002. They survey a wide cross-section of full-time federal employees every two years. The survey allows agencies to use the results to determine the effectiveness of their human capital strategies (U.S. Office of Personnel Management 2012).

The survey uses the Human Capital Assessment and Accountability Framework (HCAAF) to help agencies progress toward meeting the Human Capital Standards for Success. The HCAAF is a five-system metric that combines human capital management and merit system principles. The five systems are the strategic alignment system, the leadership and knowledge management system, the results-oriented performance culture system, the talent management system, and the accountability system (U.S. Office of Personnel Management 2006).

RESEARCH DESIGN

Human capital is a large, important resource used to produce the outputs and outcomes of the federal government. It is because of the importance of federal employees in the provision of government services, it is imperative to ensure that they perform efficiently and effectively. This analysis will aid in discovering whether there is a relationship between an agency's efforts to conduct and implement strategic planning and management and its employees' job satisfaction. If there is a link between strategic planning efforts and job satisfaction then agencies can focus more of their efforts to bolster employee morale, work ethic and, ultimately effectiveness and efficiency.

Determining the level of strategic management and planning done by each of the federal agencies is difficult. I chose to measure strategic management using the PMA scorecard results for the Strategic Management of Human Capital initiative. The PMA stoplight scorecard categorizes agencies on a color scale of red, yellow and green. For the purposes of this capstone, dummy variables will be used to indicate the categorizations for both the current state score and the progress to implementation score. For each of the dummy variables, a score of 1 will indicate that they received that stoplight color and a score of 0 will indicate they did not receive that stoplight color. The Viewpoint surveys use a variety of questions that seek to determine an employee's job satisfaction. Since not all federal agencies were scored using the stoplight scorecard and not all agencies report their viewpoint scores individually, scoreless agencies will not be included in this analysis. The OMB only scored these 26 federal agencies using the PMA scorecard because they were the largest. The viewpoint surveys combine all small agencies while individually reporting the survey results of the larger agencies. This leaves 25 agencies with both viewpoint survey scores and PMA scorecards to be analyzed at three different points in time (see below).

The dependent variable, job satisfaction score, is a numerical value on a scale of 0 to 100 determined using the Viewpoint survey questions. Respondents are asked "Considering everything, how satisfied are you with your job?" and are asked to respond on a scale of "Very Satisfied" to "Very Dissatisfied." The variable is calculated by adding the percentages of respondents in the agency who responded either "Very Satisfied" or "Satisfied."

In addition to the independent variables (stoplight scores) and the dependent variable (job satisfaction), I will use a variety of explanatory variables in a multiple regression analysis to answer this research question. The Clark County, Nevada (Kim 2002) study used four survey

questions to measure managers' participative management style and three questions to measure how participative their department's strategic planning process is. The study also used four control variables: amount of work performed in groups or teams (teamwork), position (management, executive, etc), union membership, and years of experience in the department.

This data set, compiled from three years of PMA fourth quarter results (all 25 agencies were scored every quarter from 2003-2008) and three years of Federal Employee Viewpoint Surveys, is used to determine if there is a correlation between strategic planning/management and job satisfaction in U.S. federal agencies. Specifically, as the federal agencies implemented the President's Management Agenda, the Strategic Management of Human Capital reform in particular, did job satisfaction of federal employees increase? PMA results from the fourth quarter of 2003, 2005 and 2007 are combined with the Viewpoint survey results from 2004, 2006 and 2008, respectively, to create the complete data set. Although the years do not align between the two datasets, this choice was made because employees are surveyed in early spring and the PMA fourth quarter scorecards are the closest scores to associate with which to associate their satisfaction.

Given the literature on job satisfaction, and participative management, the independent variables for this model are the PMA current score of red, PMA current score of yellow, PMA current score of green, PMA progress score of red, PMA progress score of yellow, PMA progress score of green, percentage of employees that feel they contribute to the goals of their agency, perception of teamwork, perception of participative leadership, perception of participative management, level of manager communication of agency goals, perception of encouragement in the workplace, perception of empowerment in the workplace, and perception of creativity that is encouraged in the workplace. The dependent variable in the model is job satisfaction. Table 2

includes a description for variable explanation as well as its corresponding Viewpoint survey

question, if applicable.

Table 2: List of Variables

Variable	Description	Measurement	Survey Question
Job Satisfaction	Federal Employee Job Satisfaction	0-100% (Very Satisfied + Satisfied)	Considering everything, how satisfied are you with your job? (61)
Current Status Score (4th Quarter)	PMA Scorecard Strategic Management of Human Capital "CURRENT" score	Red= serious implementation flaw; Yellow=mixed implementation results; Green=successful in meeting goals and standards of reform	N/A
Progress Status Score (4th Quarter)	PMA Scorecard Strategic Management of Human Capital "IN PROGRESS" score	Red= serious implementation flaw; Yellow=mixed implementation results; Green=successful in meeting goals and standards of reform	N/A
Goal Contribution	Measure of employees that feel their work contributes to the goals of the agency	0-100% (Strongly Agree + Agree)	I know how my work relates to the agency's goals and priorities. (19)
Teamwork	Level of perceived agency teamwork	0-100% (Strongly Agree + Agree)	The people I work with cooperate to get the job done. (1)
Participative Leadership	Level of perceived participative leadership	0-100% (Strongly Agree + Agree)	Supervisors/team leaders in my work unit provide employees with the opportunities to demonstrate their leadership skills. (13)
Participative Management	Percentage of employees that feel their managers use participative management	0-100% (Very Satisfied + Satisfied)	How satisfied are you with your involvement in decisions that affect your work? (55)
Goal Communication	Percentage of employees that feel there is adequate communication of agency goals	0-100% (Strongly Agree + Agree)	Managers communicate the goals and priorities of the organization. (40)
Encouragement	Percentage of employees that feel encouraged to contribute to new ways of doing things	0-100% (Strongly Agree + Agree)	I feel encouraged to come up with new and better ways of doing things. (4)
Empowerment	Percentage of employees that feel empowered with respect to their work	0-100% (Strongly Agree + Agree)	Employees have a feeling of personal empowerment with respect to work processes. (24)
Creativity	Percentage of employees that feel rewards are administered for creativity and innovation in their workplace	0-100% (Strongly Agree + Agree)	Creativity and innovation are rewards. (26)

Further, the model will be specified as follows:

$$\text{Job Satisfaction} = B_0 + B_1*\text{CurrentRed} + B_2*\text{CurrentYellow} + B_3*\text{CurrentGreen} + B_4*\text{ProgressRed} + B_5*\text{ProgressYellow} + B_6*\text{ProgressGreen} + B_7*\text{GoalContribution} + B_8*\text{Teamwork} + B_9*\text{ParticipativeLeadership} + B_{10}*\text{ParticipativeMgmt} + B_{11}*\text{ComGoals} + B_{12}*\text{Encouragement} + B_{13}*\text{Empowerment} + B_{14}*\text{Creativity} + e.$$

To allow for easy comparison to a base category (in this case, yellow current and progress

scores), the following dummy variables will be withheld from the regression: PMA current scores

of yellow and PMA progress scores of yellow. Using the yellow scores as the base case allows

the models to compare the effect of both the green and red current and progress scores to job

satisfaction   Performing this analysis using the three different study periods from 2003 to 2008

will show how the PMA reforms were implemented over time to see whether they were effective in reaching one of their stated goals – an increase in employee job satisfaction.

ANALYSIS AND FINDINGS

This empirical analysis included three regression models used to determine the effects of participative strategic planning, and specifically how well an agency had done in implementing the requirements of the PMA reform, on federal employee job satisfaction. The results of these three analyses are different, which indicates that other variables on which the agencies differ also affect average job satisfaction.

Summary Statistics

The summary statistics (below) indicate a wide variety of job satisfaction scores. When employees were asked how satisfied they were with their job, the OMB had the highest job satisfaction scores all three years whereas the Department of Homeland Security and the Small Business Administration consistently scored very low. Some agencies were consistently high or low whereas others fell across the spread. Every agency across the three years scored about the 50th percentile for job satisfaction. The Department of Homeland Security also ranked low on most of the other variables listed including participative management and empowerment.

With regard to the SMHC scorecard, 40% of the agencies surveyed had met the requirements of the Human Capital Standards for Success while 15% had not and 44% had met sufficient progress but had not met all the requirements. Aggregate job satisfaction scores ranged from 55.6% satisfied to 80.8% satisfied.

Table 3: Summary Statistics

Variable	Observations	Mean	Standard Deviation	Min	Max
Job Satisfaction	75	68.3	4.7	55.6	80.8
Green Current Status Score	75	0.4	0.5	0	1
Red Current Status Score	75	0.1	0.4	0	1
Yellow Current Status Score	75	0.4	0.5	0	1
Green Progress Score	75	0.9	0.3	0	1
Red Progress Score	75	0.01	0.1	0	1
Yellow Progress Score	75	0.1	0.3	0	1
Goal Contribution	75	83.8	3.4	73.6	91.6
Teamwork	75	85.2	3.3	77.5	94.9
Participative Leadership	75	61.7	5.9	48.1	74.1
Participative Management	75	53.9	6.2	35.9	71.8
Communication of Goals	75	60.9	5.8	48.6	74.8
Encouragement	75	61.4	7.7	41.3	80.1
Empowerment	75	44.2	7.2	28	64.3
Creativity	75	41.2	9.1	21.1	64.3

Regression Models

For the purposes of fully analyzing the research question, I estimated three regression

models: a pooled ordinary least squares regression model, a random-effects regression model, and

a fixed-effects regression model. As expected, given the previous research in this field, most of

the independent variables had positive impacts on the level of job satisfaction at the agency level,

although not all were statistically significant. Two variables, participative leadership and

creativity, were negative in all three models. While not statistically significant, this negative

impact could be due to the nature of federal government employment and the fact that agencies

are bound by regulations and laws that don't allow for a lot of creativity or a variety of non-

management leadership opportunities. Participative Management and Green Current Status Score are the variables I am most interested in and their coefficients indicate a positive impact on job satisfaction.

The pooled ordinary least squares regression model considers both variation in each agency over the three time periods and variation in the twenty-five agencies. These two sources of variation enter the analysis with equal weighting. Similar to the pooled OLS model, the random-effects regression model also takes into account both types of variation in the data: within each agency over time, and between agencies. The difference is that random-effects regression places more weight on the former source of variation.

Since I have panel data, i.e. more than one observation on each of the twenty-five agencies in my data set, I can perform a better test of my hypothesis than those provided by pooled ordinary least squares or random-effects. Unlike these two models, fixed-effects regression exclusively considers variation within each agency over time. All variation between agencies is discarded (by transforming the data in a way that is equivalent to including a dummy variable for each agency), which also means that all omitted variables that account for variation in average job satisfaction between agencies and that do not vary over time are now controlled for. In other words, omitted variable bias is a more limited concern in this model than in the pooled ordinary least squares and random-effects models.

In the first two models, three variables were consistently statistically significant indicating that they do not affect job satisfaction by chance. The variables for having successfully met all of the Standards for Success (green current status score), having a high level of goal contribution, and having an organization that allows for a great deal of individual decision-making are all statistically significant and their coefficients indicated that there is a positive correlation between

job satisfaction and the level of participative strategic planning. This means that the presence of these factors increase the overall job satisfaction in federal agencies. Given that the random-effects model and the pooled ordinary least squares model are fundamentally similar in that both models use both types of variation in the data, it is not surprising that they find the same statistically significant variables although not all three pass the 95% confidence threshold in the random-effects model.

Table 4: Regression Output
Agencies = 25; n = 75;

	Estimated Coefficients (t-statistic)		
Independent Variables	Pooled OLS Model	Random-Effects Model	Fixed-Effects Model
Green Current Status Score	**1.43** (2.54)**	**0.91* (1.73)**	0.32 (0.60)
Red Current Status Score	1.28 (1.55)	0.30 (0.43)	-0.25 (-0.39)
Green Progress Score	0.33 (0.29)	0.80 (0.81)	**1.87* (2.01)**
Red Progress Score	0.72 (0.28)	1.39 (0.64)	0.71 (0.37)
Goal Contribution	**0.29** (2.03)**	**0.38** (2.54)**	**0.38* (1.94)**
Teamwork	0.23 (1.62)	0.22 (1.46)	0.25 (1.33)
Participative Leadership	-0.14 (-1.20)	-0.08 (-0.65)	-0.01 (-0.04)
Participative Management	**0.61*** (3.41)**	**0.40*** (2.28)**	0.06 (0.33)
Communication of Goals	0.06 (0.90)	0.05 (0.73)	0.04 (0.40)
Encouragement	0.02 (0.17)	0.14 (0.93)	**0.40** (2.45)**
Empowerment	0.02 (0.22)	0.10 (0.84)	**0.32* (1.77)**
Creativity	-0.08 (-0.95)	-0.13 (-1.47)	-0.10 (-0.75)
R-squared (not a variable)	0.84	0.83	0.78

*** significant at .01 confidence level, ** significant at .05 confidence level,
* significant at .1 confidence level

The fixed-effects regression model, however, produced different results. This model is arguably the best model for this analysis because it is able to control for the variations within the agencies over time. Controlling for variations over time allows the results to show where actual

changes in employee perceptions that affect job satisfaction occur. This model found that a green progress score, a high level of goal contribution, a high level of empowerment, and a high level of encouragement are all statistically significant and positively correlated with job satisfaction. It should be noted that three of the four significant variables for this model meet the 90% level of confidence and one, perception of encouragement, meets the 95% level of confidence.

Because of the differences between the regression models and the fact that the same variables are not consistently statistically significant, it is not clear that there is a correlation between participative strategic planning (a green current status score and the level of participative management) and job satisfaction.

DISCUSSION

Limitations

The lack of individual-level Viewpoint Survey data and the lack of a sufficient method for scoring the past participation level of agency strategic planning are limitations of this analysis. At the aggregate level, individual characteristics of the employees cannot be considered in the analysis so factors that may influence job satisfaction, like years of service and supervisory experience, are left out of this model. These data are collected but are not publicly available through the Office of Personnel Management.

The aggregate-level data also removes the variances of job satisfaction within the agency. Because the data is aggregated, I am not able to tell if two agencies with the same satisfaction scores are the same because their employees answered the survey the same way or whether the aggregation of the employee answers averaged the responses to make them appear to be the same. For example, the DHS and SBA had very similar job satisfaction scores. It would be easy to

assume that their workforces are therefore similar and to create policies that try to mitigate their low levels of satisfaction. The aggregate level data could, however, be masking the true issues within the agencies because the data is averaged at this level. That means that all of the employees from the DHS could have answered "Neither satisfied or dissatisfied" on their survey and received the same aggregate score as the SBA where half of their employees answered "Very Satisfied" and half answered "Very Dissatisfied." This averaging hides the variations within the agency workforce.

Additionally, little research is available that develops a typology for scoring the participative nature of a federal agency's strategic planning or management process. Since all agencies are required to develop a strategic plan, it would be easy to assume that this process is standard between all of the agencies. However, that assumption is likely not correct. The proxy variables I use for determining how successful and participative the strategic planning process is, the scorecard scores and the participative management scores, are not a perfect measure for agency processes. A survey of federal employees that investigates the level of participative management and planning, both long-term and short-term, would be a good replacement for the stoplight scorecard and would interact well with the data from the Viewpoint Survey.

Lastly, there are many interpretations of job satisfaction. For this paper, job satisfaction is taken at its face value – the extent to which employees enjoy their work. However, a person's job satisfaction could be a function of their expectations. If a person has low expectations of their job then it may not take much to exceed those expectations. Likewise, a person with high expectations may have a positive work environment with work that they enjoy but their satisfaction may be lower overall because of their high expectations. These nuances of job satisfaction are lost at the aggregate level and are not measured in this study. Without them, it is

impossible to recommend a certain course of action with regard to human capital strategies for a federal agency.

Recommendations

That being said, more research can be done to show whether or not having a participative strategic management or planning process is an appropriate means for increasing job satisfaction in the public sector. This analysis may not have given consistent significant results indicating a correlation between participative strategic management and job satisfaction but it did show a positive relationship in the simple and random-effects regression models. Better, individual-level data would help to flesh out this relationship and allow for concrete recommendations to be made.

CONCLUSION

When President Barack Obama took office he abandoned the measurement and scoring methods of the PMA reform. In addition to signing the GPRA Modernization Act in 2010 President Obama has also implemented his own performance reform, High Priority Performance Goals. The GPRA Modernization Act (GPRAMA) is similar to GPRA but it also takes into consideration the failures of the original legislation. Specifically, GPRAMA requires greater integration of strategic plans, programs, and performance indicators. It is believed that this integration will address key problems in GPRA like better addressing weaknesses in major management functions and enhancing Congress's engagement in identifying management and performance issues by requiring the agencies to consult closely with Congress. GPRAMA also requires more oversight by the OMB in identifying, prioritizing and reviewing agency goals. The

key difference between GPRA and GPRAMA is that GPRAMA enhances the control of both

Congress and the President instead of just creating more congressional control. (Petrovsky 2011).

The future of performance in the federal government is always unclear due to the political

nature of our government. New administrations prefer to develop their own good-government

reforms rather than continue a previous reform and while legislative action is fairly stable, the

reforms are rarely in place for longer than eight years. This makes it difficult for agencies to

engage in long-term planning and to build performance measuring into their organization.

However, since many of these reforms are recycled and repackaged by later administrations, their

successfulness is worth studying. As time and funding for strategic planning decrease, it is

important to know whether this process is beneficial to an organization. Because the public sector

is in the position of service provision with a high level of human capital, the job satisfaction of

that workforce should be monitored and considered for targeted improvement as any other capital

resource would be.

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APPENDIX A

Scorecard Data Sources:

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- Part 3 - http://www.fedview.opm.gov/2008FILES/2008_AgencyReport_Part3.pdf
- Part 4 - http://www.fedview.opm.gov/2008FILES/2008_AgencyReport_Part4.pdf

APPENDIX B

Abbreviations

DHS – Department of Homeland Security
GPRA – Government Performance and Results Act
GPRAMA – GPRA Modernization Act
HCAAF – Human Capital Assessment and Accountability Framework
OMB – Office of Management and Budget
PMA – President's Management Agenda
SBA – Small Business Administration
SMHC – Strategic Management of Human Capital